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The Projected Chemical Weapons Convention: A Guide to the Negotiations in the Conference on Disarmament

Thomas Bernauer

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PREFACE

In 1989, UNIDIR started a project which is to result in a series of research reports on the multilateral arms control and disarmament negotiations in the Conference on Disarmament in Geneva. One of the reasons to engage in such a project was that, in general, these negotiations receive limited media coverage although they have produced several important agreements.

The reports will outline the evolution of the negotiating issues, explain and analyze the positions of delegations to the CD, assess where we stand, and point to possible trends. They are intended to provide diplomats, researchers, and the interested public with the background information necessary to follow future developments in the CD, and to participate actively in the negotiations, discussion, or research on the issues concerned.

The negotiations on chemical weapons were chosen as the first subject. For many years, this issue has received great attention in the CD and outside. The year 1989 in particular has brought rapid developments in the negotiations which have been underscored by the Paris Conference in January 1989 and the Canberra Conference in September 1989.

This research report was written by Thomas Bernauer who is a research associate at UNIDIR. UNIDIR would like to make it clear that the views expressed in this research report are the responsibility of the author and not of UNIDIR. Although UNIDIR customarily takes no position on the views and conclusions expressed by individual authors it does assume responsibility for determining whether research reports merit publication and, consequently, we commend this report to the attention of its readers.

UNIDIR would like to thank the Ford Foundation who kindly funds this project and Dr. Jozef Goldblat who serves as a consultant of UNIDIR.

Jayantha Dhanapala
Director

UNIDIR

United Nations Institute for Disarmament Research

UNIDIR is an autonomous institution within the framework of the United Nations. It was established in 1980 by the General Assembly for the purpose of undertaking independent research on disarmament and related problems, particularly international security issues.

The work of the Institute aims at:

(a) Providing the international community with more diversified and complete information on problems relating to international security, the armaments race, and disarmament in all fields, particularly in the nuclear field, so as to facilitate progress, through negotiations, towards greater security for all States and towards the economic and social development of all peoples;

(b) Promoting informed participation by all States in disarmament efforts;

(c) Assisting ongoing negotiations on disarmament and continuing efforts to ensure greater international security at a progressively lower level of armaments, particularly nuclear armaments, by means of objective and factual studies and analyses;

(d) Carrying out more in-depth, forward-looking, and long-term research on disarmament, so as to provide a general insight into the problems involved, and stimulating new initiatives for new negotiations.

The contents of this publication are the responsibility of the author and not of UNIDIR. Although UNIDIR takes no position on the views and conclusions expressed by the authors of its research reports, it does assume responsibility for determining whether they merit publication.

UNIDIR
Palais des Nations
CH-1211 Geneva 10
Tel. (022) 734.60.11

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PREFACE BY THE AUTHOR

I would like to thank the great number of people who kindly helped me in the course of writing this report. It is not possible to name them all here. My special thanks, however, go to the Chairman of the Ad Hoc Committee on Chemical Weapons for the 1989 session, Ambassador Pierre Morel of France, to the Secretary of the Ad Hoc Committee, Abdelkader Bensmail, to the Chairmen of the Working Groups of the Ad Hoc Committee, Rüdiger Lüdeking (Federal Republic of Germany), Mohammed Gomaa (Egypt), Rakesh Sood (India), Johan Molander (Sweden), and Walter Krutzsch (GDR), and to the UN Department for Disarmament Affairs which serves as the secretariat of the Conference on Disarmament, especially Ambassador Vicente Berasategui, the head of the Department's Geneva branch, Agnès Marcaillou, the assistant of Mr. Abdelkader Bensmail, and Filiz Robert-Tissot who is responsible for the library and documentation of the Department.

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Last but not least my thanks go to UNIDIR and my dear colleagues in the Institute who supported me in my work, and to Jillian Skeet who helped me very much in editing the manuscript and improving its language.

December 1989

Thomas Bernauer

ABBREVIATIONS

ACR	Arms Control Reporter (Institute for Defense and Disarmament Studies)
BW	Biological Weapons
BWC	Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction ("Biological Weapons Convention")
CBM	Confidence Building Measure(s)
CBW	Chemical and Biological Weapons
CCD	Conference of the Committee on Disarmament
CD	Conference on Disarmament
CEFIC	European Federation of Chemical Manufacturers Associations (English translation of French acronym)
CMA	Chemical Manufacturers Association (USA)
CSBM	Confidence and Security Building Measure(s)
CSP	Conference of the States Parties
CW	Chemical Weapons
CWA	Chemical Warfare Agent
CWC	Chemical Weapons Convention
CWDF	Chemical Weapons Destruction Facility
CWFZ	Chemical Weapons Free Zone
CWPF	Chemical Weapons Production Facility
EC	Executive Council
ENCD	Eighteen-Nation Committee on Disarmament
ENMOD	Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques
FBIS	Foreign Broadcast Information Service (a translation of all US-foreign-policy-related newspaper articles, wire service reports, radio reports, and television broadcasts from around the world)
IAEA	International Atomic Energy Agency
ICRC	International Committee of the Red Cross
INF	Intermediate-Range Nuclear Forces
NATO	North Atlantic Treaty Organization
JCIA	Japan Chemical Industry Association
NGO	Non-Governmental Organization
NPT	Nuclear Non-Proliferation Treaty
NTM	National Technical Means
SSOD	Special Session of the UN General Assembly Devoted to Disarmament
SSSPF	Single Small-Scale Production Facility
TS	Technical Secretariat
UN	United Nations (Organization)
WEU	Western European Union
WHO	World Health Organization
WTO	Warsaw Treaty Organization

INTRODUCTION

At the beginning of our century the use of chemicals for war purposes became more and more feasible with the development of chemical industries in some countries. This made possible the employment, with horrible effects, of chemical weapons during the First World War. At the same time, it led to an increasing international awareness of the consequences of chemical warfare and, as a result, to the conclusion of the Geneva Protocol in 1925. This international agreement which has, until today, been joined by a very large number of States[1] bans the use of asphyxiating, poisonous or other gases, and bacteriological weapons in war. It does not, however, prohibit the development, production, stockpiling and transfer of such means of warfare.

The limited scope of the Geneva Protocol, the increasing number of alleged violations of its provisions, and the spread of chemical and biological weapons horizontally and vertically have led to efforts to seek a comprehensive ban on such weapons which would outlaw their development, production, stockpiling, transfer and use. The most substantial part of multilateral negotiations in this context since the Second World War has taken place in the Conference on Disarmament in Geneva.[2]

As a first step, a comprehensive ban on biological weapons was reached in 1972 and negotiations aiming at the total prohibition of chemical weapons have continued ever since. Until 1979, those efforts were not pursued in a systematic way and with the necessary determination. Discussions took place only in plenary meetings of the CD and during informal consultations. Negotiations began to accelerate in 1980 when a special subsidiary body of the CD was established, and in 1984 when agreement on the structure of a joint preliminary draft text for the projected Convention was reached. Work has continued on this so-called "rolling text" since then.

The Geneva Protocol of 1925 and the Biological Weapons Convention of 1972 are relatively simple as far as their content and mechanisms of implementation are concerned. It became increasingly clear at the beginning of the 1970s that such a simple approach to a comprehensive ban on chemical weapons was not acceptable to some countries, particularly the United States and the United Kingdom. One of the reasons given was that chemical weapons had a higher military value than biological ones. They had repeatedly been used in armed conflicts. Biological means of warfare, on the other hand, did not seem very attractive to the military at that time because their effect on the battlefield was thought to be unpredictable. Therefore, especially Western countries believed that international verification of compliance with a total prohibition of chemical weapons should be more intrusive in order to ensure the security of all parties to the agreement. This postulate rapidly increased the number of issues to be considered by the negotiators.

A brief look at the present "rolling text"[3], i.e. the joint preliminary draft treaty, is sufficient to realize that the negotiations have reached a complexity that makes it difficult and time consuming, even for people familiar with disarmament matters, to follow the process. This report therefore aims at facilitating a better understanding of the negotiations, and hopes to promote informed discussion and research on the subject.

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1 121 as of July 1989 (information received from the Depositary (France).

2 Earlier, this forum was named Eighteen-Nation Committee on Disarmament, Conference of the Committee on Disarmament, and Committee on Disarmament (see chapter I).

3 See chapter II.

Part one of the report provides a general introduction. It describes the negotiating machinery and the general features of the "rolling text" It outlines the major developments in the field of chemical disarmament and discusses a number of issues which form the immediate "surroundings" of current negotiations.

The second and principal part contains an analysis of presently existing agreements, disagreements, gaps and proposals relating to the negotiating issues. If there are disagreements or gaps, the principal proposals and positions of delegations are explained and possible trends are shown. The structure of part two is therefore based on an issue-wise, non-chronological presentation. For each substantive issue, we start with the present situation and review how it evolved, where this facilitates understanding of the present situation. This approach favors the reader who is interested in the current work of the Ad Hoc Committee on Chemical Weapons, and who may additionally want to know how an issue has developed. For practical reasons, the structure of part two is based on the structure of the present rolling text. This approach facilitates the use of the report as a reference manual.

To supplement the second part which is shaped by practical considerations, and to introduce the necessary historical dimension into the analysis, Annex I of the report provides a review of developments from 1968 to 1979. It describes proposals and positions on the principal issues under consideration and contains comprehensive references.

The sources used in this report include official documents, working papers and verbatim records of the Conference on Disarmament and its predecessors, and contacts with many members of delegations to this forum as well as other experts. For events outside the Conference on Disarmament, additional documents and secondary literature on the subject were consulted. References to sources outside the Conference on Disarmament were given only in selected cases because this report aims at providing a guide to the multilateral negotiations in the CD. For the same reason, bilateral negotiations, especially those between the United States and the Soviet Union, and discussions in UN bodies such as the First Committee of the General Assembly, were only considered when this was thought to facilitate the understanding of the multilateral process in the CD.

As to the content of this report, there was the important question of how detailed the description and analysis should be, and which aspects should be covered. Our aim was to focus on the political process and to produce a guide to the negotiations which would also be of interest to the wider public. Few technical details were therefore elaborated. To explain such a complex negotiating process in a report of this size, we had to be selective with regard to the proposals and comments made by the delegations participating in the negotiations. The criterion for selection was usually the importance of a proposal or a comment to the negotiations of today, as seen by the author of this report.

PART ONE

BASICS

CHAPTER I

THE NEGOTIATING BODY

The name of the multilateral negotiating body which deals, inter alia, with the question of chemical weapons has changed several times. From 1962 to 1969, it was named the "Eighteen Nation Committee on Disarmament" (ENDC).[1] From 1969 to 1979, its name was the "Conference of the Committee on Disarmament" (CCD). In 1979, its name was changed to "Committee on Disarmament", and in 1984, it became the "Conference on Disarmament".[2]

The Conference on Disarmament is, in the language of the Final Document of the first special session on disarmament (SSOD I), "the single multilateral disarmament negotiating forum" of the international community.[3] It is of limited size and is based on universal representation. After two increases of membership (including China and France), it comprises all nuclear-weapons-States (5) and 35 other States[4], chosen in consultation with the President of the UN General Assembly. Another increase by four States has been considered during recent years and there is agreement that it should be designed so as to maintain the balance among the political groups in the Conference. The candidate of the Western Group is Norway, and that of the Socialist Group is Viet Nam. The Group of 21 (Neutral and Non-Aligned) has not yet named its two candidates. Finland, Austria, Turkey, Senegal, Bangladesh, Spain, Ireland, Tunisia, Ecuador, Cameroon, Greece and Zimbawe have all applied for membership as well.[5]

Upon request, the Conference on Disarmament grants observer status to non-members. During the 1989 session, 28 countries attended the plenary meetings of the Conference as observers[6] and the vast majority of them participated in the various working groups and committees of the Conference[7]. Non-governmental organizations (NGOs) or individuals may send communications to the Conference, to its Chairman or to the Secretariat. Such communications are retained by the Secretariat and made available to delegations upon request. A list of communications is regularly circulated in the Conference.

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1 The ENDC was convened for the first time on 14 March 1962 at the level of foreign ministers.

2 In accordance with the recommendation of the UN General Assembly (A/37/99 K III).

3 Resolution S-10/2 embodies the Final Document.

4 Members of the Conference on Disarmament are: Group of 21: Algeria, Argentina, Brazil, Myanmar(Burma), Cuba, Egypt, Ethiopia, India, Indonesia, Iran, Kenya, Mexico, Morocco, Nigeria, Pakistan, Peru, Sri Lanka, Sweden, Venezuela, Yugoslavia, Zaire. Group of Western countries: Australia, Belgium, Canada, Federal Republic of Germany, France, Italy, Japan, Netherlands, United Kingdom, United States of America. Group of Socialist countries: Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Mongolia, Poland, Romania, Union of Soviet Socialist Republics. China is a member of the CD but does not belong to any of the three political groups.

5 CD/956, p.9.

6 Austria, Bangladesh, Chile, Democratic People's Republic of Korea, Denmark, Finland, Ghana, Greece, Holy See, Iraq, Ireland, Israel, Jordan, Libyan Arab Jamahiriya, Malaysia, New Zealand, Norway, Oman, Portugal, Qatar, Republic of Korea, Senegal, Spain, Switzerland, Syrian Arab Republic, Tunisia, Turkey, Viet Nam and Zimbawe.

7 Israel's request to participate in the Ad Hoc Committee on Chemical Weapons was vetoed, in 1989, by an Arab country. Iraq's request to participate was approved in 1989 after Iran, a member of the CD, discontinued its resistance.

The Conference on Disarmament adopts its own rules of procedure[8] and sets up its agenda[9] on an annual basis taking into account the recommendations by the UN General Assembly. Its chairmanship rotates on a monthly basis among all members of the CD. Decisions must be taken by consensus. The Secretary-General of the Conference is appointed by the Secretary-General of the United Nations and acts as his personal representative. He assists the Conference in the preparation of the provisional agenda, annual reports of the Conference to the General Assembly, and other matters. He may also prepare background papers relevant to the conduct of negotiations. He is supported by the UN Department for Disarmament Affairs which acts as the Secretariat for the Conference.

The Conference on Disarmament usually meets for around six months per year in the Palais des Nations in Geneva. The first part of its session lasts from the beginning of February until April. The second starts in mid-June and ends on an agreed date (often the end of August). The CD holds plenary meetings twice a week which are open to the public. Several proposals have been made to improve the functioning of the Conference[10] It was, for example, proposed to review its agenda, and to consider a reduction in the number of plenary meetings and a better spread of the sessions over the whole year.[11] No agreement has been reached so far on such proposals.

Presently, the question of chemical weapons is included in the agenda of the Conference on Disarmament as item four. From 1968 to 1980, it was discussed in plenary meetings of the Conference. In March 1980, the CD decided to establish an "Ad Hoc Working Group on Chemical Weapons" for the duration of the 1980 session to intensify the negotiations.[12] The Group structured its work according to the following issues: "scope of the Convention", "verification" and "other matters". It was re-established in 1981, 1982 and 1983 with the same mandate. During the 1983 session, four "contact groups" were set up by the Working Group to deal with specific negotiating issues.

In 1984, the name of the Working Group was changed to "Ad Hoc Committee on Chemical Weapons".[13] Its new mandate was to start the full and complete process of negotiations, to develop and work out the Convention, except for its final drafting, and to take into account all existing proposals and drafts as well as future initiatives to this end.[14]

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8 CD/8/Rev.2.

9 It has 10 items on its agenda. They include: Nuclear weapons in all aspects; chemical weapons; other weapons of mass destruction; conventional weapons; reduction of military budgets; reduction of armed forces; disarmament and development; disarmament and international security; collateral measures, confidence-building measures, effective verification methods in relation to appropriate disarmament measures acceptable to all parties concerned; and a comprehensive programme of disarmament leading to general and complete disarmament under effective international control. In 1989 the agenda included the following items: (1) nuclear test ban, (2) cessation of the nuclear arms race and nuclear disarmament, (3) prevention of nuclear war, including all related matters, (4) chemical weapons, (5) prevention of an arms race in outer space, (6) effective international arrangements to assure non-nuclear-weapons States against the use or threat of use of nuclear weapons, (7) new types of weapons of mass destruction and new systems of such weapons; radiological weapons, (8) comprehensive programme of disarmament, (9) consideration and adoption of the annual report and any other report as appropriate to the General Assembly of the United Nations.

10 E.g. CD/WP.286, CD/WP.341. The UK proposed that the CWC talks be moved to round-the-year meetins (A/44/PV.8, 28 September 1989).

11 CD/956, p.10.

12 CD/131, CD/139.

13 CD/539.

14 The relevant part of the mandate reads as follows: ...conduct as a priority task the negotiations on a multilateral convention on the complete and effective prohibition of the development, production and stockpiling of chemical weapons and on their destruction, and to ensure the preparation of the convention...to continue the full and complete process of negotiations, developing and working out the convention, except for its final drafting..."(CD/956, p.39).

So far, this mandate has not changed although there have been efforts to modify it. Most delegations are in favor of removing the phrase "except for its final drafting".[15] They point to the urgency of concluding a treaty and argue that this phrase indicates a lack of commitment. In addition, the majority of delegations are of the view that the "use of chemical weapons" should be included in the title of the projected Convention as reflected in the negotiating mandate.

The Group of Socialist countries, the Group of 21, and most Western countries have repeatedly advocated a modification of the mandate in this regard but particularly the United States continues to oppose this. No reasons have been publicly stated for this position. As far as the "use of CW" is concerned, one may suspect that the lack of agreement on how to bring the CWC in line with the Geneva Protocol (see part two, chapter II, chapter XIII) plays a role. The phrase "use of chemical weapons" in the title of the negotiations as referred to in UN General Assembly resolutions[16] which were adopted without vote, i.e. by consensus, seems somewhat strange in this light. The same phrase was also used in the final act of the Paris Conference of January 1989[17] which was adopted by consensus.

In 1984, the Ad Hoc Committee on Chemical Weapons set up three "working groups" to deal with specific aspects of the projected treaty. These aspects included the scope of the Convention, the elimination of CW stockpiles, and compliance with the treaty. The following year, it established three working groups to consider (a) the scope of the treaty, definitions, and the non-production of CW, (b) the elimination of CW stocks and production facilities, and (c) compliance.

In 1986, 1987 and 1988, the substantive negotiating issues were assigned to the working groups of the Ad Hoc Committee on the basis of Articles of the joint preliminary draft treaty. The basic structure of the latter had been agreed to in 1984. The negotiating issues were grouped into four "clusters" in 1987, and five "clusters" in 1988.

To intensify the negotiations and to deal with all Articles of the preliminary draft Convention at the same time, five working groups were established in 1989. They were set up according to the major outstanding issues which were defined as: (a) verification, (b) legal and political questions[18], (c) institutional questions[19], (d) technical issues[20], and (e) transition[21].[22]

The chair of the Ad Hoc Committee rotates among the Socialist, the Western, and the Neutral and Non-Aligned Group. The chairmen were: the Swedish (1984), the Polish (1985), the British (1986), the Swedish (1987), the Polish (1988), and the French Ambassadors to the CD. The Swedish Ambassador will be chaiman for the 1990 session.

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15 CD/956.
16 E.g. A/43/74.
17 CD/880.
18 For example, the relation of the treaty to the Geneva Protocol, and the final clauses of the Convention.
19 In particular the international organization to be established under the Convention.
20 For example, the definition of relevant chemicals to be covered by the treaty.
21 This term relates to questions arising in the context of the period before the entry into force of the treaty, and to the 10 year period during which all CW stockpiles and CW production facilities would have to be destroyed.
22 CD/956.

CHAPTER II

THE "ROLLING TEXT"

The "rolling text" is the continuously updated version of the joint preliminary and non-binding draft Convention on Chemical Weapons which is being negotiated in the Ad Hoc Committee on Chemical Weapons. It reflects the preferences of delegations to the Conference on Disarmament at the end of each session. It is included in the report of the Ad Hoc Committee to the CD, and in the report of the latter to the UN General Assembly. If there is consensus on the wording of a provision, it is included in the rolling text. If there is more than one proposal for a provision, or if a specific provision is objected to by one delegation or more, it may be included in brackets. In addition, reservations, objections, or clarifications are registered in footnotes.

In 1981, 18 elements for the preliminary draft treaty were developed.[1] In 1982, 24 such elements were proposed by the Chairman of the Ad Hoc Working Group[2], and in 1984, the basic structure of the rolling text was established. It was based on a draft treaty submitted by the United States in the same year.[3] Apart from minor changes[4], the structure agreed to in 1984 has remained unchanged as far as the main body of the rolling text is concerned. The Annexes to the preliminary draft which contain technical and other details have been modified considerably and new annexes have been added. This was the consequence of substantive revisions of and additions to the contents of the Articles.

The report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament usually consists of three parts. The first one includes an introduction, some remarks on the substantive work undertaken during the session, and conclusions and recommendations. The second one, Appendix I of the report, contains the rolling text, i.e. the latest version of the joint preliminary draft Convention, its annexes, and "other documents". Part three, or Appendix II, includes documents which constitute the basis for further work on specific questions. Draft provisions for the rolling text are often proposed in informal working documents of a working group (sometimes so-called "non-papers"), are subsequently included in Appendix II of the report, and are later moved into the rolling text (main body or Annexes). Including draft provisions or other documents in the report is subject to consensus.

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1 CD/220.
2 CD/333, pp.12-16.
3 CD/500.
4 The titles of the Articles have slightly changed. Article VI, for example, was changed from "Permitted Activities" to "Activities Not Prohibited By The Convention". The title of Article VIII, "Consultative Committee", was changed to the "Organization". "Assistance" (Article X) was renamed "Assistance And Protection Against Chemical Weapons"

The structure of the current rolling text is as follows:

Preamble

Article I	General Provisions on Scope
Article II	Definitions and Criteria
Article III	Declarations
Article IV	Chemical Weapons
Article V	Chemical Weapons Production Facilities
Article VI	Activities Not Prohibited by the Convention
Article VII	National Implementation Measures
Article VIII	The Organization
Article IX	Consultation, Co-operation and Fact-Finding
Article X	Assistance and Protection against Chemical Weapons
Article XI	Economic and Technological Development
Article XII	Relation to Other International Agreements
Article XIII	Amendments
Article XIV	Duration, Withdrawal
Article XV	Signature
Article XVI	Ratification
Article XVII	Accession
Article XVIII	Deposit of Instruments of Ratification or Accession
Article XIX	Entry into Force
Article XX	Languages

Annexes and other documents

The main body of the rolling text and some other selected documents are attached to this research report.

CHAPTER III

CHEMICAL ARMS CONTROL AND DISARMAMENT: AN OVERVIEW

Toxic substances have been employed as a method of warfare for ages although their use has continuously been condemned. First efforts to formally ban these weapons are reflected in the Brussels Declaration of 1874 and the Hague Conventions of 1899 and 1907.[1] Those international agreements notwithstanding, chemical warfare on a large scale occurred during the First World War (1914-18). It resulted in approximately 1.3 million casualties, 100'000 of them fatal.

Increasing public awareness of the horrors of chemical warfare stimulated further efforts aimed at a ban on CW. The Treaty of Versailles prohibited Germany, the State which had used chemical weapons first in World War I, from manufacturing or importing poisonous gases.[2] Other peace treaties of 1919-20 contained similar provisions.[3] The Treaty of Washington which was to limit the use of submarines, but never entered into force, included limitations on the use of noxious gases.[4] A clause similar to the one used for the Treaty of Washington was included in the Convention limiting arms in Central America (signed in 1923).[5]

Efforts to prohibit chemical warfare were intensified with the creation of the League of Nations. A number of committees were established to consider various aspects of a CW ban, including the possibility of prohibiting laboratory experiments in this field and requiring States to make scientific discoveries public. It was proposed to undertake a study on the effects of chemical and bacteriological warfare to educate and raise public attention to this issue.

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1 The Brussels Declaration prohibited the use of poisons and poisoned bullets in war. The Hague Conventions did the same and a separate declaration (IV.2 of 29 July 1899) of the Hague Conference banned the use of projectiles the sole object of which was the diffusion of asphyxiating or deleterious gases.

2 Treaty of Peace with Germany, Versailles, 28 June 1919, Art.171.

3 Treaty of Saint Germain, Art.135, Treaty of Neuilly, Art.82, Treaty of Trianon, Art.119, Treaty of Sèvres (never effective), Art.176.

4 Treaty of Washington, 6 February 1922, in particular Article V. Britain, France, Italy, Japan and the United States were involved in the negotiations. The treaty stated that the use of gas in war was prohibited under international law. It did not enter into force because France did not ratify for reasons not related to the provisions on chemical weapons (the agreement covered other issues as well).

5 Convention for the Limitation of Armaments of Central American States, 7 February 1923, Article V.

3.1 The Geneva Protocol

In May 1925, a conference on methods to control the international arms trade was convened in Geneva within the framework of the League of Nations. At this conference, the United States initially proposed a prohibition of the export of chemical weapons. Many States objected to such a ban because it was deemed discriminatory, favoring the States which already possessed chemical weapons or had the means and know-how to produce them. It was also said that export controls in this field were difficult if not impossible to implement. And finally, it was argued that such an obligation would not necessarily prevent the use of CW in future wars. On the other hand, a technical committee of the Conference reached the conclusion that a prohibition of the production of CW, which was put forward as an alternative, was not accepted by many countries.

The United States therefore proposed to conclude an agreement banning the use of chemical weapons in war. As a result of a Polish initiative, biological means of warfare were added. On 17 June 1925, the "Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare" was adopted.[6] It was, by and large, modeled after Article 5 of the Washington Treaty of 1922 (see previous page). Until today, the majority of States, 121 as of end July 1989[7], have become parties to the Geneva Protocol. The UN General Assembly has, repeatedly and in resolutions adopted by consensus, called upon all States, including States not parties to the Protocol, to abide strictly by its principles and objectives.[8] This has led the majority of States to assume that the obligations expressed in the Geneva Protocol have become part of customary international law which means that parties as well as non-parties are bound by its provisions.

In addition to the limited scope of the Protocol, one of its weak points is that some 40 States have expressed reservations when ratifying or acceding to it. These reservations permit the States concerned to use chemical weapons to retaliate (proportionally) in-kind if they were attacked by such means. This has resulted in a situation where most States consider the Geneva Protocol a "non first-use" regime. Another reservation which has been expressed by some States, confines the application of the agreement to other parties. This would allow the use of CW against non-parties. Although this second type of reservation has not been withdrawn by the countries concerned, there is a clear tendency to consider the Protocol applicable to non-parties as well, particularly since the agreement is viewed by most States as part of customary international law. Occasionally, it has been argued that the Protocol only applies to international wars (the Protocol bans the use of CW in war), and that the internal use of CW is not prohibited. The predominant opinion of States and private legal experts, however, does not support this view. Another question which relates to the scope of the Protocol, the issue of whether irritant agents and herbicides are covered by it, will be discussed in sections 3.4 and 3.5 of part one, and section 3.1 of part two.

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[6] It prohibits the "use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices" and "the use of bacteriological methods of warfare".

[7] Information received from the depositary of the Protocol (France). For a list of the parties see, for example, the UN Disarmament Yearbook.

[8] E.g. A/43/74.

3.2 The Disarmament Conference of the League of Nations

As a consequence of the obvious limits of the Geneva Protocol, efforts for a total ban on chemical weapons continued within the framework of the League of Nations. At the League's Disarmament Conference in 1932-33, several proposals for chemical and biological disarmament were put forward. Many of them contained provisions on the prevention of development and production of chemical and biological weapons in peacetime, and the destruction of existing stockpiles. A special committee of the Conference was established to deal with these questions. It considered a broad variety of issues, including the definition of chemical and biological weapons, the monitoring of compliance with a ban, and sanctions to be applied in case of violations. A draft disarmament convention submitted by Britain in March 1933 reflected a number of these considerations. It provided for the prohibition of use of chemical and biological weapons in war, also with regard to non-parties to the treaty. It permitted the use of CW for retaliatory purposes, but unconditionally banned the use of biological weapons. It also stated that chemical and biological weapons must not be developed at any time. The definition of CW used in the British draft was comprehensive, including tear gas and incendiary devices.

Having reached no concrete result, the Disarmament Conference recessed in January 1936 and failed to reconvene due to rising tensions in Europe and the outbreak of the Second World War in 1939. It resulted, however, in a thorough consideration of many important aspects related to chemical and biological disarmament, and some questions discussed are still relevant in today's negotiations on the projected CWC.[9]

3.3 World War II and After

During the inter-war period and the Second World War, two major violations of the Geneva Protocol occurred. Italy, a party to the Geneva Protocol since 1928, used chemical weapons from 1935 to 1936 in its war against Abyssinia. It first denied the allegations but then justified the use of chemical weapons by saying that it was permitted as a reprisal against other illegal acts of war, an argument which was questionable from a legal point of view. Mainly tear and mustard gas were employed (dropped from airplanes) to protect the flanks of advancing columns, to disrupt the enemy's communication centers, and to demoralize its troops. Opinion is divided over the military effectiveness of these actions. However, some sources reported up to 15'000 casualties resulting from the use of chemical weapons. Other violations of the Geneva Protocol probably took place from 1937 to 1945. Japan reportedly used CW in its war against China. A wide range of chemicals, including tear gas, phosgene, hydrogen cyanide, mustard gas and others agents, were used against troops as well as the civilian population, resulting in several thousand casualties.

When the Second World War broke out, only modest CW stockpiles existed. These stocks were gradually increased during the war, but they were not used on a significant scale. This is often attributed to the fact that most of the big powers had chemical weapons in their arsenals and, as a result, there was a situation of mutual deterrence in-kind. The second factor often mentioned is that there were military concerns over the value of

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[9] A detailed description of the proposals can be found in SIPRI, Problems of Chemical and Biological Warfare, Vol.IV, Stockholm and New York 1971.

chemical weapons.[10] Indeed, the military value of chemical weapons remains, to today, a subject of controversy and the opinion of the military is divided. The debate over whether chemical weapons are the "poor man's nuclear bomb" is an example. Another factor said to have prevented recourse to chemical warfare during World War II was the impact of the Geneva Protocol, the international legal norm which existed against the use of CW.

During and after World War II, the major powers accumulated large arsenals of chemical weapons and development towards ever more poisonous chemical warfare agents continued unabated. Some countries, however, disposed of their stockpiles after the war.[11] "Nerve agents" were discovered during World War II[12], and the V-agents, another type of nerve agent, during the mid-1950s. Nerve agents interfere with, or inhibit, the transmission of nerve impulses by disrupting the enzyme reactions in the nervous system. They are often referred to as "second generation" chemical weapons. Their lethality is many times higher than that of agents used during the First World War. The manufacturing of incapacitating agents such as "BZ" was standardized by the early 1960s. Incapacitating agents are chemicals which cause temporary disease or induce temporary mental or physical disability, the duration of which extends far past the period of exposure. They are designed to reduce the combat effectiveness of enemy forces. Renewed interest in chemical weapons on the part of the military was reflected in this situation and was also responsible for the development of new means of deployment of chemical warfare agents.[13]

3.4 Renewed Attention to the Problem of Chemical and Biological Weapons and United Nations' Involvement

Developments in the CW domain went largely unnoticed by the public world-wide due to the rising focus on nuclear weapons. Chemical and biological weapons were classified as weapons of mass destruction by the United Nations Commission for Conventional Armaments in 1948[14], but the discussions in international fora, including the United Nations, during the 1950s and first half of the 1960s remained inconclusive. Proposals for general and complete disarmament put forward at this time included provisions on chemical weapons, but were never seriously examined. Two major allegations of the use of CW were made during that period. China and a number of NGOs accused the United States of using chemical weapons in the Korean war from 1951 to 1952. However, no independent confirmation of the allegations was produced. There were many reports that Egyptian armed forces had used chemical weapons from 1963 to 1967 during their intervention in the Yemeni civil war. No conclusive and independent reports were published. But the evidence

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10 Concerns at the top military level in Germany that the use of CW might inhibit the rapid movement of troops is an example.

11 The United Kingdom had destroyed its CW stockpile by 1956. Also, Canada reported that it had destroyed its CW (CCD/434, CD/173). Many experts believe that France has retained at least parts of its stockpile although the situation in this case is not entirely clear.

12 Their discovery originates in German organo-phosphate pesticide research during the Second World War. Nerve agents include, inter alia, Tabun, Sarin and Soman. Another nerve agent, VX, was discovered in the United Kingdom after the war.

13 E.g. multiple rocket launchers, clustered bomblets, and surface-to-surface missiles at a later stage.

14 The Commission for Conventional Armaments was a subsidiary body of the UN Security Council and functioned from 1947 to 1950. A resolution of the UN General Assembly, adopted on 24 January 1946, demanded the elimination of atomic weapons and of all other major weapons adaptable to mass destruction.

produced by various States and NGOs was considered more substantial than in the Korean case.

In October 1954, the Federal Republic of Germany foreswore the right to produce or stockpile on its territory chemical and biological weapons (and nuclear ones as well).[15] This was a prerequisite for joining the Western European Union (WEU), and later NATO. Under this agreement, the Federal Republic of Germany accepted international verification measures including on-site inspections, a unique obligation at that time. These controls on West-German chemical and biological armament have been effective since 1956 and are performed by the WEU Armaments Control Agency.

It was the use of chemicals on a large scale by the United States in the Second Indochina war which, again, brought the question of chemical warfare to the attention of the public and placed it on the international arms control agenda. In the early 1960s, the United States began to use gradually increasing quantities of herbicides and defoliant agents[16] for war purposes in Indochina. These chemicals were employed to deprive enemy forces of cover by defoliating the vegetation, and to destroy crops. The use of herbicides was stopped in 1970/71. Considerable quantities of irritant agents, mainly the tear gas "CS", were used during various military operations such as the so-called "tunnel-" or "bunker-warfare", or rescue missions. Irritant agents are short-term incapacitants used to cause rapid disablement that lasts little longer than the time of exposure.

The United States and Australia argued that the substances employed in Indochina were not chemical weapons and that their use in armed conflict was therefore not prohibited by the Geneva Protocol. (The United States did not join the Protocol until 1975.) However, these activities were perceived by many States as chemical warfare. A resolution by the UN General Assembly which included herbicides in its definition of CW was passed in 1969 by a significant majority of votes in favor. This resolution is discussed in the next section.

Another reaction to the use of chemicals in the Indochina war was a UN General Assembly resolution, originally proposed by Hungary. It was adopted in 1966. It called for the strict observance of the Geneva Protocol, and invited all States to ratify or accede to the Protocol.[17] The resolution, however, stopped short of condemning the United States.

As a consequence of the renewed attention to the problem of chemical warfare, the Eighteen-Nation Committee on Disarmament (ENDC) placed the issue on its provisional agenda in 1968 under the heading "Non-Nuclear Measures". This came after the conclusion of the Nuclear Non-Proliferation Treaty in the same year. In 1969, for the first time, the "Question of Chemical and Biological Weapons" was put on the agenda of the UN General Assembly.

Following a request by the UN General Assembly in 1968[18], the UN Secretary-General appointed a group of experts to study the effects of chemical and biological weapons. The report of the group was published in 1969[19] and was discussed in the ENDC. It was

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15 Declaration by the Federal Chancellor, in: Annex no.1 to the 1954 (Paris) Protocol no.3 on the control of armaments (Protocol to the 1948 Brussels treaty of collaboration and collective self-defence among Western European States).

16 The chemicals used were "Agent Orange", a substance which had several unintended effects because it was contaminated with super-toxic impurity (dioxin), and agents "Blue" and "White".

17 A/2162 B(XXI).

18 A/2454 A(XXIII).

19 A/7575/Rev.1, S/9292/Rev.1. United Nations, "Chemical and Bacteriological (Biological) Weapons and the Effects of Their Possible Use", New York 1970. (UN publication sales no. E.69.I.24)

intentionally written in a style understandable to non-experts. It described the basic characteristics of chemical and biological weapons, their effects on military and civilian persons, environmental factors influencing the effect of CBW, possible long-term effects on human health and ecology, and economic and security implications of the development, acquisition and use of chemical or biological weapons. The conclusions of the report were as follows: certain CBW are potentially unconfined in their effects in space and time. CBW could have grave and irreversible effects on the balance of nature. These effects would apply both to the attacker and the attacked. No defence system is completely effective. CBW are no cheap substitute for other weapons, and their elimination would not detract from a country's security. Attached to the report was a recommendation by the UN Secretary-General. It urged States which had not done so to adhere to or ratify the Geneva Protocol. It stated that all chemical and biological weapons (including tear gas and herbicides) should be covered by the Protocol, and that a comprehensive ban should be negotiated.

Another important document, published in 1970 as a contribution to efforts for chemical disarmament, was the WHO report on health aspects of the use of chemical and biological weapons.[20] Its emphasis was on public health and the approach was therefore different compared to the report by the UN Secretary-General. It was of a more technical nature and was directed primarily at public health and medical authorities. Still, the conclusions were essentially the same as those of the UN report.

3.5 Strengthening the Geneva Protocol

In addition to seeking a total ban on chemical and biological weapons, many countries thought that it was necessary to strengthen the Geneva Protocol of 1925. International pressure to ensure universal adherence to the Protocol was growing and a number of General Assembly resolutions were passed. They invited all States which had not done so, to adhere to, ratify, or accede to the Protocol. Similar calls were made by NGOs, for example the ICRC. These calls were particularly addressed to the United States, the only great power not yet a party to the agreement. China, France (the depositary of the Protocol), the Soviet Union, and the United Kingdom had ratified or acceded to the Protocol by 1930.

The absence of the United States was thought to be of great significance because it was known to have a large CBW programme and had used chemicals on a large scale in the Indochina war. The United States argued that it respected the principles of the Protocol but resisted formal commitments. However, international as well as national public opinion caused a change in this position. On 25 November 1969, the US President issued a statement which contained the following elements[21]:

(a) It reaffirmed the renunciation by the United States of the first-use of lethal chemical weapons.
(b) It extended this renunciation of first-use to incapacitating chemicals.
(c) It announced that the Geneva Protocol would be submitted to the US Senate for advice and consent to ratification.

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[20] Geneva 1970: WHO.
[21] ACDA, Documents on Disarmament 1969, Washington D.C. 1970, pp.592-93.

Later on, it became clear that tear gas and herbicides were not covered by this announcement. The statement of 25 November also contained a declaration on the unilateral biological disarmament by the United States.

(a) It renounced the use of lethal biological weapons and all other methods of biological warfare.
(b) It confined biological research to defensive purposes such as immunization and safety measures.
(c) It announced that the United States would dispose of existing biological weapons stockpiles.[22]

The motives behind this change in the US position will be explained in the next section. On 14 February 1970, the United States additionally renounced the offensive preparation and use of toxins for war purposes. Toxins are substances produced by living organisms, including plants, animals and bacteria. Unlike the organisms which produce them, toxins are not capable of reproduction. The United States stated that military programmes in this field would be confined to research for defensive purposes, and that all US stockpiles of toxin weapons which were not required for defensive research would be destroyed.[23] By renouncing the production, stockpiling and any use of biological or toxin weapons, and the first use of lethal and incapacitating CW against any country (not only against parties to the Geneva Protocol), the United States unilaterally accepted more obligations than provided for in the Geneva Protocol.

The ratification of the Geneva Protocol by the United States was, however, not achieved until 1975 because the Senate Foreign Relations Committee demanded ratification without reservations. The administration, on the other hand, sought to exclude riot control agents and herbicides.

The main argument for not covering these substances under the Protocol was that they were widely used for domestic purposes (e.g. riot control and agriculture). The use of chemicals which existed in large quantities in many countries could not be prohibited effectively. Another reason sometimes given was that the use of irritants could lead to fewer casualties, including on the side of the enemy.

Arguments used by advocates of the prohibition of these substances for war purposes were that: there is no clear demarcation between irritant agents and other chemicals. The military use of tear gas is different from its civil use (riot control). Irritants are often employed to increase the effectiveness of other weapons.[24] The use of these chemicals may also lead to an escalation of chemical warfare in an armed conflict. Herbicides may inflict damage on people and cause a disruption of the ecological equilibrium (including long-term consequences). Additionally, the negotiating history was said to support the comprehensive scope of the Protocol.

In 1969, a UN General Assembly resolution[25], already referred to, put forward a formal definition of chemical weapons. It included irritant agents and herbicides. It was adopted with 80 votes in favor, three against (Australia, Portugal and the United States) and 36 abstentions (including most Western States).

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22 A/C.1/PV.1699.
23 Office of the White House Press Secretary, 14 February 1970, Press Release. ACDA, Documents on Disarmament 1970, Washington D.C. 1971, pp.5-6.
24 E.g. to "smoke out" the enemy and then to attack him in the open.
25 A/2603 A(XXIV).

In 1974, the United States changed its position and US President Ford issued an executive order, still in force, which stated that herbicides could be used by US forces in armed conflict to clear vegetation around US bases. Tear gas may be used to prevent casualties (rescue operations, for example) and for riot-control in prisoners of war camps. The same points were made by the US Senate in 1975 in the context of the debate on the ratification of the Geneva Protocol.

The ratification by the United States, although with a reservation[26], and the (at least partial) resolution of the dispute over irritants and herbicides (see part two, section 2.1) strengthened the authority of the Geneva Protocol. However, the problem of formal reservations to the Protocol and especially the question of how to deal with allegations of infraction of the agreement remained. Efforts to resolve the latter started in the early 1980s. They will be discussed in section 4.2.

3.6 Intensifying Efforts to Reach a Total Ban on Chemical and Biological Weapons, and the Conclusion of the BWC in 1972

Since the end of the 1960s, the question of a comprehensive ban on chemical and biological weapons received increasing attention in the ENDC and its successor, the CCD. One of the principal issues was the possible separation of chemical and biological weapons with a view to the development of a legal instrument for their prohibition. A number of Western countries, the UK and USA among them, preferred the elaboration of a convention on biological weapons as a first step since an agreement on CW appeared to be more difficult to achieve.

The United States had unilaterally and unconditionally foresworn the use of biological and toxin weapons and had stated that it would destroy its existing stockpiles. It urged other States to conclude a comprehensive ban on these weapons. This unilateral step had a significant impact on negotiations on chemical and biological weapons. Other countries, including the United Kingdom, Canada, Sweden and the Netherlands, declared that they had no chemical or biological weapons. Mexico suggested that, pending a comprehensive treaty on CBW, other States make such declarations as well. These renunciations would acquire contractual character when all States had agreed. A number of countries maintained, however, that these measures were no substitute for a comprehensive treaty.

A working paper on microbiological warfare was tabled by the United Kingdom[27] and was discussed in the ENDC. In 1969, the UK submitted a draft convention on a ban on the development, production, stockpiling and use of biological weapons.[28]

The Socialist Group and many Non-Aligned members of the ENDC/CCD, on the other hand, opposed a separate agreement on biological weapons, and the Socialist Group tabled a

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[26] The reservation of the United States reads: "That the said Protocol shall cease to be binding on the Government of the United States with respect to the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials, or devices, in regard to an enemy State if such State or any of its allies fails to respect the prohibitions laid down in the Protocol."

[27] Official Records of the Disarmament Commission, supp. for 1968/69, doc. DC/231.

[28] Official Records of the Disarmament Commission, supp. for 1969, doc. DC/232, annex C, section 20.

draft convention banning chemical as well as biological weapons.[29] We cannot reproduce all arguments which were made in the debate[30]. However, it was the problem of verification which, according to official statements, had a decisive impact. The United States and the UK were of the view that the military value of biological weapons was inferior to that of chemical weapons. The unilateral destruction of BW stockpiles by the United States was a clear indicator. The military value of biological weapons was thought to be very limited because their effects appeared to be unpredictable. Therefore, it was argued that a BWC would not require very stringent verification measures to assure the security of the parties to the treaty. Clandestine and undetected violations of a BWC were not believed to yield significant military advantages.

A CWC, on the other hand, was said to depend on a satisfactory solution to the problem of verification. The Socialist countries were, at that time, opposed to intrusive verification techniques, notably international on-site inspections which were demanded by Western States. A BWC could therefore be reached much faster because intrusive verification measures were not deemed necessary.[31] However, many observers pointed to the fact that, according to military opinion, chemical weapons had some value. The military was therefore reluctant to give up these weapons. One must therefore regard the aforementioned arguments concerning verification with some skepticism.

Negotiations on whether to conclude two separate treaties continued until March 1971. At that time, the USSR and other Socialist countries changed their position and accepted the BWC as a first step towards the complete prohibition of chemical and biological weapons.[32] The CCD quickly reached consensus on a joint draft treaty banning the development, production, stockpiling and use of biological and toxin weapons.[33] On 16 December 1971, the UN General Assembly commended the draft treaty on biological weapons.[34] The treaty was opened for signature on 10 April 1972 and entered into force on 26 March 1975.[35]

A considerable number of States expressed fears that the conclusion of the BWC would not be followed by a CWC. Therefore, strong commitments relating to further negotiations on a CWC were expressed in the text of the BWC:

(a) Its Preamble states that the BWC is only the first step towards a comprehensive ban on chemical and biological weapons.
(b) Article IX contains a strong commitment to continue negotiations on a CWC.
(c) Article XII includes provisions for review conferences and defines their role as an instrument to monitor compliance, inter alia with the commitments expressed in Article IX.
(d) The BWC enables the parties to press for a CWC through the mechanism for consultations provided for in Article V.

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29 Official Records of the General Assembly, 24th session, annexes agenda items 29, 30, 31, 104, doc. A/7655.

30 For the basic positions see: CCD/PV.457(Sweden), CCD/295(Morocco), CCD/310(Non-Aligned countries), CCD/PV.494(Argentina), CCD/PV.458(USA), CCD/PV.466(USA), CCD/225/Rev.2(UK), ENDC/255, A/7655(Socialist Group).

31 CCD/PV.458(USA), CCD/PV.466(USA), CCD/283(USA), CCD/308(UK), CCD/283,293,311(USA).

32 E.g. CCD/PV.505(USSR), CCD/325(Socialist countries), CCD/327(Socialist countries), CCD/339(Hungary, Mongolia, Poland), CCD/353(Socialist countries).

33 Official Records of the Disarmament Commission, supp. for 1971, doc. DC/234. See also CD/337(Socialist countries), CCD/338(USA).

34 A/2826 (XXVI), A/8457.

35 At the end of 1988, there were 110 parties to the BWC. Review Conferences of the BWC were held in 1980 and 1986. At the second Review Conference, some limited CBMs were agreed to.

3.7 Negotiations on a Comprehensive Ban on Chemical Weapons

3.7.1 Draft Conventions Submitted in the 1970s

The CCD, the Committee on Disarmament and, since 1984, the Conference on Disarmament have continued negotiations on a total ban on chemical weapons. Among the large number of proposals submitted by delegations during the 1970s, three draft conventions drew particular attention. They were submitted by the Group of Socialist countries, Japan, and the United Kingdom.

The Group of Socialist countries presented a draft treaty in 1972.[36] It was modeled after the BWC and was comprehensive in scope. It included a ban on the development, production and stockpiling of chemical weapons, and provided for the destruction of existing stockpiles. It did, however, not contain any provisions on international verification measures except for a last resort mechanism involving the UN Security Council and consultations among the parties. This lack of specific international verification of compliance was unacceptable to most Western countries.

Japan tabled a draft convention in 1974. It was a framework for an agreement rather than a full fledged draft treaty.[37] It proposed a ban on chemical weapons, based on the prohibition of identified chemicals which could be used for chemical warfare. Japan held the view that agreement on a prohibition of all relevant substances and full verification measures, to assure non-production of CW, could not be reached at once. Therefore, it proposed an approach which was to enable the parties to leave certain substances exempt from the ban until further agreement, especially on verification, was reached. Two options for an annex to the treaty were proposed. Option A would suspend the application of the treaty to certain chemicals. Option B would permit exceptions by listing only those chemicals which could not be exempted. The parties would be free to decide on these provisional measures. The exemptions would be gradually reduced (option A) or the number of substances banned would be gradually increased (option B). A widening of the scope of the CWC, i.e. the application of the non-production regime to more chemicals, would take place as verification methods were improved. Hence, an initially partial ban would gradually become comprehensive. The treaty was to be verified by an international verification agency. Verification activities would include international on-site inspections and other investigations to resolve questions of compliance. They could be carried out upon request by a party or the verification organization.

In 1976, a draft convention was submitted by the United Kingdom.[38] It provided for a ban on the development, production, acquisition, or use of chemical weapons, and for their destruction or conversion. The ban was to be implemented according to a phased programme agreed to by a "Consultative Committee". Production facilities would be closed and dismantled. The Consultative Committee would oversee verification activities under the treaty. The draft included provisions on on-site inspections to assure the non-production of chemical weapons. However, no clear definition of chemical weapons was given and

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36 CCD/361.
37 CCD/420.
38 CCD/520.

verification measures were not explained in detail. The British proposal therefore provided only a framework for a draft treaty.

3.7.2 Bilateral Negotiations Between the United States and the Soviet Union 1976 - 1980

After a joint initiative at the Brezhnev-Nixon summit of 1974, bilateral talks on chemical weapons between the United States and the Soviet Union were held from 1976 to 1980. They were suspended in 1980 as a result of deteriorating East-West relations. Some modest achievements were made in the late 1970s when the two countries expressed a common position on some issues. The results of the bilateral effort were recorded in two joint reports to the CCD, in 1979, and in 1980.[39] One of the most important agreements was the common view that the future Convention should be comprehensive in its scope, banning the development, production and stockpiling of chemical weapons, and providing for their destruction. This seemed to put an end to tendencies to conclude a partial ban on CW as a first step[40] or, as proposed in the Japanese draft (see above), to conclude a partial ban with certain provision for its expansion into a more comprehensive one.

3.7.3 The Special Sessions of the UN General Assembly Devoted to Disarmament

The First Special Session of the UN General Assembly Devoted to Disarmament (SSOD I) which took place in 1978 stated in its final document that a treaty on chemical weapons was one of the most urgent tasks for multilateral disarmament negotiations.[41] SSOD II and SSOD III, which were held in 1982 and 1988 respectively, were unable to reach consensus on any specific course of action as far as chemical weapons are concerned. However, SSOD III provided a platform for statements on national CW policies, and some proposals for strengthening the Geneva Protocol of 1925 were made (see section 4.2).

The negotiations from 1968 to 1979 are described in more detail in Annex I of this research report.

3.7.4 The Question of Verification at the Beginning of the 1980s

Throughout the 1970s, the positions on the question of verification remained far apart. International verification, particularly mandatory on-site inspections, was viewed by Western countries as a prerequisite for the conclusion of a comprehensive treaty. The Socialist countries, on the other hand, regarded national means of verification as the principal tool to ensure compliance with the treaty. Some international procedures which remained ill-defined

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39 CD/48, CD/112.

40 A partial ban means, for example, only a prohibition of super-toxic lethal or other specific chemicals, or only a ban on selected activities such as the production of CW.

41 Paragraph 75 of the final document.

were regarded as possible additional means of verification. In their joint report submitted to the CD in 1979[42], the Soviet Union and the United States recorded an agreement on a "combination of national and international measures" and the possibility of on-site inspections upon request. According to the view of the Socialist countries, requests for on-site inspections could be accepted or refused by the requested State. On-site inspections were therefore thought to be of a voluntary nature. No agreement could be reached on more intrusive verification. The deterioration of East-West relations in the late 1970s made efforts to arrive at a compromise even more difficult.

Some progress was made when the Soviet Union, during SSOD II in 1982, put forward a document on basic provisions for a CWC.[43] For the first time, it agreed to systematic on-site inspections[44] to verify the destruction of CW stockpiles[45] and to monitor the production of super-toxic lethal chemicals at a single small-scale production facility (see part two, section 7.1). Agreement on the latter had been reached with the United States during bilateral talks. There was, however, no mention in the Soviet proposal of international verification of the non-production of chemical weapons or mandatory on-site inspections upon request.

3.7.5 The US Draft Convention of 1984

In April 1984, the United States tabled a draft convention for a comprehensive ban on chemical weapons.[46] One of its main features was the approach to verification which was called "open invitation". This term referred to the possibility, provided for in Article X of the draft, to request on-site inspections in government facilities of any party. The parties would not have the right to refuse these inspections. Requests could be made anytime, by any party (with some limitations, see below), and the requested party would be notified 48 hours in advance. To avoid discriminating against States which have no or only a small private chemical industry, these provisions were amended in April 1986[47] to include any (private or government) facility used for the provision of goods and services to the government of a party.

Some doubts about the term "anywhere" remained. The Soviet Union and some other delegations have repeatedly argued that the United States has not yet provided a proper response to the question of precisely which facilities would be covered by Article X and XI of the US proposal. The Soviet Union has sought to cover all private installations, not only those connected with State orders. This would include facilities belonging to US transnational corporations, no matter where they are located.[48]

The Fourth Amendment to the US Constitution prohibits "unreasonable searches and seizures". The US proposal was drawn up with this law in mind. Article X of the draft

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42 CD/48.

43 CD/294.

44 Systematic inspections, as different from inspections upon request (or challenge inspections), would be implemented on a routine basis. No special request by a party would be necessary.

45 In February 1984, the Soviet Union agreed to on-site inspections, on a continuous basis, of the destruction of CW at special depots (CD/PV.243).

46 CD/500. An outline of a convention had been presented by the US already in February 1983 (CD/343).

47 CD/685(USA). Daily Bulletin of the US Mission to the UN in Geneva, 19 September 1989.

48 E.g. Press Bulletin of the Soviet Mission to the UN in Geneva, 23 August 1989, 19 September 1989.

which provides for challenge inspections **without** the right of refusal by the requested party would cover government, military and other facilities where searches were thought to be "reasonable". These inspections could only be initiated by a Fact-Finding Panel to be established under the treaty. Two Western, two Socialist and one Non-Aligned countries would be members of this Panel. The Soviet Union and the United States would be among them. The problems of this proposed "political filter" for inspections will be discussed in part two, chapter X.

Article XI of the US draft treaty provided for ad hoc inspections **with** the right of refusal by the requested party. Such inspections would cover **all** facilities. The right to refuse inspections requested according to Article XI would take into account the right of private parties (as provided for by the Fourth Amendment of the US Constitution) to refuse searches of premises without good cause.

Even though some points in the US proposal have remained unclear or controversial, the "anytime, anywhere, without the right of refusal" approach to verification has since been considered by the United States and other Western countries as a necessary means of verifying compliance with a comprehensive treaty.[49] The Socialist countries and some Non-Aligned States, on the other hand, were, at that time, very critical of this approach. Their position changed only in the second half of the 1980s, notably in 1987.

However, the US draft treaty had a long-lasting impact on the negotiations. Many of its provisions were included in the rolling text, the basic structure of which was established in 1984 (see chapter II).

3.7.6 The Negotiations from 1984 to 1985

A second series of bilateral talks on CW between the United States and the Soviet Union started with the Geneva summit of 1985, and in the wake of a rapidly improving East-West political climate.[50] These talks, which began in 1986, dealt with questions such as CBMs in the chemical warfare domain, the proliferation of CW, and problems of verifying a comprehensive ban on CW. The renewed bilateral efforts of the two most important possessors of chemical weapons gave fresh impetus to the multilateral process. After an interruption due to the change of the administration in the United States, and the ensuing foreign policy review, bilateral negotiations were resumed in June 1989.

Despite the submission of the US draft convention, and the establishment of the basic structure of a joint draft treaty by the Conference on Disarmament in 1984, progress during 1984/85 was modest. The question of whether CW stockpiles and production facilities must be destroyed or could be converted to permitted use was not resolved. How to deal with binary chemical weapons (see section 4.3) and how to include a ban on the "use of CW" in

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[49] The features of CW production facilities were said to be similar to those of "peaceful" chemical plants, facilities for nuclear weapons, or those for defence purposes other than CW. Outside monitoring, e.g. by satellites, could therefore not detect violations of the treaty. Reliance on"National Technical Means" (NTM) was said to be discriminatory. Except for the two superpowers, none of the other countries possessed NTM which would be sufficient to control compliance with the Convention. This inequality would have serious consequences not least because the two superpowers, in order to protect their sources, might be reluctant to share with other countries information obtained by NTM. This view was supported by the Non-Aligned Group.

[50] Summit Communique, 21 November 1985.

the scope of the treaty, and making it compatible with the corresponding obligation expressed in the Geneva Protocol, remained controversial. There was only limited agreement on the definition of basic terms used in the rolling text (e.g. chemical weapons, precursors and key precursors for CW, chemical weapons production facilities). Other outstanding issues were the declaration of the location of CW stockpiles and production facilities, the verification of non-production of CW, and the concept of challenge inspections (see part two, chapter X).

As to the declaration of the location of CW stocks, there were two positions: (a) they must be declared within 30 days after the entry into force of the Convention (mainly the Western position) and, (b) there would be no declaration until just prior to destruction (mainly the position of the Socialist Group and a few other countries).

There was no agreement on how to prevent the misuse of the chemical industry for (banned) CW purposes. Western countries and some of the Group of 21 (e.g. Sweden) stated that high and medium risk chemicals could be identified in lists, and that the intrusiveness of international verification would depend on the level of risk posed to the objectives of the Convention by the listed chemicals and facilities producing or consuming them. The Socialist Group, on the other hand, proposed to ban the production of methyl-phosphorous compounds for commercial purposes because these substances were used for the production of nerve agents. This would prevent the production of precursors for certain nerve agents in the commercial industry. This was rejected by Western countries. They argued that this solution would interfere too much with commercial production for peaceful purposes.

Despite all these differences, especially on the basic approach to verification, agreement on the structure of the rolling text, established in 1984, helped to "lock in" the results achieved so far, and hence provided an overview of the progress made, and the outstanding issues.

Questions such as the elimination of stockpiles and production facilities, including the order of destruction and methods of comparing stockpiles, were considered. Verification of non-production of CW received impetus from a Swedish proposal for the comprehensive elaboration of regimes for different categories of chemicals to be covered by the treaty.[51] Sweden proposed to place the relevant chemicals into three categories according to the risk they pose to the objectives of the Convention. Risk means the likelihood that they could be used, or are used, for CW purposes. A different regime of declarations, elimination, production limits and verification would apply to each category of chemicals. In principle, this approach is still used in the rolling text.[52] A number of other proposals on the question of non-production were put forward in 1985 as well.[53]

The question of an international organization to be established under the future treaty received increasing attention. The United Kingdom submitted a proposal to this effect.[54] Guidelines for a national system of implementation of the treaty were proposed.[55] Agreement in principle was reached to include the "use of chemical weapons" in the scope of the Convention. But, the question was not solved entirely. It refers to the relationship of

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51 CD/632, PV.324, CD/651.

52 See part two, chapter VII.

53 Inter alia by Japan (CD/619), the Federal Republic of Germany (CD/627), the GDR (PV.309), Australia (PV.309), and the United Kingdom (CD/575).

54 CD/589.

55 CD/620(GDR), WP.119(GDR).

the Convention to the Geneva Protocol of 1925, and to different views concerning the scope of the Protocol (see part two, section 13.1). There was some agreement on the prohibition on the transfer of chemical weapons and procedures to be applied to the transfer of other super-toxic lethal chemicals.

3.7.7 The Negotiations in 1986

The 1986 CD session began in a rather optimistic atmosphere. The summit between the United States and the Soviet Union which took place in November 1985 resulted in a new dynamic.[56] A proposal on verification was put forward by the UK[57] It constituted an important step toward a consensus on challenge inspections. It indicated that a compromise on this issue might be possible.

Work also focused on lists of chemicals on the basis of which specific verification measures would be defined. Precursors of chemical warfare agents, and chemicals which are commercially produced in large quantities but could be used for CW purposes (dual-purpose chemicals), were considered in detail. Discussions were held on verification measures to be applied to super-toxic lethal chemicals and key precursors and facilities producing or consuming them. Different views on how to identify relevant chemicals (by their toxicity, their general purpose, or the risk they pose to the CWC) persisted. It was recognized, however, that the principal approach to the verification of non-production would be the exchange of data, and that some chemicals and facilities would require more intrusive verification measures than others.

Disagreement on how to deal with CW production facilities remained, but there was consensus that all activities at these facilities must stop immediately after the CWC has entered into force. Facilities would be declared within 30 days and would be destroyed within 10 years. An important development with regard to the declaration of CW stockpiles was that the Soviet Union declared its willingness to deliver these declarations within 30 days after the treaty has entered into force for it.[58] It also stated that it was prepared to make a timely declaration of its CW production facilities. It would ensure the cessation of production, develop procedures for destroying the corresponding industrial base, and proceed, soon after the CWC has entered into force, to the destruction of CW stockpiles under international on-site surveillance.

The new US programme for the production of binary chemical weapons (see chapter 4.3) led to controversial debates in the CD. The Socialist Group demanded an explicit ban on binary CW. This was refused by most Western countries.

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[56] Summit communique: CD/667(USA), CD/668(USSR).

[57] CD/715.

[58] This statement was made by Secretary General of the CPSU Central Committee, Michael Gorbachev, on 15 January 1986.

3.7.8 Developments in 1987

The major developments in 1987 were related to the change in the Soviet Union's position on verification.[59] This led to agreement on longstanding Western demands in this context. The new Soviet position and improving East-West relations resulted in progress on the following outstanding issues. The provisions on the verification of declarations, the destruction of CW and CW production facilities, and the non-production of CW were further developed. The scope of the treaty (Article I) and the provisions on declarations (Article III) were, with some exceptions, agreed to. Provisions on existing CW (Article IV) were improved. It was agreed that CW must be destroyed without the right to divert the chemicals to peaceful use, and there was almost consensus that the location of CW stockpiles would have to be declared upon entry into force of the Convention[60]. Procedures to verify the destruction of CW were largely agreed upon.

The focus of attention began to shift somewhat from the military/security issues to "industrial questions", i.e. the verification of non-production of CW in the civil chemical industry. Progress was made on the Annexes to Article VI. They contain the verification procedures to be applied to listed chemicals and the facilities producing or consuming them. As far as institutional aspects are concerned, guidelines for an international inspectorate were elaborated. These guidelines would define general rules governing on-site inspections carried out by inspectors of the international verification organization to be established under the CWC (see part two, chapter IX).

The order of destruction of CW, i.e. the problem of how to ensure a balanced destruction of existing stockpiles so as to guarantee the security of all parties to the treaty, remained unresolved. There was no consensus on provisions concerning CW production facilities. The lack of agreement on a definition of the latter was, among other things, responsible for the limited progress on this issue.

3.7.9 Developments in 1988

During 1987 and 1988, model agreements to guide the elaboration of "facility attachments", once the Convention is in force, were developed. These facility attachments would, inter alia, set out facility-specific verification procedures and define what has to be declared. Provisions on assistance to victims of a CW attack, and provisions on economic and technical cooperation were considered without concrete results.

During their eighth round of bilateral talks, the United States and the Soviet Union agreed to a common approach to the elimination of CW production facilities and submitted a joint proposal to the CD[61]. New elements were a definition of CW production facilities, and the agreement that these installations could not be converted to peaceful use but must be destroyed. This joint US-Soviet proposal was accepted by the other members of the CD and the corresponding provisions of the rolling text were almost completed.

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59 See section 4.7.

60 France remained the only country which (officially) disagreed.

61 Daily Bulletin of the US Mission to the UN in Geneva, Press Bulletin of the Soviet Mission to the UN in Geneva, (both) 25 March 1988. The text was subsequently reproduced in Annex II of the report of the Ad Hoc Committee on Chemical Weapons (CD/831).

Work on the lists of chemicals to be covered by the treaty continued. Tentative language for the final clauses of the CWC was developed, and guidelines for the international inspectorate were improved. It was decided to conduct "national trial inspections", on a voluntary basis, to test systematic verification procedures established so far. Many countries (of all political groups) conducted such experimental inspections and presented their results during the 1989 session.

At the end of the 1988 session, some delegations felt that the pace of negotiations had slowed. Consultations during the inter-sessional period brought only modest progress. The protection of confidential commercial and other information during inspection activities was considered and the regimes to verify the non-production of CW were further developed.

3.7.10 Developments in 1989

Despite the impetus received from the Paris Conference on chemical weapons, held in January 1989 (see section 4.10), and the intensification of negotiations - inter alia by the establishment of five instead of three working groups in the Ad Hoc Committee on Chemical Weapons[62] - the first part of the 1989 session of the CD did not result in significant progress. Additional verification procedures to complement systematic and challenge inspections were proposed by the Federal Republic of Germany and the UK. These proposals were made in an effort to solve the problem of facilities which are capable of producing CW but are not subject to declaration and monitoring under the non-production provisions of the treaty. They were discussed but the outcome was inconclusive.[63]

The question of protecting confidential commercial and other information in the context of international verification activities was considered and received impetus from a French[64] proposal. There was agreement that an annex which would bring together all provisions on this matter should be worked out.

The final clauses of the rolling text were further developed and the settlement of disputes under the treaty was, for the first time, discussed.

As far as institutional aspects are concerned, some progress was recorded on national implementation measures, and on the composition, procedure, decision-making and powers of the Conference of the States Parties. The latter would be the principal body of the international organization to be established under the CWC. The Preparatory Commission, an institution to be set up to put the Convention into operation, and an additional sub-organ of the international organization to be established, the Scientific Advisory Council, proposed by France[65], were considered.

Progress was also made in the working group on technical questions. Provisions on the non-production regime for chemicals which pose the highest risk to the Convention were further developed. The problem of permitted production of these chemicals came closer to a solution. A new "Annex on Chemicals" which would include several definitions, the three

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62 See chapter I.
63 See part two, chapter VII.
64 CD/901.
65 CD/916.

Schedules (lists of chemicals covered by the CWC), guidelines for the Schedules, a text concerning the revision of lists and guidelines, and procedures to determine the toxicity of chemicals, was proposed and discussed. This Annex was to contain many technical details which were included in various Articles and Annexes of the rolling text. It would therefore streamline the rolling text and make it more readable.

A controversial fourth Schedule was considered.[66] This Schedule was to include super-toxic lethal chemicals which could be used for CW but were not used for this purpose at present. The problem was not solved.

A preliminary conceptual discussion was held on the preparation period, i.e. the period before the Convention enters into force. The discussion covered topics such as ensuring the universality of the treaty and establishing the necessary verification mechanisms. As to the latter, the identification of equipment and expertise required for the efficient work of the Preparatory Commission, CBMs, and organizational aspects were considered.

A proposed draft Article to encourage or strengthen peaceful cooperation in the chemical field remained controversial. The same held for provisions on assistance to victims of a CW attack.

The second part of the 1989 session of the Conference consolidated the developments of its first part and ended with some progress. Compared to the high expectations produced by the Paris Conference, however, the results were considered unsatisfactory by many delegations.

Major progress was made in streamlining the rolling text and making it more readable. The "Annex on Chemicals" and the Annex on the protection of confidential information collected by the international verification organization were established. A new document on containing a protocol on inspection procedures was included in the report of the Ad Hoc Committee. Furthermore, documents on consultations on the Executive Council of the international organization to be established under the CWC, on challenge inspections, on material concerning the preparation period, and on a proposal for a Scientific Advisory Board were included in the 1989 report of the Ad Hoc Committee[67].

In addition, verification procedures to monitor activities in the civil chemical industry, particularly the regime for chemicals which pose the highest risk to the CWC, were further developed. Many countries conducted experimental inspections in facilities of their chemical industry to test and improve verification procedures elaborated so far. The results of these experiments were carefully reviewed in the Ad Hoc Committee.

No significant progress was made during the 1989 session on any of the major "political" issues, including the relation of the projected Convention to the Geneva Protocol, the order of destruction of CW stockpiles and production facilities, on-site inspections on challenge, and institutional aspects.

However, several important events outside the CD took place in 1989: the Paris Conference, held in January 1989; the Canberra Conference of September 1989 which brought together governments and representatives of the chemical industry; and bilateral

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[66] See part two, chapter VII.
[67] CD/952.

initiatives. These matters will be discussed in more detail in the next section and in chapter IV.

3.7.11 Major Proposals by the United States and the Soviet Union in 1989

At the end of the 1989 session of the CD, some progress on a bilateral level was made. The United States and the Soviet Union agreed to a set of detailed procedures for on-site inspections on challenge. The work was said to have drawn on experience with the INF agreement. The US representative to the CD stated that the positions of the two countries on challenge inspections were "identical".[68] The Soviet Union had mentioned, in July 1989, that a joint proposal on this subject might be submitted to the CD.[69] The joint US/Soviet proposal will probably be discussed in the Ad Hoc Committee before and during the next session of the CD which begins in February 1990. (See part two, chapter X)

Some results were achieved on the order of destruction of existing CW stockpiles. The US representative to the CD stated in a press interview that there was agreement on the "levelling out" of stockpiles by the eighth year of the total ten year destruction period. During the last two years, each party concerned would destroy its remaining CW. It was mentioned that details remained to be worked out, but that the two sides had, in principle, agreed on a mathematical formula prescribing the amounts and types of CW to be destroyed.[70]

US President Bush, in a speech before the UN General Assembly on 25 September 1989, put forward a three-point proposal. He proposed that the United States and the Soviet Union destroy more than 80 % of their CW stockpiles even before the CWC is concluded. This could begin at once if agreement on the verification of destruction is reached. 98 % of the stockpiles of the two countries would be destroyed within eight years after a multilateral Convention has entered into force, provided the Soviet Union joined the treaty. All CW stocks would be eliminated until the end of the tenth year if all States capable of producing CW have signed the multilateral treaty.[71]

The Soviet Union welcomed the US proposal[72] but proposed to go further and accept the following obligations before the CWC is concluded: The two sides should stop the production of CW (the Soviet Union has done so, the United States not). This would be subject to international verification. They should, on a bilateral basis, reduce radically or destroy totally all CW stockpiles as a step towards a multilateral treaty. They should also renounce the use of CW under all circumstances. The latter would imply a withdrawal of reservations to the Geneva Protocol (see part two, chapter XIII). The Soviet Union did not accept the US proposal to destroy the remaining 2 % of the stockpiles only if all CW-capable States have joined the multilateral treaty.

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68 Daily Bulletin of the US Mission to the UN in Geneva, 19 September 1989.
69 Press Bulletin of the Soviet Mission to the UN in Geneva, 21 July 1989.
70 International Herald Tribune, 28 July 1989.
71 Daily Bulletin of the US Mission to the UN in Geneva, 26 September 1989.
72 Daily Bulletin of the US Mission to the UN in Geneva, 26 September 1989, 27 September 1989, Soviet Mission: text of Mr. Shevardnadze's speech before the UN General Assembly, Washington Post, 27 September 1989, Financial Times, 28 September 1989, TASS, 27 September 1989.

The United States responded that it was against the total destruction of CW before the entry into force of a multilateral treaty because this would negatively affect the motivation of other States to join the Convention. It also refused to stop the production of CW.[73]

The high publicity accorded to the two proposals notwithstanding, they offered nothing new. The United States is obliged to destroy around 80 90 % of its (older) stockpile of CW until 1997 according to a law passed by Congress.[74] At the same time, it plans to continue the production of binary CW. These weapons are more efficient in a military sense than the older types of CW which will be destroyed. The Soviet Union proposed, in addition to the destruction of CW on a bilateral basis, the cessation of CW production, something it has unilaterally done since 1987. Moreover, the Soviet Union presently does not have a destruction facility for CW.

During a meeting, in September 1989, between the US Secretary of State and the Soviet Foreign Minister, a memorandum of understanding on a bilateral verification experiment and an exchange of data on existing CW capabilities was signed.[75] The data, defined by the memorandum, will be exchanged in two phases before the CWC enters into force. The second stage will include on-site inspections to verify the data provided by both countries.[76] The agreement will be discussed in more detail in part two, chapter XIV. The text of the memorandum is attached to this research report.

In mid-September 1989, the US administration reportedly decided to modify its position, held since 1984, and propose to permit the production of CW even after a multilateral treaty has entered into force.[77] This challenged a long-standing consensus in the CD which is reflected in the rolling text. It holds that the production of CW is to be stopped immediately after the entry into force of the treaty. This position, if formally taken by the United States in the CD, would revive the controversy over a French proposal submitted in 1987. France had proposed that each interested party be permitted to produce, during the ten year destruction period, a limited "security stockpile" of CW at a single facility subject to international verification. These CW would be stockpiled at undeclared locations and would be destroyed during the last two of the 10 years. The French proposal was withdrawn after having met with strong objections by almost all other delegations to the CD (see section 4.4). It was therefore questionable whether a US proposal of this type would receive a more favorable response.

The decision by the US government seems to have been the result of the following considerations: The United States plans to replace around 20 % of its existing CW stockpile by new binary CW and destroy older CW (see section 4.3). The final assembly of the first type of binary munitions, a 155 mm artillery shell, started in December 1987 but is behind schedule. Production of the second type of binary munitions, the "bigeye bomb", has been delayed by technical problems. If the CWC was to be concluded within the next few years, it would not be possible to produce the envisaged quantity of binary weapons (if the production of CW has to be stopped immediately after the entry into force of the treaty).

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73 Financial Times, 28 September 1989.

74 Section 1412 of the Department of Defense Authorization Act 1986 (Public Law 99-145). The phrase "making virtue out of necessity" was used by some observers.

75 Daily Bulletin of the US Mission to the UN in Geneva, 25 September 1989.

76 Press Bulletin of the Soviet Mission to the UN in Geneva, 26 September 1989. International Herald Tribune, 4 August 1989.

77 E.g. International Herald Tribune, 9 October 1989, Washington Post, 9 October 1989, 10 October 1989, 19 October 1989, New York Times, 15 October 1989, Washington Times, 18 October 1989, ACR, 12 September 1989, 704.B.397-398, 9 October 1989, 704.B.404.1-406, Daily Bulletin of the US Mission to the UN in Geneva, 27 November 1989.

Some people in the US administration therefore feared that the United States might not have modern and "usable" CW to deter an attack by such weapons (or retaliate in-kind) during the 10 year destruction period. The right to continue production of CW (at least for some time) under the Convention would allow the United States to complete its binary programme.

The head of the US delegation to the CD indicated, however, that the United States would, for the moment, not seek a rewriting of the rolling text, and that the binary programme might be terminated before the entry into force of the CWC.[78] The final decision on this issue will partly depend on the outcome of tests of the bigeye bomb (see section 4.3). This bomb is regarded as an essential component of the US binary CW programme. The tests will begin in May 1990 and production contracts might be awarded in 1992.[79] If production of the bigeye bomb was to be dropped for technical or financial reasons, production of CW under the treaty would not be required.[80]

In December 1989, during the US-Soviet summit off the coast of Malta, the US President reportedly stated that he would not seek permission of the continuation of CW production under the Convention if the Soviet Union accepted his proposal made in the UN General Assembly in September 1989. It was also reported that the US President had proposed to sign, at the next summit meeting which is to be held in June 1990, a bilateral accord on a 80 % reduction of US and Soviet CW stockpiles.[81] This proposal was welcomed by the Soviet Union and the conclusion of a bilateral agreement on a 80% reduction of CW stockpiles appears likely. However, the implementation of such a treaty would probably have to be delayed because the Soviet Union has, at present, no destruction facility. Help by the United States in this regard is not excluded.

Several questions remain to be answered and will be discussed during the inter-sessional consultations and the 1990 session of the CD. Will the Soviet Union agree to the destruction of 80 % of US and Soviet stockpiles while the United States continues production of binary CW? Would the 80 % reduction take place before the CWC enters into force, or would the conclusion of a multilateral treaty be possible during the implementation of the bilateral accord? Regarding the lack of a destruction capacity in the Soviet Union[82], but also the sheer size of existing stockpiles on both sides, an 80 % destruction would not be completed until the mid-1990s. Most countries agree that a delay of the multilateral treaty until that time is not desirable. With a view to the comment, refered to above, that the US binary programme might be terminated before the CWC enters into force, a delay of the multilateral treaty until the mid-1990s might be considered by some countries as a deliberate strategy designed to permit the completion of the programme for binary CW.

Other questions are: What does 80 % mean? Many observers assumed that this refered to 80 % of the current US stockpile. The United States, however, has not yet declared the size of its stockpile. How would compliance with the bilateral agreement be verified? If the procedures provided for in the rolling text were applied for this purpose, this could be a useful test of their practicability. How to formalize the proposal that the remaining 2 % of

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78 Daily Bulletin of the US Mission to the UN in Geneva, 4 December 1989.

79 Defense News, 21 August 1989.

80 ACR, 28 November 1989, 704.B.384.45.

81 Daily Bulletin of the US Mission to the UN in Geneva, 11 December 1989, 14 December 1989, The White House, Office of the Press Secretary, Fact Sheet: The President's initiatives during the Malta meeting, Brussels, 4 December 1989.

82 An exchange of destruction technology between the United States and the Soviet Union to facilitate faster destruction of CW in the USSR is conceivable.

CW stockpiles (probably around 500 - 800 agent tons) would be destroyed only if all CW capable States have joined the treaty? Could a "pause" be written into the CWC itself, into a separate protocol...? How to define CW capable States?

CHAPTER IV

THE "SURROUNDINGS" OF CURRENT NEGOTIATIONS ON THE CHEMICAL WEAPONS CONVENTION

Among the events and issues which have, since the beginning of the 1980s, formed the immediate "surroundings" of negotiations on the projected CWC, the following ones have been of particular importance.

(a) The use of chemical weapons in the Iran-Iraq war and the investigations conducted under the auspices of the UN Secretary-General in this context
(b) Mechanisms to investigate alleged violations of the Geneva Protocol
(c) The binary chemical weapons programme of the United States
(d) French policy on chemical weapons and chemical disarmament
(e) The horizontal spread of chemical weapons
(f) Proposals for Chemical Weapons Free Zones
(g) The position of the Socialist Group
(h) Two problems connected with intrusive verification
(i) The position of the chemical industry
(j) The Paris Conference of January 1989
(k) The Canberra Conference of September 1989

4.1 The Use of Chemical Weapons in the Iran-Iraq War

The first use of chemical weapons against Iranian troops reportedly took place in 1981[1], but their employment on a significant scale started only in 1984. Iraq was accused of having used mustard gas, cyanide, and possibly other chemicals, in its efforts to halt large-scale Iranian offensives.

The legal situation can be described as follows: both Iran and Iraq are parties to the Geneva Protocol of 1925 which prohibits the use of CW in war.[2] When ratifying the Protocol, Iraq made the following reservation: it would not feel bound by the agreement with regard to States "at enmity with them whose armed forces, or the forces of whose allies, do not respect the dispositions of the Protocol"[3]. It also stated that it considered the agreement as binding only among the parties to it. According to the first part of its reservation, Iraq would be allowed to use chemical weapons against Iran only if Iran had used them first. This argument was in fact put forward by Iraq on some occasions to justify the use of CW against Iran. Iran did not express any reservations when it became a party to

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1 E.g. PV.453(Iran).
2 Iran joined the Protocol on 5 November 1929, Iraq on 8 September 1931.
3 United Nations, Status of Multilateral Arms Regulation and Disarmament Agreements, Third Edition, New York 1987, p.9.

the Protocol and has never claimed the legal right to retaliate in-kind. The question of whether Iran could use chemical weapons to retaliate in-kind therefore remains open.

After repeated allegations of the use of CW and several requests for an investigation, a fact-finding mission by a group of experts appointed by the UN Secretary-General was undertaken in 1984. The group obtained conclusive evidence, based on investigations on-site, that chemical weapons, mustard gas and some nerve agent, probably tabun, had been used on the battlefield.[4] However, there was no identification of the State which had violated the Geneva Protocol. This lack of response by the international community was perceived by a number of countries as threatening the authority of the Protocol.

In 1985, the UN Secretary-General commissioned a Spanish physician who had been a member of the 1984 investigation team. He was asked to produce a report on allegations of the renewed use of chemical weapons in the same conflict. On the basis of examinations of victims in hospitals in the UK, Belgium and the Federal Republic of Germany, he concluded that chemical weapons had indeed been used in March 1985. The UN Secretary-General reported this to the Security Council on 17 April 1985. Again, there was no mention of the State responsible for the violation. The report only identified Iranian soldiers as the victims.[5]

In February and March 1986, major incidents of CW use against Iranian soldiers were reported. Once again, the UN Secretary-General sent a group of experts. In their report of March 1986, they concluded that CW had been used.[6] The UN Security Council did not react, however, and chemical weapons continued to be used in the Gulf war throughout 1987 and 1988.

The report of a UN fact-finding team, published in May 1987[7], indicated that a new quality of chemical warfare had been reached. Chemical weapons were reportedly used more and more against the civilian population, notably Kurdish civilians. Evidence of this new quality of chemical warfare were incidents at Sardasht in 1987, and Halabja in 1988. (This development was also reflected in the UN Security Council reports of July 1988.) The investigation team of 1987 had access to both Iraqi and Iranian war zones. Evidence obtained clearly pointed to Iraq as the State which had used chemical weapons.[8]

In 1988, a series of allegations by Iraq and Iran against each other led to investigations in both countries.[9] The evidence obtained by the UN fact-finding team indicated that Iraq had used chemical weapons. In addition to the use of chemical weapons against Iranian soldiers, there was strong evidence, produced by several NGOs, that chemical weapons had been used against Kurdish rebels in Iraq, most notably against the village of Halabja in March 1988. The latter resulted in an international public outcry.[10] Iraq repeatedly rejected the allegations and denied that it had used CW. However, it also confirmed, on some

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4 A/39/210, S/16433.
5 S/PV.2576.
6 S/17911 and corr.1 and add.1 and 2 (summary of 1985 and 1986). See also S/17127 and add.1.
7 S/18852 and corr.1 and add.1.
8 S/18852.
9 4 missions were undertaken by UN teams to the Gulf region in 1988. Three were requested by Iran, one by Iraq. In their reports (S/19823, S/20060 and add.1, S/20063, S/20134) the experts concluded that chemical weapons, mainly mustard gas but also a nerve agent, had been used, against both armed forces and civilians.
10 Iraq refused to accept a UN team to investigate the allegations.

occasions, that it had used CW from time to time. But it said that Iran had done so first at the beginning of the war.[11]

The repeated breaches of the Geneva Protocol[12], and the evident reluctance of the international community to identify and act decisively against a clear violator of the agreement, demonstrated that the authority of the Protocol had suffered. Increasingly strong condemnations of the violations of the Protocol[13], based on eight conclusive reports by UN fact-finding teams, did not stop the use of CW. The UN Security Council, for reasons which will be explained in the next section, reacted only at a relatively late stage. Two resolutions, passed in May and August 1988, condemned the use of chemical weapons and urged all States to observe the rules of the Geneva Protocol. In August 1988, the Security Council, by resolution S/620, decided to consider further measures in accordance with the UN Charter (chapter VII), including sanctions, in the case of any further use of chemical weapons. It encouraged the UN Secretary-General to carry out investigations of alleged violations of the Geneva Protocol.[14]

In addition to the widespread awareness that the authority of the Protocol had suffered, these incidents proved the necessity of developing efficient procedures to investigate alleged breaches of the agreement. The increasingly important role of the UN Secretary-General[15] in investigating alleged violations of the Geneva Protocol, and the general acceptance, since 1987, by the international community of his activities in this context, have been regarded as a positive development.

Another consequence of the use of CW which was noted by many observers was that it might lead to the further spread of chemical weapons. (The horizontal spread of CW will be discussed in section 4.5.) It might motivate other States in the region to acquire a CW capacity as a means of deterrence and retaliation. There were indications that Iran was strongly considering the possibility of manufacturing chemical weapons.[16] In March 1987, Iranian officials hinted that they might produce CW with a view to their use by Iraq. Iran has since officially renounced this option.[17] The use of chemical weapons might also lead to changes in the perception of their military value and might therefore induce other States to produce or acquire them, particularly with a view to the lack of international enforcement demonstrated by the Iraqi case.[18]

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11 E.g. FBIS-NE, 1 July 1988.

12 Iran submitted to the Conference on Disarmament a list of incidents involving the use of CW by Iraq from January 1981 to March 1988 (CD/827). Other sources are the Arms Control Reporter or the SIPRI Yearbooks.

13 E.g. in S/Res/612, S/Res/620.

14 S/620.

15 Security Council resolutions (e.g. S/Res/620) contributed to this. The role of the Secretary-General in this context was also endorsed by the Paris Conference of January 1989 (see section 4.9).

16 IRNA, in: FBIS-NES, 19 October 1988.

17 Statement by Iran in the First Committee of the UN General Assembly on 24 October 1989 (official text).

18 A systematic analysis of military aspects of the use of CW in the Gulf War has not yet been produced, at least in the non-secret domain of research.

4.2 Mechanisms to Investigate Alleged Violations of the Geneva Protocol

First steps to develop international procedures for investigating allegations of the use of chemical and biological weapons were undertaken at the beginning of the 1980s.

The involvement of the United Nations in this field began in 1981/82 as a result of several allegations of CBW use during previous years. Among these allegations, those made by the United States against the Soviet Union and Vietnam received the most attention due to their implications for East-West relations.

In 1978, reports that Vietnamese and Lao forces had, with Soviet assistance, used chemical and toxin weapon in violation of the Geneva Protocol and the BWC began to appear in the news media. Vietnamese forces had allegedly used, at least since 1978, toxins and chemical weapons against Democratic Kampuchean troops and Khmer villages. These incidents are often referred to as the "yellow rain" allegations.[19] The reports published in the news media were publicly endorsed by the US government since the beginning of the 1980s.[20] At the same time, the Soviet Union was also accused of using chemical weapons in Afghanistan since the beginning of the Soviet invasion.[21] The Soviet Union strongly rejected these accusations.[22] Yet another allegation, made by the United States in 1980, held that an outbreak of human anthrax in the region of Sverdlovsk (USSR) in 1979 had been caused by an accident at a major BW-related research and production installation. If confirmed, this would have indicated a violation of the BWC. The Soviet Union replied that anthrax had resulted from the consumption of meat of anthracose domestic animals distributed on the black market.[23]

To clarify these allegations, the UN General Assembly, in December 1980, asked the UN Secretary-General to conduct an investigation. However, there was strong dissent in the General Assembly over this question. Socialist and Western countries held opposing views and many Non-Aligned countries did their best not to get involved in the issue.[24] A UN investigation team, headed by an Egyptian General (a medical doctor), undertook on-site visits to Pakistan and Thailand, but the experts were not given access to the places where the use had allegedly occurred, i.e. Laos, Kampuchea and Afghanistan. Therefore, they undertook their investigation on the basis of interviews with alleged victims, other eye-witnesses, and medical personnel. They also examined samples of specimens of blood and urine of alleged victims. Although drawn up with great care, the reports[25] remained

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19 This term refers to the description by alleged eyewitnesses of the employment of the toxins. The toxins involved were said to be certain epoxytrichothecenes. These are poisons generated by some species of mould fungus found worldwide. The label mycotoxin was subsequently used. In the US defence literature, they are usually described as "yellow rain agents".

20 See, in particular, the so-called Haig Report of March 1982 (US Department of State Special Report No.98, 22 March 1982), and the Soviet reply, addressed to the UN Secretary-General, on 20 May 1982. See also the report by the US President in December 1985 on "Soviet Noncompliance with Arms Control Agreements", White House Press Release, Washington D.C., 23 December 1985.

21 See, for example, the Haig report, op.cit.

22 E.g. in a letter to the UN Secretary-General on 20 May 1982.

23 See, for example, Voas, Jeanette, The arms control compliance debate, in: Survival XXVIII, Vol.1, January/February 1986, pp.8-31.

24 A/35/144 C. This resolution was passed with 78 votes in favor, 17 against, 36 abstentions and 22 absentees. A/36/96 C asked the Secretary-General to continue the investigation.

25 A/36/613 Annex, A/37/259. The outcome of the vote, in the UN General Assembly, on the report and on the renewal of the mandate of the investigation team indicated the controversial nature of the issue (86 in favor, 20 against, 34 abstentions, 16 absentees for the resolution to prolong the mandate of the group, A/36/96 C).

inconclusive, not least because much time had elapsed between the alleged attacks and the examination of some victims. Furthermore, the origin of material evidence provided to the team could not be objectively determined.[26] Due to the contradictory evidence produced by various governments, private organizations and experts[27], and the UN reports, the importance of the issue began to fade after 1984.[28]

Nonetheless, the investigation was the first test-case. It indicated that, provided a fact-finding team obtained timely access to the site of the alleged use, conclusive evidence could be found. Another important consequence was that private institutions became more and more involved in investigations of this kind. The advantage of NGOs and private experts was that they were able to obtain (often unauthorized) access to the site of the alleged use, while official teams were barred from visiting the location. However, the objectivity of the reports by NGOs was sometimes questioned and they were therefore less authoritative than the reports by UN investigation teams. Despite their controversial nature, it will be noted that the "yellow rain" cases have led to increasing awareness within the scientific community of the problems of verifying the alleged use of CBW. This has stimulated further research on this subject.

Several proposals to strengthen the Geneva Protocol by international verification procedures were made during SSOD II in 1982. The Geneva Protocol does not provide for any specific international verification of compliance. Countries such as Belgium, France, the Federal Republic of Germany, Indonesia and New Zealand proposed to set up international procedures to clarify the increasing number of allegations of the use of chemical and biological weapons.[29] France[30] proposed that the UN Secretary-General undertake a study of fact-finding arrangements which could, inter alia, involve the WHO. A draft resolution to uphold the authority of the Geneva Protocol was sponsored by a number of Western, Neutral, and Non-Aligned countries, and was introduced by France[31].

Although France stated that the proposed resolution did not imply any link to previous allegations, the Socialist countries voted against and many of the Neutral and Non-Aligned States voted against or abstained.

The reasons put forward by countries opposing an involvement of the United Nations in the issue were: (a) The United Nations is neither a party to the Protocol nor its depositary. Neither are all members of the United Nations parties to the Protocol, nor are all parties to the Protocol members of the UN (Switzerland, for example). Also, the Protocol was not concluded under the auspices of the UN. (b) The UN Secretary-General would have to make delicate political decisions. This could affect his neutral status. (c) The experience with the investigations by the UN Secretary-General in 1981/82 left many countries with the impression that these activities could be abused for political purposes. These investigations had been requested by a few Western countries and some Socialist countries were alleged to have used CBW. Therefore, the allegations, and subsequent investigations, became entangled in the deteriorating East-West relations at the beginning of the 1980s. The Socialist Group, which perceived these activities as part of Western propaganda, refused to cooperate. (d)

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26 The concluding remarks contained in the report by the UN expert group read as follows: "While the Group could not state that these allegations had been proven, nevertheless it could not disregard the circumstantial evidence suggestive of the possible use of some sort of toxic chemical substance in some cases."

27 See, for example, Scientific American, September 1985, 253, 3, p.137.

28 E.g. SIPRI Yearbook 1983, pp.400ff, ACR, 10 October 1987, 704.B.218-219.

29 The proposals are listed in A/S-12/32 Annex II.

30 A/S-12/AC.1/41.

31 A/37/98 D.

These measures could divert attention away from efforts to reach a comprehensive ban on chemical weapons.

However, there were important reasons for the United Nations to become involved in this issue. Since 1969, the General Assembly had regularly adopted resolutions on chemical and biological weapons calling upon all States, including non-parties to the Protocol, to abide strictly by its rules and objectives, and to ratify or accede to the Protocol as soon as possible. As a result, most States were of the view that the Geneva Protocol was part of customary international law (at least the ban on first use of CW), binding both parties and non-parties alike. This would justify the involvement of a quasi-universal organization such as the United Nations.

Many States believed that the existing procedures to investigate allegations of the use of chemical and biological weapons needed some improvement to allow more prompt and conclusive fact-finding. The UN Secretary-General therefore received the following mandate from the General Assembly.[32] He was asked to hold himself ready for further investigations, if required, and to establish a group of qualified consultant experts to develop technical guidelines and procedures. The Secretary-General was also asked to establish a list of experts and laboratories available for off-site analyses of material evidence.[33]

The General Assembly resolution requesting the establishment of the expert group and the subsequent reports submitted by the latter, notably in 1984[34], had to be passed by majority vote in the UN General Assembly. This indicated the controversial nature of the undertaking.[35] The Socialist countries voted against and many other countries abstained or also voted against because they felt that the issue was too delicate.

Controversy persisted throughout 1985 and 1986. The UN Security Council remained rather passive but tolerated the activities of the Secretary-General, including the fact-finding missions in the Gulf War, which fell under its competence. It became active only in 1988. Resolution S/620, adopted in August 1988, approved and supported the role of the Secretary-General in this context and threatened with sanctions in case of future violations of the Protocol.

One factor which had led to this change of views was the increasing and successful involvement of the UN Secretary-General in fact-finding missions in the Gulf war (see above). Other reasons were the new position of the Socialist Group, the Soviet Union in particular, on the question of international on-site verification (see section 4.7) and the improved East-West political climate.

In 1987, the Secretary-General received a new mandate from the General Assembly[36], but this time the resolution was adopted without vote, i.e. by consensus. He was again asked to develop further, with the help of qualified governmental experts provided for by the interested member States, existing guidelines and procedures for fact-finding missions. He was also asked to compile and maintain a list of experts available to the good offices of the

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32 A/37/98 D.

33 A/37/98 D. For subsequent mandates, see: A/38/435, A/39/488, A/39/688.

34 For an analysis of the legal controversy and the procedures developed, see: Sur, Serge, La résolution A/37/98 D du 13 décembre 1982 et les procédures d'enquête en cas d'usage allégué d'armes chimiques et bactériologiques (biologiques), A.F.D.I, 1984, (Edition du CNRS), pp.93-109.

35 See, for example, A/35/144 C, A/36/96 C, A/37/98 E, A/38/187 C, A/39/65 E, A/38/435, A/39/488 Annex II.

36 A/42/37 C.

Secretary-General for investigations, and laboratories for off-site analysis of evidence. This mandate was extended in 1988.[37]

In 1989, the expert group held two sessions in Geneva. It included experts from Bulgaria, Egypt, France, Sweden, the United States and the Soviet Union. The group submitted detailed reports in 1988 and 1989.[38] It was understood[39] that the guidelines and procedures established might have to be reviewed once the has CWC entered into force. In part two, chapter X, we will discuss proposals to include in the projected CWC provisions on investigations of the alleged use of CW.

One of the fundamental problems of investigating allegations of the use of chemical, biological, and toxin weapons (the latter two are completely outlawed by the BWC) remains the timely access to the site of the alleged use. The most sophisticated technical procedures and equipment are only of limited value if access is obtained too long after the alleged attack has occurred, or if access to the site is even denied. Especially the employment of nerve agents is difficult to verify if material evidence cannot be analyzed shortly after the attack.[40] In cases of inter-State wars, access is usually easier to obtain, as the case of the Gulf war shows. The victims of a chemical or biological attack often have a strong interest in bringing violations of the Geneva Protocol by their enemy to international public attention. On the other hand, internal conflicts, where the victims may not have the means to publicize the use of CBW are more difficult. The State concerned may not have an interest in allowing an international investigation by a UN team (see the case of Iraq and the use of CW against Kurdish civilians in Iraq). Two proposals to overcome this difficulty were made during SSOD III in 1988. The Netherlands[41] proposed that States agree in advance to admit investigation teams of the UN Secretary-General on their territory in case of allegations of CBW use. The United Kingdom[42] proposed an agreement on procedures for automatic, routine investigations of such allegations.

4.3 The Binary Chemical Weapons Programme of the United States

The United States had kept a unilateral and informal moratorium on the production of CW since 1969 but, in September 1973, the US Army announced plans for a new generation of chemical weapons, binary chemical weapons. Research on these weapons had been conducted since the end of the 1940s because the production, storage and transportation of "unitary CW", the traditional type, involves a number of risks. As far as the unitary type of CW is concerned, the toxic chemical agent is filled into the container of the shell, bomb or warhead as a final mixture which is disseminated upon impact of the weapon at the target. Binary chemical weapons, on the other hand, contain two relatively less toxic "precursors", each in a separate container in the same weapon. The two substances mix to produce a CWA, usually a nerve agent, during the weapon's way to the target. One of the two substances may be stored separately to be inserted into the weapon only prior to

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37 A/43/74 A.
38 A/43/690, A/44/561.
39 A/44/561.
40 The importance of timely access to the site(s) of the alleged use was repeatedly mentioned by the expert groups developing procedures available to the Secretary-General, and by the UN teams investigating the alleged use of CW in the Gulf War.
41 A/S-15/PV.3.
42 Official text, 7 June 1988. CD/PV.474.

its use. This makes the storage and transportation of binary chemical weapons less dangerous.

Funding for the proposed programme was sought in 1974/75 but this request was not repeated in the following years after the rejection by Congress. In 1981, however, while still refusing to fund the binary weapons plans, Congress approved funding for the renovation of existing facilities at the Pine Bluff Arsenal in Arkansas. They were to be used at a later stage for the production of a 155mm shell which would carry the binary weapons load. In 1982, US President Reagan certified to Congress that binary chemical weapons were in the national interest of the United States[43] and, in 1983, the US Congress authorized a programme for the production of new chemical weapons but did still not appropriate the corresponding funds. This continued until 1985.

In June 1985, Congress approved funding for the binary CW programme, but the following conditions for the final assembly of the munitions were set in the FY86 Department of Defense Authorization Act. (a) The munitions could be assembled only if the CWC had not been concluded. (b) The US President had to certify that the programme was necessary for the national security of the United States and was in the interest of other Nato member States. (c) Performance and safety regulations set by the Department of Defense and other federal safety regulations must be met. (d) Unitary lethal chemical agents and munitions must be destroyed by September 1994 and a plan for their destruction had to be ready by the time the final assembly of binary munitions started. (e) The two components of binary CW must be stored in separate states of the US and must be transported separately.[44]

During the debate on the proposed programme, its supporters stressed its military necessity as well as the aim of inducing the Soviet Union to accept the verification provisions included in the US draft convention of 1984.[45] The military reasons put forward in favor of the programme were: with a view to the alleged Soviet CW threat, a limited but effective chemical deterrent and retaliation capacity must be maintained.[46] This was underlined with allegations of Soviet non-compliance with the BWC and the Geneva Protocol (see section 4.2). It was argued that the United States had stopped the production of chemical weapons in 1969 whereas the Soviet Union had continued manufacturing. The existing US chemical warfare capability was said to be insufficient because parts of the old (non-binary) stocks had deteriorated. In addition, existing delivery systems were said to be of little use and new ones were therefore necessary. It was also argued that an insufficient CW retaliation capacity might lead to an earlier use of nuclear weapons in an armed conflict. And finally, another reason was that binary weapons were much easier and less dangerous to stockpile and transport.

In May 1986, the North Atlantic Council approved NATO force goals which included an endorsement of the US binary programme. However, West-European States were reluctant to modify their policies on chemical weapons. Some countries, among them Belgium, Denmark, Greece, Iceland, Luxembourg, the Netherlands, and Norway, made it clear that they would not station CW on their territory, not even in crisis situations. Italy, the UK and the Federal Republic of Germany expressed varying degrees of acceptance. The agreement

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[43] ACR, 8 February 1982, 704.B.3.

[44] US Public Law 99-145, 8 November 1985.

[45] Arguments used in favor of the programme for binary CW are reflected, for example, in the report by the US President's Chemical Warfare Review Commission (the Stoessel Report) of 11 June 1985 (Washington D.C., Government Printing Office). See also PV.436(USA), PV.436(USA).

[46] The threat posed by the Soviet Union's chemical warfare capability was outlined, for example, in the publications of the Pentagon on "Soviet Military Power" (e.g. the volumes for 1981-1987).

of the Federal Republic of Germany, the only NATO country in Europe which, at present, has US chemical weapons on its territory, seems to have been obtained at the price of a promise by the US President to withdraw US chemical weapons from the territory of the Federal Republic of Germany until 1992. It was also agreed that no binary CW would be stationed in the Federal Republic of Germany in peacetime, and the Federal Republic of Germany has reportedly reserved itself the right to veto the deployment of US binary weapons on its territory in the future. The situation is not entirely clear, however. The agreement between the US and the Federal Republic of Germany was reached in Tokyo in May 1986 during a meeting between West-German Chancellor Kohl and US President Reagan.[47] The withdrawal of US CW stockpiles from the Federal Republic of Germany is currently being prepared and will be completed by the end of 1991. The weapons will be brought to a US facility on the Johnston Atoll (Pacific region) for destruction.[48] As a result of varying commitments expressed by West-European NATO members, there does not seem to be an agreed NATO policy concerning the circumstances under which US binary CW could be transferred from the United States into the territory of West-European States. The procedures for the authorized release of CW in Europe in time of crisis do not seem to be agreed either.[49]

In March 1988, the US Department of Defence reported to Congress that the destruction of unitary CW could only be completed by 1997, not by 1994, as previously planned. It would cost a total of 2.7 billion US$(1988). Some experts believe that the total cost of the destruction programme are likely to exceed 3 billion US$.[50] The US Army, responsible for the destruction of unitary CW stockpiles, announced that they would be destroyed at 8 storage locations in the continental US and at one site on Johnston Atoll in the Pacific Ocean instead of being transported to a central incineration facility for this purpose.[51] In March 1989, it was reported that the destruction facility on Johnston Atoll was nearing the start of a 16-month operational verification test and that proposals to build another full-scale destruction facility at the Tooele Army Depot had been issued.[52] The ground-breaking for the Tooele facility took place in October 1989. Destruction at this site is to begin in 1993.[53]

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47 FBIS-WE, 8 Feb 1988. Deutscher Bundestag, report of 8 December 1988, pp.8536-46. A discussion of the concerns of the Federal Republic of Germany in this context can be found in Brauch, Hans Guenter, Chemical Warfare and Chemical Arms Control, in: AFRES-Press Report, No.34, Mosbach October 1989: Arbeitsgruppe Friedensforschung und Europaeische Sicherheitspolitik. The agreement may imply a modification of US rights under the 1954 troop stationing treaty.

48 Daily Bulletin of the US Mission to the UN in Geneva, 15 September 1989, ACR, 15 October 1989, 704.B.406-407, 27 October 1989, 704.B.409, Washington Post, 15 October 1989, FBIS-WE, 30 October 1989, The Week in Germany (FRG Government), 3 November 1989.

49 See, for example: Defence Committee of the British House of Commons, Statement on the Defence Estimates 1988: Seventh Report, 28 June 1988. Robinson, Julian Perry, NATO Chemical Weapons Policy and Posture, in: ADIU Occasional Papers, No.4, Brighton September 1986, p.80. Hansard (Commons, UK), vol.163, no.16, col 526. A proposal by the Soviet Union not to transfer CW to anyone and not to deploy them in the territories of another State may be understood in this context (Statement of Mr. Gorbachev on 15 January 1986, in: Press Bulletin of the Soviet Mission to the UN in Geneva, 17 January 1986).

50 CD/711(USA).

51 Washington Post, 24 February 1988.

52 A one-third scale prototype of the Johnston facility already exists at Tooele. It is based on the experience gained during the 1970s at the Rocky Mountain Arsenal in Colorado where the US Army destroyed HD, GB and VX.

53 Baltimore Sun, 1 October 1989, Defense Week, 30 October 1989, New York Times, 2 September 1989, Washington Times, 29 August 1989, ACR, end September 1989, 704.B.403.

Destruction methods are to be worked out at the Johnston Atoll facility until December 1990 before use of any other destruction site in the continental US.[54]

Final assembly of the first type of binary munitions, a 155 mm artillery shell, started in December 1987 after the presidential certification of NATO's support and the necessity of this programme for national security, and the submission of plans for the destruction of existing CW stockpiles.[55]

The US programme for binary CW includes the following items:

- The M687 155mm artillery shell to be filled with the nerve agent sarin (GB). This howitzer projectile is the only weapon for which US Congress has appropriated funds for full scale production. It contains one canister of difluor (DF) and one of isopropyl alcohol (OPA). The canister filled with DF would be added to the munition only on the battlefield. The production of this weapon is reportedly behind schedule.[56]
- The BLU-80/B "Bigeye Bomb", to be filled with the chemical warfare agent VX. It will contain one canister of QL and one of sulfur. The production of this bomb and as well as a rocket warhead (XM-135, see below) has not yet started. The former is scheduled to commence in 1991 and the production of the rocket warhead is planned for 1992. The clearance for the bigeye bomb was given by US President Reagan on 19 January 1988 but Congress has authorized only minimal funds pending the certification of readiness for full-scale production. Technical problems with the bigeye bomb have caused the delay.[57]
- A warhead for the XM-135 MLRS (multiple rocket launch system), to be filled with a new semi-persistent CWA named "IVA" (intermediate volatility agent, reportedly similar to sarin).
- Other weapons are under consideration. The US Army plans to intensify research efforts for a long-range standoff CW system.[58]

The US programme for binary chemical weapons has led to some controversial discussion in the Conference on Disarmament, particularly in 1987 and 1988[59]. The Socialist Group[60] stated that the US decision would complicate the question of verification of a comprehensive ban on CW, the definition of chemical weapons in the future treaty, and other aspects of the negotiations. The US programme was also said to affect negatively the spirit of the negotiations. In 1987, however, the Soviet Union stated that the US programme would not affect the Soviet approach to the question of chemical disarmament.[61] On the whole, the US binary CW programme has had, so far, only a limited effect on the multilateral negotiations, and the initial controversy has given way to constructive work in the Conference. After all, it seems that additional technical difficulties associated with binary weapons can be overcome.

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54 Large quantities of obsolete CW have been destroyed earlier at the Rocky Mountain Arsenal in Colorado. A small-scale pilot facility for destruction of unitary CWA has been in operation at the Tooele Army Depot near Salt Lake City since 1979. A destruction facility at Pine Bluff, Arkansas began operations in May 1988 and is about to complete the destruction of the US stockpile of BZ, an incapacitating agent. (Daily Bulletin of the US Mission to the UN in Geneva, 15 September 1989)

55 Congressional record, 20 October 1987, S.14597.

56 E.g. Chemical and Engineering News, 4 September 1989, ACR, 27 July 1989, 704.B.393.

57 ACR, 10 August 1989, 704.B.394, US General Accounting Office, PEMD-89-29, Defence Week, 11 September 1989.

58 ACR, July 1989, 704.E.2.

59 E.g. CD/790(USSR), PV.436(USSR), PV.436(USA).

60 E.g. CD/615.

61 Press Bulletin of the Soviet Mission to the UN in Geneva, 31 December 1987.

4.4 French Policy on Chemical Weapons and Chemical Disarmament

In 1986 and 1987, France was considering the possibility of developing its own modern CW deterrence and retaliation capacity.[62] During previous years, an increasing interest on the military side in a CW rearmament could be noted. Since 1984, the French government was willing to gradually support this interest and the development of a chemical warfare capability was included in the five year defence plan (1987-92) which was passed by the French parliament.

The interest of France in acquiring a modern CW capability was said to be the result of a perceived need to have a means of deterrence in-kind against Soviet chemical weapons and the CW of other States. The latter reflected fears of a growing horizontal spread of CW. Previously, French nuclear weapons were thought to deter other States from using CW against France.

Some experts tend to believe that France possesses chemical weapons, although it has never officially admitted this. On the contrary, in his speech in the UN General Assembly on 29 September 1988, the French president stated that France had no chemical weapons.[63]

In line with the new interest of France in developing and producing modern chemical weapons, a modification of the French negotiating position occurred. To provide, in its view, smaller States with an incentive to join the future CWC and to guarantee their security during the 10 year destruction period, France put forward a proposal for "security stockpiles".[64] It proposed that all parties to the projected CWC have the right to maintain or acquire a limited but militarily significant stockpile of chemical weapons (around 1000 2000 agent tons) during the envisaged transition period (10 years) when CW stockpiles and production facilities would be destroyed. The security stockpile, to be stored at undeclared locations, would have to be produced at a single and limited facility subject to international verification. The security stockpile would provide the parties with a deterrence and retaliation capacity against non-parties to the CWC or other parties as long as the latter had not destroyed all CW. It would be destroyed during the last two of the ten years.

The French proposal implied that countries with smaller stockpiles would not have to eliminate their weapons until larger stocks were reduced to a lower level. This would eliminate existing disparities in the size of CW stockpiles. The levelling out of stockpiles at a lower level could be achieved either by a reduction of Soviet and US stockpiles before the 10 year destruction period started, or by a reduction of the largest stocks during the first five of the proposed 10 year period. A linear destruction of every party's stockpile, starting at the beginning of the 10 year period, was rejected by France because the disproportion of existing stockpiles would leave some countries with no chemical weapons after a short time

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62 E.g. Le Monde, 8 November 1987, 17 March 1988. Or, in the words of French Foreign Minister Raimond (CD/PV.390, 19 Feb. 1987): "...it is in the light of these uncertainties in the negotiations that France does not rule out the possibility of acquiring a limited and purely deterrent capability in this area [chemical weapons]. In accordance with the commitments assumed by France when signing the Geneva Protocol of 1925, this would only be used for retaliation and not for a first attack. In any case, the current negotiations, to which we continue to attach very high priority, could not constitute a moratorium for France, nor for that matter for any other country." See also Washington Times, 20 February 1987, New York Times, 12 March 1987, FBIS-SU, 19 May 1987, Agence France Presse, 7 November 1986, ACR, 19 February 1987, 704.B.215-16, 13 November 1987, 704.B.207.

63 Official text (French Mission to the UN in New York).

64 CD/757, WP.199, PV.390.

while parties with large stockpiles would retain an advantage for a while. Furthermore, France said that the location of stockpiles should not be declared until their destruction.

This proposal by France was sometimes interpreted as reflecting the concerns of a possessor of a small CW stockpile. It was regarded by some observers as a confirmation that France possessed or was intending to produce chemical weapons.

However, the French proposal challenged a long-standing consensus, reflected in the rolling text, that there would be a total ban on the production of CW as soon as the CWC has entered into force. It was therefore criticized by most other delegations. It was thought to encourage the spread of chemical weapons and undermine the purpose of the projected Convention. It would furthermore create a negative negotiating climate and would complicate the question of verification.

Following the overwhelmingly negative reaction and a review of the French policy, the security stock proposal was formally withdrawn by President Mitterand of France in a speech in the UN General Assembly in September 1988. He stated that France was ready to renounce, as soon as the Convention enters into force, any possibility of producing chemical weapons. He said that all CW production facilities and stockpiles must be subject to international verification before they were destroyed. The French President also stated that France had no chemical weapons. Later on, he said that: "[I] would like to affirm [the] principle: We will not deprive ourselves of any type of weapon held by other powers if we have the technological and financial means of producing it."[65] In April 1989, in an article published in the NATO Review, the French Foreign Minister wrote that France "is carrying out research aimed at maintaining a capability in the old technology but, in view of present circumstances, is not intending to go beyond that".[66] In concrete terms, these statements indicated that France intended to keep the option to produce chemical weapons before the entry into force of the CWC. This position would be in conformity with the (non-binding) provisions contained in the current rolling text.

The withdrawal of the French proposal notwithstanding, the problem of "undiminished security" during the 10 year destruction or transition period remains. It was the reason for the French proposal and is widely recognized as a legitimate concern. (See part two, chapter II) Like the majority of other delegations to the CD, France is now of the opinion that undiminished security should be achieved by a combination of measures such as a balanced order of destruction of existing CW stocks and production facilities, a verification system capable of quickly indicating significant violations of the treaty (early warning), and assistance to victims of a CW attack. The status of negotiations on these issues as well as proposals made by the delegations will be discussed in part two of the report.

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[65] Defense Nationale (Paris), November 1988. He also said: "The Soviet Union has large stockpiles. The United States is rapidly trying to make up its lag. We in France are a long way behind. Having said that, I do not think it reasonable to push France into an untenable position in which it would continue to produce chemical weapons when the others had stopped doing so."

[66] NATO Review, April 1989.

4.5 The Horizontal Spread of Chemical Weapons

Another issue which has influenced negotiations on the CWC is the horizontal spread[67] of chemical weapons. During the last 20 years, many countries have developed a modern chemical industry. This has provided them with the technical means and know-how to produce chemical weapons, including nerve agents, and has increased the number of potential CW possessors.[68]

Since the beginning of the 1980s, an increasing number of allegations of the possession of chemical weapons or their use have occurred.[69] 10 to 20 countries, in addition to the declared possessors of chemical weapons (Soviet Union and United States), allegedly own these weapons today.[70] Many of the alleged countries are located or involved in crisis spots of the world, the Middle East and Southeast-Asia in particular.

Notwithstanding the controversial nature of and little objective information on many of the allegations, a certain spread of CW has indeed taken place. The Gulf War is an example. In addition to concerns over the spread of chemical substances which could be used for CW purposes, there are growing concerns over the spread of technology for means of CW delivery, including ballistic missiles. This would make the implications of this trend much more serious because the military utility of CW depends on means of delivery.

The spread of CW has received high publicity. However, the vast majority of allegations made in this context remained unverified due to the lack of international verification procedures. Regarding the fact that most information on allegations stems from the secret sources of intelligence services, but also considering that the subject lends itself to easy abuse for political purposes, one has to be very cautious in making assessments.

Another factor which makes an assessment of this trend unreliable is the difficulty of proving CW possession if the chemical weapons acquired are not used. If Iraq had not used CW, conclusive evidence on the Iraqi CW programme might never have been obtained.

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67 Horizontal spread of CW means that the number of States possessing chemical weapons is increasing.

68 In the SIPRI Yearbook 1987 (p.104), for example, it was reported that a search of the relevant literature had revealed that at least 37 different countries had been identified over the past 20-odd years on purportedly good authority as possessors of chemical weapons. In addition, Sipri Yearbook 1988 (p.103) listed 20 States known to have been past possessors or repositories of chemical weapons approximately during the years 1940-60. They include Australia, Canada, China, Czechoslovakia, Egypt, France, Germany, Hungary, India, Indonesia (Netherlands East Indies), Italy, Japan, Kenya, Nigeria, Poland, Singapore (Straits Settlements), South Africa, Soviet Union, United Kingdom and United States. (Most of them have probably not kept the stockpiles.) The Arms Control Reporter (July 1989, 704.E.5) lists countries and NGOs which allegedly possess and/or have used CW in the 1980s.

69 A more recent example were allegations that a facility in Rabta (Libya) was being built, mainly with Western equipment, to manufacture chemical weapons. The allegations led to high tensions between the United States and Libya but also to political consequences in some Western countries in which firms, having supplied equipment for this facility, are located. For details on the allegations, see, for example, the SIPRI Yearbooks or the ACR.

70 E.g.: The statement of CIA Director Webster on 19 September 1988 (Reuter from San Francisco). Tass, 9 April 1986. Statement of the United Kingdom in the Conference on Disarmament on 15 July 1986. Richard Clarke, US Assistant Secretary of State for Politico-Military Affairs, said that 21 to 22 countries in the world had CW stocks (Statement made at a news conference in Canberra, 19 September 1989, Daily Bulletin of the US Mission to the United Nations in Geneva, 18 September 1989, Story EU2140919). See also the statement of US President Bush in the UN General Assembly in September 1989 (Daily Bulletin of the US Mission to the UN in Geneva, 26 September 1989), or the SIPRI Yearbook 1987, p.104.

Concerns over the growing horizontal spread of CW have had, although there were few facts and many assumptions, concrete consequences. Socialist and Western countries began to install export controls on certain chemicals and technical equipment, especially after it became clear that Iraq had used chemical weapons in the Gulf War. After the supply lines to Iraq and later Libya had been detected, export controls were strengthened. They have, so far, been established only on a national level but are coordinated on an international one.[71]

The "Australia-Group"[72] which includes 20 Western and Neutral countries with an important chemical industry, and the Commission of the European Communities, is the most prominent international arrangement in this context.[73] The group meets informally since 1985. At present, it maintains a warning list of more than 40 chemicals, and a "core-list" of nine chemicals to which the 20 countries and the European Communities apply formal export controls. The warning list has been distributed to private chemical companies to make them aware of the problem and to facilitate their cooperation with governments in this regard. Most of the listed chemicals are used for the production of pesticides and insecticides but could be used (as "precursors") for the production of CW. The efforts of the "Australia-Group" are based on a "gentlemen's agreement" (informal agreement). The individual countries are free to maintain longer lists of chemicals which are subject to national export controls. Additional chemicals are taken from the Australia Group's warning list. There is a trend to enlarge the national lists[74].[75]

The Socialist countries have implemented export controls as well.[76] The Soviet Union, for example, decided on a statute on the export of chemicals which have a peaceful purpose but can be used to produce chemical weapons. This decree was adopted on 23 January 1986 and requests guarantees from importing countries that the chemicals are not used for weapon purposes. It also requires assurances that the chemicals are not be re-exported without the permission of the responsible Soviet Trade Association.[77] Export controls adopted by Socialist countries are coordinated, to a limited extent, by what has been called the "Leipzig Group".[78]

Joint summit statements by the Soviet Union and the United States[79], Security Council resolutions[80], and the continuing US-Soviet bilateral consultations on the question of non-proliferation of CW, suggest that the positions of the two declared CW possessors on this question are very close. The summit communique of June 1988[81], for example, calls upon all nations with the capability of producing chemicals which could be used for the

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71 A good overview of the problem of CW proliferation and efforts to prevent it is given by: Harris, Elisa D., Stemming the Spread of Chemical Weapons, in: The Brookings Review, Winter 1989/90, pp.39-45.

72 The name of the group stems from the fact that it usually meets in the embassy of Australia in Paris.

73 All countries of the European Communities (12), and Australia, Austria, Canada, Japan, New Zealand, Norway, Switzerland and the United States.

74 The United States, for example, applies export controls to more than 40 different chemicals from the Australia Group's control and warning list. The Federal Republic of Germany and Japan have also extended their lists of chemicals to which export controls apply (PV.491, The Week in Germany (Government of the Federal Republic of Germany), 6 October 1989).

75 Efforts to coordinate export controls have also been undertaken within the European Communities. All EC members are members of the Australia-Group. Therefore, the EC has merely codified into its laws what already exists via the Australia Group. (See, for example PV.491(Federal Republic of Germany)).

76 E.g. PV.440(Romania), PV.409, PV.457, PV.478(Bulgaria), PV.503(Poland), PV.485(GDR), CD/878(CSSR).

77 International Affairs (Moscow), 4 April 1986.

78 ADN (GDR press agency), in: FBIS-EE, 25 June 1987.

79 E.g the summit communique of 1 June 1988 (CD/846).

80 E.g. S/Res/620, S/Res/612.

81 CD/846.

manufacturing of chemical weapons to institute stringent export controls to inhibit the proliferation of CW.

In June 1988, Australia announced a regional initiative in an effort to prevent the spread of chemical weapons in the Pacific region, and to inform non-members of the CD about the negotiations.[82] A regional seminar was held in Canberra on 2-4 August 1989. It was attended by more than 20 countries of the South Pacific and Southeast-Asia.[83]

It will be noted that national export controls will become part of the projected Convention and be internationally supervised. Austria proposed that this could be done with the help of a multilateral information center which would support countries in establishing their export control systems. It could also arrange the exchange of information and inform the parties of disruptions in this context.[84]

Efforts to control the export of chemicals and technology which could be used for CW purposes grew out of the Gulf war and increasing concerns over the horizontal spread of CW. Export controls established so far have been implemented on a national level and with the help of limited multilateral coordination. If all major industrialized countries, including the Socialist countries, participated in this undertaking, export controls could be relatively effective in preventing the horizontal spread of chemical weapons. And even if they could not prevent the spread of CW in every case, they would increase the costs of acquiring a CW capability.

It is obviously difficult, however, to render export controls effective because there are differences, within the Australia Group for example, over the degree of commitment, over substances and technology to be controlled, over the control of re-exports, but also over the legal and technical implementation of these measures. Even a more institutionalized approach, for example an international body to certify chemical facilities or an international export licensing agency[85], might not be able to stop the proliferation of CW. More and more countries are developing a modern chemical industry (Argentina, Brazil and India, for example) and they may not be very interested in implementing restrictive export policies during this phase.

One of the most controversial aspects of measures to prevent the spread of CW is that they are regarded, particularly by developing countries, as discriminatory. They are said to prevent the transfer of technology to developing countries and perpetuate the situation where some countries maintain chemical weapons while others are prevented from doing so. This element of inequality has plagued the Nuclear Non-Proliferation Treaty since its conclusion in 1968. Some countries fear that an increasingly sophisticated regime of export controls could become a substitute for the CWC.

In the final analysis, most countries of all political groups in the CD agree that the most effective and lasting solution to the problem of chemical warfare can only be a global, comprehensive and verifiable ban on the possession of chemical weapons and the destruction of existing CW stockpiles and production facilities.[86] In this perspective,

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82 ACR, 704.B.294, FBIS-SEA, 12 Nov 1988.

83 A report on the initiative and the seminar in August 1989 was submitted by Australia to the First Committee of the UN General Assembly. (A/C.1/44/5)

84 E.g. PV.500(Austria).

85 Such a body was proposed by some US government officials (ACR, 23 January 1989, 704.B.364.2)

86 This view is also held by the Soviet Union and the United States (see, for example, the joint statement of September 1989, A/C.1/44/2).

measures to prevent the further spread of CW may only have a temporary character. Many countries recognize that more CW possessors may render the conclusion of a universal treaty more difficult because a larger number of States would have to be persuaded to abandon their chemical warfare capability. It is easier to give up an option than to destroy existing arms.

4.6 Proposals For Chemical Weapons Free Zones (CWFZ)

In addition to export controls, another means to prevent the spread of chemical weapons and possibly to promote the conclusion of a comprehensive and universal ban on CW are formally agreed CWFZ.[87] CWFZ have been proposed for several regions including Central Europe (see below), the Middle East (proposed by Iraq[88], Israel[89], and Syria[90]), the Balkans (proposed by Romania, Bulgaria and Greece[91]), Latin America (proposed by Peru[92]), the Pacific region (proposed by Australia[93]), Southeast-Asia (proposed by Vietnam and others[94]), the Korean peninsula (proposed by North Korea[95]), and Africa (proposed by South Africa[96]).

The most prominent proposal has been the one for a CWFZ in Central Europe.[97] The idea of a CWFZ was first discussed in sessions of the Pugwash chemical warfare study group during the 1970s and a proposal was included in the 1982 report of the Independent Commission on Disarmament and Security in Europe (the Palme Commission).[98] In 1985, this proposal was transformed into an outline agreement between the ruling Socialist Unity Party of the GDR and the opposition Social Democratic Party of the Federal Republic of Germany.[99] The proposed CWFZ was to include Belgium, the CSSR, the GDR, the Federal Republic of Germany, Luxembourg, the Netherlands, Poland and perhaps other States, but in any case the GDR, the Federal Republic of Germany, and the CSSR. The parties to the proposed agreement would clear their territory of chemical weapons, keep it free of these weapons, foreswear the production or acquisition of CW, and prohibit other States from stationing or producing CW on their territory or transferring these weapons through their territory. They would call upon other States to respect the CWFZ and never use or threaten to use chemical weapons against this area. Compliance with the agreement would be verified through national and international procedures. A permanent international

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87 For a detailed analysis of the proposals for CWFZ see: Trapp, Ralf, ed., Chemical Weapon Free Zones?, in: SIPRI Chemical and Biological Warfare Studies No.7, Oxford 1987: Oxford University Press.

88 PV.504. Iraq proposed a zone free of chemical **and** nuclear weapons. This reflects the linkage, proposed by some Arab States, of chemical and nuclear disarmament.

89 SSOD-3, A/S 15/PV.11.

90 Syria proposed a zone free of all weapons of mass destruction. A/44/PV.16, 6 Oct.1989.

91 CD/919, PV.388(Bulgaria), PV.440(Bulgaria), CD/648(Bulgaria).

92 PV.315.

93 International Herald Tribune, 13-14 August 1988.

94 PV.498.

95 GICCW/P/49(Prov), 21 September 1989 (Canberra Conference).

96 The Citizen (Johannesburg), 10 January 1989.

97 This discussion is reflected in a number of CD documents (CD/437(CSSR), CD/435(Socialist countries), CD/437(CSSR), CD/748(USSR), CD/755(GDR), CD/643(GDR), CD/644(FRG), CD/645(Bulgaria), CD/646(CSSR,GDR), CD/699(Bulgaria), CD/700(Hungary), CD/648(Bulgaria,Romania), CD/675(Federal Republic of Germany), CD/686(Poland).

98 Common Security: A Programme for Disarmament, The Report of the Independent Commission on Disarmament and Security Issues, London 1982: Pan Books.

99 For a zone free of chemical weapons in Europe, joint political initiative by the Socialist Unity Party of Germany and the Socialist Democratic Party of Germany, Verlag Zeit im Bild: Dresden 1985.

commission would be established. It would investigate, including by on-site verification, any suspected violation of the agreement if doubts could not be removed within a defined period. The CWFZ would not affect membership in the two military alliances. The parties to the agreement would undertake to join the future CWC.

The advocates of the proposed CWFZ in Central Europe believed that it would have a positive influence on the negotiations on the CWC and might serve as a test-case for verification arrangements. The CWFZ would also limit the military utility of CW because they would not be immediately available on the battlefield in an armed conflict and could therefore not be used for a surprise attack.

The proposal for a CWFZ in Central Europe was supported by the Soviet Union and other Socialist countries. The GDR and the CSSR repeatedly suggested to hold negotiations on the subject with the government of the Federal Republic of Germany.[100] The proposal met with predominantly negative reactions by most Western countries.[101] A Soviet proposal, made in 1984, for a NATO-WTO effort to free Europe of chemical weapons[102] received a similar response. Notwithstanding, the proposal for a CWFZ in Central Europe is still upheld[103].

Criticism centered on four points. First, a CWFZ in Central Europe would not reduce existing CW stockpiles and production facilities. Second, a CWFZ would only aggravate the verification problem encountered in the negotiations in the CD. Third, it would not reduce the threat of chemical warfare because chemical weapons could be re-deployed in Central Europe within a short period if they were not destroyed. Fourth, such an agreement would only detract from efforts in the CD.

4.7 The Position of the Socialist Countries

Until the end of the 1970s, the Socialist countries and the Soviet Union in particular were of the opinion that national means of verification and some (ill-defined) international procedures were sufficient for a comprehensive ban on CW. Disagreement between Socialist and Western countries on this subject was often hidden in the formula "combination of appropriate national and international measures" [104]

In 1979, the Soviet Union and the United States reached agreement on the possibility of on-site inspections upon request. But the Socialist countries held that these requests could be refused by the requested State.[105] The approach of the United States to verification, on the other hand, formalized in the US draft convention submitted in 1984, including provisions on on-site inspections upon request without the right of refusal by the requested party, was rejected by the Soviet Union. It stated that the proposed measures were too intrusive and would affect peaceful economic activities.

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100 E.g. CD/643(CSSR/GDR), Financial Times, 21 April 1988.

101 E.g. PV.315(Federal Republic of Germany), CD/644(Federal Republic of Germany), International Herald Tribune, 13 December 1985, Financial Times, 21 April 1988. Trilateral consultations between the Federal Republic of Germany, the GDR and the CSSR on this issue have taken place in Geneva, without any results.

102 CD/437.

103 E.g. PV.527(CSSR).

104 A/2662(XXV).

105 CD/48, PV.46.

The position of the Socialist Group on intrusive verification measures became more flexible at the beginning of the 1980s. A first step was taken during SSOD II in 1982 when the Soviet Union accepted the idea of systematic international on-site verification of the destruction of CW and the (permitted) production of certain chemicals at a "Single Small Scale Facility". This facility was to be the only installation with a limited capacity where a party would be allowed to produce super-toxic lethal chemicals for non-hostile purposes (e.g. research on the protection against CW).[106] In 1984, the Socialist countries accepted international on-site inspections on a permanent basis for the monitoring of destruction sites.[107] They did, however, not agree to on-site verification to monitor the non-production of chemical weapons, a long-standing demand of most Western and some Neutral and Non-Aligned countries.

Changes in the Soviet position on verification accelerated in 1986 and 1987. In 1986, the Soviet Union announced its willingness to declare the location of its CW production facilities once the Convention has entered into force.[108] It stated that it was ready to accept systematic verification of the cessation of operations at CW production facilities.[109] In February 1987, it agreed to identify the locations of its CW stockpiles and to allow their inspection by international inspectors once the treaty has entered into force[110]. It also accepted international and mandatory on-site verification upon challenge in case of suspected use of chemical weapons, and for declared facilities.[111] In March 1987, it acknowledged, for the first time, that it possessed chemical weapons. It had neither confirmed nor denied this so far. In April 1987, the Soviet Union announced that it had stopped the production of chemical weapons and was constructing a plant for the destruction of CW. It stated that it had no chemical weapons outside its territory, and that the other members of the WTO had never produced chemical weapons and never had these weapons on their territory.[112] The latter has repeatedly been disputed by some Western countries.[113]

In August 1987, Soviet Foreign Minister Shevardnadze stated that the Soviet Union was willing to accept on-site inspections on challenge at short notice and without the right of refusal by the requested party.[114] A proposal by the United Kingdom[115] had paved the way to this change in the Soviet position. The UK had proposed to provide the challenged party with the possibility to propose alternative measures to full access to a facility during the requested inspection. Alternative measures might include outside observation of an installation, collection of samples around a facility, and other measures. Later, the Soviet Union announced that it was willing to accept the proposal of the United States[116] which provided for mandatory on-site inspections upon challenge anytime and anywhere (no

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106 CD/294. Agreement on the Single Small Scale Facility was reached in 1980 (CD/112).

107 PV.243(USSR).

108 Statement of Secretary General of the CPSU Central Committee, Mr. Gorbachev, 15 January 1986 (Novosti Press Publishing House, Moscow 1986).

109 PV.358(USSR).

110 PV.389.

111 PV.389.

112 Statement of Mr. Gorbachev in Prague, 10 April 1987. CD/751. Soviet Deputy Foreign Minister Karpov said, on 28 December 1988, that the Soviet Union had stopped the production of chemical weapons in spring 1987 (FBIS-SOV 3 January 1989). Foreign Minister Shevardnadze stated at the Paris Conference in Jan 1989 that the destruction facility would soon be completed and destruction would commence on an experimental scale (New York Times, 9 January 1989). Mr. Karpov later said that the speed of destruction would depend on progress in the negotiations on CW (Financial Times, 11 January 1989).

113 See, for example, the detailed assessment of the "Bundesnachrichtendienst" of the Federal Republic of Germany which was leaked to the press (ACR, 18 October 1989, 704.B.407-408).

114 PV.428.

115 CD/715.

116 CD/500, especially Articles X and XI.

alternatives) within 48 hours and without the right of refusal by the requested State.[117] It therefore agreed to more intrusive verification measures than those proposed by the United Kingdom.

The Soviet Union invited the delegations to the CD to visit the Soviet CW facility at Shikhany.[118] The purpose of this visit was to show standard items in the Soviet CW arsenal and to examine technology for the destruction of chemical weapons at a mobile installation. The invitation also served to underline the new openness of the Soviet Union and its new approach to verification, and was meant to create confidence.[119] The visit by around 130 representatives from 51 States and 50 journalists took place from 3 to 5 October 1987 and was welcomed by most countries. Some critics maintained, however, that the Soviet Union had not shown all types of chemical weapons which were in its arsenal.

An invitation to visit the Soviet Union's first CW destruction facility which was being constructed near the city of Chapayevsk in the Volga region was announced. At the Paris Conference, Foreign Minister Shevardnadze said that the elimination of CW at this facility would commence on an experimental scale as soon as it was completed. At the moment, the Soviet Union has difficulties in commencing operations at the Chapayevsk facility which was completed in February 1989.[120] This is reportedly due to environmental concerns of the population living in the area already heavily polluted.[121] In September 1989, it was reported that the facility would not be used for the destruction of CW but would be converted to a training center for the destruction of CW.[122] Therefore, as different from the United States, the Soviet Union has, at present, no CW destruction capability sufficient to implement an agreement on deep cuts in CW stockpiles. This may pose problems if a multilateral Convention or a bilateral agreement with the United States is concluded within the next few years.

At the end of 1987, the Soviet Union declared that its CW stockpile did not exceed 50'000 tons.[123] Soviet experts said that this size roughly corresponded to the size of the US stockpile. The Soviet Union also stated that it had no binary chemical weapons. The announcement by the USSR was welcomed by many countries. Some assessed, however, that the figure provided was grossly understated. NATO estimates of the Soviet CW stockpile have usually been higher, up to 300'000, in some cases even 700'000 agent tons.[124] No sources of information for this figure have been indicated. At the end of 1989, as the implementation of a data exchange between the Soviet Union and the United States approached, the United States has reportedly scaled its estimate down to around 50'000 tons. The Soviet Union has so far declined the disclosure of the locations of its CW stockpile but has asked the United States to indicate the size of its stockpile in exchange for

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117 PV.429.

118 PV.428.

119 See part two, chapter XIV.

120 FBIS-SU, 6 February 1989. Some US officials who visited the site said that it was only a pilot facility (ACR, 8 January 1989, 704.B.334).

121 Press Bulletin of the Soviet mission to the UN in Geneva, 1 September 1989.

122 TASS, in: FBIS-SU, 6 September 1989, Washington Times, 29 August 1989, Statement of the Soviet representative in the First Committee of the UN General Assembly on 30 October 1989 (official text).

123 CD/790. On 26 March 1988, it was added that the 50'000 tons related to toxic substances, i.e. the CWA as such. The CW displayed at the Shikhany facility included munitions for cannons, rocket artillery, warheads for tactical missiles, aircraft munitions, and hand-grenades. CWA were mustard gas, lewisite, sarin, soman, VX and CS.

124 See, for example, the British annual defence White Paper, released on 2 May 1989 (Statement on Defence Estimates 1989, Vol.1). It was questioned whether the Soviet Union had shown all types of CW in its arsenal during the visit to the Shikhany facility, and whether no Soviet CW were stationed outside its territory.

a Soviet declaration of the locations.[125] The United States has declared the location of its stockpile, but not the aggregate size of the latter.[126] (See part two, chapter XIV)

The availability of accurate information on existing CW stockpiles is a major difficulty which needs to be overcome to plan the destruction process and verification activities under the projected Convention. Information on CW stockpiles is now available only in a fragmentary and unreliable form. In November 1987, the Soviet Union said that it would be willing to accept proposals made by Western countries at an earlier stage and exchange data on CW stockpiles and production facilities even before the Convention enters into force.[127] After bilateral consultations with the United States, this has resulted in a bilateral US-Soviet agreement, in September 1989, on the exchange of data. This will include, in a second phase and before the entry into force of the CWC, inspections of each other's facilities to verify the data provided (see part two, chapter XIV).

The change in the position of the Socialist Group[128], basically a result of internal changes in the States concerned, produced a major step forward in the negotiations. They had been deadlocked for many years over whether verification measures must include international on-site inspections, and if, whether inspections, when requested by another party, would be mandatory, at short notice, and could take place anywhere on the territory of the requested State without the right of refusal by the latter. Many countries, Western ones in particular, had been of the view that only such verification procedures would ensure confidence in the treaty. They would provide the parties with objective information about each other's compliance. "National verification measures" (the State controls itself) and the use of "national technical means" (satellites, "human intelligence" etc.) were deemed insufficient. The first for reasons of objectivity, the second mainly for technical reasons. The different views of Socialist and Western countries in this respect have now been overcome by the change in the position of the Socialist countries. The question of verification is not entirely solved, however, as part two of the report, particularly chapter VII and X, will show.

4.8 Two Problems Connected With Intrusive Verification

The US draft convention, submitted in 1984, included provisions on intrusive verification measures which were supported by most Western countries. The Soviet Union and other Socialist countries first rejected this approach, but, in 1987, changed their position and accepted the US proposal. Still, many details concerning verification are not yet agreed. Partly responsible for this is a dilemma which makes intrusive international verification of compliance with the CWC difficult.

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125 Washington Post, 24 September 1988.

126 CD/849.

127 FBIS-SU, 11 December 1987.

128 The new Soviet position on verification was well reflected in a statement by Soviet Foreign Minister Shevardnadze in January 1989: "Over the past two years, our position has evolved in a radical way from manufacturing chemical weapons to abandoning their production altogether, from hushing up data on the existing stockpiles to publishing such data, from seeking to protect chemical production and storage facilities from the eyes of others to recognizing the concept of comprehensive verification and inviting foreign observers to watch the elimination of chemical weapons. And should anyone say to us that we waited too long before stopping the production of chemical weapons and imposing other prohibitions on them, we would say: yes, we did wait too long." (Cited in: New York Times, 9 January 1989.

Some delegations, mainly Western ones, argue that verification procedures so far envisaged are still incomplete. Some experts even went as far as to say that a comprehensive CWC would not be verifiable.[129] There are still a number of perceived gaps in the routine verification system as contained in the rolling text[130], and a few States are not convinced that challenge inspections, as the last resort mechanism, could fill these. Even with this option at hand, it might be difficult to find the "smoking gun", or an alarm might not even be "triggered" so that an inspection would be requested.

In any case, it is not clear "how much verification is enough". There is no agreement on how sensitive to violations and how intrusive the verification system must be. One of the principles is that verification procedures should be tailored to ensure the security of the parties to the regime. They must therefore be capable of detecting militarily significant violations of the treaty which could be a threat to the national security of the parties. But what does this mean? Agreed estimates of significant quantities of CW, for example, are difficult if not impossible to produce and it is unlikely that a consensus on particular figures will be found in the future. Estimates would certainly depend on the geographical location of a country, its strategic situation, threat perceptions and other factors. In addition, there are different assessments of the military value of chemical weapons as a whole. All this makes a definition of fundamental requirements concerning verification very difficult.

One may conclude that the more intrusive the verification procedures, the safer the parties to the treaty. However, there are two main concerns which have been expressed about intrusive verification measures.

One is that the right to request on-site inspections ("inspections on challenge") could be abused for political purposes, e.g. to embarrass another country or to gather intelligence. This problem has been stressed particularly by a few Non-Aligned countries, including Argentina, Brazil, India, and Yugoslavia, but also China. For Socialist and Western countries, this problem appears to be less important, particularly since East-West relations have improved remarkably since the mid 1980s and the views on intrusive verification are very similar (see section 4.7). The Ad Hoc Committee on Chemical Weapons is still discussing measures to prevent the abuse of the challenge procedure. Possible approaches will be discussed in part two, chapter X.

The second concern is that intrusive verification activities could lead to the loss of confidential proprietary information.[131] This could, in a competitive field such as the private chemical industry where research and development is crucial to commercial success, have grave financial implications. This problem was mainly stressed by Western countries because they might be the most affected in this respect (nature of the Western economy). (See part two, chapter VII)

There is hence a dilemma. On the one hand, very intrusive verification measures are deemed necessary to ensure the security of the parties to the projected Convention. On the other hand, there is an increasing awareness that one has to "pay the bill" for this

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129 E.g. the report on "Discriminate Deterrence" (public report to the US Secretary of Defense and the Assistant to the President for National Security Affairs by a panel chaired by former Under-Secretary of Defense Fred Ikle and Prof. Albert Wohlstetter (University of Chicago), Washington D.C.: Government Printing Office).

130 CD/881.

131 The unwanted disclosure of other confidential information (e.g. military) was occasionally mentioned as well.

verification system. However, the work undertaken in the Ad Hoc Committee (see in particular chapters VII and X of part two) indicates that appropriate solutions can be found.

4.9 The Position of the Chemical Industry

An important factor which influences the position of many countries, Western ones in particular, is the views of the chemical industry.[132] This was indicated in the previous section by referring to the problem of confidential commercial information.

On 12 October 1987, the Board of Directors of the US Chemical Manufacturers Association (CMA), which represents around 90% of US manufacturing of chemicals, announced its support for the projected CWC. At the same time, it urged the US government to press for measures to protect confidential commercial information in the context of international verification activities. It spoke against the expansion of envisaged verification measures to ensure the non-production of CW and stated that a fool-proof routine verification system was not feasible.[133]

Other associations of the chemical industry in Western countries have expressed similar views (for example CEFIC (Europe) and JCIA (Japan)[134]). Most of them offered the advice of the chemical industry on issues such as the protection of confidential information during verification activities, the elaboration of protocols to govern inspections, data reporting methodologies, and questions concerning the Technical Secretariat of the organization to be established under the Convention.

The interest of the chemical industry in the negotiating process began at a relatively late stage. This can be explained by the fact that the negotiations accelerated remarkably since 1986/87 and a Convention suddenly happened to be within reach.[135]

The support expressed by the chemical industry was a hard choice. The projected treaty would imply additional work for the chemical industry and therefore costs. The CWC would lead to a certain risk of the loss of commercially viable information during verification activities. This might have additional financial implications.

However, the work of the Conference on Disarmament has, during recent years, received useful inputs from the chemical industry. Several meetings between its representatives and the negotiators have been held in Geneva since 1987. On 26 - 30 June 1989, for example, representatives of the US CMA, the Canadian Chemical Producers Association, the Australian Chemical Industry Council, CEFIC, and JCIA, convened a meeting on questions concerning the CWC. They met among themselves and with CD delegations. The Pugwash working group on chemical weapons has provided another platform for the exchange of views between the representatives of the chemical industry and CD delegations. The most

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132 The present views of the Western chemical industry are well reflected in: Olson, Kyle B., The U.S. Chemical Industry Can Live With a Chemical Weapons Convention, in: Arms Control Today, November 1989, pp.21-25.

133 Text from CMA. PV.469(USA).

134 See, for example, the statement of CEFIC on 7 December 1987. Meetings of experts from the chemical industry of the United States, Canada, Western Europe and Japan were held in Switzerland in 1987, 1988 and 1989.

135 See, for example, ACR, 12 May 1988, 704.B.291.

comprehensive dialogue so far has taken place in Canberra (Australia) in September 1989. This event led to the first joint expression of support for the CWC by the world's chemical industry. It will be discussed in section 4.11.

Other inputs are provided through the cooperation between governments and the chemical industry on a national level. Examples are seminars which are attended by representatives of the chemical industry and government officials[136], or the cooperation between governments and the chemical industry in the context of experimental inspections on a national level, conducted to test verification procedures included in the rolling text.

In addition to providing CD delegations with the expertise of the chemical industry, this dialogue may increase the attention of the chemical industry to the problems of chemical disarmament, and may, in the final analysis, facilitate the adoption of the Convention by national parliaments by removing in advance possible sources of opposition.

4.10 The Paris Conference of 7 11 January 1989

The repeated violations of the Geneva Protocol, especially during the Gulf War, and their consideration in the UN Security Council and the General Assembly left the widespread impression that the authority of the Protocol had suffered. Growing fears about the further spread of chemical weapons and the slow pace of negotiations on the projected CWC raised additional concerns. This led US President Reagan to propose, at the beginning of the general debate in the UN General Assembly in 1988, a conference open to all States. It was to discuss ways and means of strengthening the Protocol. French President Mitterand supported the idea and France, in its capacity as the depositary of the Protocol, subsequently invited all interested States to a conference on the prohibition of chemical weapons, to be convened in Paris.[137]

The Paris Conference[138] brought together, for the first time, the parties to the Geneva Protocol of 1925 and other interested States with the exclusive aim of discussing the issue of chemical weapons. 149 States, including 77 ministers, participated in the event. Its purpose was to ensure that chemical weapons would never be used again, and to provide a strong impetus to on-going negotiations in the Conference on Disarmament. The Paris Conference received much publicity and was regarded by most participants as a great success. Its final act[139], adopted by consensus, strongly condemned the use of chemical weapons, reaffirmed the validity of the Geneva Protocol, supported the early conclusion of a comprehensive ban on chemical weapons, and expressed support for the role played by the UN Secretary-General in investigating alleged violations of the Protocol (see section 4.2).

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136 E.g. a seminar, organized by the US CMA and the US Government for member companies and trade associations to acquaint them with the negotiations in the CD but also CW proliferation issues.

137 Statement of France in the UN General Assembly on 20 October 1988. President Mitterand said that the purpose of the conference would be to "solemnly reaffirm the commitment not to use chemical weapons, to prevent their proliferation, to encourage new accessions to the Protocol, to improve investigative procedures - in short, to indicate a common desire for the success of the work currently being carried out at Geneva within the context of the Conference on Disarmament" (official text). PV.484(France).

138 The official title of the conference was "Conference of States Parties to the 1925 Geneva Protocol and Other Interested States on the Prohibition of Chemical Weapons".

139 CD/880. This document contains the final act, lists the participants, and indicates some organizational details of the event. PV.484(France).

Other results of the Conference, not reflected in its final act, were that it provided an opportunity to the participants to clarify their national policy on chemical weapons. The number of States which have declared their non-possession of chemical weapons rose to 67 until December 1989.[140] A considerable number of new declarations were made during the Paris Conference. CWFZ were proposed by North-Korea, Israel, and South Africa (see section 4.6). 11 States, including both Koreas, became parties to the Geneva Protocol. Three others announced their intention to do so. The number of parties to the Protocol therefore rose to 121 (as of end July 1989)[141] And finally, two States withdrew their reservations to the Protocol.[142]

Some issues caused controversial discussions. Among them were efforts to control the spread of chemicals and technologies which could be used for CW purposes. These measures were criticized by the majority of Non-Aligned countries due to their perceived discriminatory nature. They were regarded as potentially detrimental to the transfer of technology for peaceful purposes to developing countries and were said to favor States which already possessed chemical weapons. Some countries expressed the fear that these measures could divert efforts away from the negotiations on a total ban on CW. This controversy was hidden in the formula "risk of use of chemical weapons as long as such weapons remain and are spread".

Another problem which appeared at the Paris Conference and has still not been solved was that some countries tried to link chemical and nuclear disarmament. Some Arab countries stated that, facing a nuclear threat by Israel, they could not renounce chemical weapons while Israel was allowed to keep its nuclear ones. Chemical weapons were therefore implicitly regarded as a means to deter a nuclear attack. This link was strongly questioned by most other countries. They held the view that there was a big difference in the destructive power of the two categories of weapons. To use the concept of deterrence in this context would therefore not make much sense. Moreover, arms control history proves that linking very different categories of weapons has never produced satisfactory results. Among others, the Soviet Union, the United States, the United Kingdom and France blocked a proposal to mention, in the final act, a link between nuclear and chemical disarmament.[143]

It was criticized that the Paris Conference had stopped short of taking more concrete action against the recent violations of the Geneva Protocol and did not condemn Iraq for its use of CW. However, to assure the participation of all significant countries in the Conference, it had been agreed in advance that the event would not be used as a tribunal against Iraq or Libya (controversy over the facility at Rabta).

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140 They include as of December 1989: Afghanistan, Argentina, Australia, Austria, Bahrein, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Cook Ireland, Island, Cyprus, Czechoslovakia, Denmark, Egypt, Ethiopia, Finland, France, Federal Republic of Germany, GDR, Greece, Guinea-Bissau, Hungary, Iceland, India, Indonesia, Italy, Japan, Kenya, Kuwait, Madagascar, Malaysia, Malta, Morocco, Mexico, Mongolia, Myanmar (Burma), New Zealand, Netherlands, Nicaragua, Nigeria, Norway, Pakistan, Panama, Papua New Guinea, Peru, Poland, Romania, Senegal, South Africa, South Korea, Spain, Sweden, Switzerland, Tanzania, Thailand, Togo, Turkey, Uganda, United Kingdom, Venezuela, Viet Nam, Zimbawe. (Sources: Chemical Weapons Convention Bulletin, Issues No.3, 5, 6, ACR, 1989).

141 Information received from the depositary of the Protocol (France).

142 Times (London) and Financial Times, 10 January 1989, Financial Times, 12 January 1989.

143 ACR, 9 January 1989, 704.B.335-336.

4.11 The Canberra Conference of 18 22 September 1989

On 6 March 1989, after discussions with Australian Foreign Minister Evans, US Secretary of State Baker announced that the Australian government had agreed to hold an international conference of governments and representatives of the chemical industry. The meeting was to deal with the growing problem of the movement of CW precursors and CW relevant technologies in international commerce.[144] On the same day, the Australian Foreign Minister issued a press release[145] stating that the proposed conference would bring together governments and representatives of the international chemical industry to discuss the growing problem of the international trade in feedstocks, plants, and equipment, which could be used for CW purposes. Both Australia and the United States are members of the "Australia Group" which seeks to coordinate export controls applied to CW relevant chemicals (see section 4.5).

The Australian-American initiative received a cautious response from other States. The Paris Conference had just been held and several countries argued that another conference on a similar issue was not necessary at the moment. They believed that the conference in January had provided an impetus to the negotiations and efforts should now concentrate on the work in the CD. The main reason for the lack of support, however, was the proposed aim of the meeting. The question of preventing the spread of chemical weapons had led to a controversy at the Paris Conference and it had not been possible to include a clear statement on this issue in the final act. Many Non-Aligned countries were very critical of export controls. The lukewarm response to the US-Australian proposal and the risk that some States could boycott the conference led to a modification of the theme of the event.[146]

The re-definition was confirmed by a statement by the Australian Foreign Minister in the CD on 13 June 1989. He stated that the aim of the conference was to focus the attention of governments and the chemical industry on the problem of chemical weapons, and to support the negotiations on the projected CWC. He also announced that the "Government-Industry Conference Against Chemical Weapons" would be convened in Canberra on 18 22 September 1989.[147]

This clarification of the objectives notwithstanding, the Group of 21 released a statement[148] on 17 August 1989. It strongly reaffirmed the commitment of the countries concerned to a comprehensive ban on CW as the only effective and non-discriminatory solution to the threat posed by chemical weapons. It stated that the forthcoming Canberra Conference must not seek to establish any alternative or parallel approach to the negotiations on the CWC in the Conference on Disarmament. It stated that the Group of 21 opposed any restrictive measures which may hamper the development of the chemical industry, the transfer of technology, and international cooperation for peaceful purposes in this field. The statement therefore included a strong warning against using the Canberra Conference to promote export controls.

The Canberra Conference was opened on 18 September and was attended by 66 States and many representatives of the world's chemical industry. Despite the initial difficulties in

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144 Statement at the CFE talks in Vienna (official text).
145 CD/897.
146 E.g. Prepared Statement by US Assistant Secretary of State for Politico-Military Affairs Holms before the House Foreign Affairs Committee, 4 May 1989.
147 PV.508.
148 CD/951, PV.527(Peru).

defining the purpose of the event, it was considered by most participants as a success. Its results can be summarized as follows.

1. An intensive dialogue between the chemical industry and government representatives took place. It covered a wide range of issues, including verification procedures envisaged for the CWC, the protection of confidential commercial information during verification activities, the structure of the international organization to be established under the treaty and its relation to national authorities, technical questions concerning the destruction of existing CW stockpiles and production facilities, and the promotion of international cooperation in the chemical field under the CWC. The conference also tried to assess the tasks which lie ahead for the chemical industry and governments.

2. The representatives of the world's chemical industry expressed, collectively, for the first time, their willingness to work actively with governments to achieve a global and comprehensive ban on chemical weapons, and to contribute to additional momentum in the negotiations. The value of this statement cannot be underestimated. The active support by the civil chemical industry is important for the conclusion of a solid Convention as well as the quick ratification and effective implementation of the treaty. In alliance with the views of most developing countries, the representatives of the chemical industry declared their willingness "to continue their dialogue with governments to prepare for the entry into force of an effective chemical weapons convention which protects the free and non-discriminatory exchange of chemicals and transfer of technology for economic development and the welfare of all people.' They stated that a global and comprehensive and effectively verifiable CWC, and the destruction of existing stockpiles and production facilities, was the only solution to the problem of chemical weapons.[149] They also announced that they would establish an international chemical industry forum to be convened in Geneva. It is to provide practical input to the negotiations and the implementation of the treaty later on. It will replace existing informal arrangements and will involve the chemical industry on a worldwide basis (not only industrialized countries).

3. Several associations of the chemical industry, including those of the Federal Republic of Germany, the UK, the USA, Italy, France, Switzerland, and Japan, said that they had installed or were about to institute self-monitoring or self-regulating arrangements. The US chemical industry (CMA), for example, announced a voluntary program to restrain the spread of chemical weapons. This program is to cover 175 US firms representing around 90% of US basic chemical manufacturing. It will establish formalized channels within the chemical industry to review corporate export procedures, promote CW awareness among the employees of firms, and establish liaison procedures between the government and the chemical industry. Suspicious orders and inquiries will be reported to the government on a voluntary basis and procedures will be established to evaluate whether orders were made for peaceful purposes. An in-house documentation of all exports of sensitive chemicals will be kept and an industrial information and referral system will be established to serve as a hot line between government and industry.

4. The United States proposed the establishment of a forerunner of the Preparatory Commission and the Technical Secretariat (one of the three bodies of the international organization to be set up under the CWC). This body would, inter alia, create government-industry databases, assist in national and multinational trial inspections, and undertake research and disseminate information on the destruction of chemical weapons. It would also coordinate work on CW identification and verification procedures. The proposed body

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[149] Daily Bulletin of the US Mission to the UN in Geneva, 22 September 1989.

would be open to all interested States and would be an umbrella organization for coordinating activities leading to the CWC. It would have an advisory function and would report to the chairman of the Ad Hoc Committee on Chemical Weapons.[150] The Soviet Union made a similar proposal. Details, for example the financing of the proposed body, are likely to be discussed during the 1990 session of the CD.

5. Other practical steps such as the identification and training of personnel[151] for the Organization to be established under the CWC, and national mechanisms to implement the projected treaty, were discussed as well. As to the latter, Australia announced that it had decided to establish its national CWC authority.[152] Other States indicated interest in doing so as well. It was said that governments could already legislate to prohibit activities which would be banned or restricted under the CWC. The Federal Republic of Germany, for example, has recently amended its War Weapons Control Act in this sense[153].[154]

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150 Daily Bulletin of the US Mission to the UN in Geneva, 20 September 1989.

151 Finland is already carrying out a small programme (see part two, chapter IX).

152 Christian Science Monitor, 25 September 1989, News release No. M164, Australian Ministry of Foreign Affairs and Trade, 19 September 1989.

153 Sullivan, John, Government-Industry Conference Against Chemical Weapons, in: UNIDIR Newsletter (December/January 1989/90, forthcoming).

154 A/C.1/44/4(Australia). For a detailed review of the Conference, see Robinson, Julian Perry, Review: The Canberra Conference, in: Chemical Weapons Convention Bulletin, No.6 (November 1989), pp.16-22. The formal papers submitted at the Conference are to be published soon.

PART TWO

RESULTS OF THE NEGOTIATIONS ON THE PROJECTED CHEMICAL WEAPONS CONVENTION: AGREEMENTS, UNRESOLVED QUESTIONS, GAPS AND PROPOSALS

CHAPTER I

THE PREAMBLE OF THE TREATY

The main elements of the Preamble included in the current rolling text are[1]:

1. The CWC is linked to the aim of general and complete disarmament under strict and effective international control, and to the elimination of all weapons of mass destruction. The United Nations has, since 1959, declared that general and complete disarmament under effective international control is the ultimate goal of all disarmament efforts, and several proposals to this end were put forward and discussed.[2] It was soon realized that general and complete disarmament could not be achieved in one step and by one legal instrument. Therefore, efforts began to focus on special issues or categories of weapons in the hope that a number of smaller steps would lead to the ultimate goal. This view has constantly been repeated in many UN declarations, resolutions, other UN documents, and multilateral disarmament treaties[3], and is regarded as an expression of the principles laid out in the Charter of the United Nations.

2. The purposes and principles of the UN Charter are referred to, particularly the role of the UN in preserving future generations from war and in maintaining international peace and security.

3. The repeated condemnations, by the General Assembly, of violations of the Geneva Protocol are mentioned. The General Assembly has, on many occasions since 1966, condemned violations of the Geneva Protocol and has urged States which have not yet done so to become parties to the agreement. It has called upon all States (non-parties as well) to abide by the rules of the Protocol. These General Assembly resolutions which have, since 1987, been adopted without vote[4], i.e. consensus, have led many States to assume that the Protocol is part of customary international law, binding parties and non-parties to the Protocol alike (see part one, chapter III).

4. The Preamble reaffirms the validity of the Geneva Protocol, the most important international legal instrument which, at present, constrains the use of chemical weapons. It points out that the CWC will supplement the obligations established by the Protocol.

5. It mentions the BWC of 1972, and reaffirms its principles. It refers to Article IX of this treaty in which the parties express their commitment to continue, in good faith, negotiations on a comprehensive ban on chemical weapons.

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1 The most important developments concerning the wording of the preamble are reflected in the draft conventions submitted by the delegations (CCD/361(Socialist countries), CCD/420(Japan), CCD/400(Neutral and Non-Aligned countries), CCD/512(UK), CD/500(USA)).

2 Proposals for general and complete disarmament were submitted by the United States and the Soviet Union at the beginning of the 1960s.

3 E.g. the BWC of 1972, the Sea Bed Treaty of 1971, or the final document of SSOD I (1978).

4 E.g. A/43/74.

6. It states that achievements in chemistry must be used for the benefit of mankind. An Article of the rolling text which is devoted to this issue will be discussed in chapter XII.

Apart from some minor differences, most of the wordings of earlier draft conventions submitted by the delegations, other documents, and the BWC, include these elements.[5] Additional points, proposed but not contained in the preamble of the current rolling text, are:

1. The scope of the treaty (see chapter II) was specified in a more detailed manner in some draft conventions and other proposals.[6]

2. A reference to the ENMOD-Convention was proposed.[7] This treaty, concluded in 1977, bans military or any other hostile use of environmental modification techniques. These are techniques which could change - through the deliberate manipulation of natural processes the dynamics, composition or structure of the earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space. One of the reasons to propose a reference is that some chemicals could possibly be used for environmental warfare. The Indochina war, for example, has shown that the use of large amounts of chemicals in war may have long-term ecological consequences (see part one, chapter III).

3. It was proposed to refer to the principle of "undiminished security" of any State or group of States (see chapter II).[8] This principle means that the security of a State which ratifies the CWC must not be diminished by this step. It refers in particular to the security of the parties during the "transition period". This is the envisaged 10 year period when existing CW stockpiles and production facilities would be destroyed.

4. It was proposed that the preamble state that the CWC will improve the international atmosphere and will promote social progress and scientific, technological and economic development.[9] This proposal partly overlaps with point 6 above.

The preamble of the projected CWC must be closely connected to the provisions of the Convention and must reflect its contents. The substance of the rolling text has changed significantly during recent years whereas the Preamble has essentially remained the same. Therefore, most delegations recognize that the present wording of the Preamble may have to be modified as the negotiations continue.

The proposed elements of the preamble indicate that there is a relationship between the CWC, the BWC of 1972, and the Geneva Protocol of 1925. Particularly the relation of the CWC to the Geneva Protocol is of outstanding significance and has posed a number of problems, including the definition of CW and the reservations expressed by some States when ratifying or acceding to the Protocol. These two questions will be discussed in chapters II, III, and XIII.

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5 E.g. CCD/361 (Socialist countries), CCD/420(Japan), CCD/512(UK), CD/44(Poland), CD/139, p.42, CD/179:Annex I, CD/220, WP.33, CD/500(USA).

6 E.g. CCD/420(Japan), CCD/512(UK), CD/443(China).

7 CD/44.

8 E.g. WP.33, CD/342.

9 E.g. CD/443(China).

CHAPTER II

GENERAL PROVISIONS ON THE SCOPE OF THE CONVENTION

The Geneva Protocol of 1925 prohibits the use of asphyxiating, poisonous and other gases, and of all analogous liquids, materials or devices in war. It does not, however, ban the development, production, acquisition, stockpiling or transfer of these weapons. Reservations to the Geneva Protocol, especially claims to the right of (proportional) reprisals in-kind, have additionally narrowed its scope. Justified by their reservations, some countries possess (or have done so in the past) stockpiles of CW for deterrence and retaliation purposes. Other countries which have not expressed reservations or have withdrawn previous ones have accepted an unconditional ban on the use of chemical and biological weapons.

The projected CWC will expand the scope of the Geneva Protocol. Article I of the rolling text contains general provisions to this end. It holds that the parties to the CWC must not develop, produce, acquire otherwise, stockpile, retain or transfer chemical weapons, or assist, encourage or induce anyone to engage in activities prohibited by the CWC. They undertake not to use chemical weapons and will destroy all CW stockpiles and production facilities under their jurisdiction or control. These provisions reflect an understanding, reached in 1979/80, that the CWC is to be comprehensive in scope.[1] Agreement on the destruction of all CW stockpiles and production facilities, without the right to convert them to peaceful use, was achieved in 1988.

Although the provisions of Article I of the rolling text are almost agreed, some questions remain to be solved. The most important ones are:

1. Prohibiting the "preparation of use" of chemical weapons: There is no agreement on whether or in what form to include a ban on the preparation of use of chemical weapons. Proposals to prohibit these activities, in addition to the use of CW itself, were already discussed during negotiations on the Geneva Protocol in 1925.[2] The preparation of use may include planning, organization, and training, for the purpose of using CW. The participation of chemical warfare units in large-scale offensive manoeuvres is an example.

Wordings proposed in the rolling text are: ...conduct other activities in preparation for use of chemical weapons..." or "... engage in any military preparations for use of chemical

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1 See Annex I of this research report which describes the negotiations from 1968 to 1979, and chapter III of part one. The evolution of the provisions can also be followed on the basis of past draft conventions and other documents submitted by the delegations (e.g. CCD/361(Socialist countries), CCD/400(Neutral and Non-Aligned countries), CCD/420(Japan), CCD/512(UK), CD/294(USSR), CD/500(USA)).

2 SIPRI, Problems of Chemical and Biological Warfare, Vol.IV, Stockholm and New York 1971.

weapons..."[3]. The first phrase was proposed by the United States[4], the second one by Sweden[5].

A ban on the preparation of use of CW has especially been promoted by Sweden.[6] It was included in the concept, proposed by Sweden, of "chemical weapons capability" The prohibition of the preparation of use was deemed necessary because, in the absence of this provision, a party to the Convention could, after a withdrawal from the agreement, rapidly acquire a full CW capability if preparations had been undertaken.[7]

Critics of the proposal hold that this obligation would be difficult to define and could be subject to different interpretations.[8] Moreover, it was stated that verification of compliance with this obligation was almost impossible. A ban on the preparation of use of CW could hamper legitimate activities relating to the protection against CW because both might have some features in common. Positions on this question are not very clear at the moment (except for the United States and Sweden) and the issue has not been discussed in detail during recent years. It appears that the question was important at a time when the "use" of CW was not yet included in the general scope of the projected treaty (see next paragraph).

2. Banning the "use" of chemical weapons: To include in the Convention a ban on the "use" of CW seems to be only logical because the purpose of the CWC is to completely outlaw chemical weapons as a means of warfare. On the other hand, it could be argued that if all CW stockpiles must be destroyed there would be no need to prohibit the use of CW because they would not exist anymore. This latter argument is not very convincing and was not used very often in the debate.

The question of banning the use of CW has turned out to be more complex. In 1983, consensus in principle was reached on including in Article I a provision prohibiting the use of chemical weapons.[9] But an agreed wording of the provision has not yet been found.

The use of chemical weapons is prohibited by the Geneva Protocol of 1925. The scope of the Protocol has been the subject of disputes and different interpretations and reservations exist (see part one, chapter III). They have influenced negotiations on the scope of the CWC. The most difficult problems in this context have been:

(a) The question of interpretations of the Geneva Protocol. The United States, for example, believes that the use in war of irritant agents, herbicides, and defoliants, is allowed under certain circumstances. The current position of the United States is that the use of herbicides in war is permitted to clear the vegetation around the perimeter of US bases. Irritants could be used for riot control in prisoner of war camps and for certain special operations (e.g. rescue missions). To finalize the provisions on the prohibition of use of CW, consensus must be found on the definition of CW, and on what precisely is to be banned.

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3 CD/952, p.20.
4 CD/500, p.1.
5 CD/426:Annex.
6 CD/97, CD/142, CD/426. Other documents dealing, inter alia, with this issue are: CD/343, p.1(USA), CD/500, p.3(USA), CD/539:Annex II, pp.2-3.
7 CD/426, p.1(Sweden).
8 E.g. CD/539:Annex II, p.3.
9 See CD/416:Annex I, p.22.

(b) The relation of the CWC to the Geneva Protocol. This concerns in particular the formal reservations to the Protocol, especially reservations claiming the right to retaliate (proportionally) in-kind. Will the prohibition of use of CW, expressed in Article I of the rolling text, be unconditional and therefore supersede the reservations to the Geneva Protocol. Or could the reservations be upheld, perhaps only for a limited period (e.g. the transition period of 10 years when all CW stockpiles and production facilities would be destroyed)?

The question of defining chemical weapons and dealing with irritants and herbicides will be discussed in the next chapter (III). The relationship between the CWC and the Geneva Protocol, especially the problem of reservations, will be treated in chapter XIII. Some remarks on the issue of reservations to the Geneva Protocol are also contained in the following section which deals with the problem of "undiminished security".

3. The principle of "undiminished security": One of the principles to be taken into account when drawing up the Convention is that the security of a State which becomes a party to the CWC must not be affected in a negative sense. This is one of the prerequisites for getting States to ratify or accede to the Convention. The principle of undiminished security has particularly been stressed in the context of three negotiating issues: the order of destruction of existing CW stockpiles and production facilities; assistance and protection against CW; and the question of how the CWC will affect the reservations attached by some States to the Geneva Protocol. These issues will be discussed in chapters III, XI, XIII.

One of the problems of "undiminished security" is that most States have a distinct view of what this term means. The United States and the Soviet Union perceive the issue of undiminished security as being first of all a bilateral one. The balanced order of destruction of their CW stockpiles and production facilities is one of their concerns in this context. France, as a result of its strong views on equality, tends to focus on the two superpowers, but also on a number of allegedly CW capable States. Finally, many developing countries perceive the problem of undiminished security within a regional context. This is particularly true of countries located in the Middle East.

The different views concerning undiminished security are reflected in the positions of the delegations on a number of negotiating issues. The order of destruction of chemical weapons, for example, is particularly important to States possessing CW. Protection against chemical weapons is viewed as crucial especially by developing countries where protection is almost non-existent at present, and where CW are most likely to be used in the future. The question of how reservations to the Geneva Protocol will be affected by the CWC has divided States possessing chemical weapons or States intending to produce or acquire CW stocks before the treaty enters into force, and, on the other hand, countries which do not possess CW or do not intend to do so. Notably the first category of States are interested in upholding under the CWC claims to retaliate in-kind. Once the treaty enters into force, all States will be barred from producing of acquiring CW. The possibility of retaliation in-kind would therefore not make sense for countries which do not have CW at that time.[10]

4. "Jurisdiction and control": The issue of "jurisdiction and control" has repeatedly been raised since 1987. The term has been used for the draft provisions on the declaration

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[10] It will be noted that a considerable number of States which do not have chemical weapons have attached reservations to the Geneva Protocol. Under present circumstances, these reservations provide the States concerned with the option to retaliate in-kind. A State which does not possess CW but has been attacked by such means is, at present, still free to produce or acquire CW and use them against the aggressor.

and destruction of CW stockpiles and production facilities, and on the verification of non-production of CW. It has also been included in other arms control agreements such as the Nuclear Test Ban Treaty of 1963[11]. Nevertheless, it remains to be clarified.

It relates primarily to the definition of the responsibility of the parties to the CWC in implementing the treaty with regard to legal or physical persons operating in a special environment, for example under some form of extra-territorial status, in non-self-governing territories, or on the territory of States not parties to the CWC. Subsidiaries of private enterprises incorporated under the originator State's law but operating abroad (transnational corporations) have been mentioned as an example. Who would be responsible for the implementation of the treaty with regard to these corporations, the originator or the host State? Who would be responsible for acts of a State not party to the CWC or a transnational enterprise incorporated under the law of a non-party if they operated on the territory of a party?

Multinational enterprises tend to have affiliates in many countries. Hence, they work under different legal conditions. This makes it difficult, for example, to devise effective export and import regulations and to define which State is ultimately responsible for the actions of multinationals. Some multinationals operate as "States within a State", escaping the control of the host country. One of their features is that, in some cases, they deliberately try to elude restrictive legislation in the country where the headquarters are located. Therefore, they set up affiliates in countries where fewer legal restrictions exist or where fewer means of control are available or applied.

The Soviet Union[12] in particular has pointed to the problem of transnational corporations, especially questions which may arise in the context of challenge inspections "anytime, anywhere, and without the right of refusal"

The following example may serve as an illustration of possible problems: To whom would the request for a challenge inspection be addressed if a company registered in country A and operating in country B under special legal status was suspected of violating the CWC? Which State would host the inspection? Would an inspection be possible if country B was not a party to the CWC?

The US delegation[13] mentioned that the production of chemical weapons by multinational corporations on the territory of a State not party to the Convention was no special problem for the United States. Any enterprise incorporated under US law, wherever its activities took place, would be prohibited from helping a non-party in the production of chemical weapons. The United States noted that the basic problem was activities which took place on the territory of non-parties regardless of who was conducting them. In these cases, political pressure, especially pressure to get the non-party to join the CWC, would be the appropriate response. It will be noted, however, that the implementation of national jurisdiction beyond national borders varies amongst countries. Other countries may hold a different view on this

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[11] Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water. The agreement entered into force on 10 October 1963. (United Nations, Treaty Series, Vol.480, No.6964, see Article I). It holds that each party undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control. (This obligation is limited, in subsequent paragraphs, to the atmosphere, beyond its limits (outer space) or under water etc. Underground tests are still allowed by the treaty.)

[12] PV.418, Press Bulletin of the Soviet Mission to the UN in Geneva, 19 September 1989.

[13] PV.424.

question than the United States. Therefore, the case might not be as clear as the comment by the delegation of the United States suggested.[14]

In any case, the provisions of the Convention must be designed to ensure that no legal or physical person operating under special circumstances violates the provisions of the treaty, and that there is always a State under whose jurisdiction and control these acts fall and are punished.[15] To cope with these difficulties, the term jurisdiction and control may have to be defined more clearly.[16] Work on this subject has, so far, not gone beyond general discussion.[17]

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[14] The United States extends its jurisdiction, under certain circumstances, to acts performed outside its territory. Most other countries do not practice this. There is a long discussion in international law on this subject which cannot be treated in our report.

[15] If a legal or physical person violated the Convention, the *responsibility of the State* under whose jurisdiction and control the violator falls, would not be a priori clear. Consensus on the responsibility of States under international law has not yet been reached. A draft on this question by the International Law Commission is still under consideration.

[16] Canada, for example, has proposed to drop the term and replace it by more precise wording (statement in the CD-plenary on 7 March 1989).

[17] A more explicit wording was proposed by China (CD/443). It defined the stockpiles and installations to be covered by the CWC as "either within a country or outside it, either under the control of administrative authorities or military authorities, or transnational corporations..." Spain (WP.93) proposed to include in the Convention a provision on special declarations to be made by parties on whose territory multinationals were located. It also proposed the institution of national and international monitoring of some raw materials exported to countries where subsidiaries of multinationals were established, if such countries were not parties to the Convention.

CHAPTER III

DEFINITIONS AND CRITERIA

Article II contains definitions of important terms which are used throughout the rolling text. They include (a) "chemical weapons" (b) "toxic chemical", (c) "permitted activities", (d) "precursor", and (e) "chemical weapons production facility" The definitions have, during the 1989 session of the CD, been streamlined and some parts have been transferred to a new "Annex on Chemicals" which is attached to the main body of the rolling text (see chapter VII). This was the result of an initiative by Sweden[1] which proposed to consider Articles II and VI (activities not prohibited by the treaty, see chapter VII) together. Article VI includes provisions on the verification system designed to prevent the production of chemical weapons once the treaty is in force. The "Annex on Chemicals" contains the lists of chemicals covered by the verification regimes, guidelines to establish and update these lists, and technical aspects of the definition of some terms defined in Article II.

3.1 "Chemical Weapons"

A precise definition of chemical weapons in the CWC is crucial to the determination of what will be banned and what will be allowed under the treaty. It therefore contributes to the definition of its scope. The definition of chemical weapons can be based on different criteria. These include: the toxicity, purpose, and quantity of the chemicals involved, and the effect, purpose, and quantity of the munitions used for the delivery of the chemicals.

The rolling text states that the term chemical weapons applies to toxic chemicals, including super-toxic lethal, other lethal and other harmful chemicals ("toxicity criterion") and their precursors, including key precursors. These terms are defined in more detail in the Annex on Chemicals, and in subsequent provisions of Article II (see below). The definitions included in the Annex on Chemicals are, inter alia, based on the delimitation of the different categories of toxic chemicals by toxicity values. Provisions on procedures to determine the toxicity of individual substances are included in this Annex as well.

The definition of CW does not cover chemicals which are intended for purposes not prohibited by the Convention as long as the types and quantities involved are consistent with these purposes. The two criteria, expressed in this phrase, are the "general purpose criterion" and the "quantity criterion".

The definition of CW also applies to munitions and devices which are specifically designed to cause death or other harm through the toxic properties of the chemicals released as a result of their employment. This reflects the "general purpose criterion" and the "effect

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[1] PV.481.

criterion" It covers, in addition, any equipment specifically designed for use directly in connection with the employment of the defined munitions and devices.

It is understood that the definition of CW as well as other definitions included in Article II will have to be developed or revised later to make them compatible with other provisions of the rolling text. This applies especially to the lists of chemicals which are included in the Annex on Chemicals and are being constantly revised. The definition of CW contained in Article II is very general. It must be made operational to implement the provisions of the treaty. For example the destruction of chemical weapons or the verification of non-production of CW by the chemical industry requires more detailed definitions. The lists of chemicals (see chapter VII) have made the definition of CW in Article II more precise as far as known CWA and other risky chemicals (e.g. precursors) are concerned. The updating of the lists of chemicals will be less cumbersome than a formal amendment to Article II of the treaty. This will introduce an element of flexibility into the CWC. The definitions contained in the treaty must be designed so that new technical developments in the chemical field can be accommodated by quickly adapting the provisions of the treaty. France has proposed the establishment of a "Scientific Advisory Council" (see chapter IX). This institution, which may play a consultative role, could assume some responsibility in this context and could serve as a "watchdog" to monitor and assess new technological developments which might necessitate the modification of definitions or the lists of chemicals.

Several problems concerning the definition of CW remain to be solved. The most important are:

1. Another definition of chemical weapons: China holds that the definition of chemical weapons contained in the rolling text does not adequately reflect the general purpose criterion. It stated that chemical weapons must be defined on the basis of this criterion. Therefore, the term "chemical warfare agent" must be used. This would also bring the Geneva Protocol and the CWC in line.[2] The Chinese proposal has not been supported by other delegations and has not been mentioned for some time. It is therefore unclear under what circumstances China would be willing to accept the definition explained above.

2. Binary and multi-component CW[3]: The issue of binary chemical weapons received much attention as a result of the decision by the United States to develop and produce these weapons. The US programme was discussed in detail in part one, chapter IV. It will be noted, however, that the technical know-how to produce binary CW has existed for some time and the issue would have been relevant in the negotiations even without the US programme. In any case, the question arose of how to include these weapons in the definition of CW.

The Socialist countries in particular, which strongly criticized the US programme[4], proposed that explicit reference to binary CW be made in the definition of CW. They advocated the use of the expression "key component of binary and/or multi-component

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2 CD/378, pp.2-3, CD/443, p.2.

3 Multi-component weapons will not be discussed separately in this paragraph. The problems involved are quite similar to those concerning binary CW. Multi-component weapons are considered as CW which contain more than two toxic chemicals which mix during the flight of the munition to the target (binary weapons contain two such chemicals).

4 The opposition by the Socialist Group is reflected, for example, in CD/615(USSR), CD/620, p.1(GDR), CD/643(GDR), CD/645(Bulgaria), CD/700(Hungary), CD/748(USSR), CD/750(Mongolia), CD/790(USSR).

chemical systems for chemical weapons". A key component for binary or multi-component weapons was defined as a component which poses a special risk to the objectives of the Convention because it can be an integral part of a CW munition or device and can form toxic chemicals at the moment of employment. It possesses the following characteristics: it reacts rapidly with other components of a binary and/or multi-component chemical system during the munitions's flight to the target and gives a high yield of final toxic properties of the final product; it plays an important role in determining the toxic properties of the final product; it may not be used, or be used only in minimal quantities, for permitted purposes; and it possesses the stability necessary for long-term storage.[5] The Socialist Group continues to insist on an explicit definition of binary and multi-component weapons because it considers them as the most modern CW and the most likely to be technologically enhanced in the future.

The United States, supported by some Western countries, has opposed such an explicit definition of binary CW, stating that they were adequately covered by the definition of chemical weapons as described above.[6] Some arguments which seem to support the US position are, for example, contained in a document submitted by Yugoslavia.[7] This document dealt with binary CW and problems of verification, and examined whether or not these weapons could be covered by the definition of "key precursors". The two chemicals in a binary CW which mix to produce the CWA during flight are called "precursors" of the chemical weapon. At least one of the two chemicals used for binary CW is a "key precursor". The latter is a substance which plays a crucial role in the production of the final toxic product released by the weapon at its target. The term "key precursor" is defined in the Annex on Chemicals and will be discussed in section 3.4 below.

The key precursors currently used for binary CW are now included in the lists of chemicals and are to be covered by stringent verification measures (see chapter VII). Therefore, it appears that the issue has come closer to a solution. One of the problems in the long run could be that, as a result of scientific developments, the precursors for binary weapons could become less and less toxic. They may even be substances which are extensively used for commercial purposes and could therefore not be banned altogether. However, as long as there is consensus that the resulting mixture of chemicals which affects the target is a CWA, there could be no different interpretations about the legality of the use of these substances in a weapon. In the last resort, the general purpose criterion would apply.

The definition of "toxic chemical" in the rolling text (see 3.2 below) would also help in identifying binary CW. The expression "regardless of the method or pattern of production" (a phrase used for the definition of "toxic chemical") is relevant in this context because the final toxic product of binary CW is produced as the munition approaches its target. This can be regarded as simply a different method of production compared with that used to produce "unitary" CW where the CWA is formed at an earlier stage.

Another provision which would cover binary weapons is the definition of munitions and equipment. The technical design of binary CW seems to allow their distinction from other types of munitions. This reflects the purpose criterion.

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[5] Suggestions on how to deal with chemicals which could possibly be used as key components for binary and/or multi-component CW are contained, for example, in CD/636:Appendix II, pp.12-13. See also CD/258(Socialist countries), CD/266(Yugoslavia).

[6] Binary CW were not explicitly mentioned in the US draft convention of 1984 (CD/500).

[7] CD/266.

Unfortunately, discussion of the problem posed by binary CW has been shaped rather by political controversy over the US binary programme[8], than by rational considerations and efforts for a technical solution. There may be additional difficulties relating to verification and the destruction of binary weapons. (E.g. Would binary CW have to be destroyed first? Could precursors of binary CW which have widespread commercial use be diverted to peaceful use instead of being destroyed?) These problems are not, however, insoluble and a determined effort on the part of the negotiators could surely produce a technical solution.

3. Herbicides and Irritant Agents: As noted in chapter II, banning the "use" of chemical weapons is linked to establishing a clear definition of CW and elaborating what is to be permitted and prohibited under the Convention. The ban on use of CW, expressed in Article I, would apply to anything defined as a chemical weapon. Permitted purposes would identify activities exempt from the ban on use. In this context, herbicides and irritant agents[9] have caused difficulties.

As early as in the 1930s, it was discussed whether the use of irritants and herbicides in war was prohibited by the Geneva Protocol. The United Kingdom had pointed to this problem in December 1930. A difference in the French and English version of the text of the Protocol was said to allow different interpretations.[10] Criticism of the looser interpretation of the Protocol, i.e. that the use of these chemicals was allowed for war purposes, reached a peak during the second Indochina war when irritants and herbicides were used on a massive scale by the United States.[11] Most countries argued that the use of these chemicals in war was prohibited by the Geneva Protocol. Moreover, many delegations to the CD and its predecessors expressed the view that irritants and herbicides must be covered by the projected Convention to prevent their use in armed conflict. (See part one, chapter III).

The differences over the interpretation of the Geneva Protocol culminated in the adoption of a UN General Assembly Resolution, sponsored by Sweden. It was passed with the aim of establishing an authoritative definition of chemical weapons, broad enough to include irritants and herbicides.[12] It defined CW as "chemical substances, whether gaseous, liquid or solid - which might be employed because of their toxic effects on man, animals and plants."[13] Although the resolution passed, the undertaking resulted only in a modest success. The United States and two other countries voted against and a considerable number of others States abstained (see part one, chapter III).

Irritants and herbicides are widely used for domestic purposes (e.g. riot control and agriculture). Consequently, questions such as whether to ban the use of these substances altogether or whether to prohibit their use for war purposes only, and how to include such a ban in the treaty without affecting their peaceful domestic use, have to be solved. If irritants and herbicides were covered by the definition of CW, the unconditional ban on the use of CW (not only in war) as contained in Article I of the rolling text would prohibit their employment altogether. Most delegations do not consider this a practical solution. Therefore, these chemicals may have to be handled outside the definition of CW, or the ban on use of

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8 See part one, chapter IV.

9 Especially CN and CS have been considered in this context.

10 The English term "other gases" (in addition to asphyxiating and poisonous gases whose use is prohibited by the Protocol) was said to have a different meaning than the French term "similaires" (similar).

11 See part one of this report.

12 See part one of this report.

13 A/2603 A(XXIV).

CW as contained in Article I may have to be modified to make the permitted use (however defined) of these substances possible.

A ban on the use of herbicides and irritants only for war purposes would, on the other hand, result in a situation where these substances, particularly irritants, are banned for war purposes but could legitimately be used by a country against its own population.[14] It will be noted, however, that the use of irritants in war usually differs from their use for riot-control purposes. As several cases including the second Indochina war indicate, irritants have been used to increase the efficiency of other weapons, i.e. as a "force multiplier". Hence, these chemicals have a military value. It has also been argued that the use of irritants and herbicides in war might lead to the use of other chemicals and therefore to an escalation of chemical warfare. In addition, the massive use of herbicides can have long term effects on human health and the environment as the Indochina case may have shown.

Most of these arguments were used by States advocating a ban on the use of irritants and herbicides for war purposes. They proposed to apply the "general purpose criterion" (the intention) and the quantity of the chemicals used in a particular case. The use of irritants or herbicides would therefore be prohibited unless the quantities involved were strictly limited and justified for purposes permitted by the CWC. Riot control, for example, is to be explicitly permitted by a provision included in Article II of the rolling text (see 3.3 below).

A few countries, the United States among them, argued that such a ban would be unrealistic since the chemicals concerned would still exist in large quantities in many countries. If they were available, they could easily be used in armed conflicts despite a ban.[15] As a matter of fact, efforts to widen the scope of the Geneva Protocol and conclude a comprehensive treaty are based on this reasoning. However, this should not lead to the conclusion that the problem can be ignored and that these substances must not be covered by the CWC.

Some countries stated that the use of herbicides was already prohibited by the Geneva Protocol and the ENMOD Convention. A reference to these treaties might therefore be sufficient.[16]

If irritants and herbicides are to be covered by the CWC, the provisions must be elaborated. They could be placed in the main body of CWC, an Annex, a protocol, or another separate legal instrument with a specified relation to the CWC. Other questions which have to be addressed if herbicides and irritants are to be explicitly covered by the treaty include determining whether a definition of herbicides and irritants is needed, what

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[14] The use of chemicals which are clearly identified as chemical weapons (by their toxicity, the purpose of their use, or the lists of chemicals contained in the Annex on Chemicals) would be outlawed altogether except for very limited purposes (see chapter VII). The provisions on the scope of the Convention include a ban on the use of CW without naming the type of conflict. In addition, the definition of purposes permitted under the Convention (i.a. riot control) does not allow for the use of lethal chemical agents against human beings in any case. The CWC would therefore remove certain ambiguities contained in the Geneva Protocol. Concerns in this respect had been expressed after the use of CW against the Kurdish population in Iraq which was interpreted by some as not prohibited by the Geneva Protocol because the latter bans the use of chemical weapons in "war". This interpretation of the Geneva Protocol is not supported by the vast majority of States, however.

[15] PV.211(USA), CD/343, p.1(USA), CD/500, p.2(USA). An Executive Order of 1974 now prohibits US troops from using herbicides in war except around the perimeter of US military bases, and the use of irritant agents in war except for rescue and other specific operations and riot control in prisoner of war camps.

[16] E.g. CD/342, p.5.

the implications are for the verification of allegations of the use of CW, and the relationship to existing international law (especially on the use of herbicides).

Wording for provisions for herbicides was suggested by the chairman of open-ended consultations held on this issue in 1986. It reads: "Each State-Party undertakes not to use herbicides as a method of warfare; such a prohibition should not preclude any other use of herbicides" [17]

The following wording was proposed for the definition of herbicides and the relation of the provision to international law: "For the purpose of this Convention, herbicides mean chemical substances which, due to their purpose and direct effects, interfere with life processes of plants...The provision of [before] shall not be interpreted as in any way impairing the applicable rules of international law pertaining to the use of herbicides"[18].[19]

Proposals have also been made to deal with irritants used for law enforcement and riot control purposes, and chemicals to enhance the effectiveness of chemical weapons.

(a) It was proposed that irritants could be handled outside the definition of chemical weapons if this would result in better definition.[20] It was also proposed that the term chemical weapon apply not to chemicals which are not "super-toxic lethal" or "other lethal" (as defined in the Annex on Chemicals) and which have been approved by the "Conference of the States Parties" (a body of the international organization to be established under the treaty) for use by a party for domestic law enforcement and riot control purposes.[21] This would exclude approved irritants from the definition of CW, and therefore from the ban on use as provided for in Article I of the rolling text.

(b) It was proposed to prohibit the use of chemicals to enhance the effectiveness of CW.[22] (Irritants and herbicides may also be employed for this purpose.) A definition of such chemicals would, however, be difficult. Thousands of substances may have this effect. In addition, it would have to be determined whether this ban would apply only to the use or also to the development, production and stockpiling of these substances.

4. Toxins: The BWC explicitly bans toxin weapons. Nonetheless, a number of delegations maintain that these substances must also be covered by the CWC. Toxins, substances which are not able to reproduce themselves (in contrast to biological agents), are very similar to CWA, especially when synthetically produced.[23] If toxins are weaponized and field tested, they cannot be distinguished from CW. Most of the "novel agents", substances which have not yet been discovered or are known but not weaponized and which could be used for CW in the future, are believed to be toxins. This may justify the monitoring of these substances under the CWC, especially since the BWC does not contain

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17 CD/952, p.20. This provision is supported, inter alia, by the Soviet Union.

18 CD/636:Appendix II, p.45.

19 Documents which deal, inter alia, with the question of herbicides include CD/378, p.2(China), CD/539:Annex, WP.118(Pakistan). A report on consultations on the issue, including an informal suggestion for a possible wording, is contained in CD/636:Appendix II, pp.44-45. A report on an international symposium on herbicides and defoliants in war, held in Ho Chi Minh City, was presented to the CD by Cuba (CD/349).

20 CD/952, p.21.

21 CD/636:Appendix II, p.4. This wording is similar to the one proposed by the United States (CD/500, p.2) but additionally involves the CSP in the decision-making process.

22 CD/952, p.21.

23 Definitions and descriptions of toxins can be found, for example, in CCD/333(Sweden), CCD/286(USA). See also the WHO report of 1970 and the UN-report of 1969.

any provisions for international verification. Most Western countries have held this view. Countries of the Socialist Group, on the other hand, argued that toxin weapons, whatever their origin, were banned by the BWC and should therefore not be covered by the CWC.

The substances "ricin" and "saxitoxin" which are extremely poisonous have been under discussion. Delegations which argued that toxins must be covered by the CWC proposed that ricin and saxitoxin be included in the second part of the second list of chemicals. This list is to comprise super-toxic lethal chemicals which have not yet been weaponized but could be used for weapon purposes in the future (see section 7.2). Other delegations have asserted that the two substances could be mentioned as examples ("markers") in the first list of chemicals. This list is to include substances considered to pose the highest risk to the objectives of the treaty.[24] The listing of certain toxins might need to be supplemented by definitions and other special provisions. This question will have to be addressed in detail if toxins are to be included in the CWC. In the second half of 1989, the Soviet Union changed its position and agreed to covering the most dangerous toxins.[25]

3.2 "Toxic Chemical"

Another term defined in Article II of the rolling text is "toxic chemical". It is used, inter alia, for the definition of CW (see 3.1) and reflects the toxicity criterion. It covers, according to the rolling text, chemicals whose toxic properties can be utilized to cause death or temporary or permanent harm to human beings or animals. This phrase reflects the effect criterion. No agreement has been reached on precise wording.

In the draft definition of CW (see 3.1), three categories of toxic chemicals are identified. Specific toxicity values to delimitate these categories are included in the Annex on Chemicals. They are expressed in terms of median lethal doses for subcutaneous administration (LD50) and inhalation (LCT50) of the specific agent to/by test animals. The values stand for the amount of a chemical which kills 50 % of a test group of animals. Provisions on standardized testing procedures to examine chemicals of interest are contained in the Annex on Chemicals.

The toxicity values defining the three categories of toxic chemicals "super-toxic lethal chemicals", "other lethal chemicals", and "other harmful chemicals" have remained unchanged for some time.[26] These values depend on an agreed method for toxicity determination, and on their practicability. It has been noted, for example, that the medium lethal doses may have to be changed at a later stage to cover sulphur mustard under "super-toxic lethal" chemicals once measurements have been performed.

Except for super-toxic lethal chemicals, definitions for the categories have not been agreed to. One of the reasons for the limited attention to these definitions is that they may become less necessary as the process of listing chemicals continues. Notwithstanding, they may perhaps remain as part of the guidelines which are needed for considering chemicals with a view to including them in an appropriate list. The relationship between the

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[24] CD/956, p.92.

[25] Statement of the Soviet representative in the First Committee of the UN General Assembly on 30 October 1989 (official text), Daily Bulletin of the US Mission to the UN in Geneva, 4 December 1989.

[26] They were already contained in CD/48(USA/USSR).

definitions contained in Article II and those in the Annex on Chemicals is expressed by a reference in Article II. It states that toxic chemicals are listed in the Annex on Chemicals.

Several questions concerning the definition of "toxic chemicals" remain to be addressed. They include:

1. The definition of "toxic chemical": Two proposals are mentioned in the rolling text. One is very similar to the wording proposed in the US draft convention of 1984.[27] The issue has not been discussed in much detail in recent years. This is a result of the continuing work on the lists of chemicals and guidelines therefore which may reduce the importance of this definition (see chapter VII).

2. The definition of categories of "toxic chemicals": The definition of toxic chemicals is based on three (or even four as we shall see) categories of substances. One among them are "other harmful chemicals". There is disagreement on their definition.[28] Two bracketed proposals are contained in the rolling text. The first bases the definition of other harmful chemicals on a comparison to super-toxic lethal and other lethal chemicals, and on the effect criterion.[29] The second proposal is solely based on toxicity values.[30] The basic issue is whether the toxicity criterion can be successfully applied to define this residual category of toxic chemicals. It appears that the two proposals are not mutually exclusive. The question may be rather one of finding a practicable technical definition.

Two other categories of "toxic chemicals" remain to be considered. The definition of "other lethal chemicals" was agreed to in the previous version of the rolling text[31], but is again bracketed in the latest report[32]. A proposal to establish a category of "ultra-toxic chemicals" has been added. According to the toxicity values proposed for these substances, they would constitute a subcategory of super-toxic chemicals. They would probably include a number of toxins and "novel agents".

3. Procedures to determine the toxicity of chemicals: To identify existing substances and assign them to one of the three categories of toxic chemicals, their toxicity must be determined. One of the criteria in this evaluation is their toxicity. Standardized procedures are necessary in this regard. Currently, the toxicity of chemicals reported in the international scientific literature is often based on different methods of toxicity determination. Standardized measurement is required for the purposes of the CWC, however, to ensure the uniform implementation of the treaty. Recommended procedures are contained in the Annex on Chemicals.[33] They were developed in 1982 and were unanimously adopted by the delegations. They were subsequently reviewed and transferred to the Annex on Chemicals in

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27 CD/500, p.2(USA).

28 Documents dealing with this issue include: CD/350, pp.1-2(Spain), CD/443, p.2(China), CD/500, p.2(USA), CD/636:Appendix II, p.5.

29 As to the first proposal, there is no agreement on an addition which reads: "including toxic chemicals which normally cause temporary incapacitation rather than death" and "at similar doses to those at which super-toxic lethal chemicals cause death". Except for the last expression, this wording was proposed in the US draft convention of 1984 (CD/500, p.2).

30 The second proposal was contained in CD/112(USA/USSR).

31 CD/952.

32 CD/952.

33 CD/952, pp.61ff.

1989. They include recommended standardized operating procedures to determine acute subcutaneous toxicity[34], and procedures to evaluate acute inhalation toxicity[35].

3.3 "Purposes not Prohibited by the Convention"

The rolling text defines permitted purposes as: industrial, agricultural, research, medical or other peaceful purposes, domestic law enforcement purposes, military purposes not connected with the use of chemical weapons, and protective purposes. Protective purposes are activities directly related to the protection against chemical weapons. Article VI (see chapter VII) defines in detail permitted activities with regard to specific chemicals and establishes verification regimes to monitor them.

For the moment, the only outstanding issue concerning the definition of permitted purposes is a proposal, put forward by Sweden. It holds that permitted protective purposes (protection against CW) must relate only to "an adversary's use of CW". This proposal was withdrawn pending a decision on whether and how "military preparations for the use of CW" will be covered by the treaty.[36] This link can be explained as follows: When discussing the possibility of a ban on the "preparation of use" of CW, we mentioned that it might be difficult to distinguish preparations for the offensive use of CW from protective activities. The qualification of protective purposes, proposed by Sweden, would prohibit protective measures for offensive purposes. (Troops which use CW must also be protected against these weapons.) If protective measures for the offensive use of CW were to be prohibited in Article I by a ban on the preparation of the use of CW, an additional qualification of protective purposes would not be necessary.

3.4 "Precursor"

The rolling text defines a "precursor" as a chemical reagent which takes part in the production of a "toxic chemical" (see 3.2). Precursors are contained in the lists of chemicals included in the Annex on Chemicals.

Additional definitions of precursor chemicals are contained in the Annex on Chemicals. There, a "key precursor" is defined as a precursor which poses a significant risk to the objectives of the Convention by virtue of its importance in the production of a "toxic chemical" It plays an important role in determining the toxic properties of a "toxic chemical" and may be used in one of the chemical reactions at the final stage of its formation.

Most of the unresolved issues in this context relate to the elaboration of the lists of chemicals (see chapter VII). As mentioned above, it is unlikely that the wording of

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[34] Principles concerning the test methods; description of the test procedure including experimental animals, the test substance, test methods and the evaluation of results; and data reporting.

[35] Principles concerning the test methods; description of the test procedure including experimental animals, the test substance, equipment, physical measurements, test methods and the evaluation of results; and data reporting.

[36] This proposal was contained already in CD/539:Annex I, p.7 and CD/636:Appendix II, p.6.

definitions in Article II will be finalized until the lists of chemicals, and the guidelines and monitoring regimes are further developed. At present, the following questions concerning the definition of precursors remain to be addressed:

1. The final product of "key precursors": It remains to be agreed whether the final product to which key precursors contribute significantly are "toxic chemicals prohibited by the Convention" or "super-toxic lethal chemicals". The definition of key precursors aims at identifying chemicals which are particularly significant in the chain of reaction the final result of which is a CWA. The definition of key precursors in relation to the resulting product will therefore depend on the definition of CW and other terms, especially the limitation on the production of certain chemicals under Article VI (see chapter VII).

2. Restrictions on the use of key precursors: It has been proposed that key precursors be not used or be used only in minimal quantities for permitted purposes. The inclusion of such a provision would depend on how some chemicals are dealt with in the Convention, and on agreed provisions on the production of particular chemicals for permitted purposes (see chapter VII). The consequences of the proposed provision are difficult to assess, especially the extent to which they may unnecessarily restrict the peaceful use of certain key precursors in the chemical industry.

3. Key precursors for binary or multi-component CW: There is little agreement on how key components of binary or multi-component weapons are to be covered. At least one of the two chemicals contained in a binary CW is a key precursor. It remains to be considered whether the term key precursors could cover the chemicals used for binary or multi-component weapons, or whether a special definition of binary CW is needed. Especially the Socialist countries proposed to include in the definition of precursors a direct reference to binary CW and define the chemicals used for these weapons as a special category of key precursors.

The solution of the problem may have to await further work on the lists of chemicals. If precursors for binary CW were included in appropriate lists, and if verification measures to monitor their production and consumption were satisfactory in the view of the delegations, there might be no need for a special definition of key precursors for binary or multi-component CW (at least not in Article II). However, guidelines for the updating of lists must be designed to ensure that new chemicals which could be used as key components for binary or multi-component CW would be quickly included in the lists and therefore monitored. This might necessitate a definition of binary CW in the guidelines for the Schedules.

3.5 "Chemical Weapons Production Facility" (CWPF)

Basic agreement on the definition of a CWPF was reached in 1988 after the Soviet Union and the United States had submitted a joint proposal to the Ad Hoc Committee. The definition includes any equipment, as well as any building housing such equipment, that was designed, constructed or used since 1 January 1946 for the production of chemical weapons

or other substances if their production exceeds thresholds established by the treaty.[37] The term CWPF also applies to facilities for the filling of CW.

This definition does not include the "Single Small Scale Production Facility" (SSSPF) which is to be permitted under the provisions of the Annex to Article VI. This facility would be the only place (with some exceptions) where a party could produce substances included in the first list of chemicals ("Schedule 1"). The question of permitted production of such chemicals outside the SSSPF is still under discussion. (See chapter VII)

1. The relation of the definition to other Articles: Like other provisions of Article II, most of the outstanding questions remain to be considered together with Article VI and III (Declarations). Further work on Article VI may lead to a revision of the definition of CWPF, especially as a result of negotiations on the lists of chemicals. An example: The definition of quantities of specific chemicals which could legitimately be produced or consumed, and of facilities which would be allowed to produce or consume them, may partly help in identifying CWPF. The provisions so far agreed to hold that facilities with an annual capacity for the synthesis of chemicals included the first list (the most risky ones) or other chemicals that have no use for permitted purposes, which is below a defined threshold would not be covered by the definition of CWPF.[38]

2. Defining the filling of CW: The definition of CWPF includes, inter alia, facilities for the filling of chemical weapons. There is, however, no agreed definition of the filling of CW. On the other hand, it is not clear yet whether such a definition is needed for the Convention. The following suggestion has been made and is included in the rolling text as a footnote. The filling of chemical weapons may include: the filling of Schedule 1 chemicals into munitions, devices, or bulk storage containers; the filling of chemicals into containers which form part of assembled binary munitions and devices, and into chemical sub-munitions which form part of assembled unitary munitions and devices; and the loading of the containers and chemical sub-munitions into the respective munitions and devices.[39]

It seems that this proposal merely intends to create a common understanding that such facilities must be included in the definition of CWPF. It does not appear to indicate disagreement. However, there may be cases where filling installations are located in facilities producing chemicals for legitimate purposes. These cases must be taken into consideration and may pose some problems.

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37 The production process in which the equipment is used is defined as the stage, when the equipment is in operation, in the production of chemicals ("final technological stage") where the material flows contain any Schedule 1 chemical or any other chemicals which have no use for permitted purposes above a certain quantity but which can be used for CW purposes.

38 Quantitative thresholds for particular chemicals remain to be established. If a facility produced or consumed more than a specific quantity of a particular chemical, it would be defined as a CWPF. A proposed provision holds that the definition of CWPF does not cover any facility with an annual capacity for synthesis of Schedule 1 or any other chemical having no permitted purposes below a certain quantity (1000-2000 kg are proposed). The disposition of such facilities will have to be decided in the context of Article III (Declarations) and VI (non-production regime). In addition, the term "production capacity" of a facility remains to be defined (see chapter VII).

39 CD/952, p.23. Other documents dealing with this aspect include CD/393, pp.4-5(Yugoslavia) and CD/630(France).

CHAPTER IV

DECLARATIONS BY THE PARTIES TO THE TREATY

To destroy chemical weapons and CWPF and to verify the non-production of chemical weapons, the location and characteristics of existing CW stockpiles and production facilities, and other facilities, must be known. This information will be made available through declarations of the parties to the Convention. The general provisions on these declarations are contained in Article III which will be discussed here. Details including the verification of declarations are provided for in Article IV (provisions concerning CW), Article V (provisions concerning CWPF), and Article VI (the non-production regime).

After a long controversy over whether the location of CW stockpiles and CWPF must be declared and when this has to be done, there is now basic agreement on the information to be provided. In 1986, the Socialist Group accepted the declaration of the location of CW stockpiles and production facilities.[1] France remains the only country which has reserved its position in this context. This is a result of its preoccupation with the question of "undiminished security" (see chapter II, chapter V, and part one, chapter IV). France has indicated, however, that it might change its position if, in its view, the problem of undiminished security has been properly addressed. The latter relates to issues such as the order of destruction of CW and CWPF, questions of verification, and the relationship of the CWC to the Geneva Protocol.

The rolling text states that each party must submit to the international organization to be established under the treaty, not later than 30 days after the Convention has entered into force for it, declarations on chemical weapons, CWPF, and other declarations. Parties making affirmative declarations with regard to chemical weapons and CWPF will have to implement the provisions of Article IV (chemical weapons, see chapter V) and Article V (CWPF, see chapter VI).

4.1 Declarations Concerning Chemical Weapons

Declarations concerning CW must indicate: whether a party has any weapons of this kind under its jurisdiction or control anywhere; whether it has on its territory any CW under the jurisdiction or control of others, including a State not party to the Convention; and whether it has transferred or received any CW, or has transferred to or received from anyone the control over such weapons since a specific date (to be determined)[2] A questionnaire for the declarations is included in the Annex to Article III.

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[1] Statement of Secretary General of the CPSU, Mr. Gorbachev, on 15 January 1986, Novosti Press Publishing House 1986.

[2] 1 January 1946 and 26 March 1975 (entry into force of the BWC) were proposed.

4.2 Declarations Concerning CWPF

Declarations concerning CWPF must state whether a party has any CWPF under its jurisdiction or control anywhere or has had such facilities at any time since a date to be determined[3]; whether it has any CWPF on its territory under the jurisdiction or control of others, including a State not party to the Convention, or has had such facilities at any time since a date to be specified[4]; whether it has transferred or received any equipment for the production of CW, or has transferred to or received from anyone the control over such equipment. A questionnaire for the declarations is contained in the Annex to Article III.

4.3 Other Declarations

Additional declarations must be made on the precise location, nature and general scope of activities of any facility and establishment on the territory of a party or under its jurisdiction or control anywhere which was designed, constructed or used since a date to be determined[5] for the development of CW. This includes, for example, laboratories and test and evaluation sites. A questionnaire for the declarations remains to be developed.

The opinion has been expressed that the whole Annex to the Article on Declarations (especially the questionnaires) needs to be reviewed. In addition, the following details remain to be considered:

1. The term **"jurisdiction and control"** may have to be clarified. This question was discussed in chapter II.

2. **Timeframes:** The timeframes included in the provisions on declarations remain to be agreed.[6] Most delegations believe that this issue is of minor importance. It is rather a question of obtaining the information back to a particular date and a question of what makes sense. An example is whether declarations on transfers of chemical weapons since 1946 are possible with a view to the availability of information, or whether these declarations are necessary for the purposes of the CWC.

3. **"Documentation relevant to the production of CW":** There is disagreement on a proposal by the Soviet Union[7] to provide for mandatory declarations of transfers or receipts of "documentation relevant to the production of CW, or the control over such documentation" (e.g. technical information on the design of CW). Other countries argue that the verification of these declarations is impossible.

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[3] 1 January 1946 was proposed.

[4] 1 January 1946 was proposed.

[5] 1 January 1946 was proposed.

[6] The date from which transfers of and the receiving of control over CW, CWPF and other facilities have to be declared is not agreed. 1 January 1946 and 26 March 1975 were proposed. 1 January 1946 was apparently chosen because CW moved forward as troops proceeded to Germany and Japan had presumably been transported back again. France said that declarations back to 1946 could not be made obligatory. They could, however, be made as a CBM (CD/757, p.7). The Soviet Union proposed 1 January 1946 (PV.448). Basic agreement on the obligation to declare past transfers was reached in 1987.

[7] CD/294, p.4.

4. "Other declarations": As far as "other declarations", i.e. on CW development facilities, are concerned, the scope of the term "any facility and establishment" remains to be clarified and properly formulated. The United States[8] proposed that this term relate to facilities or establishments which "specialize" in CW development. This would cover only facilities of concern, and not facilities with an indirect or one-time involvement in CW development. The development of a clear definition of development facilities is a question of technical nature. It will, to some extent, depend on further work on Article VI (see chapter VII). This concerns in particular verification measures to be applied to facilities producing Schedule 1 chemicals (the most risky type of chemicals covered by the treaty).

Parts of the declarations required under Article III may already have been made by the time the CWC enters into force. A bilateral as well as (limited) multilateral exchange of data is currently under way. (See chapter XIV)

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[8] PV.403.

CHAPTER V

PROVISIONS CONCERNING EXISTING CHEMICAL WEAPONS

The provisions of Article IV will apply to parties which have declared (under Article III, see chapter IV) their possession of CW. The Article will have to be implemented with regard to all chemical weapons under the jurisdiction or control of a party, regardless of their location. This includes CW on the territory of another State. An example for the latter are chemical weapons of the United States currently (until 1991) stockpiled in the Federal Republic of Germany (see part one, chapter IV).

Article IV provides for a series of steps to be taken by the parties concerned. They range from detailed declarations to the destruction of the declared weapons.

The international organization which will be established under the Convention will monitor compliance with the obligations expressed in this Article. Institutional questions will be discussed in detail only later in chapter IX. A short explanation is therefore necessary at this point because we will repeatedly refer to the Organization and its bodies in subsequent sections. The Organization will consist of the "Conference of the States Parties" (CSP), the "Executive Council" (EC), and the "Technical Secretariat" (TS). The first two bodies are of a political nature, the third will, inter alia, carry out all international verification activities. Its staff will include international inspectors. National Authorities will be established by each party to the CWC. They will help in implementing the treaty on a national level, and assist the Technical Secretariat.

5.1 Declarations Concerning CW and CW Storage Facilities

The provisions on the declaration of CW partly repeat but also supplement and elaborate those contained in Article III (see chapter IV). Each party to the Convention will have to submit, within 30 days after the Convention has entered into force for it, a declaration on: the precise location, the aggregate quantity and detailed inventory of any CW under its jurisdiction or control; CW on its territory but under the jurisdiction or control of others, including a State not party to the Convention; any transfer or receipt of any chemical weapons since a date to be determined, or any transfer of control over such weapons. The declaration must include a general plan for the destruction of the declared stockpile. The Annex to Article IV determines the information to be submitted.

The Annex to Article IV defines a CW storage facility as a place where chemical weapons, declared under Article IV, are stored on the territory of a party or under its jurisdiction or control elsewhere pending destruction. When submitting the declaration on CW, each party must provide the TS with a detailed description of its CW storage facilities including, for example, recommendations for the emplacement of seals and devices by the TS to monitor them.

The following questions remain to be addressed:

1. The declaration of the location of CW stockpiles: After the Soviet Union had modified its position on this issue in 1986[1], France remained the only country which was opposed to the declaration of the location of CW stocks within 30 days after the entry into force of the treaty, and to their permanent international surveillance from then on.

France first proposed that CW stocks to be destroyed be grouped at destruction sites whose location would be declared (no declaration of storage sites).[2] In addition to the argument of national security, it indicated that the obligation to declare the location of stockpiles shortly after the entry into force of the CWC could lead to many difficulties and might make some countries "forget" to declare certain stocks, possibly located in high-security areas. France declared itself willing to accept a solution based on the principle of declaring the location of CW in stages.[3] It did not elaborate on how this process would look like.

The French "security stock proposal" (see part one, chapter IV, and section 5.3.1) led to a modification of the French position in this context. France proposed to afford the opportunity to each party to the CWC to produce or maintain a small but militarily significant CW stockpile until all CW stocks were reduced to the same level. This "security stockpile" would be stored at not more than 5 undeclared locations. An "envelope solution" was proposed for international verification in this context. The location of the stockpile would be indicated in a document contained in a sealed envelope (no declaration). This envelope could be opened only if on-site verification became necessary, for example to clarify suspicions that the stockpile was larger than permitted. This would, so the French view, increase the security of the parties by providing them with a deterrent and retaliation capacity during the destruction period.[4]

Facing strong opposition by almost all other CD delegations, France formally withdrew its proposal (see part one, chapter IV) and declared that it did not possess CW. Under these circumstances, some observers expected a modification of the French position with regard to the declaration of the location of CW stocks. A party which does not have CW would not have to declare their location anyway. It will be noted, however, that concerns in this context could make sense for a State which is considering the possibility of acquiring CW before the entry into force of the CWC. This is indeed the declared French policy which is designed to keep open the possibility of acquiring CW before the treaty enters into force and to maintain the stockpile at undeclared locations. France believes that this would guard against the threat posed by larger CW arsenals and possible actions by non-parties during the destruction period. However, if the concerns of France about undiminished security could be solved in the context of the order of destruction of CW and other issues, France may withdraw its reservation.

2. Binary and multi-component CW have caused some difficulties with regard to declarations. They raise the question of whether declarations on the quantity of each chemical component in binary or multi-component CW, devices, bulk containers etc. would

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1 E.g. chapter IV, PV.389. Before, the Soviet Union advocated a gradual declaration of the location of CW during the 10 years destruction period (in the plans to be submitted one year before the destruction of the facility and stockpile concerned starts).

2 CD/494, p.2.

3 CD/630, p.4(France).

4 This implies that the secrecy of the site where CW stocks are located guards against preemptive attacks by an adversary and therefore increases the military value of the CW.

have to be made in the category of "key precursors" or "key components" for binary or multi-component CW (see chapter III).

3. Provisions on the declaration of CW on the territory of a State-party but under the **jurisdiction or control** of another country, including a State not party to the Convention, remain to be elaborated in the Annex to Article IV. A clear definition of the State which would be responsible for the declaration of these CW is needed to ensure that there are no loopholes which could be used to avoid a declaration.

4. There is no agreement on provisions concerning the declaration of **past transfers or receipts of CW**. A proposal, under consideration, is to declare such transfers or receipts only if the quantity involved exceeds one metric ton "of chemicals" (or (alternatively) "per chemical") per year, in bulk and/or munitions form.[5] This issue may have to be settled in the light of practical considerations such as the feasibility and necessity of declarations of smaller transfers and receipts.

5.2 The Verification of Declarations, the Monitoring of CW Storage Facilities, and the Removal of CW for Destruction

Verification procedures provided for in Article IV will include international verification of declarations concerning CW, systematic international monitoring of CW storage facilities, international verification of the removal of CW for destruction, and international verification of the destruction of CW stockpiles. The latter will be discussed in section 5.3.2, the other verification procedures are explained in this section.

5.2.1 Securing CW Storage Facilities and Preparing them for International Verification

Not later than when submitting their declarations on CW, the parties must take the necessary steps to secure their CW storage facilities, and must prevent any removal of CW from there except for destruction. To prepare the facilities for international verification, chemical weapons must be configured to allow the effective application of seals and monitoring devices and ready access. Solely activities which are necessary for maintenance and safety may continue.

5.2.2 Agreements on Subsidiary Arrangements

The parties will conclude agreements with the Technical Secretariat, within a period to be specified[6], on subsidiary arrangements. These agreements will determine in detail verification procedures for each CW storage facility. They will be based on a "Model

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[5] CD/952, p.74.

[6] 6 months after the Convention has entered into force for the party concerned are under discussion.

Agreement" which contains guidelines on the number, intensity and duration of inspections, on detailed inspection procedures, and on the installation, operation and maintenance of seals and other devices by the Technical Secretariat. The Model Agreement will also include provisions to take into account future technological developments.

The parties must ensure that the verification of declarations and the initiation of the systematic monitoring of CW storage facilities can be accomplished by the TS within agreed timeframes.

5.2.3 International Verification of Declarations

The international verification of declarations of CW has three purposes: it will help to confirm the accuracy of declarations; it will verify the identity and quantity of declared items; and it will ensure that no CW or other declared items are removed from the declared site.

International inspectors will, promptly after a declaration has been submitted, verify the quantity and identity of chemicals, the types and number of munitions, devices, and other equipment, at the declared site.[7] They may employ agreed seals, markers or other inventory control procedures to facilitate an accurate inventory, to check that no declared items are removed, and to ensure the securing of the facility. In conjunction with this, the inspectors will undertake the necessary preparations for the systematic monitoring of the facility after the initial inspection.

5.2.4 Systematic International Monitoring of CW Storage Facilities

Systematic international monitoring of CW storage facilities will ensure that no clandestine removal of CW or other declared items takes place. It will also be used to monitor the removal and arrival of items for destruction.

It will start as soon as possible after a declaration concerning CW has been submitted and will continue until all CW have been removed from a storage facility for destruction. In accordance with the applicable agreement on subsidiary arrangements, it will be based on a combination of continuous monitoring with on-site instruments and systematic verification by international on-site inspections. If the continuous monitoring with on-site instruments is not possible, verification will be based on the presence of international inspectors.

If the corresponding agreement on subsidiary arrangements has been concluded, international inspectors will install a monitoring system. Details concerning the monitoring system are specified in the Annex to Article IV[8], in the Model Agreement for agreements on subsidiary arrangements, and in the agreements on subsidiary arrangements.

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[7] France reserved its position on the prompt access by international inspectors to declared CW storage facilities. This is a consequence of its views concerning the declaration of the location of CW stockpiles 30 days after the entry into force of the CWC.

[8] The provisions on instrumental monitoring include, inter alia, procedures to be applied if irregularities occurr in the system.

If no agreement on subsidiary arrangements has been concluded by the time the monitoring is supposed to begin, international inspectors will initiate systematic monitoring by their continuous presence on-site. This will continue until the agreement has been concluded and the monitoring system can be installed and activated. This provision closes a possible loophole. It makes it impossible to delay verification activities by prolonging negotiations on the agreement on subsidiary arrangements.

Before the continuous monitoring with on-site instruments starts, and at other times when this method of verification is not feasible, seals at a CW storage facility may only be opened in the presence of international inspectors. If an extraordinary event requires the opening of a seal without an international inspector being present, the party will have to inform the TS immediately. International inspectors will return as soon as possible to check the inventory and re-establish the seals.

The monitoring of CW storage facilities requires systematic on-site inspections. In addition to these inspections, visits to service the monitoring system may be required. During each inspection, the inspectors will verify that the monitoring system is functioning correctly and that no declared items have been removed except for destruction.

When all CW have been removed from a storage facility to a destruction site, the Organization will certify the declaration of the responsible National Authority to that effect. After that, the international systematic monitoring of the facility will end and all devices and monitoring equipment installed by the TS will promptly be removed.

5.2.5 International Verification of the Removal of CW for Destruction

The Annex to Article IV establishes procedures for the removal of CW from storage locations to sites where they are to be destroyed. The Organization must be notified in advance (14 days are proposed) of the exact time of any removal and the planned arrival of the removed items at the destruction site. The party concerned must establish an inventory of items to be removed. International inspectors will be present when these items are removed and loaded onto transport vehicles. They will seal the vehicles and will subsequently verify the arrival at the destruction site. They will check the seals and confirm the accuracy of the inventory of the items transported.

5.2.6 Inspections and Visits

The "Model Agreement" (see above) and individual agreements on subsidiary arrangements will determine in detail the inspection procedures. However, some general guidelines for international inspections are included in the Annex to Article IV.

The TS will notify a party whose storage facility(ies) has been selected for an inspection or visit 48 hours prior to the planned arrival of the inspection team at the site concerned. If an urgent problem has to be solved, this period may be shorter. The TS will specify the purpose of the inspection or visit. The host State must make the necessary preparations for the arrival of the inspectors and must ensure their expeditious transportation to the facility

from the point of entry into its territory. The agreements on subsidiary arrangements will deal with administrative questions arising in this context.

The rights and obligations of the international inspectors, in accordance with the agreements on subsidiary arrangements, are: they will have unimpeded access to all parts of the CW storage facility; they may choose the items to be inspected; they may bring along and use agreed instruments; they can receive samples taken at their request and in their presence by the host State, perform on-site analyses of samples, and transfer, if necessary, samples for off-site analysis to a laboratory designated by the Technical Secretariat according to agreed procedures; they also have the right to communicate freely with the TS. If ambiguities arise during the inspection, international inspectors may request clarification. If ambiguities cannot be clarified during the inspection, the inspectors will inform the TS.

Obligations of international inspectors are, inter alia: to comply with safety regulations at the facility concerned; to afford the opportunity to the host State to be present when samples are analyzed (off-site as well); and to ensure, in accordance with agreed procedures, that samples transported, stored, and processed, are not tampered with.

The host State has the right: to accompany the international inspectors at all times during the inspection and observe their activities; to obtain duplicates of all samples taken and to be present when samples are analyzed; to inspect any instrument used or installed by inspectors and to have it tested in the presence of its personnel; to receive copies of the reports on inspections of its CW storage facility(ies) and copies, at its request, of information and data gathered by the TS about its CW storage facility(ies). It is obliged to provide assistance to the international inspectors, upon their request, for the installation of the monitoring system and the on-site analysis of samples.

The international inspectors will submit to the TS a report on each inspection or visit. The TS will transmit a copy to the party which has received the inspection or visit.

The status of the provisions on inspections and visits is not entirely clear at the moment. Work in the Ad Hoc Committee has focused on an inspection protocol which also covers certain aspects of routine verification procedures. It will be discussed in chapter IX. Parts of the provisions outlined may therefore be shortened.

Several questions concerning the verification of declarations, the monitoring of CW storage facilities, and the removal of CW for destruction remain to be addressed. They include:

1. The declaration of the location of CW: France has reserved its position on this whole section because of its views on the declaration of the location of CW stocks (see above). This affects, of course, also the question of access of international inspectors to verify declarations.

2. The Model Agreement and Subsidiary Arrangements: The coverage of agreements on subsidiary arrangements remains to be considered. The period within which these agreements have to be concluded must be determined as well (6 months are proposed). It has been proposed to develop procedures to ensure the implementation of the verification scheme within designated timeframes. It has not been indicated, so far, how such procedures would look like. For the systematic international monitoring of CW storage facilities, guidelines to determine the frequency of systematic on-site inspections may have to be developed.

The Model Agreement for agreements on subsidiary arrangements relating to CW storage facilities remains to be completed. According to the work done on this issue so far[9], it will include guidelines for: information to be delivered by the parties on their CW storage facilities; information relating to the transport of CW from storage to destruction facilities; the number and modalities of systematic and other inspections; the description and use of seals and markers; the monitoring system; provisions governing the employment of instruments and other equipment; sample-taking; on-site analyses of samples and on-site analysis equipment; administrative arrangements; services to be provided; and amendments and revisions of the agreement.[10]

3. Responsibility in special cases: Another question which was discussed in chapter II and IV ("jurisdiction and control") is who would be responsible for the declaration of CW located on the territory of a party but under the control of someone else, including a non-party, and how these declarations would be verified. The provisions of Article IV must be designed to ensure that declarations of CW of a party which are located on the territory of a non-party can be verified.

4. Transmission of data to the Technical Secretariat: A question of technical nature is how data collected by the monitoring systems installed at CW storage facilities would be transmitted to the Technical Secretariat. Japan proposed a "second generation" system to the US system "Recover" The technology of the US system was originally developed for a global data collection system for the safeguarding of nuclear material.[11] A second generation system is being developed in Japan. It was said to permit a safe, economic and reliable transmission of digital data from various sensors placed at facilities to a central monitoring organization. According to Japan, the system could, for example, be applied to the verification of the inactive status of CWPF, the situation of CW stockpiles, and their elimination. Japan submitted to the CD an outline of the project, describing its status, the system characteristics, the application to verification of compliance with the Convention, and financial implications.[12] The United States[13] suggested the creation of an international verification center which would receive and process the data collected from local transmissions by sensor systems at CW storage facilities.[14]

5.3 The Destruction of Chemical Weapons

The rolling text states that all chemical weapons must be destroyed. Agreement on their destruction without the right to convert certain materials to peaceful purposes was reached in 1986/87.[15] The destruction of CW is defined as a process by which the chemicals are converted in an irreversible way to a form unsuitable for the production of CW. Destruction must also render munitions and other devices unusable, in an irreversible manner, for CW purposes.

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9 CD/952, pp.180-184.

10 Other documents which deal, inter alia, with this question are WP.164 and WP.175, pp.18-25.

11 CD/271(USA, UK, Australia).

12 CD/619(Japan).

13 CD/516, pp.2-3.

14 Some comments on the issue are also contained in CD/387, pp.15-16(USA) and CD/518, pp.11-12(Federal Republic of Germany).

15 Before, some countries had held the view that the conversion of some materials might be justified for economic reasons (e.g. PV.389(USSR), PV.394(USSR)).

Except for certain limitations, each party concerned may determine how it destroys its CW stockpile. The limitations are: dumping CW in any body of water, land burial or open-pit burning are explicitly prohibited; and chemical weapons must be destroyed only at specifically designated and appropriately designed and equipped facilities. These provisions will help to protect the environment. (The destruction of CW in the United States (see part one, chapter IV) and some other countries has shown that this process requires very expensive safety measures. This makes the destruction of CW an expensive undertaking.[16]) Another limitation is that destruction facilities must be designed to make the process verifiable under the provisions of the Convention.

5.3.1 Principles and Order of Destruction

Each party will destroy its chemical weapons pursuant to the order specified in the Annex to Article IV. The destruction process will begin not later than 12 months and be terminated not later than 10 years after the Convention has entered into force for a party. Each party must, on an annual basis, provide information on the implementation of its plans for the destruction of CW (see below). It must certify, not later than 30 days after the destruction process has been completed, that all of its CW have been destroyed.

Any party which has on its territory chemical weapons under the control of a non-party must ensure that these weapons are removed from its territory within a period to be specified[17]. CW discovered after the initial declaration must be reported, secured and destroyed. This question remains to be addressed and will be treated below.

The whole destruction period will be divided into nine annual periods. Each party will destroy not less than one ninth of its stockpile during each of the destruction periods. Faster destruction is not precluded. Each party must work out detailed plans for every destruction period and report annually on the implementation of its plans. Agreement on the order of destruction has not yet been reached. It is one of the major outstanding issues and will be discussed below.

The following questions remain to be addressed:

1. The length of the destruction period: Some delegations have suggested that the period of 10 years for the destruction of CW could perhaps be shortened. The idea of a 10 year destruction period appeared at the end of the 1970s. In the meantime, the technology which could be used for the destruction of CW may have been further developed and improved. In addition, the United States is implementing a major CW destruction programme and the Soviet Union is making plans in this context. Hence, the possibility of shortening the destruction period is worth considering. Whether a shortening is feasible will, inter alia, depend on when the Convention enters into force. If parts of the existing CW stocks are destroyed before the CWC enters into force (the United States, for example, will destroy large parts of its stockpile until 1997), a shortening of the destruction period might

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[16] The United States is already engaged in the destruction of parts of its CW stockpile. It will destroy around 90 % of its older CW until 1997 according to a law passed by Congress and irrespective of the conclusion of a multilateral treaty. The Soviet Union intends to destroy parts of its CW as well but currently lacks the destruction capacity therefore.

[17] 30 days are proposed.

be technically possible. Some delegations argue, however, that basic political compromises such as the one on the ten years must not be upset.

2. "Undiminished security" during the 10 year destruction period and the order of destruction: The question of "undiminished security" has been discussed in chapter II. Essentially, the term refers to the principle that the security of a State which joins the Convention must not be reduced by this step. This abstract principle becomes more concrete when considered in the context of the order of destruction of CW.

There is consensus that the order of destruction must proceed in a balanced manner in order not to affect negatively the security of any party to the CWC. However, the practical implementation of this principle may be difficult. There are possessors and non-possessors of chemical weapons as well as holders of larger or smaller stockpiles. In addition, existing CW stockpiles differ in quality. As a consequence, there are different interests concerning the order of destruction.

The main body of the rolling text holds that chemical weapons must be destroyed pursuant to the order specified in the Annex to Article IV The destruction must begin not later than 12 months and be completed not later than 10 years after the Convention has entered into force for the State concerned.

The entire section of the Annex to Article IV to which this provision in the main body of the rolling text refers remains to be elaborated. A document on preliminary results of consultations on this issue is included in the report of the Ad Hoc Committee.[18] It states that the elaboration of the order of destruction must build on: the undiminished security of all States during the entire destruction period; on confidence-building in the early stages of the destruction period; on gradual acquisition of experience in the course of destroying existing stockpiles; and the applicability irrespective of the actual composition of the stockpiles and the methods chosen for their destruction.

In general terms, there is consensus that each party possessing CW will start destruction at a certain time after the entry into force of the Convention, and will complete this process within 10 years. There is agreement that no party must gain a military advantage throughout the destruction period. A timetable for the destruction of CW which pays respect to these principles remains to be established. It must take into account the disparities of stockpiles and production facilities, and differences in industrial, financial and technological capacities.[19]

Four basic approaches to solve the question have been proposed. They partly overlap and could therefore perhaps be combined.

(a) It was proposed[20] to divide chemical weapons declared by the parties into three categories:

Chemical weapons on the basis of substances included in the first list of chemicals (the most dangerous CWA, see chapter VII).
Chemical weapons on the basis of all other chemicals.

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18 CD/952, pp.157-158 (the development of the negotiations is reflected in WP.130, WP.162, WP.169, WP.182, WP.199, WP.211, CD/822, CD/831, pp.104-105, CD/789, pp.46-52, CD/795, pp.92-93, CD/697, CD/874, pp.51-52, 114, CD/782:Appendix II, pp.7-9).

19 See, for example, CD/605:Annex, p.2(China), CD/630(France).

20 CD/952, pp.157-158.

Unfilled munitions and devices, and equipment specifically designed for use directly in connection with the employment of CW.

During the destruction period, the CW stockpiles would be "levelled out". This means that all CW possessors would be left with an approximately equal stockpile after a certain period (level and time to be defined). Existing stockpiles would have to be compared to determine the proportion of each CW stockpile to be destroyed during a specific period. It was therefore proposed that the comparison factor for the first two categories of CW (see above) be the aggregate weight of the CWA. For munitions and devices the comparison factor would be the fill volume (m3). For equipment it would be the number of items.

The destruction of CW included in the first category would start not later than one year after the entry into force of the Convention and be completed not later than by the tenth year. For the second category of CW, destruction would begin not later than 1 year and end not later than 5 years after the entry into force of the Convention. The same would apply to items in category three.

Maximum quantities of particular items which could remain at the end of each year would be specified in a table. Each party would be free, however, to destroy its stockpiles faster. Detailed plans for destruction would have to be submitted and approved by the Executive Council. For each category of items, detailed plans for destruction would be submitted for each year. The parties concerned would also report to the Organization on the implementation of their destruction programme during each year.

A table indicating "maximum allowed quantities" remains to be established. It is to be designed so that possessors of larger stockpiles would have to eliminate larger quantities of CW than countries with smaller stockpiles. This would lead to the levelling out of CW arsenals at a point to be defined. It was therefore proposed that each party concerned destroy not less than one ninth of its stockpile during each destruction phase. This would lead to the levelling out at a relatively late stage and was hence criticized by a few delegations, notably France.

Mongolia submitted a proposal which is very similar to the one just outlined.[21] It proposed to divide CW into categories within which the levelling out of stockpiles would occur. After 8 or 9 years, approximately equal quantities of CW would be left (1/9 of the CW in each category would be destroyed by each CW possessor during each year of the destruction period).

Belgium[22] put forward a proposal which had somewhat similar features but may have different effects. It was based on "minimal established quantities" of CW stocks to be destroyed within each destruction phase and may result in a more linear destruction of stockpiles. Chemical weapons would be destroyed in equal proportions by all countries and there is no mentioning of a levelling out of stockpiles. The proposal includes a method for calculating the amounts of CW to be destroyed in each phase of the destruction period. Belgium recognized that there might be a need to allow countries possessing smaller stockpiles to destroy them only in the final phase of the destruction period. A purely linear destruction might be perceived by holders of smaller stockpiles as a threat to their security. It would leave them without a significant CW arsenal very quickly whereas this level would

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[21] WP.182, see also WP.162.
[22] CD/697.

be reached by holders of larger stockpiles only at a relatively late stage. This concern was expressed clearly by France (see below).

During bilateral negotiations between the United States and the Soviet Union in 1989, the eighth year of the destruction period appeared as a possible point for the levelling out of all stockpiles. In September 1989, US President Bush[23] announced that the United States would be willing to destroy 98% of its CW stockpile within eight years after the conclusion of a multilateral treaty if the Soviet Union has joined the ban. 100 % would be destroyed by the tenth year if all CW-capable States have joined the CWC. The Soviet Union seemed to agree to this approach (except for the condition mentioned last). It is impossible to tell, however, whether a 98 % reduction would result in a levelling out of all existing stockpiles because only the Soviet Union and the United States have acknowledged their possession of CW. No reliable information is available on the stockpiles of other countries, even though the question of "levelling out" is of special interest to possessors of smaller stocks. In addition, the United States has not indicated whether the proposed 98 % reduction of the stockpiles would concern only the US and Soviet arsenal or whether holders of smaller stockpiles would have to destroy some of their CW during the first 8 years as well. The possibility of destroying parts of the biggest arsenals in advance to produce a faster levelling out will be discussed next.

(b) The second of the proposed approaches to the order of destruction includes a special phase in which the owners of the largest CW arsenals would destroy parts of their stockpiles. States with smaller stockpiles would commence the destruction of their CW only afterwards. This would lead to a faster levelling out.

This approach was formally proposed by the Federal Republic of Germany and Italy[24], but was also mentioned before by France in the context of its security stock proposal (see below). Italy and the Federal Republic of Germany proposed that the owners of the largest CW stockpiles (defined by a threshold based on tons of CWA) reduce (and level out) their stocks down to an agreed level (to be defined) during the first 5 years after the entry into force of the Convention. This would start not later than one year after the Convention has entered into force. Equal levels of the largest stocks would be reached after five years. A formula to calculate the quantities of CW to be destroyed during the five annual reduction steps was put forward. Annual reports on the destruction of stockpiles would be submitted to the TS.

After the levelling out of the largest stockpiles at the end of the fifth year, a review of the results and experiences would take place in a special conference. Subsequently, a linear destruction of the remaining stockpiles (stocks divided by remaining destruction periods) would follow. The three categories of chemical weapons outlined under (a) would be used to this end. The review could not be used to change the timing of the overall destruction process, to extend the transitional period, or to decide on a course of execution of the CWC other than the one laid down in the treaty. The United States and the Soviet Union did not support the West German-Italian proposal but proposed the levelling out of stockpiles at the eighth year after the entry into force of the CWC (see above).

(c) A third possibility which was mentioned by some countries is to destroy the most dangerous chemical weapons first[25]. They include, in particular, nerve agents or also binary

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[23] See part one, chapter III.
[24] CD/822, PV.437, PV.458.
[25] E.g. CD/443, p.4(China), CD/605(China), CD/494, pp.2-3(France), PV.406(China), PV.421(Mexico), PV.424(Argentina).

CW. "Other harmful chemicals" (see chapter III) would be destroyed last. It was, however, realized that an order of destruction based only on this criterion would have to be combined with a proportional destruction in phases to pay respect to the principle of undiminished security. To this end, the proportional destruction of CW in phases and in quantities determined by an agreed method was introduced.[26] This approach is reflected in the proposals described under (a) and (b).

(d) Another option was introduced by France. Although France has withdrawn its proposal because of the negative reaction by other delegations[27] it is still worthwhile to take a closer look at it since the debate on the order of destruction is still continuing.

France made a first proposal on the order of destruction in 1985. Some of the ideas contained therein were further developed and resulted in a "security stock proposal" submitted in 1987.[28]

The document submitted in 1985 proposed to divide the destruction period into sub-periods. To balance the process of destruction, a new stage would begin only when all countries concerned have fulfilled the requirements of the preceding stage. The whole process would be divided into three stages and a preparation phase. The order of destruction would be based on categories of CW. The time-table elaborated by France indicated that the main holders of CW would be brought to a position of parity half way through the destruction process (i.e. by the end of the fifth year). The preservation until the eighth year of a militarily significant stockpile (to be determined) for the countries participating in the munitions-destruction process would be assured. This would maintain, under verifiable conditions, a balance of security.[29] This limited stockpile would be destroyed during the last two of the ten years.[30] Therefore, the effects of the French proposal submitted in 1985 would have been, apart from its component relating to the maintenance of a militarily significant CW stockpile until the eighth year, similar to those of the West-German/Italian proposal.

In 1987, France submitted a detailed proposal which developed the "security component" of its previous proposal. It was said to aim at assuring a security balance among all parties to the Convention from the moment of the declaration of existing stocks until their complete elimination. France assumed that difficulties may arise during the destruction period. They might lead to an extension or even to a calling into question of the agreed time-table for destruction. Another problem was said to be the disproportion in existing CW stocks. If the order of destruction was linear and all CW possessors had to destroy equal quantities in each specified sub-period of the 10 years, there would, after a short time, be no CW left in States possessing a small stockpile. Owners of larger arsenals, on the other hand, would retain a militarily significant part of their stockpile until a relatively late stage. A linear order of destruction would therefore reduce the security of countries possessing smaller stockpiles.

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26 E.g. CD/605, p.1(China), CD/630, p.5(France).

27 E.g. WP.211(USSR), PV.413(Pakistan), PV.419(Poland), PV.441(USSR). The main arguments were that it would lead to the legalized buildup of CW arsenals and therefore to the further spread of such weapons. It would also complicate the work of the Ad Hoc Committee, especially on verification, and would be against the spirit of the negotiations.

28 CD/630, PV.327, PV.413, PV.409.

29 CD/630, p.14(France).

30 This document contains a detailed time-table (CD/630, pp.15-16(France)).

Possible solutions to this problem were said to be: (a) A preliminary Soviet-American agreement prior to the signature of the CWC. It would provide for the destruction of a defined proportion of US and Soviet stocks and could be concluded and enter into force immediately. The multilateral Convention would enter into force for other countries only later when the stocks of the USA and the USSR have been reduced. (b) The destruction of an agreed proportion of US and Soviet stockpiles during the first five of the ten year destruction period. This was formally proposed by the Federal Republic of Germany and Italy (see above).[31]

France believed that agreement on such approaches was unlikely. It therefore proposed a third solution. Each party to the treaty would have the opportunity to produce or acquire a limited security stockpile of CW before or during the destruction period. The security stockpile would help in deterring violations of the Convention during this time. This would motivate States which may otherwise be reluctant (e.g. for reasons which may lie in the regional context) to join the treaty. The security stockpiles would be destroyed during the last two of the 10 years. The size of the stocks would be based on the criterion of "minimum military significance" (to be defined, 1000 2000 agent tons were mentioned).

The security stockpiles would be homogenous to facilitate their comparison and verification and would be stored at five undeclared (optional) locations. If the locations remained undeclared, an "envelope solution" (see paragraph on the declaration of locations above) would be used. Each interested party could produce a security stockpile at a single facility. The latter would be subject to international verification.

France[32] proposed an Annex to Article I (general scope of the CWC) and additional provisions to be inserted in various parts of the rolling text, Articles I, IV, V, and IX, in particular.

The French position on the order of destruction is not very clear at the moment. France withdrew its proposal for security stockpiles (and therefore for the production of CW after the entry into force of the CWC), but remains opposed to the early declaration of the location of CW stockpiles. It has not stated whether it would still demand an "envelope solution" for the declaration of storage locations, and whether it would accept the levelling out of stocks after eight years (US/Soviet proposal). At an earlier stage, it indicated that the levelling out at the ninth year, as proposed by the USSR in 1987 (see below), would be too late.[33] It appears, that France is waiting for a detailed US/Soviet initiative before providing a clear response (see below). Recent reports[34] indicated that the United States was also considering the possibility of allowing the production of CW after the CWC has entered into force. But this idea has conditionally been abandoned again (if the Soviet Union accepts the US proposal made in September 1989).

The order of destruction of CW is one of the major outstanding issues in the negotiations on the CWC. The principle of levelling out of stockpiles enjoys wide support since 1988.[35] However, for a long time, neither the Soviet Union nor the United States took a clear

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31 CD/822.
32 WP.199, CD/831.
33 PV.449.
34 E.g. International Herald Tribune, 9 October 1989, see part one, chapter III.
35 The Soviet Union stated in 1987 that it agreed to the levelling out of CW stockpiles by the penultimate year, subject to equal security for the parties, in particular the members of the WTO and NATO (PV.448).

position on the order of destruction. The document on "basic provisions" submitted by the Soviet Union in 1982[36] did not contain any provisions on the order of destruction. The US draft convention of 1984[37] referred to a time-table for destruction, contained in the Annex of the draft. But the Annex did not include such a table.

The lack of a clear position of the two States holding the largest stockpiles led to a virtual standstill in negotiations on the order of destruction. A preliminary agreement, reached by the two countries in the second half of 1989, and the additional US and Soviet proposals, may help in finding a solution (see part one, chapter III).

A joint proposal for a formula to determine quantities of CW to be destroyed during each phase of the destruction process was expected for the 1989/90 inter-sessional consultations or the 1990 session of the CD.[38] But it may have been partly overcome by a new proposal by the United States.

The United States proposed to destroy, on a bilateral basis, 80 % of US and Soviet stockpiles even before the CWC has been concluded. 98 % would be destroyed until the eighth year after the entry into force of the CWC if the USSR joined the treaty. The remaining 2 % would only be destroyed if all CW capable States had signed the CWC. This condition might necessitate the writing into the CWC of a "pause". How to define a CW capable State remained unclear. The US president stated that his government would withdraw a (informal) proposal to allow the production of CW even under the treaty, if the Soviet Union accepted the US proposal on the destruction of stockpiles. It was mentioned that a bilateral accord on the proposed 80 % reduction may be concluded already at the next summit meeting in mid-1990.

3. The comparison of CW stockpiles: An issue of rather technical nature which arises in the context of the order of destruction and which was mentioned above is how to compare existing stockpiles. This comparison is necessary to design procedures which will lead to a balanced destruction process. This may not be very easy since existing stockpiles are heterogenous. Should the comparison be, for example, based on the overall quantity of agents, on the comparative toxicity of the chemicals involved, or on other factors which determine the military value of chemical weapons? How can lethal and harmful chemicals be compared?

Several proposals on how to compare stockpiles and how to calculate the amount of CW to be destroyed during each stage of the destruction process have been made. Some of them have been mentioned in the previous explanations.

China[39] presented a method for the calculation of elimination quantities and proposed a formula. The formula is based on the toxicity intensity (medial lethal dose (LD50 or LCT50)) of chemicals and the "stockpile equivalent". The stockpile equivalent is equal to the product of stockpile weight of a chemical warfare agent and its toxicity intensity. It therefore combines quantitative (weight) and qualitative (toxicity) criteria. The resulting quantity of CW to be destroyed is given in terms of actual weight of CWA to be destroyed by a particular party in one phase of the destruction period.

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36 CD/294.
37 CD/500.
38 See, for example, Daily Bulletin of the US Mission to the UN in Geneva, 25 September 1989 (Story EU1060925).
39 WP.130. See also CD/605..

Spain[40] proposed a similar approach. It is based on a method for calculating "quantities of equivalent risk" to be eliminated in each of the destruction phases. The method includes parameters of major military significance of CW (median lethal dose, median incapacitating dose). The paper comprises two examples for the calculation, including a generalization.

Belgium[41] presented elements for a possible solution which are, to some extent, similar to the formula proposed by China. Over the entire elimination period, the order of destruction for lethal and for harmful substances would be considered independently. This would help in solving the difficulty of comparing "lethal" and "harmful" chemicals. The equivalence of lethal chemicals would be determined according to the approach proposed by China, namely weight and toxicity. To assess the equivalence of agents which have a different degree of lethality, the notion of "equivalent weight" was introduced. Mustard gas was proposed as the reference compound. For lethal chemicals, the total amount of "mustard equivalent" would be divided by the foreseen number of destruction periods. This would result in the "planned minimum rate"[42] (see above). This rate would indicate the minimum quantity of mustard equivalent to be destroyed during a specific destruction phase. For harmful chemicals, the total quantity to be destroyed would be divided by the foreseen number of elimination periods the result of which would be the minimal quantity of mustard equivalent to be destroyed during each period. To illustrate its proposal, Belgium included an example for the calculation, including the results for each of the destruction phases, indicated by graphs and tables.

A proposal contained in the Annex to Article IV of the rolling text holds that each party will destroy in each destruction phase not less than one ninth of its CW stockpile "in measure of stockpile equivalent and/or equivalent mustard weight".[43] This wording reflects the Chinese and the Belgian proposals.

Mongolia[44] stated that the comparison of CW stockpiles by equivalence factors would be complicated and difficult to implement. The most simple and practical approach was said to be a method to compare stockpiles on the basis of mass (of chemicals) and the number of standard metric tons of chemicals for empty munitions and devices. This would necessitate the definition of categories of CW-components which are of similar effectiveness. Necessary corrections to the classification could be made after the declarations have been submitted. This would lead to the destruction of CW within categories in equivalent amounts of weight (in each of the destruction phases). Categories of CW-components were proposed. They were based on the toxicity of CWA and the degree of filling of munitions.[45] Mongolia stated that this would, at once, solve the problem of comparing stocks, and the order of destruction. Within the established categories, the parties would be flexible regarding the sequence of destruction. Some elements of this proposal are reflected in one of the possible approaches to the order of destruction outlined above (a).

The basic principles concerning the order of destruction have not yet been agreed. This has so far prevented a more detailed consideration of the question of comparing stockpiles. Some elements of the Mongolian proposal have been included in a working document attached to the report of the Ad Hoc Committee. Elements contained in other proposals are

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40 WP.169, PV.422.
41 CD/697.
42 See above, WP.130.
43 CD/952, p.82.
44 WP.162, PV.400, PV.416.
45 E.g. Toxic chemicals in munitions, in devices, and in bulk, empty munitions, and empty devices. Subcategories are unitary and binary CW.

included in brackets in the rolling text. A joint proposal by the United States and the Soviet Union on the order of destruction is expected. As mentioned above, a formula has been worked out by the two countries. It is likely to be discussed in the Ad Hoc Committee during the 1990 session.

4. "Old" chemical weapons[46]: Some of the chemical weapons which have been produced and/or stockpiled in a variety of countries since World War I, including former colonies or protectorates, but have been lost or forgotten, are still being discovered. Examples are the Federal Republic of Germany or Belgium[47]. The defence ministry of Belgium, for example, announced plans to build a small destruction facility to eliminate old World War I munitions. Around 20 tons of munitions were said to be unearthed every year. Among them are also CW. They were first dropped into holes or destroyed, then covered in concrete and dumped at sea. Because of new environmental laws, this practice has changed at the beginning of the 1980s, and there is a considerable backlog by now.[48] The United Kingdom destroys old CW at a facility at Porton Down.[49]

How would CW discovered by a party after its initial declaration under the Convention be treated? Some countries said that the treaty must not unnecessarily complicate the situation for the States concerned, especially since there are countries which have only "inherited" those weapons. The Dutch army, for example, left some CW in Indonesia after World War II. These weapons were destroyed in 1979 with the cooperation of the Netherlands.[50]

There is an understanding that a party which discovers such weapons after its declaration on CW (according to Article III and IV) would not have violated the Convention. However, there should be provisions in the CWC which would determine how to deal with these situations. The necessary procedures would cover the reporting, securing, and destruction.

The main body of rolling text states that provisions on old chemical weapons are contained in the Annex to the rolling text. The corresponding provisions remain to be drawn up. Results of consultations on this issue are reflected in a working document attached to the report of the Ad Hoc Committee.[51] It defines the question as one applying to discoveries of CW which are not a part of the stockpile of any party and which, during or after past military conflicts, notably the two World Wars, were lost on the battlefield or were abandoned or disposed of, and the origin of which is unknown.

The document identifies two possibilities of dealing with these cases. Both include provisions on the notification of the Organization, declarations, and the destruction of the CW. The party which discovers these CW may ask for assistance by the Organization. The differences between the two options are the following: The first option would leave the basic responsibility with the party which has discovered the "old" CW. The involvement of the Organization would be minimal. The second possibility would assign more functions to the Organization. It would enable the State which has discovered the CW to ask their original possessor to destroy them. This solution is favored especially by the Group of 21.

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46 In this report, we use the term "old" chemical weapons. Other terms for the same type of CW have been used by the delegations to the CD as well. They include "abandoned" CW, "old obsolete" CW, "discovered" CW etc.

47 E.g. PV.424.

48 Jane's Defence Weekly, 28 January 1989.

49 E.g. PV.474.

50 PV.437(Indonesia).

51 WP.177/Rev.1, pp.3-4.

Some delegations reserved their position on the issue of "old" CW and on the proposals contained in the document mentioned.[52] The question is of special concern to some developing countries. They may lack the technological know-how and resources to destroy these weapons. The possibility that CW, abandoned or lost by former colonial powers, might be found on their territory has led to a certain sensitivity. The countries concerned therefore believe that it is necessary to come to an agreement on the responsibility for the elimination of discovered old CW, and on the financial implications.

5.3.2 International Verification of the Destruction of CW

The provisions on the verification of destruction of CW are somewhat similar to those concerning the verification of declarations. They also cover the conclusion of agreements on subsidiary arrangements, based on a model agreement, systematic on-site verification etc.

According to the provisions included in the rolling text, access to any CW destruction facility (CWDF) and the facility's storage sites must be provided for the purpose of systematic international on-site verification. This will include the continuous presence of inspectors and the monitoring with on-site instruments at all locations where CW are destroyed.

5.3.2.1 General and Detailed Plans for the Destruction of CW

Each party concerned will submit to the TS "general plans" for the destruction of its chemical weapons. These plans must contain a general schedule, indicating types and quantities of CW planned to be destroyed during each destruction phase. They must indicate the number of CWDF which exist or are planned to be operated over the 10 years, and include specific information on these facilities. The contents are outlined in the Annex to Article IV.

Subsequently, each party must submit "detailed plans", not later than six months before a destruction phase begins. These plans will include information on all stocks to be destroyed during the upcoming destruction phase, and will indicate the precise location and the detailed composition of the items. They must also define the aggregate quantity of each individual type of CW planned to be destroyed at each facility, and include a detailed schedule therefore. Guidelines on the information to be provided are contained in the Annex to Article IV. After the submission of the first detailed plans, subsequent (annual) plans will contain only changes of and additions to the data submitted in the first detailed plans.

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[52] Other documents dealing, inter alia, with this issue are CD/343, pp.4-5(USA), CD/494, pp.3-4(France), CD/500:6,Annex II, pp.3(USA).

5.3.2.2 Review of the Detailed Plans

The TS will prepare, before a destruction period begins, a plan for the verification of destruction. This will be done in consultation with the party concerned. The plan will be based on the detailed plans for destruction, verification procedures proposed by the party concerned, and on the corresponding agreement on subsidiary arrangements. It will take into account the experience gained by previous inspections.

If difficulties arise during the preparation of the plans, they must be solved through consultations. Unresolved matters will be forwarded to the EC[53] for appropriate action. The agreed and combined detailed plans for destruction and verification will be reviewed and approved by the members of the EC. The latter will check the compatibility of the plans with the provisions of the CWC, for example by determining in detail whether the verification schemes for destruction are consistent with verification objectives of the treaty and are feasible and efficient.

The review process must be completed 60 days before a destruction phase begins. Each member of the EC may consult the Technical Secretariat during this process. If there are no objections by any member of the EC, the plan will be put into action. If there are difficulties, they must be resolved through consultations between the EC and the party concerned. If a problem cannot be solved, the matter will be transferred to the CSP.

After this review, the TS, if the need arises, will enter into consultations with the party concerned to ensure that the CWDF is designed to assure the destruction of CW and permit the verification of the process. These consultations will also allow advance planning of verification procedures and an assessment of whether the application of verification measures is consistent with the facility's operation. As to the latter, verification must not interfere with the destruction process.

5.3.2.3 Agreements on Subsidiary Arrangements

Detailed agreements on subsidiary arrangements for the systematic verification of destruction of CW must be concluded with the Organization. They will be based on a "Model Agreement" and specify, for each destruction facility, detailed on-site inspection procedures and arrangements for the removal and transport of CW from storage to the destruction facility. They will include provisions on arrangements for the monitoring with on-site instruments and will take into account the specific characteristics of each CWDF and its mode of operation.

International inspectors will have access to each destruction facility prior (30 days are proposed) to the beginning of active destruction phases to carry out an "engineering review" of the facility. This may include a review of the facility's construction and layout, the equipment and instruments for measuring and controlling the destruction process, and the examination and testing of the accuracy of the verification equipment.

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[53] See chapter IX on the Organization to be established under the CWC.

5.3.2.4 Systematic International On-Site Verification of the Destruction of CW

To verify the destruction of CW, international inspectors will have access to CWDF and CW storage facilities thereat during the entire active phase of destruction. Representatives of the facilities' management or the National Authority may accompany the inspectors and will cooperate with them.

The inspectors will monitor, by physical observation or technical devices, the following objects and activities: CW storage facilities located at destruction facilities and the CW present; the movement of CW from storage to destruction facilities; the process of destruction; the material balance (relation between input and output); and the accuracy and calibration of instruments.

Information from routine facility operations should be used as much as possible. After each completed destruction phase, the TS will certify the declaration of the National Authority reporting the completion of destruction of the designated quantity of CW.

The rights and obligations of international inspectors are spelled out in the Annex to Article IV and will be complemented by the agreements on subsidiary arrangements. The rights and obligations of the hosting party are defined by the same Annex and the agreed procedures. These rights and obligations are the same as those governing inspections at CW storage facilities (see above)[54].

Irregularities discovered by international inspectors during an inspection must be clarified in co-operation with the management of the facility or the National Authority. Unresolved problems will be reported to the EC. A report on each inspection will be submitted to the Technical Secretariat by the inspectors, and a copy of it will be transmitted to the State which has received the inspection.

5.3.2.5 CW Storage Facilities at CW Destruction Facilities

International inspectors will verify any arrival and storage of CW at destruction facilities. To this end, they will, if necessary, employ agreed seals, markers and other devices to facilitate an accurate inventory of the CW. This will be done to secure that the declared items are not removed except for destruction. As long as chemical weapons are stored at a destruction facility, they will be subject to systematic international monitoring in conformity with the corresponding agreement on subsidiary arrangements. If such an agreement has not been concluded, they will be monitored in accordance with the agreed and combined plan for destruction and verification (see above). Whenever inventory changes occur, appropriate adjustments in the monitoring system will be made.

The inspectors will make an inventory of CW which have been removed for destruction and will verify the inventory of remaining CW at the end of each active destruction phase. Subsequently, they will secure the storage facility. If no CW remain, international systematic international monitoring may be discontinued, provided the active destruction

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[54] "Inspections and visits", see above.

phase is completed. The latter will be terminated if no CW are planned to be stored at the facility.

Preliminary agreement exists on most of the provisions for international verification of the destruction of CW. The following issue remains to be considered:

The Model agreement for agreements on subsidiary arrangements: It is agreed that a Model Agreements for agreements on subsidiary arrangements relating to CW storage and destruction facilities has to be developed. The agreements on subsidiary arrangements would determine detailed verification procedures for each facility. They would also cover other questions (e.g. administrative) arising in the context of international verification. The IAEA which safeguards nuclear materials under the NPT uses the same approach to monitor nuclear installations. The Model Agreement for CW storage facilities has been elaborated to some extent and was discussed above. The Model Agreement concerning CWDF remains to be developed.

CHAPTER VI

PROVISIONS CONCERNING EXISTING CHEMICAL WEAPONS PRODUCTION FACILITIES (CWPF)

The scope of the CWC as spelled out in Article I provides for the destruction of CW production facilities.[1] This will reduce the potential to produce new CW in the future. Article V of the rolling text contains detailed provisions on how CWPF must be destroyed and how this process will be verified. Similar to Article IV on chemical weapons (see chapter V), it provides for a series of steps to be taken by parties which have declared that they own or operate CWPF. These steps range from the declaration of CWPF to their destruction under international surveillance.

The provisions will apply to all CWPF under the jurisdiction or control[2] of a party regardless of their location. It is understood that this includes any facility on the territory of another State as well.

After the entry into force of the Convention, each party which possesses any CWPF must immediately cease all activities thereat except for those necessary for its closure. The construction of new facilities or the modification of existing ones for the purpose of producing chemical weapons, or for any other purpose prohibited by the treaty, will be banned. Declarations, plans, and information, to be submitted by the parties are outlined in the Annex to Article V.

6.1 Declarations and Reports on CWPF

Each party which owns or operates a CWPF has to submit a declaration within 30 days after the Convention has entered into force. The provisions of Article V on this aspect partly repeat but also supplement those of Article III (Declarations, see chapter IV). The information to be submitted must indicate: (a) any CWPF under the jurisdiction or control of a party, or on its territory but under the control of others including a State not party to the Convention, at any time since a specific date (to be determined); (b) any transfer or receipt of equipment for the production of CW or the control over such since a specific date (to be determined); (c) actions planned to be taken for the closure of each CWPF; (d) a general plan for the destruction of each CWPF; (e) a general plan for any temporary conversion of a CWPF into a facility for the destruction of CW. The Annex to Article V

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[1] After a long controversy, agreement was reached in 1988 that CWPF must be destroyed and cannot be converted to peaceful use. Some specific and very limited items (to be defined, see below) may perhaps be eligible for conversion. In addition, the CWC may provide for the possibility to temporarily convert a CWPF into a CW destruction facility (provisions remain to be elaborated, see below).

[2] The term "jurisdiction and control" may have to be clarified. This issue was discussed in chapter II.

outlines the details of these declarations and plans[3], the content of annual reports, and the final certification of destruction of CWPF.

The following questions remain to be addressed:

1. Closing potential loopholes: The provisions described must ensure that all CWPF under the "jurisdiction or control" of a party will be destroyed. This includes private and State-owned facilities but also CWPF which are not under the jurisdiction and control of the State on whose territory they are located. Some countries of the Socialist Group have pointed to possible difficulties with regard to private versus state-owned enterprises. This concern is reflected in a bracketed proposal in a footnote in the rolling text. It holds that Article V must apply to facilities on the territory of another State "...regardless of ownership and form of contract, on the basis of which they have been set up and functioned for the purposes of production of chemical weapons".[4] This issue is closely related to the problem of defining "jurisdiction and control" (see chapter II). In any case, the provisions of the CWC must ensure that there is always a party which is responsible for the declaration of CWPF and former CWPF, and their destruction under international surveillance. Parts of the problem have been solved by stating that each party must declare all CWPF which are or were located on its territory, including those under the jurisdiction and control of others. Whether additional provisions are necessary remains to be considered.

2. "Former CWPF": States which have produced CW at some time in the past but have ceased these activities, or States on whose territory such weapons were once produced by another State, may still have the facilities on their territory. These installations might be destroyed by now, converted to other purposes, or "mothballed" at the moment. The provisions on CWPF will have to take these cases into account. But this issue has not yet been considered in detail. Notwithstanding, the provisions of the rolling text indicate that such facilities will have to be declared.

3. Timeframes: A number of timeframes remain to be set. This concerns especially the date retroactive to which CWPF and transfers and receipts of equipment have to be declared. It was proposed that any CWPF which has been under the jurisdiction or control of a party since 1 January 1946, or (alternatively) the entry into force of the Convention, must be declared. As far as transfers or receipts of equipment are concerned, the proposed date is 1 January 1946. The definition of these timeframes is rather a matter of feasibility (availability of information) and relevance than one of principles.

4. The scope of declarations of transfers and receipts: As to the declaration of transfers and receipts, the term CW production equipment remains to be defined. It will determine which items have to be declared. No agreement exists on a proposal to include in the declaration of transfers and receipts the transfer of technical documentation relevant to the production of CW. A proposal to this end was made by the USSR.[5] (See the two preceding chapters.)

5. Other outstanding issues: Several other provisions need to be elaborated. They include: (a) provisions on the declaration of measures to ensure the closure of CWPF under

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[3] This includes the definition of the contents of declarations on CWPF, former CWPF, CWPF on the territory of the State party concerned but under the control of others, former CWPF on the territory of the State party but under the control of others, transfers, and procedures to ensure the closure of CWPF.

[4] CD/952, p.28.

[5] CD/294, p.4.

the jurisdiction or control of a State-party, or of facilities on the territory of the State-party but under the jurisdiction and control of others. These declarations would identify actions to render CWPF incapable of rapidly resuming operations[6]; (b) provisions on annual reports to be submitted to the Organization by the parties; (c) provisions on the final certification of destruction of CWPF.

6.2 The Closure and Destruction of CWPF

The parties will be allowed, with some exceptions, to decide on the methods of destruction. However, they must destroy any CWPF and any related facilities and equipment specified in the Annex to Article V without the right to convert the facilities or installations to peaceful use. The destruction of CWPF must start not later than 12 months and end not later than 10 years after the Convention has entered into force for the State concerned. The parties will annually provide information on the implementation of their plans for the destruction of CWPF. They will certify the destruction of their CWPF not later than 30 days after the process has been completed.

CWPF may temporarily be converted for the purpose of destroying chemical weapons. These facilities must be destroyed as soon as they are no longer in use for the purpose mentioned. In any case, they must be destroyed not later than 10 years after the Convention has entered into force for the State concerned.

6.2.1 The Closure of CWPF

Each party will close any CWPF within three months after the Convention has entered into force for it. (The production of CW must cease immediately after the entry into force of the treaty.)

CWPF must be closed in a manner which renders them inoperable. Therefore, agreed steps must be taken with due regard to the specific characteristics of each facility. The Annex to Article V specifies the procedures. They remain to be further developed in the light of destruction methods and the characteristics of individual facilities. While CWPF remain closed, the parties may continue safety activities thereat.

6.2.2 The Destruction of CWPF

The provisions of the rolling text on the destruction of CWPF focus on: (a) measures for the destruction of equipment and buildings covered by the definition of CWPF; (b) procedures to be applied to facilities producing unfilled chemical munitions and specialized equipment for CW employment; (c) activities related to the temporary conversion of CWPF to destruction facilities.

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[6] CD/749, p.1(USA).

"Specialized" and "standard" equipment covered by the definition of CWPF must be physically destroyed. The Annex to Article V defines the terms "specialized" and "standard" equipment, "building", "specialized" and "standard" building, and defines the corresponding destruction activities. Facilities exclusively used for the production of non-chemical parts of CW munitions or specialized equipment for CW employment must be declared and destroyed. Destruction must begin not later than 12 months and be completed not later than 10 years after the Convention has entered into force for the country concerned. All equipment designed or exclusively used for the production of non-chemical parts for chemical munitions must be destroyed within the same period. It may be brought to a special location for this purpose. International inspectors will be present during the destruction process. Some buildings and standard equipment may be converted to permitted purposes. Confirmation will be provided though consultations or challenge inspections.

6.2.3 Plans to Be Submitted by the Parties

The Annex to Article V outlines the information to be supplied by the parties in "general" as well as "detailed plans". The general plans will include specifics on CWPF, the temporary conversion of CWPF to destruction facilities, and information on former CWPF.

As to the detailed plans, the Annex determines the data to be submitted on the destruction of each facility, the temporary conversion of a CWPF into a CWDF, the destruction of facilities which were temporarily converted for the destruction of CW, and former CWPF.

The following questions remain to be considered:

1. The temporary conversion of CWPF: As mentioned above, the provisions of the rolling text allow for the temporary conversion of CWPF into facilities for the destruction of CW. Provisions therefore remain to be developed.

The United States[7] said that assurance of proper conversion must be given. If the destruction of CW at a facility does not begin immediately after its conversion, appropriate steps must be taken to monitor the site. Detailed agreements with the Organization, declarations, reporting, and on-site monitoring, would be the same as under Article IV (provisions concerning CW stockpiles and storage facilities, see chapter V). At the end of the converted facility's use for destruction, appropriate measures for its final elimination must be taken.

The issue of temporary conversion of CWPF is still under discussion. It is a matter of practical considerations, especially cost effectiveness. Some experts have questioned whether temporary conversion of existing CWPF into CWDF is the most effective and cheapest way of establishing a destruction capacity for CW stockpiles. CW production facilities are often not constructed according to the latest standards of technology and environmental protection. Additionally, their design may complicate verification.

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[7] CD/749, p.5.

2. The order of destruction: The order of destruction of CWPF is closely linked to the order of destruction of CW and the two issues must be considered together. The order of destruction of CW is one of the outstanding issues under Article IV (chapter V). Therefore, the corresponding provision for CWPF have not yet been agreed. As far as the destruction of CW is concerned, there is consensus that it would start not later than 12 months and would be completed not later than 10 years after the Convention has entered into force for the country concerned. There is also agreement that a security balance must be maintained during the destruction period (principle of "undiminished security"). These principles may be applied to CWPF as well.

In connection to what has been said in chapter V, it will be noted that keeping a CWPF "mothballed" for a certain period (before destruction) may permit the party possessing the facility to resume the production of CW if it decided to withdraw from the treaty. The definition of "mothballed" will determine how quickly this could be done. The United States, for example, prefers to keep CWPF mothballed until a relatively late stage, whereas India wants to destroy these facilities at the beginning of the 10 year destruction period. India argues that some countries may have only one or very few CWPF. Therefore, they could not be destroyed in a gradual process comparable to CW.[8]

The only detailed and formal proposal on the order of destruction of CWPF was put forward by France.[9] It distinguishes development and production facilities. As to development facilities for CW, only testing grounds would be the subjects of precise declarations (e.g. location). They would be closed down or diverted to other purposes. As far as manufacturing facilities for CW are concerned, they would be separated into production facilities for toxic substances, munitions filling shops, and those facilities producing bodies or warheads for munitions. The first two years after the entry into force of the Convention would be used for the declaration of production sites, their closure and sealing, their placing under international monitoring, and the transformation of one or more CW production plants into destruction facilities. The next three years would serve to convert to other use certain (undefined) production units[10], and to destroy munitions-filling shops. During the final three years, isolated facilities for the production of super-toxic lethal chemicals or incapacitating agents would be destroyed. Isolated and specific facilities for the production of key precursors for super-toxic substances would be destroyed during the same period. The entire production structure would therefore be dismantled by the end of the eighth year. The last two years would serve to complete the destruction process, if necessary, and to definitively verify whether the facilities have been taken out of service.[11]

3. Destruction methods: The rolling text holds that each party may decide with some limitations on methods for the destruction of its CWPF. However, further discussion of possible methods and of related definitions is needed.[12] Measures to be defined for the closure of CWPF require elaboration and discussion in the light of methods of destruction and characteristics of specific facilities.

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8 ACR, 25 April 1989, 704.B.384.15.

9 CD/630(France).

10 E.g. factories for the manufacture of super-toxic lethal chemicals or incapacitating agents, forming part of a military complex; civilian facilities which have manufactured key precursors for super-toxic lethal chemicals; and special munitions assembly shops or shops preparing munitions for shipment.

11 This document contains a detailed time-table for the destruction of CWPF (CD/630, pp.15-16(France)).

12 Document CD/831(pp.143-146) reflects the present status of work on the question. It contains a definition of CWPF and some comments on procedures for their destruction. See also CD/749, pp.4-5(USA).

Several proposals on the destruction of CW have been made so far, but only very few documents have been submitted on the destruction of CWPF.

The United States presented a working paper[13] which contains some comments on destruction methods for CWPF. It includes suggestions relating to destruction facilities producing super-toxic chemicals, the destruction of facilities producing non super-toxic chemicals, the demolition of buildings, the demolition of non-chemical facilities and equipment, time and manpower requirements, environmental requirements, and the monitoring of destruction.

In the framework of a multilateral data exchange (on a voluntary basis), the United Kingdom[14] explained its past production of CWA. It described, inter alia, the closure and dismantling of the Nancekuke CW pilot plant in the UK. This undertaking started in 1976. 19 governments visited the site in 1979 and observed the process of dismantling.

4. Responsibility for the destruction of CWPF: The responsibility for carrying out the destruction of a CWPF when more than one State is involved needs to be discussed.

5. The definition of equipment to be destroyed or converted: To determine precisely which equipment has to be destroyed or may be converted, a definition of the purpose for which it has been used must be established. This relates to the question of what "production of CW" means under the treaty. Article VI of the rolling text (see chapter VII) includes a number of quantitative thresholds in excess of which the production of specific chemicals could not be justified for permitted purposes. In excess of this threshold, production may hence be regarded as the manufacturing of CW. Such thresholds therefore affect the definition of equipment for the production of CW. (Equipment used for the production of certain chemicals in excess of a specific threshold may be considered as equipment used for the production of CW.)

6. Timeframes: The timeframe for the submission of detailed plans for the destruction of CWPF remains to be agreed. One position is not later than 3 months, the other not later than 6 months[15] before the destruction of the facility begins.

7. Former CWPF: Provisions on former CWPF (see above) have to be defined to close potential loopholes. Provisions on the destruction of such facilities have not yet been drawn up. It has been stated that all provisions relating to former CWPF will need to be reviewed once the definition of CWPF is agreed. How to deal with CWPF which have previously been destroyed has to be discussed as well. Provisions on general and detailed plans for the destruction of former CWPF remain to be developed as well.

6.3 Verification Procedures Relating to CWPF

Verification procedures concerning CWPF will comprise international verification of declarations of CWPF and their closure, systematic international monitoring of these facilities, and systematic international verification of their destruction. It is agreed that each

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13 CD/849.
14 CD/15, PV.474, CD/856.
15 E.g. CD/500:Annex II, pp.3(USA), CD/749, p.3(USA).

party will submit all CWPF to systematic international on-site verification. This will be include international on-site inspections and monitoring with on-site instruments.

6.3.1 The Verification of Declarations and the Cessation of Activities at CWPF

Each party will, immediately after the submission of its declaration concerning CWPF, provide access to any CWPF for the purpose of international on-site verification of the declaration through on-site inspection(s).

The purpose of verification is to confirm that all activities at any CWPF have ceased except for measures required for closure. It is also meant to confirm the accuracy of the declaration. The inspection(s) will be carried out by international inspectors from the Organization promptly after the declaration has been submitted (not later than 60 days was proposed).

The inspectors will, inter alia, utilize agreed seals and other equipment to establish an accurate inventory of the declared items at each CWPF. These verification devices will be installed, if necessary, to ensure that no production or resumption of production of CW takes place and that no declared items are removed. Verification must not hinder a party's activities for the purpose of closing the CWPF. After the initial inspection, the inspectors may return to maintain and verify the integrity of the devices installed.

In conjunction with initial on-site inspections to verify the declarations, the inspectors will undertake the necessary co-ordination for subsequent systematic monitoring of the inspected CWPF.

6.3.2 Agreements on Subsidiary Arrangements

The parties will conclude, within a specific period after the entry into force of the treaty (6 months were proposed), detailed agreements with the Organization on subsidiary arrangements for the systematic monitoring of CWPF

As in the case of CW storage and destruction facilities, these agreements will be based on a Model Agreement and will define, for each facility, detailed inspection procedures and arrangements for the installation, operation, and maintenance (by the TS), of seals and monitoring devices. The Model Agreements will take into account future technological developments.

The parties must ensure that the verification of declarations and the initiation of systematic monitoring can be accomplished by the Technical Secretariat at all CWPF within agreed timeframes.

6.3.3 Verification of the Closure of CWPF

As mentioned above, each party to the Convention will close any CWPF within three months after the Convention has entered into force for it so that the facility will be inoperable. It must provide access to any CWPF, subsequent to closure, for the purpose of systematic international on-site verification through periodic on-site inspections and the continuous monitoring with on-site instruments. This will ensure that CWPF remain closed.

6.3.4 Systematic Monitoring of CWPF

The purpose of systematic international monitoring of CWPF is to ensure that no resumption of production or removal of declared items goes undetected. The monitoring will start as soon as possible after the closure of a CWPF and will continue until the facility is destroyed. It will proceed in accordance with the corresponding agreement on subsidiary arrangements and involve a combination of continuous monitoring with on-site instruments and systematic verification by international on-site inspections. If continuous monitoring with on-site instruments is not feasible, verification activities will be based on the presence of international inspectors.

In conjunction with on-site verification of the closure of a CWPF, and if the agreement on subsidiary arrangements has been concluded, international inspectors will install a monitoring system which is outlined in the Annex to Article V. If this agreement has not been concluded, the inspectors will begin systematic monitoring through their continuous presence on-site until the agreement is ready and the monitoring system is installed and activated.

Before the activation of the monitoring system, and at times when the continuous monitoring with on-site instruments is not feasible, devices installed by international inspectors may only be removed in their presence. If an extraordinary event results in the removal of a device in the absence of inspectors, the TS must be informed immediately and inspectors will return as soon as possible to validate the inventory and re-establish the devices.

Systematic on-site inspections and visits will subsequently be carried out to verify that the monitoring system is functioning correctly, and to check the declared inventory as required. Visits to service the monitoring system will be necessary. The CWPF to be inspected will be chosen by the Technical Secretariat in a way that precludes the predictability of the timing of the inspection.

6.3.5 International Verification of the Destruction of CWPF

The purpose of international verification of the destruction of CWPF is to confirm that the facilities and each item on their declared inventory have been destroyed in accordance with agreed detailed plans for destruction.

Each party concerned must deliver to the TS, within a defined period before the destruction process begins (3-6 months are proposed), a detailed plan for the destruction of each CWPF. This plan will include proposed verification procedures.

The TS will prepare, in consultation with each party, a plan for the monitoring of the destruction of each CWPF. This plan will be based on the detailed plan and on the proposed verification procedures, both submitted by the party concerned. It will also take into account the experience acquired during previous inspections. During the elaboration of the plan, any matter which remains unresolved after consultations between the party and the TS will be forwarded to the EC for appropriate action.

The resulting combined plans for the destruction of CWPF and verification of destruction must be agreed to by the EC and the parties concerned. Agreement must be reached prior (60 days are proposed) to the planned beginning of destruction.

With some exceptions, the subsequent process will be very similar to the one for the destruction of CW (Article IV, see chapter V). Each member of the EC may consult with the Technical Secretariat on any issue concerning a proposed combined plan for destruction and verification. If there are no objections by any member of the EC, a plan will be put into action. If there are difficulties, the EC will enter into consultations with the party concerned. If a problem remains unsolved, the issue will be transferred to the CSP. As a matter of principle, the resolution of disagreements over methods of destruction must not delay the execution of other parts of a destruction plan which are acceptable. If there is no agreement on certain aspects of verification, or if an approved verification plan cannot be put into action, the verification of destruction will be carried out through continuous on-site monitoring and the presence of inspectors.

Verification must not unduly interfere with the destruction process. It will be carried out through the presence of inspectors on-site. If required verification or destruction measures are not undertaken as planned, all parties will be informed.

When all declared items of the inventory of a CWPF have been destroyed, the TS will certify the corresponding report of the party. After this, it will terminate the systematic international monitoring and will remove all devices and monitoring equipment installed by international inspectors. After the certification of destruction by the TS, the party concerned will issue a declaration stating that the facility has been destroyed.

6.3.6 Inspections and Visits

The guidelines for inspections of and visits to CWPF are almost a copy of the corresponding provisions of Article IV (see chapter V). Provisions on the notification of the country which is to receive the inspection, the preparation of the inspection or visit, and the rights and obligations of the host State and the international inspectors are the same as for inspections of CW storage facilities. This applies also to the resolution of ambiguities arising during an inspection, and to the report to be submitted by the inspectors. As mentioned in chapter V, these provisions may be streamlined because they partly overlap with some provisions contained in the new inspection protocol which is being elaborated at the moment (see chapter IX).

The following issues remain to be addressed:

1. Verification of the temporary conversion of CWPF: The question of temporary conversion of a CWPF to a destruction facility was discussed above. Provisions on the international verification of conversion remain to be developed.

The United States[16] proposed to apply the same procedures as for the monitoring of CWPF. If the converted facility does not begin the destruction of CW immediately after the conversion, "appropriate portions" of the procedures for CWPF (see chapter V) will be invoked. This would include an initial on-site inspection, actions for closure, a monitoring agreement, a second on-site inspection or visit, and annual declarations. Before commencing the destruction of CW at the converted facility, the party concerned must conclude a detailed agreement with the Organization to govern on-site verification while the facility is used. As soon as the latter is not used anymore, the same verification procedures as for CWPF - mothballing and then destruction under international surveillance would apply.

2. Converting certain items instead of destroying them: The provisions explained above provide for the possibility to convert some items to peaceful use. Items which may be converted to peaceful use remain to be specified, and the purposes have to be defined. In addition, methods to verify their disposition will have to be developed. The United States, for example, said that such items must not be stockpiled but must be installed in a timely manner in a permitted facility. Their identification and location, and the identity of the permitted facility, must be reported. If questions arose as to whether the removed items were installed as declared, consultations and challenge inspections could be used to clarify uncertainties.[17]

3. Timeframes: Several timeframes remain to be set. They include, for example, the period within which the agreements on subsidiary arrangements must be concluded, the period within which the detailed plans for destruction have to be delivered to the TS, and the period within which the combined plans for destruction and verification must be agreed upon. A footnote to the rolling text holds that procedures to ensure the implementation of the verification scheme within designated timeframes may have to be developed. The concrete meaning of this note is not clear and it has rarely been discussed.

4. The role of the Executive Council: The role of the Executive Council in the review process concerning the detailed plans for destruction and verification will have to be reassessed once the composition and rules of decision-making of this body are agreed.[18] These questions will be discussed in chapter IX.

5. The right of individual inspectors: Whether an individual inspector will have the right to request clarification, to inform the Technical Secretariat of an unsolved problem during an inspection, or to submit a separate report on an inspection, remains open. In principle, most delegations are of the view that each individual inspector should have the right to have his own views mentioned in an inspection report.[19] Such questions are likely to be resolved in the context of the inspection protocol which will be discussed in chapter IX.

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16 CD/749, p.5.
17 CD/749, p.4.
18 Some comments on the role of the Executive Council in this context are contained CD/749, pp.3-4(USA).
19 E.g. CD/766, pp.7(Canada/Norway).

6. Other outstanding verification issues: It has been argued that the presence of inspectors on-site to witness the destruction of CWPF may not necessarily be the only method of verification. Others remain to be considered. Guidelines for determining the frequency of systematic on-site inspections remain to be developed. Procedures to inform the other parties if required verification or destruction measures have not been carried out as planned have to be established. The coverage of the subsidiary arrangements for the systematic monitoring of CWPF, to be based on a Model Agreement, must be considered. Monitoring systems will be installed at each CWPF and a system to transmit to the TS the collected data will be necessary (see chapter V). The technical requirements remain to be assessed.

CHAPTER VII

VERIFYING THE NON-PRODUCTION OF CHEMICAL WEAPONS

Articles IV and V of the rolling text provide for the destruction of existing CW and the infrastructure for their production. To supplement these provisions, Article VI establishes a "non-production regime". It defines (in addition to Article II) permitted activities in the chemical industry and elsewhere and determines verification procedures to prevent the clandestine production of chemical weapons.[1]

Article VI contains the most complex part of the verification system to be established under the treaty. Many countries have a chemical industry of considerable size and it may often be possible to convert, within a short time, modern facilities currently engaged in peaceful activities to the production of chemical weapons. Thousands of installations around the world may have to be monitored to ensure compliance with the treaty. And to make things worse, some of the chemicals widely produced and consumed for peaceful purposes (e.g. for pesticides) may also be used for the production of CW. These substances are called "dual-purpose chemicals". Some experts have expressed the view that the CWC may be more difficult to verify than any other arms control or disarmament agreement. Therefore, precedents such as the IAEA in Vienna which safeguards nuclear material under the NPT[2], or the INF treaty of 1987, can only serve as limited examples.

It is difficult to define "adequate" or "efficient" means of verification. (Notwithstanding, these terms are often used in the arms control and disarmament literature.) On the one hand, the verification system must take into account what is technically feasible in terms of human and financial resources and realistic from the point of view of security and commercial interests of the States concerned. On the other hand, verification should be as stringent and intrusive as possible to ensure the confidence of the parties in the regime. The resulting dilemma (see part one, chapter IV) and efforts to address it have influenced the work of the Ad Hoc Committee as the following sections will show.

The major part of verification activities under the Convention, including those provided for in Article VI, will have a "routine" character. This means that they will be carried out by the TS on a routine basis, not upon a specific request by a party to Convention, and not only if particular problems or concerns over compliance occur. In addition to routine

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1 For additional information, see: SIPRI, Chemical and Biological Warfare Studies No.4/No.5 (The chemical industry and the projected CWC, proceedings of a Sipri/Pugwash conference, Oxford 1986: Oxford University Press), and No.9 (Non-production by industry of chemical warfare agents: Technical verification under a chemical weapons convention, Oxford 1988: Oxford University Press). For an overview of the verification system envisaged for the CWC, see: Robinson, Julian Perry, Verifying a Ban on Chemical-Warfare Weapons, Faraday Discussion Paper No. 12, London 1988: The Council for Arms Control.

2 The activities of the IAEA and verification under the CWC are compared in: Keeley, James F., International Atomic Energy Agency Safeguards. Observations on Lessons for Verifying a Chemical Weapons Convention, Ottawa 1988: The Arms Control and Disarmament Division, Department of External Affairs, Ottawa, Canada.

measures, there will be verification procedures for special cases. They are provided for in Article IX (see chapter X).

The verification of non-production of CW has been a controversial issue for a long time. Partly, this has been due to the profound differences over intrusive and mandatory international on-site verification, the principle of which was agreed to only in 1987 after the Socialist Group had changed its position.[3] This paved the way to rapid progress on this question.

A large number of different chemicals are currently produced and consumed in the chemical industry by many types of facilities. These chemicals and the facilities involved are of varying interest as far as the Convention is concerned. Each substance possesses specific characteristics which define the potential "risk" it poses to the objectives of the treaty. Because some chemicals pose a higher risk to the Convention than others, it would be a waste of resources and perhaps even impossible to subject all potentially relevant chemicals and the facilities concerned to the same verification procedures. This might even jeopardize legitimate activities in the chemical industry. Article VI therefore defines several categories of chemicals. Each category includes substances which pose a particular risk to the treaty and are hence subject to a distinct regime of declarations, verification procedures, and limitations on production.

Three lists of chemicals[4], or "Schedules" have been established so far. They are included in the "Annex on Chemicals". This Annex which forms part of the rolling text comprises guidelines to be used when considering substances with a view to including them in an appropriate list. It also defines procedures for the modification of the lists[5], and standard procedures to determine the toxicity of chemicals under consideration.[6]

The selection of chemicals to be included in the lists is based on the "risk" they pose to the objectives of the Convention. The concept of "risk" in this context combines the "hazard" of a particular chemical (toxicity criterion) and the "purpose" for which it could be used (purpose criterion). Another criterion is the assessment of how the inclusion of a chemical in a particular list would affect current peaceful activities. This problem will become more evident in sections 7.1, 7.2 and 7.3.

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3 See part one, chapter III and IV.

4 The lists contain families of chemicals rather than specific compounds.

5 It is evident that the lists of chemicals drawn up before the entry into force of the Convention cannot remain the final ones. New technological developments and the discovery of new substances have to be taken into account. Procedures to revise the lists and their guidelines must hence be provided for in the treaty. Most likely, they will not involve a formal amendment to the CWC (which would be complicated and time-consuming). Draft provisions on such procedures are included in the Annex on Chemicals. Revisions will consist of additions to, deletions from, or shifts between the lists of chemicals, and modifications of the guidelines for these lists. According to the draft provisions, a revision may be proposed by any party. Each party may request the assistance of the TS in substantiating a proposal. Proposals will be submitted to the TS. The TS will inform all parties and the EC. Any party and, if requested, the TS may provide relevant information for the evaluation of a proposal. If the TS has information which in its opinion requires a revision, it may communicate this information to the EC and the other parties. Technical evaluations may be carried out by any party or by a body of the Organization. Decisions will be taken by the Organization. The TS will provide assistance to any party, upon request, in evaluating an unlisted chemical. This assistance should be confidential. Several questions remain to be considered. They relate in particular to the bodies of the Organization to be entrusted with specific tasks, the rules for decision-making on proposals for a revision of lists and guidelines, and the timeframes for the whole process.

6 One of the factors which has to be taken into account when evaluating a chemical with regard to including it in an appropriate list is its toxicity.

The first list of chemicals, Schedule 1, contains substances which are the most dangerous as far as the Convention is concerned. Stringent verification and strict production limits will be applied to this category of chemicals and the facilities producing or consuming them.

The second list, Schedule 2, includes chemicals which are less dangerous than the ones in Schedule 1, but still pose a significant risk to the objectives of the treaty. Verification measures used to monitor the production and consumption of these chemicals will be less strict and intrusive than the ones for Schedule 1, and there will be no limits on their production or consumption.

Schedule 3 includes chemicals which are less dangerous than the ones in Schedule 2.[7] The monitoring of these substances and the facilities producing and consuming them will therefore be less intrusive than for Schedule 2.

One of the pioneers of this concept is Sweden. In 1985, it submitted a comprehensive proposal on the verification of non-production.[8] This proposal was discussed in the CD in 1986 and its basic approach was incorporated into the subsequent report of the Ad Hoc Committee.[9]

The following table shows the basic structure of the non-production regime to be established under the CWC. It indicates some of the characteristics of each Schedule and the verification procedures to be applied to facilities and installations producing or consuming these compounds. The details of each regime will be discussed in the subsequent sections.

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[7] Many proposals have focused on the verification of non-production of CW. First results of efforts to find an integrated approach for the listing of chemicals (still used today and outlined above) are contained in CD/651:Annex. Other proposals (partly outdated) on the verification of non-production include: CD/220, CD/298(Yugoslavia), CD/313(Canada), CD/333, CD/334, CD/350(Spain), CD/353(UK), CD/393(Yugoslavia), CD/401(Yugoslavia), CD/416:Annex I, pp.13-14, Annex II, pp.30-34, CD/439(Federal Republic of Germany), CD/445(Netherlands), CD/482(Yugoslavia), CD/500(USA), CD/514(UK), CD/537(Denmark), CD/539:Annex II, p.3, CD/541(Australia), CD/546:Annex, p.1, CD/575(UK), CD/585(Spain), CD/613(Yugoslavia), CD/619(Japan), CD/620(GDR), CD/627(Federal Republic of Germany), CD/632(Sweden), CD/636:Appendix II, pp.8-13, CD/642, CD/706(Netherlands), CD/713(Japan), CD/719(Finland), CD/727, pp.33-43, CD/747(France), CD/769(UK), CD/925(Netherlands), WP.57(UK), WP.86(UK), WP.131(Australia), WP.133(Netherlands), WP.138, WP.144(Netherlands), WP.150, WP.155(Australia), WP.159(Federal Republic of Germany), WP.171(USA), WP.172, WP.178(Canada), WP.193(Austria). Useful summaries on the system of Schedules and the provisions on non-production were produced by Japan (WP.174), the UK (CD/514), the Federal Republic of Germany (CD/627) and Sweden (CD/632).

[8] CD/632, PV.324. Sweden put the chemicals into three categories based on the risk they pose to the objectives of the Convention, i.e. the degree to which they might be or have already been used for CW purposes. Group I comprised the most dangerous, group III the least dangerous substances. A special regime of declarations, elimination, and verification would apply to each group.

[9] CD/651.

type of chemical	risk to the objectives of the CWC	civil use	verification		
			data reporting	on-site verification	limitation of production
Schedule 1	very high	none or very small	+	+	+
Schedule 2A	high	small to large	+	+	
Schedule 2B	moderate to high (?)	small (?)	?	?	?
Schedule 3	moderate	large to very large	+	?	

According to the rolling text, each party will have the right to develop, produce, acquire otherwise, retain, transfer, and use toxic chemicals and their precursors for purposes not prohibited by the Convention[10]. But it must ensure that no prohibited activities are carried out on its territory or anywhere under its jurisdiction or control.

The provisions of Article VI must be implemented so as to avoid hampering the economic or technological development of the parties and international co-operation in the field of peaceful chemical activities. The latter includes the exchange of scientific and technical information, and chemicals and equipment used for the production, processing or use of chemicals for peaceful purposes (purposes not prohibited by the treaty). The inclusion of this paragraph in Article VI remains to be considered. The TS, in performing verification activities provided for in Article VI, must avoid undue interference in the parties' peaceful chemical activities.

The following issues remain to be addressed as far as the entire Article is concerned:

1. Structure and basic concepts of Article VI: The structure and contents of Article VI have changed considerably during recent years. The basic structure of the provisions on non-production (the Article in the main body of the treaty, the Annex on Chemicals

[10] See chapter III. Article II of the rolling text defines permitted purposes.

containing three Schedules and guidelines, and the three Annexes to Article VI including provisions on the three regimes) seems to be agreed by now. The structure and wording remain to be improved, however. A working paper[11] by the chairman of working group 1 for the 1989 session currently serves as the basis for work on this issue. It contains no new substantive elements compared to what is already included in the rolling text, but the proposed wording and structure are more coherent and readable. It clearly connects the main body of the Article and the Annexes.

Another document was submitted by Canada[12] It reviews the whole concept of Article VI and contains a number of suggestions. They concern in particular the criteria used for the inclusion of chemicals in the Schedules (i.e. the risk the pose to the CWC (based on toxicity and other criteria)). Canada also addressed the question of how to make Article VI and II compatible (see chapter III). The definitions of CW, CWPF, permitted activities, precursor etc. in Article II have remained unchanged for several years although work on Article VI which partly defines those terms has made rapid progress. No systematic examination of this question has yet been undertaken by the Ad Hoc Committee.

2. The protection of confidential information: An important question still to be considered is the protection of confidential commercial and other information in the context of verification activities carried out by the TS. This concerns especially Articles IV, V, VI, VII (national implementation measures), VIII (the Organization), and IX (consultations, cooperation and fact-finding, including challenge inspection). The issue will be discussed at this point, however, because it has been raised particularly with regard to Article VI.

Especially Western countries and representatives of their chemical industry have expressed concerns that intrusive international verification may result in the loss of confidential proprietary information (production plans, process designs, customers etc.). Intellectual property could be lost to competitors. This may result in financial damage. The problem of protecting confidential information became more and more important after 1986/87 when the chemical industry of Western countries became increasingly involved in the question of chemical disarmament (see part one, chapter IV).

The problem of protecting confidential information also concerns military matters such as security arrangements for CW storage facilities or technical information on the production of CW.[13] Those two types of information may have to be protected particularly in the context of verification activities under Article IV and V.

After having been raised by Western countries, the question has received great attention within the CD, also from Socialist States[14] and developing countries. It was recognized that the same language in the treaty could be used to protect commercial as well as State secrets. Particularly regional powers, including Argentina, Brazil or India, which are developing a chemical industry, but also reprocessing plants for nuclear materials, have repeatedly mentioned this question and the need to solve it.[15]

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11 WP.256.
12 WP.231.
13 E.g. PV.512(USA).
14 E.g. PV.473(USSR), PV.481(GDR).
15 E.g. PV.446(Argentina).

The status of work is reflected in the "Annex on the Protection of Confidential Information" which was established during the 1989 session of the CD and forms part of the rolling text.[16] This annex remains to be elaborated.

According to its draft provisions, the obligation to protect confidential information will pertain to the verification of civil and military facilities. The primary responsibility in this context will be in the hands of the Director-General of the TS (see chapter IX). He must establish a stringent regime which will be based on guidelines expressed in the Annex.

Information will be considered confidential if the party from whom it is obtained and to which it refers to designates it as such, or if the Director-General concludes that its unauthorized disclosure could cause damage to the State concerned or to the mechanisms for the implementation of the treaty. A special unit of the TS will evaluate whether data and documents obtained contain any confidential information.

Data which are needed to assure the parties of each others' compliance will be routinely provided to them. The Annex defines such information. It mentions exceptional circumstances under which information, collected by the TS during the implementation of the treaty, may be published or otherwise released. The level of sensitivity of information will be determined according to a classification system to be developed. Some work on this system has been undertaken and is reflected in a document attached to the report of the Ad Hoc Committee.[17] It holds that information collected by the TS will be classified as follows:

(a) Information which could be released to the public.
(b) Information for States-parties only.
(c) Information to be confined to the TS.
(d) The most sensitive kind of confidential information.

The Annex contains guidelines for the storage of information and access to it. The Director-General of the TS must report annually to the Conference of the States Parties (see chapter IX) on developments related to the protection of confidential information.

The Annex also covers the employment and conduct of personnel of the TS, especially the international inspectors. It includes provisions on access to information, the taking of records during inspection activities, individual secrecy agreements between the inspectors and the TS, the notification of the parties about clearances for access to confidential information, the evaluation of the performance of employees etc.

Several procedures will help in protecting sensitive installations and prevent the disclosure of confidential data during on-site inspections. Provisions therefore will have to be considered together with the inspection protocol (see chapter IX). A party may indicate to an inspection team equipment, documentation, or areas of a facility, which it considers sensitive and not related to the purpose of the inspection. The inspectors must be guided by the principle of verification by the least intrusive means and may take into account proposals of the party hosting the inspection. The inspectors must strictly abide by the rules on confidentiality established under the treaty. The agreements on subsidiary arrangements (facility attachments) must consider this problem, e.g. by exactly determining the areas of a facility subject to inspections, or rules for the taking of samples.

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[16] CD/952, pp.65-70.
[17] CD/952, pp.191-192.

The final part of the Annex on the protection of confidential information contains draft provisions on procedures to be used in case of breaches or alleged breaches of confidentiality rules. The Director-General of the TS will establish procedures in this context and supervise possible investigations. How staff members of the TS will be punished if they violate the confidentiality rules remains to be discussed. Measures might include punitive, disciplinary measures, or the waiving of immunity from legal process in serious cases. Provisions on this aspect will have to be discussed together with questions such as the liability for damage occurring as the result of an inspection, or the settlement of disputes. Most delegations agree that, in principle, the Organization should not be held liable for breaches of confidentiality committed by members of the TS. For breaches involving a State party and the Organization, a "Commission for the settlement of disputes related to confidentiality" would be set up as a subsidiary ad hoc body of the CSP.

France submitted a detailed proposal on the question of confidentiality.[18] It had an important impact on the subsequent establishment of the Annex just described. Many points contained in the French document have been included in the Annex, some of them are still under consideration. We shall therefore take a closer look at this proposal.

The first part of the French proposal discusses the concept of confidentiality and the protection of confidential information with regard to: the recipients of confidential information; different aspects of the verification regimes; and the application to different fields or facilities. The second part is devoted to proposed additions to or amendments of the rolling text, especially Articles IV, V, VI, VII, VIII, and the inspection protocol. In addition, the tentative structure of a special Article on the question of confidentiality and principal elements of an annex covering the various aspects of this issue were proposed.

The proposed annex includes provisions on the TS (procedures, staff rules), procedures applicable to breaches of confidentiality rules, and rules concerning National Authorities. The TS will set up a "special office" to monitor the protection of confidential information and to identify leaks and persons responsible for them. It would establish rules for the storage of information, access to information (on a need to know basis), the distribution of confidential data etc.

France proposed that in any case of disclosure of confidential information, the Director-General of the TS send a report on this to the EC and the party concerned. It said that particularly stringent rules concerning confidentiality would apply to international inspectors. Procedures applicable to breaches of confidentiality rules, including the investigation of allegations, were proposed for each type of violation of the rules (within a State party, by staff of the TS etc.).

Procedures for the settlement of disputes were proposed for specific types of breaches. These procedures may involve national legislation, a "Commission for the settlement of disputes relating to confidentiality" or the Executive Council.

Enforcement measures or sanctions for cases of breaches of confidentiality rules may be needed. France put forward some questions relating to this aspect, e.g. the kind of liability which would apply to each party (financial, criminal) and options for the Director-General of the TS and the Commission for the settlement of disputes concerning confidentiality.

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[18] CD/901.

Provisions on National Authorities could include rules governing their participation in verification activities (to be spelled out nationally). They may comprise, inter alia, a model agreement with the TS on the exchange of confidential information and a system of national auditing.

The draft provisions of the Annex on the protection of confidential information remain to be further developed. Close cooperation with the chemical industry and the experience gained by "national trial inspections" (see below) will facilitate the work. It may also be possible to learn from the experience of the IAEA and national practice in this context. In addition, the implementation of the INF treaty of 1987 may provide some insights.

Some delegations have stated, however, that the problem of confidentiality has been exaggerated.[19] They believe that it could be solved by designing verification provisions so that only the information necessary for verification purposes would be required. Additional measures could be incorporated in the staff regulations of the TS. And finally, the format of inspections (e.g. the "managed access" to facilities to be inspected, see chapter X) may allow the resolution of some confidentiality problems on the spot and would hence reduce the risk of loss of confidential information. In any case, it remains to be discussed and decided how specific the provisions on this issue must be and how much can be left to the Preparatory Commission or the TS.

3. The collection and forwarding of data and other information: A footnote in the rolling text indicates that the question of collection and forwarding of data and other information to verify the non-production of CW requires further consideration.[20] It refers to a proposal by the Federal Republic of Germany[21] on a system of data exchange.

Data reporting by the parties to the CWC will be an essential obligation under each of the three regimes established by Article VI. The National Authorities will collect and transmit to the TS data, especially on Schedule 2 and 3 chemicals and the facilities producing or consuming them. The amount of data and other information to be submitted will depend, inter alia, on the number of chemicals listed in the Schedules and on the thresholds for reporting.[22] (If production or consumption of a defined chemical at a facility exceeds a particular threshold, data defined by the provisions of the CWC will have to be submitted to the TS.)

The Federal Republic of Germany proposed that the TS have the right to request clarification, if necessary, of the data submitted by a country. This verification mechanism was said to allow a business-like establishment of the facts and would save challenge inspections for exceptionally serious cases. The Federal Republic of Germany proposed procedural details and draft elements for such a data reporting system for Schedule 2 and 3. The proposal has not been considered in detail in the Ad Hoc Committee. It has reportedly met with some resistance because it would provide for more intrusive monitoring of the production or consumption of Schedule 3 chemicals (see section 7.3).[23]

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19 E.g. PV.506(Sweden).

20 Some comments on this issue are contained in CD/698, p.1(Australia) and CD/627, pp.5-6(Federal Republic of Germany).

21 WP.159, PV.398.

22 Several delegations, Western ones in particular, have stated that these thresholds should correspond to "militarily significant quantities" This criterion is not the only one which can be used to define thresholds. Other approaches have been proposed as well and will be discussed later on in this chapter.

23 To supplement the verification procedures so far agreed to, the Federal Republic of Germany (CD/791, WP.183) proposed "ad-hoc checks" at short notice and carried out by the international authority on its own initiative in facilities of the chemical industry (see below).

As to the national level of data reporting, the GDR[24] proposed specific guidelines for a national system of accounting and control of chemicals in connection with the Convention.

3. "Trial inspections": Most delegations agree that the provisions on international on-site verification remain to be improved with a view to their practicability and efficiency. This task will be facilitated by the practical testing of routine as well as other (e.g. challenge or "ad hoc", see below) verification procedures and the evaluation of the results. To this end, "national trial inspections" in the civil chemical industry were undertaken during 1988 and 1989 by a considerable number of States[25] and the results were intensively discussed in the Ad Hoc Committee.[26] Similar trials had been carried out before, for example during a workshop organized by the Netherlands in 1986, or by Australia.[27] Informal proposals for trial inspections were put forward in 1987 by Finland and the UK. A formal proposal to conduct experiments on a broader basis was made by the Soviet Union in February 1988.[28]

The national trial inspections were carried out on the basis of guidelines developed in the Ad Hoc Committee during the 1988 session.[29] These guidelines were designed to help interested countries in the preparation of trial inspections and the elaboration of scenarios therefore. They also provided a repertory of procedures to conduct the inspections and details to be observed.

Most trial inspections took place in industrial facilities producing or consuming Schedule 2 chemicals. The following results drew particular attention: The identification of a facility to be inspected may pose some problems, especially in multi-purpose facilities. The contents of facility attachments need to be reassessed. The Model Agreements therefore have to be improved, particularly with regard to multi-purpose facilities. The guidelines for Schedule 2 remain to be considered. The settlement of disputes and the resolution of complications or anomalies during inspections has to be addressed. Guidelines for the evaluation of the findings of an inspection and the report may have to be developed. The question of sample taking and analysis has to be considered. The importance of auditing of facility records versus sample taking and analysis has to be assessed. Auditing may reduce the need for sample taking. The instruments to be used for on-site inspections have not yet been fully developed. The role of national legislation relating to on-site inspections has to be studied. And finally, check-lists of points of Schedule 2 facilities where violations could be detected may have to be established.[30]

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24 CD/620(GDR).

25 The results of national trial inspections were submitted to the CD by Hungary (CD/890, PV.489), Italy (CD/893, PV.491), the USSR (CD/894, PV.490), Brazil (CD/895, PV.499), the GDR (CD/899, PV.495), the CSSR (CD/900, PV.495), Australia (CD/910, PV.501), the Federal Republic of Germany (CD/912, PV.503), France (CD/913), Belgium(CD/917, PV.501), the United States (CD/922, PV.500, PV.512), the Netherlands (CD/924, CD/925), Austria (CD/948), Sweden (WP.216), (Japan) WP.228, Finland (WP.233, PV.503), Switzerland (WP.247), and the United Kingdom (WP.249). India stated that it had carried out a trial inspection and would submit the results to the CD (GICCW/WSII/1, 19 September 1989, Canberra Conference).

26 See the reports by the chairman of the open ended consultations on this issue (WP.217, WP.236, WP.237, WP.248).

27 CD/698(Australia). Documents submitted by the Netherlands: WP.133, WP.141, WP.142, WP.143, WP.144, CD/706.

28 PV.448, PV.460.

29 WP.213.

30 E.g. WP.217, WP.236, WP.237.

As a second step, trial inspections on an international level are planned. The Soviet Union[31] proposed that the countries participating in the negotiations designate, on a voluntary basis, one facility each where an international group of experts could test procedures for the systematic international monitoring of non-production of CW in the commercial chemical industry. The United States first expressed the view that international trials should be conducted only later and that procedures must now be improved on a national basis.[32] It subsequently stated, however, that it preferred multilateral verification experiments.[33] They should concentrate on specific questions defined in advance, for example the definition of the area of a facility to be inspected. At the moment, this view seems to be supported by most delegations. The GDR[34] submitted a document which contains some suggestions on international trials. Several countries, for example the CSSR[35], Austria[36], the GDR[37], the USSR[38] and the Federal Republic of Germany[39], have offered to host an international trial inspection. Guidelines for these experiments may be established during the 1990 session of the CD.

Some countries undertook or are planning to carry out experimental inspections to examine and develop challenge (chapter X) or ad hoc (see below) procedures. The United Kingdom[40] tested challenge inspection procedures at military installations, including conventional ammunition facilities. This was done in the framework of a continuing programme. Results were presented to the CD, including comments on: the problem of defining the facility to be inspected; the size and composition of the inspection team; resource implications; the role of the requesting party which may participate in the inspection as an observer; the securing of the site; alternative arrangements to full access to the site specified by the requesting party etc. The Netherlands[41] and the Soviet Union[42] stated that they were planning to conduct such experiments as well. The GDR[43] said that it would be willing to carry out such a trial inspection together with the Federal Republic of Germany on the basis of reciprocity. The Federal Republic of Germany undertook a trial inspection to examine ad hoc verification procedures (see below).

In addition to the technical results obtained through trial inspections, they may help to increase the acceptability of intrusive verification to States and the industry. Except for the Federal Republic of Germany, where similar inspections have been carried out since 1956 by the WEU[44], intrusive international verification in the chemical industry is new. It is therefore necessary to dispel existing concerns and find solutions if particular worries prove to be justified. As to the governments, trial inspections can focus their attention on necessary adjustments in national legislation and institutions. Trial inspections will therefore have a learning effect for both governments and the chemical industry.

Finally, trial inspections, carried out by so many countries, are something new in disarmament history and can serve as a precedent. Indeed, it can be noted that the United

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31 PV.441.
32 PV.457.
33 PV.512.
34 WP.241.
35 PV.507, PV.527.
36 PV.457.
37 PV.504.
38 PV.516.
39 PV.491, PV.503.
40 CD/921, PV.509.
41 PV.498. The Netherlands tested some non-routine procedures during its first trial inspection (CD/925).
42 PV.511, GICCW/WSI/8 (Canberra Conference, 18-22 September 1989).
43 PV.504.
44 See part one, chapter III.

States and the Soviet Union are envisaging trial inspections in the context of their negotiations on strategic nuclear weapons (START).

5. Additional verification procedures: Verification procedures to ensure the non-production of CW will include data reporting, routine inspections, challenge inspections, and consultations among the parties. Some delegations believe that there are still gaps in this system.

(a) As currently envisaged, no routine inspections will be carried out in facilities producing or consuming Schedule 3 chemicals (see below).

(b) Undeclared industrial facilities will remain outside the routine verification system. Routine procedures will only be used to monitor declared sites. The same applies to undeclared military and other facilities.

(c) Undeclared facilities within facilities subject to declaration and routine verification will not be monitored. This question is of particular relevance with regard to modern multi-purpose chemical facilities which are capable of quickly switching production from peaceful to prohibited purposes.

(d) A verification gap may exist for certain other facilities to be declared, but not subject to routine verification.

The following proposals were made to address these perceived gaps:

Australia[45] proposed to supplement established verification procedures for Schedule 3 facilities (data reporting) by **"on-spot checks"** They would serve to selectively verify the data submitted by the parties.

In 1988, the Federal Republic of Germany[46] submitted a detailed proposal on additional verification procedures. It noted that violations of the provisions on data reporting were conceivable in facilities covered on the basis of their reported production or consumption of Schedule 2 or 3 chemicals. A verification gap also existed for plants not reported as production facilities for listed chemicals. These facilities would thus remain outside the routine verification system as established by Article VI. (Declared sites would be covered by routine and challenge inspections, undeclared sites only by challenge inspections.)

To close this gap, the Federal Republic of Germany proposed **"ad hoc checks"** They would be carried out in the chemical industry on a routine basis (random, see below) and at short notice by the Organization on its own initiative.

The basic difference between this proposal and the procedures for challenge inspections (chapter X) is the routine (random) character of ad hoc checks, their format, and the fact that the inspections would be requested by the Organization, not a party. Ad hoc checks would simply ensure that, at the time of the inspection, no substances listed in Schedule 1 - 3 which must be declared but were not are produced. This would, so the view of the Federal Republic of Germany, result in very short (a few hours) inspections of less intrusive nature compared to regular routine or challenge inspections. Verification would intensify

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[45] CD/698.

[46] CD/791, CD/869. The idea of additional verification procedures was already mentioned in an earlier proposal by the Federal Republic of Germany (CD/627, PV.328).

only if the undeclared production of listed chemicals was detected.[47] In these cases, it would be established whether the amount of chemicals involved constitutes a violation of the Convention.

The Federal Republic of Germany[48] developed the concept of ad-hoc checks, including the inspection format, in a subsequent proposal. National registers of each party's chemical industry would be submitted to the TS. They would list facilities with a production capacity exceeding a specific threshold. Facilities to be inspected would be selected on a random basis with the help of these registers. They could, in addition, be carried out on the basis of "passive quota"[49]. The TS could not initiate ad hoc checks upon information received by the parties. No facility attachments would be necessary for ad hoc checks. But a framework agreement between the TS and each party would be concluded. Samples would be taken and analyzed on-site with mobile instruments. Ad hoc checks would therefore have a routine character.

The Federal Republic of Germany proposed the language for an Annex to Article VI. It included general provisions, provisions on national registers, the initiation of ad hoc checks, the conduct of such checks, and the submission of the inspectors' reports. In June 1989, the Federal Republic of Germany undertook a trial inspection to test the proposed ad hoc procedures.[50] The test was said to have shown that ad hoc checks can be undertaken within a few hours and can prove with a high degree of certainty that no activities prohibited by the treaty have taken place at the inspected facility.

In 1989, the United Kingdom[51] submitted a proposal for **"ad hoc inspections"** It is modeled on the Stockholm Agreement of 1986[52] and builds on the contribution of the Federal Republic of Germany.

The proposal by the UK can be summarized as follows:

(a) Each party may initiate ad hoc inspections by the TS in all facilities (civil, military, other). These mandatory inspections will be carried out upon short notice. According to the proposal by the Federal Republic of Germany, the TS would initiate the inspections. The proposal by the Federal Republic of Germany covers only the chemical industry (registered facilities).

(b) Ad hoc inspections will not be linked to alleged breaches of the Convention (no challenge character).

(c) Requests and the hosting of ad hoc inspections will be managed on a quota basis (passive[53] and/or active[54]). The ad hoc checks proposed by the Federal Republic of Germany would be managed on a random basis (selection of facilities from national registers). Passive quota were mentioned as an additional possibility.

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47 CD/869, PV.481.
48 CD/869.
49 Passive quota means the number of inspections a party must accept within a specific period.
50 CD/950.
51 CD/909, PV.500.
52 The Stockholm Agreement, concluded in the framework of the CSCE in 1986, is a politically (but not legally) binding agreement on CSBMs in Europe.
53 "Passive" means the number of inspections a party is obliged to receive within a specific period.
54 "Active" means the number of inspections a party can request within a specific period.

(d) Ad hoc inspections will serve to assure that no activities subject to declaration but not reported, or prohibited activities, are undertaken at a facility. The ad hoc checks proposed by the Federal Republic of Germany have the same objective.

(e) The format of ad hoc inspections will be different from the format of routine or challenge inspections (no facility attachment, no observers from the requesting party). The UK did not elaborate on this point, but said that it would undertake practical experiments and report to the CD later. The format of the ad hoc checks proposed by Federal Republic of Germany is defined in more detail (registers of facilities, framework agreement). The format of the inspections proposed by the UK would depend, inter alia, on the content of bilateral agreements (see (g)).

(f) All parties will be informed of the results of an inspection.

(g) Separate bilateral agreements on ad hoc inspections will be possible. In this case, the costs will be borne by the States concerned. This bilateral element is not mentioned in the proposal by the Federal Republic of Germany.

The United Kingdom stated that ad hoc inspections would complete the inspection framework and would focus on facilities of most concern. This would be cost-effective (smaller number of inspections, shorter inspections). (In contrast, the proposal by the Federal Republic of Germany, based on a random selection of sites, may lead to too many inspections of facilities of little relevance.) The UK noted that the proposed procedures would provide reassurance and would work as a deterrent (mandatory nature and short notice), and would have a routine character (no allegations of non-compliance, quota system).

The proposals by the Federal Republic of Germany and the UK were partly an effort to solve the question of CW-capable facilities. Part of the issue was a proposed fourth list of chemicals (see section 7.2).[55] This list was disliked by Western countries[56]. It was to cover substances which are currently not used for CW but could be employed for this purpose in the future. Such a definition may cover many super-toxic substances which are or might be used for research activities in the chemical and pharmaceutical industry. The verification procedures connected to this list were therefore regarded as too intrusive. Although this list has been dropped, the question of how to cover these substances the production or consumption of which could identify CW-capable facilities is still the subject of ongoing negotiations (see section 7.2). One of the solutions which is now considered is to include some of the most risky chemicals of this type in the second Schedule (2B). Risky facilities which would have been identified on the basis of the proposed fourth Schedule[57] could then be covered by ad hoc checks or ad hoc inspections.

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55 E.g. PV.481(Federal Republic of Germany).

56 The chemical industry of Western countries seems to support additional verification procedures. To assure the minimal disruption of peaceful activities, it had suggested that points of standard inspection routine should be created. They would be used as decision points for the early termination of an inspection or visit. This would help in protecting confidential information and would be cost-effective. If one assumes that the resources of the Organization will be limited, a zero-sum game between inspections of Schedule 2 facilities and ad-hoc inspections is likely. This would probably decrease the number of inspections in Schedule 2 facilities and might therefore be in the interest of the chemical industry which is most concerned about such inspections.

57 The verification procedures were proposed for facilities producing or consuming chemicals listed in the fourth Schedule.

In addition, the proposals for ad hoc verification measures were also made to address the concerns of some countries about the difficult political features of challenge inspections. One concern is that challenge inspections could be abused for political purposes (see chapter X). Additional inspection procedures with a routine character may reduce the need to request challenge inspections. This would reserve the latter for the most exceptional cases.

There was no consensus among the delegations on the need for additional verification procedures. Most countries have, in general terms, welcomed the proposals. But many of them[58] prefer to define existing verification gaps first, before elaborating additional measures. The structure of the system of routine verification is quite well developed, but provisions on challenge inspections remain to be agreed. The United States, for example, stated that to develop additional verification procedures while the provisions on challenge inspections were not agreed and therefore the existing verification gap not known would be the wrong approach.[59] It changed its position only shortly afterwards, however, and supported the proposals made by the UK and the Federal Republic of Germany. Other delegations still hold that the currently envisaged verification system would cover all facilities and that additional measures are not necessary. Some of these delegations prefer to "banalize" challenge inspection rather than to find substitutes.

Criticism of the proposal made by the Federal Republic of Germany has focused on the need to establish national registers of the chemical industry, and on the role of the TS. As mentioned above, too many facilities of little relevance, perhaps thousands, may be inspected if the selection of facilities is to be made on a random basis. In any case, the term "chemical industry" would have to be defined. Rules on how to draw up the registers and to update them would be needed. It was argued that, if the TS was empowered to request inspections, suspicions about its independence and objectivity would arise. This could jeopardize its effective performance.[60] And finally, the problem of wholly undeclared facilities (neither according to Schedules 1, 2, or 3, nor for the establishment of the registers) would remain unsolved. These problems provided the background for the British proposal.[61]

The British proposal has been criticized because it appeared to offer challenge inspections on a quota basis with a touch of routine. The fact that a party could request an inspection of another party's facilities, the quota system, and the possibility of bilateral agreements are indeed typical elements of challenge inspections. The UK provided little details on the format of the proposed ad hoc measures although this would have made the difference more clear. The following arguments were put forward by a British official: ad hoc inspections would occur more frequently than challenge inspections; they would be shorter in duration and based on a quota system; and no observer from the requesting party would be on the inspection team. He said that the UK would elaborate on its proposal if the basic idea became acceptable to other delegations.[62]

Several elements contained in the proposals by the Federal Republic of Germany and the UK need to be clarified. The "chemical industry" covered by the West-German proposal needs to be defined in more detail. The same applies to the difference between ad hoc and challenge inspections. It has to be determined for which situations ad hoc checks or

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58 E.g. PV.504(USA), PV.498(Netherlands), PV.506(Sweden).
59 PV.504.
60 E.g. PV.460(Brazil), PV.482(Pakistan).
61 PV.474.
62 ACR, 27 April 1989, 704.B.384.18-19.

inspections would be needed[63], and what the chances of deterring violations by such means are. The cost-effectiveness, gaps in other verification procedures, and the availability of portable equipment[64] for ad hoc procedures, have to be taken into account as well when evaluating the need for additional verification measures.

The concept of ad hoc procedures enjoys growing support in the CD, inter alia by the Soviet Union and the United States.[65] Many delegations agree that the TS should play a role in clarifying ambiguous situations. Whether the TS will be allowed to initiate ad hoc measures or query unclear data provided by the parties under circumstances to be defined remains to be considered. Some of the elements contained in the proposals by the Federal Republic of Germany (routine character) and the UK (challenge character) could be combined. There are indications that a proposal to this end may be submitted soon. The trend seems to be not to establish a new separate verification mechanism, e.g by a separate Article in the treaty, but to extend the routine verification procedures. In this light, ad hoc measures might partly be regarded as a simplification for Schedule 2 facilities.

6. The definition of "production capacity": There may be facilities which are currently not producing or consuming chemicals included in one of the three Schedules. Or, the quantities produced or consumed might not exceed the threshold above which a declaration would be required and specific forms of verification would apply. Such facilities may still have the "capacity" to produce Schedule 1, 2, or 3 chemicals in excess of the threshold even if they did not at the moment.

There is an understanding that these facilities would not be irrelevant. One possibility would be to declare all facilities having once produced chemicals for CW purposes. Such facilities would therefore be monitored even if they did not produce these chemicals at the moment. But this would not cover all facilities of concern. It was therefore proposed that a declaration of the production capacity of facilities be required. Facilities which have a production capacity exceeding a defined threshold would have to be declared and monitored. This necessitates a definition of production capacity.

A report on consultations on this issue during the 1987 session provides some information on the status of work. It was drawn up on the basis of a proposal by the United States[66] and was developed before the elaboration of the "Annex on Chemicals". Therefore, the concepts and terminology of the report do not fully reflect the present status of negotiations.[67] The document states that, if the production capacity of a facility for key precursors of extremely toxic chemicals clearly exceeds legitimate commercial needs, there will be concern that the excess capacity may be utilized to produce CW. The production capacity of each declared production facility must therefore be declared so that any excess capacity over the projected commercial requirements will be made an issue of concern and an area for verification. A method for the uniform calculation of production capacity was therefore proposed. The method is based on the "maximum practical quantity" which could be produced in a year from a given process design.

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63 During a trial inspection, the Netherlands (CD/925, PV.512) examined some characteristics of plants which may be capable of producing CW. A list of such characteristics was presented to the CD.

64 The Federal Republic of Germany explained a new technical device (SNAL=sample now, analyze later) which could be used for ad hoc checks (WP.204, PV.491, PV.512).

65 PV.512(USA), PV.516(USSR).

66 WP.171(USA).

67 CD/952, pp.161-163.

The term "production capacity" is used for several parts of the rolling text. However desirable, a definition applicable to all parts of the treaty may not be possible. The definition could include two elements: a verbal definition; and a mathematical formula for the calculation of the numerical value of production capacity. (Such a formula was proposed in the report.) According to the view of technical experts who participated in the consultations that led to the report, production capacity can be defined as "...the annual quantitative potential for manufacturing a specific substance on the basis of the technological process actually used or, in case of processes not yet operational, planned to be used at the facility, as specified in the subsidiary agreements."

The definition of production capacity is a technical issue which has nevertheless remained unsolved for several years. One way to find a consensus may be to replace the term by more precise characteristics of the outfit of a facility. This has been done for the SSSPF (see section 7.1). Its capacity has been expressed in terms of the mode of operation and volume of its reaction vessels.

7.1 The Regime for Chemicals Listed in Schedule 1

Chemicals listed in Schedule 1 are the most dangerous as far as the Convention is concerned. They include super-toxic lethal chemicals which have already been weaponized, for example Sarin, Soman, Tabun, and the VX-Agents, but also some key precursors for CW, and other CWA[1]. The production of these substances will be restricted and subject to stringent verification. The list of chemicals, the guidelines therefore (which will define this category of chemicals), and modalities for the revision of the list and guidelines are contained in the Annex on Chemicals.

The provisions on the regime for Schedule 1 hold that the parties to the Convention must not produce, acquire otherwise, retain, transfer or use such chemicals except for research, medical, pharmaceutical or protective purposes, and only if the types and quantities are strictly limited to what can be justified for these purposes. Protective purposes means purposes directly related to the protection against CW. The aggregate amount of chemicals listed in Schedule 1 and produced for these purposes must not exceed one metric ton at any given time.

Within 30 days after the entry into force of the Convention, each party must provide data on Schedule 1 chemicals and the facilities producing them.

7.1.1 The Transfer of Schedule 1 Chemicals

Schedule 1 chemicals may only be transferred to another party to the Convention for research, medical, pharmaceutical, or protective purposes. They must not be re-transferred to a third State. Transfers must be notified to the TS by the parties concerned 30 days in advance. Transfers during the previous calendar year must be declared in detail annually. The contents of the declarations are defined in Annex I to Article VI.

7.1.2 Restrictions on the Production of Schedule 1 Chemicals

The production of Schedule 1 chemicals for research, medical, pharmaceutical or protective purposes must be carried out in a "single small-scale production facility" (SSSPF) approved by the State-party concerned. The capacity (to be defined) of such a facility must be limited.

For practical reasons, limited production of Schedule 1 chemicals outside the SSSPF will be allowed. Quantities of more than 100 g per year and facility for purposes to be defined (protective purposes excluded) may be produced outside the SSSPF in aggregate quantities not exceeding 10 kg per year and facility. These facilities must be approved by the party concerned. Quantities of less than 100 g per year and per laboratory for purposes to be determined may be synthesized outside the SSSPF as well.

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[1] E.g. sulphur mustard, lewisites, nitrogen mustard, DF and QL, and BZ.

7.1.2.1 The "Single Small-Scale Production Facility" (SSSPF)

Each party planning to operate a SSSPF must declare its location to the TS and provide a detailed technical description. This includes an inventory of the equipment and detailed diagrams. If such a facility exists, the declaration must be made within 30 days after the Convention has entered into force for a party. New SSSPF must be declared 6 months before operations are to begin. The TS must be notified of any planned changes as compared to the initial declaration.

Parties which have a SSSPF must make detailed annual declarations on its activities during the previous calendar year. The contents of the declarations are defined in Annex I to Article VI. Detailed annual declarations on projected activities and the anticipated production during the coming calendar year will have to be submitted as well.

The purpose of verification relating to the SSSPF is to ensure that the quantities of Schedule 1 chemicals produced are correctly declared, and that their aggregate amount does not exceed one metric ton. Verification procedures will include systematic international on-site inspections and monitoring with on-site instruments. The number, intensity, duration, timing and mode of inspections at each particular facility will be based on the potential risk the chemicals produced pose to the objectives of the Convention. Guidelines remain to be developed.

An initial visit, promptly after the declaration of a facility, will serve to verify that the information provided is correct. It will help to ensure that the reaction vessels of the facility are not designed for continuous operation and do not have a volume which exceeds the threshold (to be defined). It will also provide additional information necessary for the planning of subsequent verification activities at the facility.

Each party which possesses or plans to operate a SSSPF must conclude an agreement on subsidiary arrangements, based on a Model Agreement, with the Organization before operations at the facility begin. Work on the Model Agreement is under way (see below).

7.1.2.2 The Production of Schedule 1 Chemicals Outside the SSSPF

The production of Schedule 1 chemicals outside the SSSPF has been a controversial issue for a long time. In 1989, it was partly solved.

The United States[2], for example, proposed that the production of laboratory quantities of Schedule 1 chemicals in establishments approved by a State-party for research, medical or protective purposes be permitted. It was argued that confining the production of these chemicals to a single facility would not be realistic. It would interfere too much with peaceful activities in the civil industry, the pharmaceutical industry in particular. Sweden[3] stated that extremely limited production in laboratory quantities could be considered. Countries of the Socialist Group, on the other hand, opposed this.

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2 CD/500, p.4.
3 CD/632, PV.481.

The position of the Socialist Group began to change in 1987/88. Discussion first focused on the production outside the SSSPF of nitrogen mustard. This chemical is applied for medical purposes (cancer treatment etc.).[4] Its production outside the SSSPF was accepted by the Socialist countries.[5] Negotiations subsequently addressed the production of limited quantities (in the range of 100g to 10 kg per facility and year) of other Schedule 1 chemicals outside the SSSPF.

Bilateral consultations between the United States and the Soviet Union finally resulted in agreement on some aspects of this question. The agreement was recorded in a document attached to the report of the Ad Hoc Committee in spring 1989. The draft provisions were further developed during the 1989 session and then included in the rolling text. On the basis of quantitative thresholds for production, two types of facilities producing Schedule 1 chemicals outside the SSSPF were defined. The first category includes facilities producing quantities of 100g to 10 kg per year. The second covers laboratories producing Schedule 1 chemicals in quantities of less than 100 g per year.

Facilities producing quantities of 100 g to 10 kg per year will be subject to the following provisions: The parties must provide information on these facilities to the TS, including their name, location, and a detailed technical description. Existing facilities must be declared not later than 30 days after the treaty has entered into force for the State concerned. Advance notice of any planned changes as compared to the initial declarations must be given. Annual declarations with approximately the same contents as for the SSSPF must be made. International verification at such facilities will ensure that they are not used to produce any chemicals in Schedule 1 except for the declared ones, and that the quantities of Schedule 1 chemicals produced are correctly declared and consistent with the declared purpose. It will also ensure that these chemicals are not diverted or used for prohibited purposes. The provisions on verification are practically the same as for SSSPF (see above).

The following questions remain to be solved:

1. Provisions on the SSSPF: The provisions on the SSSPF are almost complete. A number of technical issues remains to be considered. The production capacity in terms of volume of the reaction vessels remains to be defined. 1, 10 and 100 liters have been proposed. A number of timeframes concerning advance notifications and annual declarations have to be set. Guidelines to determine the number, intensity, duration, timing and mode of inspections at SSSPF have to be elaborated. And finally, a Model Agreement for the facility attachments needs to be developed. A proposal[6], made during the 1987 session, reflects the work undertaken. It elaborates on: the information to be provided on the SSSPF by each party; the number and modalities of inspections; the monitoring system; the temporary closure of such a facility; instruments and other equipment to be used during inspections; sample-taking; on-site analyses of samples and on-site analysis equipment; records; administrative arrangements; services to be provided; revisions of the agreement etc. It was stated that, pending the conclusion of an agreement between a party and the Organization, there would be a need for provisional inspection procedures.

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4 E.g. PV.448(USSR).
5 ACR, September 1988, 704.B.311.
6 CD/952, pp.175-179.

2. The production of Schedule 1 chemicals outside the SSSPF in aggregate quantities exceeding 100 g per year and facility: There is no agreement on the definition of the purposes for which these chemicals could be produced. "Pharmaceutical" and "research, medical or pharmaceutical" purposes were proposed. A proposal to allow the production for protective purposes (directly related to the protection against CW) has been dropped so that agreement may be reached soon. The production of Schedule 1 chemicals for protective purposes would therefore have to be carried out at the SSSPF if it exceeds 100 g per year.

The thresholds of 100g and 10 kg seem to be agreed.[7] However, a proposal by the United States to establish a subcategory of Schedule 1 chemicals, "ultra-toxic chemicals", and to prohibit their production in excess of 10 g per year remains to be considered.[8] Ultra-toxic substances are likely to be toxins (e.g. ricin or saxitoxin). Whether or how to cover toxins in the Convention was discussed in chapter III.

Several timeframes for declarations and advance notifications remain to be set for these facilities. Guidelines to determine the number, intensity, timing and mode of inspections, and a Model Agreement for facility attachments have to be developed as well. Another question concerns the "production capacity" of such facilities. One of the aims of verification is to check that a facility does not have the capacity to produce, on an annual basis, aggregate quantities of more than 10 kg of Schedule 1 chemicals. Therefore, the term production capacity needs to be defined (see above).

3. Laboratories producing Schedule 1 chemicals outside the SSSPF in aggregate quantities of less than 100g per year and facility: There is little agreement on provisions concerning these facilities. This is the result of disagreement over verification procedures for such cases, and the purpose for which these laboratories could produce Schedule 1 chemicals. Two types of laboratories are under consideration.

The first one could produce Schedule 1 chemicals for protective purposes, the second one for research, medical or pharmaceutical purposes. As to the first type, there is no agreement on whether only one laboratory should be allowed, or laboratories, or not more than 20 installations. Some delegations proposed to permit these facilities only if no SSSPF has been established by the State concerned, others disagree with this. The Socialist Group holds that the production of Schedule 1 chemicals for protective purposes must be strictly limited. It first expressed the view that production must only be permitted in the SSSPF, but it gradually changed its position.[9] The proposals mentioned above indicate more flexible views by now.[10]

The second type of facility could produce quantities of less than 100 g per year and facility for research, medical or pharmaceutical purposes. It is not agreed whether these facilities would have to be approved by the State they are located in. Many Western countries, the United States in particular[11], do not think that such facilities must be approved by the State. This reflects the different nature of research in this field in Western countries. Much of it takes place in private enterprises, universities, and other institutions. In most Socialist and Non-Aligned countries, on the other hand, such research is under the control of the government.

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7 The threshold of 10 kg was, for example, proposed by the United States (CD/802).
8 CD/802(USA).
9 E.g. PV.486(USSR), PV.481(GDR), PV.477(Mongolia), WP.195(GDR).
10 At present, the Soviet Union agrees to one such laboratory, provided its name and location is declared and it is approved by the party (PV.516).
11 CD/802.

For both types of facilities, there is disagreement on verification. In general terms, the Socialist Group and the Group of 21 prefer more intrusive verification for these facilities than Western countries[12]. The United States does not think that any international verification is necessary for these facilities.[13] Other countries such as Sweden hold that facilities which produce Schedule 1 chemicals for protective purposes should at least be declared at the end of each calendar year.[14] The Soviet Union[15] stated that all facilities producing Schedule 1 chemicals must be declared and approved by the party concerned. However, no systematic verification should apply to laboratories producing Schedule 1 chemicals outside the SSSPF.

There are concerns, notably in Western countries, that intrusive verification procedures for these facilities may hinder peaceful research activities and could lead to the loss of confidential commercial information, especially in the pharmaceutical industry. Another question is whether intrusive verification in such installations is necessary. Applying intrusive verification at this point means that already the "non-development of CW" is to be verified. The feasibility of this has been questioned by many countries[16] and it is unlikely that procedures explicitely designed to verify the non-development of CW, an obligation expressed in Article I of the rolling text, will be established.

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12 CD/802(USA).
13 CD/802.
14 PV.506.
15 PV.516.
16 E.g. PV.481(Sweden).

7.2 The Regime for Chemicals Listed in Schedule 2

The second list of chemicals included in the "Annex on Chemicals" contains substances which pose a lower risk to the objectives of the treaty than the chemicals in the first list. Schedule 2 consists of two parts.

The first part (Schedule 2A) includes key precursors for chemicals listed in Schedule 1. According to the guidelines for Schedule 2A contained in the Annex on Chemicals, they may be used in one of the chemical reactions at the final stage of the formation of a chemical listed in Schedule 1.[1]

The second part of Schedule 2 (Schedule 2B) includes, according to the preliminary guidelines in the Annex on Chemicals, super-toxic lethal chemicals and other chemicals which are not included in Schedule 1 and are not key precursors for CW. Hence, they are not used for CW purposes but could be done so in the future. This implies a potential risk. This category of chemicals covers the "novel agents" most of which are toxins. The potential for new developments in this field has increased remarkably with progress in genetic engineering. Schedule 2B was established during the 1989 session and is still tentative. It is the result of a long controversy over a proposed fourth Schedule (see below).[2]

Most of the chemicals so far included in Schedule 2 are key precursors. They can be utilized for the production of CW. Some of them are also produced and consumed in considerable quantities for peaceful purposes in the civil chemical industry (e.g. thiodiglycol[3]). This has become clear when several countries submitted to the CD data on their production of Schedule 2 chemicals.[4] Therefore, although key precursors pose a special risk to the objectives of the Convention, it would be difficult to restrict their production and consumption in a way comparable to the regime for Schedule 1 chemicals. Also, it would be unpracticable to monitor facilities producing or consuming Schedule 2 chemicals in the same way as Schedule 1 facilities. (There are probably too many facilities of this type.) As a result, Annex II of Article VI is to establish a less intrusive regime than Annex I.

7.2.1 Declarations

Initial and annual declarations must be made by the parties. They must contain aggregate national data on the production, processing and consumption of each chemical listed in

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1 Schedule 2A includes, for example, chemicals containing a phosphorus atom to which is bonded one P-methyl, ethyl, or propyl group but not further carbon atoms, except for those chemicals listed in Schedule 1. It also includes arsenic trichloride.

2 The only substance so far listed in Schedule 2B is amiton. It is chemically related to the VX-agents. The United States has proposed its inclusion (PV.512). Ricin and saxitoxin are candidates for this Schedule and were proposed by some Western countries.

3 The Pugwash working group on chemical warfare, together with SIPRI, is carrying out a project which is to examine the worldwide production and consumption of thiodiglycol in the chemical industry, and to assess the practicability of verification measures with regard to this Schedule 2 compound. Thiodiglycol is interesting because it is convertable to mustard gas (a Schedule 1 chemical) in a single stage.

4 See chapter XIV.

Schedule 2, and on the export and import of such substances in the previous calendar year, including the countries involved.

Specific information will be required for each facility which, during the previous calendar year, has produced, processed or consumed more than a defined quantity (tons) of Schedule 2A chemicals. The threshold remains to be set. The same declarations must be made for facilities which have produced, at any time since a date to be defined, a Schedule 2 chemical for CW purposes. The information to be provided on the chemicals and the facilities is defined in Annex II to Article VI. The applicability of these provisions to chemicals in Schedule 2B (see below) remains to be discussed.

Advance notification on an annual basis must be given to the TS of facilities which intend, during the coming calendar year, to produce, process or consume quantities of any Schedule 2 chemical exceeding a defined threshold. The contents are specified in Annex II. The TS must be notified of any production, processing or consumption planned after the submission of the annual notification. This must happen not later than one month before the production or processing is anticipated to begin.

7.2.2 Verification

The aim of verification under the second regime is: to verify that declared facilities producing Schedule 2 chemicals are not used for the production of any Schedule 1 chemical; that the quantities of Schedule 2 chemicals produced, processed or consumed are consistent with the needs for purposes not prohibited by the Convention; and that Schedule 2 chemicals are not diverted or used for purposes prohibited by the treaty.

Each facility producing Schedule 2 chemicals and declared to the TS under this regime will be subject to systematic international on-site verification. The number, intensity, duration, timing and mode of inspections, and the monitoring with on-site instruments will be based on the risk posed to the objectives of the CWC by the chemical(s), the characteristics of the facility, and the nature of the activities carried out there. Some work on guidelines for this purpose has been undertaken (see below).

Each declared facility will be liable to receive an initial visit by international inspectors, promptly after the State concerned has become a party to the Convention. The purpose of this visit is to check the data provided on the facility, and to obtain additional information needed for the planning of following verification activities at the facility.

Each party must conclude an agreement with the Organization. It will be based on a Model Agreement. Work on this question is under way (see below). The agreement between a party and the Organization will govern inspections at the declared facilities. It will specify for each facility the number, intensity, duration of inspections, detailed inspection procedures, and the installation, operation and maintenance of on-site instruments by the TS.

Facilities to be inspected will be chosen by the TS in a way that precludes the prediction of the timing of the inspection. A party which is to receive an inspection must be notified by the TS prior to the arrival of the international inspectors (12 and 48 hours are proposed). This period may be shortened in urgent cases. The TS will specify the purpose of the inspection or visit. The host party must make the necessary preparations for the arrival of the inspectors and must ensure their expeditious transportation to the facility from the point

of entry into its territory. The applicable agreement on subsidiary arrangements will cover administrative procedures. The host State will have the right to designate personnel to accompany the inspection team. This right must not interfere with the right of the inspectors to obtain access to a facility, or delay or otherwise impede the carrying out of an inspection. The parties must ensure that verification activities can be accomplished by the TS at all facilities within the agreed timeframes.

Other rights and obligations of the international inspectors and the host State are the same as under Articles IV and V (see chapters V and VI).[5] The same goes for the submission of the inspectors' reports and the resolution of ambiguities arising during inspections.

The following questions remain to be solved:

1. Schedule 2B: Schedule 2B and the regime therefore are still very tentative. This Schedule is the result of efforts to solve the controversy over a proposed fourth Schedule. The fourth Schedule had been proposed in 1985[6] and was included in the rolling text in 1987. In 1988, it was re-named Schedule [...]. This reflected growing disagreement over its necessity. In 1989, it became Schedule 2B. It covers chemicals which are super-toxic lethal but are currently not used for CW purposes for various reasons (technical, financial, military, the ban on toxin weapons[7] etc.). Because of new technological developments, these substances may be used for CW purposes in the future, however, and therefore warrant special attention. Schedule 4, and now Schedule 2B, must therefore be regarded as an effort to take into account new technological developments.

Another reason to propose this fourth Schedule was that facilities producing these chemicals may be capable of quickly switching production to super-toxic lethal chemicals for CW because they have some of the necessary equipment and installations (e.g. safety systems). Facilities producing or consuming this category of chemicals were therefore said to pose a risk to the objectives of the Convention. Schedule 4 was believed to be a means of identifying CW capable facilities which would not be covered on the basis of their declared production of Schedule 1, 2, or 3 chemicals.

The necessity of Schedule 4 was constantly questioned. The chemical industry of most Western countries voiced its opposition.[8] Super-toxic lethal chemicals which, at present, have no use for CW purposes are produced and consumed in limited quantities by sometimes highly sensitive research establishments in the commercial chemical industry, the pharmaceutical industry in particular. The industry was therefore concerned about the risk of losing sensitive commercial information during verification activities, notably because verification procedures proposed for Schedule 4 were almost identical to those for Schedule 2 (i.e. relatively intrusive).

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5 The only additional provision is that the TS may retain at each site a sealed container for photographs, plans and other information that it may wish to refer to in the course of subsequent inspections.

6 Reasons for the proposal are reflected in a statement by the Netherlands (PV.481). It said that Schedule 1 contained only super-toxic lethal chemicals which have been used for CW. But other super-toxic lethal chemicals should be considered as well. Facilities producing Schedule 4 chemicals could easily be switched to the production of Schedule 1 chemicals. Without Schedule 4, such facilities may remain undeclared. Schedule 4 would, in addition, enable the Organization to verify the non-development of CW.

7 Toxins are covered by the BWC.

8 See part one, chapter IV. E.g. the letter of CEFIC to the CD (7 December 1987), or the statement by the US CMA of 12 October 1987.

Another argument was that it is nearly impossible to establish a complete list of these chemicals. There are perhaps thousands of such compounds the precise toxicity of which is not even known. To select the relevant substances would therefore be extremely difficult and the effects of the Schedule hard to assess. Some chemicals which might be included in this Schedule are produced in the chemical industry only as by-products, sometimes in rather large quantities. The example of perfluoroiso butene was examined by the United Kingdom as an illustration.[9]

Most Western countries therefore concluded that Schedule 4 was not the right approach to solve the problem of risky facilities not monitored under the other regimes, and of novel agents. At present, it seems that they prefer to cover these facilities by challenge or ad hoc inspections.[10] The growing opposition to Schedule 4 partly explains the proposals for additional (ad hoc) verification procedures (see above).

Only the Socialist Group continued to support Schedule 4.[11] During the 1989 session, however, the fourth Schedule was dropped[12] and replaced by Schedule 2B which covers the same category of chemicals. The problem has therefore not been solved. Except for one substance, Amiton, proposed by the United States[13], there is no agreement on the chemicals to be included in Schedule 2B. Saxitoxin, ricin and several other substances have been proposed. The monitoring of Schedule 2B facilities remains to be considered. It was proposed that the same verification procedures as for Schedule 2A chemicals be used. However, it is difficult to agree to a verification system if the substances and quantitative thresholds above which certain verification procedures would apply are not known. If, for example, only the substances just mentioned were to be included in Schedule 2B, the regime for Schedule 2A, developed so far, might be acceptable to Western countries. If many other substances were to be included as well, they might object.

It is interesting to note that ad hoc checks or inspections (proposed by the Federal Republic of Germany and the United Kingdom) could be applied in this context. The GDR[14] proposed that an open list be maintained for potentially risky chemicals. The parties would propose the substances to be added to this list.[15] Facilities producing or consuming such

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9 WP.239.

10 E.g. PV.457(USA).

11 Italy (WP.190) presented a working paper which reflected the position of some Western countries on Schedule 4. It stated that the relationship between toxicity, quantity of the chemicals produced, the capacity for the production of such chemicals and, on the other hand, the use of such chemicals for weapons purposes was weak. A toxic chemical could only be considered a potential weapon if there was reliable evidence that it was used experimentally in activities of concern. Certain technical and economic characteristics are necessary to make a chemical suitable for CW purposes. They include military/technological features of an agent (military significant quantities, physico-chemical characteristics) and economic criteria (low production costs on an individual scale, possibility of production using raw materials available on the domestic market, ease of synthesis). Italy said that a large number of substances may possibly be covered by Schedule 4. Any well equipped laboratory may produce quantities of 10kg. Schedule 4 could therefore cause great impairment of research and development activities in the commercial chemical industry and aggravate the risk of losing confidential information.
See also CD/747(France), CD/792(Federal Republic of Germany), PV.458(Federal Republic of Germany). The proposal by the Federal Republic of Germany should be regarded as an effort to restrict the number of substances which could have been included in Schedule 4. The change in the position of Western countries is also reflected in PV.481(Netherlands), PV.457(USA), PV.512(USA).

12 The Socialist Group had in the meantime indicated its flexibility concerning this issue (e.g. PV.477(Mongolia), PV.481(GDR), PV.495(GDR)).

13 PV.512.

14 PV.495.

15 This list ("waiting and warning list") could be updated, for example by the proposed Scientific Advisory Board which will be discussed in chapter IX.

chemicals in quantities exceeding a certain threshold would have to be reported. On this basis, ad hoc checks, perhaps according to the procedure proposed by the Federal Republic of Germany, would be applied to monitor the reported facilities. Ad hoc checks, e.g. on a random basis, may be less intrusive than normal inspections and would therefore be more acceptable to research establishments and other sensitive installations. A similar view was expressed by the United Kingdom.[16]

An efficient procedure to update the Schedules could be connected to an open list. This would permit the inclusion of new substances in the Schedules within a short period of time.

2. Instrumental monitoring: Data reporting, instrumental on-site monitoring, and on-site inspections will be the principal methods to verify compliance under the first two regimes. The versatile character of the modern chemical industry will necessitate the use of highly sophisticated instruments which would need to be serviced frequently.

The status of work on the question of instrumental monitoring of facilities declared under the second regime is reflected in a report on consultations as seen by the rapporteur.[17] It was suggested that the Convention only contain a few paragraphs on this issue. Details could be spelled out in the facility attachments established according to guidelines included in the Model Agreement. Inspections and instrumental monitoring were considered as complementary. Instruments could not replace inspectors. They could, however, reduce the number of inspections. Instrumental monitoring could be especially useful for continuous monitoring. It could be used to check the non-presence of Schedule 1 chemicals, and to verify that the quantities of Schedule 2 chemicals are consistent with the needs for permitted purposes, and that no chemicals are diverted for purposes prohibited by the Convention. Issues which remain to be addressed include, first of all, the feasibility of instrumental monitoring in specific cases. In addition, the problem of confidentiality, the ownership of the instruments used, and the possibility to make use of instruments owned by the facility to be monitored have to be examined. These issues are being studies by a special working group of the Ad Hoc Committee (see section 9.3).

3. Thresholds: The question of establishing quantitative thresholds has been mentioned several times. These thresholds will be used for each of the three regimes. Facilities producing, processing or consuming certain chemicals in excess of such thresholds will be subject to specific verification procedures. The thresholds will partly determine the scope of verification activities as well as permitted purposes involving Schedule 2 chemicals, and the number of facilities which will be subject to systematic international monitoring. (Other factors influencing the extent of verification activities are the number of parties to the CWC, additional provisions for the regime, and the number of chemicals included in the Schedule.) The definition of thresholds is of great concern to the civil chemical industry of many Western countries. If the thresholds were too low, verification would become more extensive and may even cover smaller research laboratories. This could lead to the loss of confidential information, but would also have financial implications for the Organization as well as the countries and the facilities concerned.

Several thresholds remain to be defined for the second regime. They include: the threshold above which detailed information on a facility must be provided (10, 100 and 1,000 kg were proposed. This applies to Schedule 2A and 2B. It remains to be discussed

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16 WP.239.
17 CD/952, pp.165-168.

whether the same thresholds can be used for Schedule 2A and 2B); the threshold above which Schedule 2 chemicals, having been stored at a facility during the previous calendar year, must be declared; the threshold and timeframe for advance notifications.[18]

Two approaches to define thresholds have been proposed. One is based on the criterion of "military significant quantities", the other on the "comparative toxicity or effectiveness of chemicals". These two approaches can be illustrated by proposals of the United States and the GDR.[19]

Several thresholds for the second regime were proposed by the United States.[20] It proposed that, because Schedule 2 was to contain chemicals of medium risk to the Convention, production at a facility of up to 1 metric ton be permitted without declaration and international monitoring. For 1 to 10 tons per year, annual declarations would be necessary. Above 10 tons per year and facility, data reporting and on-site inspections, at least once a year, would be required. On-site inspections of such facilities would determine raw materials and material balances (comparison of input and output of chemicals) and would verify that only permitted activities are being carried out. The frequency of inspections and the need for continuous on-site monitoring would depend on the production capacity of a facility and other factors. It was said that, in quantities exceeding 100 tons, the withdrawal or diversion of Schedule 2 chemicals could lead to a military significant chemical warfare capability. Hence, more intrusive verification would apply.[21] The criterion of military significant quantities stems from the view that the security of the parties to the Convention depends on the assurance that no significant quantities are secretly produced or acquired by a party in violation of the treaty. The security of a State could only be threatened by means which are militarily relevant, not by some grams of super-toxic lethal agents produced somewhere in a small laboratory.

The GDR[22] presented another approach to establish key precursor thresholds. It was based on equivalence or effectiveness factors. The GDR stated that the criterion of "military significant quantities" would be difficult to apply. No agreement on this term existed and it would be hard to define. Additionally, the GDR did not share the view that verification should not begin until a given facility had the capacity to produce military significant quantities of Schedule 1 chemicals within one year.[23] It was also argued that a militarily significant quantity depended not only on the properties of the CWA in question, but equally on the aim of a specific military operation, the theatre of war, and other factors.[24]

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18 Whether the declaration of the aggregate quantity of key precursors produced, consumed, imported or exported during the previous calendar year must be made as an exact figure or a range remains to be considered.

19 The criterion "military significant quantities" seems to be a predominantly Western approach. It has been used, for example, by the United States (CD/802, PV.438) and the Federal Republic of Germany (WP.159, PV.398). The "comparative approach" was supported by the Socialist Group.

20 CD/802.

21 CD/802, p.3. Some comments on "militarily significant quantities" are contained in the French "security stock proposal" (CD/757, p.5-6, CD/630, p.14). For the purpose of its proposal, France assumed that a "militarily significant quantity" was the quantity appropriate for the deployment for a period of three days by an army in a theatre of military operations of a sustained chemical retaliatory capability. This would be around 4,000 tons of toxic substances by the USA and the USSR, and 1,000 tons for other countries. Japan (CD/713, p.4) said that to consider a chemical agent in the context of the Convention it would be necessary to assign a minimum quantity below which an agent had no military significance. This quantity would be linked to the individual chemical agent.

22 WP.166.

23 Several small facilities could each produce quantities of CWA below the threshold of military relevance. Put together, these quantities may still result in a military significant quantity of CW.

24 Spain mentioned some parameters to assess the military significance of chemical agents (WP.169).

Hence, the GDR stated that the definition of thresholds could not be based on the criterion of military significant quantities. It proposed that one ton of the most effective chemical in Schedule 1 and a comparison of other chemicals in Schedule 1 be used to define the thresholds. The quantity of a key precursor needed to produce one ton of a Schedule 1 chemical would be calculated and would constitute the threshold. The thresholds would therefore be different for each key precursor. In contrast, the proposal by the United States[25] does not use different thresholds for each key precursors.

The exchange of information on the production of Schedule 2 chemicals by the potential parties to the Convention will provide a more adequate picture of the consequences the proposed thresholds would have for the extent of verification activities (resources, financial implications, intrusiveness). This exchange is under way.[26] It is recognized that the thresholds cannot be defined solely on the basis of abstract criteria or mathematical formula, but will be a result of practical considerations and experience. The thresholds may even have to be amended later.

4. Other definitions: It was argued that, under the second regime, declarations concerning multi-purpose facilities should differ from those on other Schedule 2 facilities. It was also proposed to elaborate a definition of the term "chemical production facility".

The definition of "production capacity" was discussed above. It would be one of the means to identify a Schedule 2 facility and monitor its activities. Efforts to verify the production, processing or consumption of super-toxic lethal chemicals stem from the idea of registering any future militarily significant developments in the chemical field. This necessitates the monitoring of installations suited to the production of these chemicals. A definition of CW capable facilities may be difficult. Interest therefore focused on the actual production as evidence of suitability.[27] In this sense, the equipment used in an installation and the facility design are of special interest.[28] According to the provisions of the rolling text, the production capacity of each facility declared under the second regime must be indicated. It remains to be considered whether facilities which have once produced a Schedule 2 chemical for CW purposes must be declared. This could indicate their capacity to produce CW. It has been proposed to solve this question in the context of Article V (see chapter VI).

5. Obligations and frequency of verification: The obligations and the frequency of verification under the second regime remain to be addressed. Guidelines for this purpose are being developed and several proposals have been made. 1 to 5 inspections per year were proposed[29] and a series of factors influencing the number, intensity, duration, timing and mode of inspections were mentioned in a document attached to the report of the Ad Hoc Committee.[30] These factors are related to the listed chemicals, to the facility concerned, and to the activities carried out at a facility. It was proposed to use a "weighted approach" in determining the inspection regime for specific chemicals. This might necessitate the definition of thresholds. Bulgaria[31] presented a formula for calculating the number of routine inspections the TS would carry out at a facility. It stated that the proposed approach would

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25 CD/802.
26 See chapter XIV.
27 CD/792(Federal Republic of Germany).
28 Some delegations believe that there is a need to consider the existence in a facility of an excessive capacity for the production of chemicals in Schedule 2.
29 The Soviet Union proposed a number of 1 to 3 inspections per year (PV.448).
30 CD/952, pp.159-160.
31 WP.170.

result in at least two inspections. It would guarantee that, following the first inspection, there would be the possibility of a second one. This would act as a deterrent.

6. The Model Agreement for subsidiary arrangements: The Model Agreement for subsidiary arrangements governing verification activities at Schedule 2 facilities remains to be finalized. The status of work is reflected in a document attached to the report of the Ad Hoc Committee.[32] This document deals with a variety of questions including: the identification of a facility; the information to be provided on it; the storage of information at a facility; the number and modalities of inspections; the identification of the area(s) of a facility to be inspected; provisions governing sample-taking, on-site analysis of samples, and on-site analysis equipment; records; services to be provided by the facility; facility health and safety rules and regulations to be observed by inspectors; revision and updating of advance information to be provided on the facility; and interpretation services. Several delegations expressed the view that the Model Agreement should be developed during the negotiations on the Convention. It is not clear, however, whether this is absolutely necessary, and how detailed the Model agreement should be. As to the NPT, for example, model agreements[33] were concluded outside and after the entry into force of the treaty. Nevertheless, in its ideal form, the Model Agreement must be as clear-cut as to establish a rigid standard and make the provisions of the treaty operational, but also as flexible as to allow meaningful inspections and to take into account future technological developments.

The Model Agreement for Schedule 2 facilities was improved during the 1989 session as a result of national trial inspections (see above). A proposal by Japan[34] to use step-by-step inspections was considered in this context. If no problems occurred at the end of one step in the inspection, the latter would be terminated. This would reduce the costs and may help to protect confidential information.

7. Timeframes: Several timeframes for verification remain to be established. They include: the period within which the agreement on subsidiary arrangements must be concluded (6 months were proposed); the timeframe for the advance notification by the TS of a party to be inspected (48 and 12 hours were proposed); retroactive to which date facilities having once produced chemicals for CW purposes at any time must be declared[35]. Procedures to ensure the implementation of the verification scheme within designated timeframes may have to be established.

8. Off-site analysis of samples: For technical reasons, the international inspectors may not be in a position to analyze samples on the spot, but may have to transport them to a laboratory outside the facility or even outside the country concerned. This must be taken into account when drawing up the provisions on verification. The body of the Organization responsible for determining the laboratories used for off-site analysis has to be designated. Rules for the transfer of samples and the presence during the analysis of representatives of the State whose facility was inspected must be elaborated. Procedures to ensure that samples transported, stored, and processed are not tampered with remain to be developed. Little attention has been paid to these questions.

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32 CD/952, pp.169-174.

33 The IAEA safeguards nuclear installations under the NPT and uses "facility attachments" which govern verification activities at each site. These agreements are based on a Model Agreement.

34 WP.228, WP.246.

35 Where to place a provision on the obligation to declare facilities having once produced chemicals in Schedule 2 for CW purposes needs to be discussed. One view was that it should be included in the Article on CWPF (V).

7.3 The Regime for Chemicals Listed in Schedule 3

Chemicals listed in Schedule 3 constitute the least risky category of substances covered by the Convention. According to the guidelines[1], this Schedule will comprise dual-purpose chemicals and CW precursors which are not listed in Schedules 1 or 2. Schedule 3 chemicals are highly toxic and are commercially produced and consumed in large quantities. Some of them have been used as CW or as precursors for CW.[2] Schedule 3 so far includes substances such as phosgene, cyanogen chloride, hydrogen cyanide, chloropicrin, phosphorus oxychloride, trichloride and pentachloride. These chemicals and the facilities producing or consuming them must be declared and will be monitored through data reporting, depending on quantitative thresholds.

7.3.1 Declarations

Within 30 days after the entry into force of the Convention, each party must provide data on its production and consumption of Schedule 3 chemicals and the facilities involved. This will be followed by annual declarations.[3] Annex III to Article VI designates the data to be reported. The third regime will, in general terms, not require as much facility related information as the first two regimes.

7.3.2 Verification

The verification procedures for Schedule 3 chemicals and related facilities remain to be considered. It is agreed that they will comprise both the provision of data and the monitoring of the data by the TS.

The following questions remain to be addressed:

1. Additional verification procedures: The verification procedures under the third regime include the international monitoring of data provided by the parties through their National Authorities or otherwise. Systematic on-site inspections do not seem feasible with reference to the size of the worldwide production of Schedule 3 chemicals. However, some delegations believe that the national provision of data and its monitoring by the TS are not sufficient to ensure compliance with the treaty.

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1 These guidelines are contained in the Annex on Chemicals and remain to be elaborated.

2 Several Schedule 3 chemicals have been used as CW during World War I. Schedule 3 also includes several precursors for CW. Trimethyl phosphite, for example, which is used for the production of pesticides, flame retardants and oil derivates can be converted to a phosphorite and then to a Schedule 2 chemical which, together with some other chemicals not listed, results in Sarin, a nerve agent.

3 Whether the aggregate quantity of Schedule 3 chemicals produced, consumed, imported or exported by a party in the previous year is to be declared as an exact figure or as a range remains to be discussed. As to the declaration of chemicals under Schedule 3, categories according to which the final product or end use of chemicals must be declared remain to be developed.

Two measures of different intrusiveness have been proposed to provide additional assurance that facilities producing or consuming Schedule 3 chemicals are not misused for purposes prohibited by the Convention. It was proposed that TS have the right to query unclear or ambiguous data. A procedure to this end was proposed by the Federal Republic of Germany.[4] A more intrusive means of verification would be "on-spot checks" or "ad hoc checks" or "ad-hoc inspections". Australia proposed on-spot checks to verify the information supplied by a State-party under the third regime.[5] Ad hoc checks or inspections were proposed by the Federal Republic of Germany[6] and the United Kingdom[7] They would include on-site inspections of Schedule 3 facilities. According to the proposal of the Federal Republic of Germany, ad hoc checks would be initiated by the TS on a random basis. The ad hoc inspections proposed by the UK would be initiated by a party on a quota basis. (See above)

There is no agreement on the necessity of additional verification measures. Several delegations of all political groups believe that the provisions on verification established so far (routine and challenge) are sufficient in this respect. Also, the data reporting under Schedule 3 remains to be considered in the light of the results of data exchanges on the national production and consumption of these chemicals.[8] A system of "material accountancy" as under the first regime seems impossible with a view to the large quantities of Schedule 3 chemicals produced or consumed and the large number of facilities involved. On the other hand, there are some concerns that the system of data reporting might not be capable of detecting the diversion of military significant quantities (however defined) of Schedule 3 chemicals.

2. Thresholds: Thresholds for the production or consumption of Schedule 3 chemicals above which specific verification measures would apply remain to be defined.

There is a bracketed proposal in the rolling text which states that the parties will notify the TS of the name and location of any facility which intends, in the year following the submission of the annual declaration, to produce, process or consume any of the chemicals listed in Schedule 3 "on an industrial scale". It was also proposed to require more specific information on facilities producing Schedule 3 chemicals in quantities exceeding 30 tons. This threshold was proposed by the United States[9]. The United States argued that the production or consumption of these chemicals below the threshold of 30 tons would pose a comparatively low risk to the objectives of the Convention. It proposed that up to 30 metric tons per year and facility be permitted without declaration. Above 30 tons per year, an annual declaration would be made to the TS so that the latter would be in a position to monitor where the chemicals were produced and where they were allocated. An alternative approach would be to establish separate thresholds for dual-purpose agents and precursors for CW.[10] For dual-purpose agents such as phosgene or cyanogen chloride, threshold of 50 tons and (alternatively) 500 tons per year, for precursors for CW 5 tons and (alternatively) 50 tons per year were proposed.

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4 WP.159, CD/627.
5 CD/698, WP.131, p.3. See also CD/713(Japan).
6 CD/791, CD/869.
7 CD/909.
8 See chapter XIV.
9 CD/802.
10 This was proposed in an informal working paper of 30 March 1987. Dual-purpose agents in Schedule 3 include phosgene, cyanogen chloride, hydrogen cyanide, and chloropicrin. Such agents have been used as CW.

3. Other definitions: Additional data will probably have to be reported for specific types of facilities. Therefore, the term "production capacity" needs to be defined. (See above)

The parties will have to declare the approximate extent of production and consumption of Schedule 3 chemicals in the previous year. The ranges therefore remain to be specified.

The obligation to declare facilities which have once produced a chemical in Schedule 3 for CW purposes since a specific date (to be determined) needs to be discussed.

4. The lists of chemicals: The guidelines for each of the three Schedules remain to be discussed. Substances considered for inclusion in Schedule 2 or 3 have caused some difficulties. The evaluation of proposals requires detailed knowledge about the quantities of chemicals produced or consumed in the chemical industry. If they were enormous, even key precursors might have to be listed in Schedule 3, and not in the second list, because the latter would strain the resources available to the Organization or may interfere too much with peaceful activities. The guidelines can therefore not be based on abstract criteria, e.g. only the toxicity of chemicals or the risk to the CWC, but must take into account several other factors, including practical experience.

CHAPTER VIII

NATIONAL IMPLEMENTATION MEASURES

Article VII of the rolling text had remained unchanged for a long time but was modified during the 1989 session. This was overdue since the features of the verification system envisaged for the CWC had changed considerably in the meantime. The placement of the Article remains to be discussed, however.

The provisions state that each party will adopt the measures it considers necessary in accordance with its constitutional processes to implement the Convention and to prohibit and prevent anywhere under its jurisdiction and control any activity prohibited by the treaty.[1] The parties will inform the Organization of their legislative and administrative measures to implement the treaty. They will treat as confidential and afford special handling to information which comes to their knowledge during the implementation of the CWC. They must treat such information exclusively in connection with their rights and obligations under the treaty and in accordance with the Annex on the protection of confidential information. The latter is still under discussion.

Each party will appoint a "National Authority" and convey information on it to the Organization. The parties will be obliged to cooperate with the Organization and provide assistance to the TS, including the provision of expertise, information and laboratory support.

The following issues remain to be considered:

1. Guidelines for the National Authority: Some delegations proposed that the role of the National Authorities be clarified. The GDR[2] presented a detailed proposal on guidelines for National Authorities. It argued that the national system of controls would ensure the implementation of the Convention on a national level by law and regulations, and by control and sanctions in case of non-compliance. In addition to their internal functions, the National Authorities would cooperate with the Organization and National Authorities of other States, especially with regard to the exchange of data and support for international procedures. They may also train international inspectors and provide expertise and laboratory support to the Organization. The Federal Republic of Germany[3] specified some of the duties of National Authorities, including the division of work between National Authorities and the

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1 Technical, organizational and political implications of the provisions of the rolling text for the national implementation of the CWC are analyzed in: Stock, Thomas, Sutherland, Ronald, eds., National Implementation of the Future Chemical Weapons Convention, in: SIPRI Chemical & Biological Warfare Studies (March 1990, forthcoming). Canada, Department for External Affairs and Trade, Role and Function of a National Authority in the Implementation of a Chemical Weapons Convention, Ottawa, August 1989. Some discussion on the national implementation of the CWC took place at the Canberra Conference on 18-22 September 1989 (see part one, chapter IV, and Chemical Weapons Convention Bulletin, issue no.6, November 1989).

2 CD/620.

3 WP.159.

International Authority. Yugoslavia[4] put forward some ideas on the role, tasks, and structure of national committees (equivalent to the National Authority).

2. National technical means of verification (NTM): A proposal for a provision on NTM[5] had been included in Article VII for a long time. After persisting disagreement, it was dropped during the 1989 session.

Three positions had existed before:

(a) It was proposed that NTM may be utilized to collect information on compliance and that these means be not interfered with. Any party may place information collected by NTM at the disposal of other parties. This proposal was mainly supported by countries which possessed NTM in sufficient quantity and quality to be of some use in connection with the CWC (particularly the Soviet Union and the United States).

(b) It was proposed that, where NTM are utilized to collect information on compliance and are not interfered with, all parties have access to this information.

(c) No provision on NTM.[6]

Proposals (b) and (c) were supported by members of the Group of 21. They criticized the proposed provision (a) because they felt that an overemphasis of such means would discriminate them since they did not have these means.

The question of NTM lost much of its importance when the Socialist countries' position on verification changed. The issue of NTM had been of relevance mainly at a time when international on-site verification had been unacceptable to the Socialist countries. In 1989, the USSR[7] stated that it would not object to dropping the proposed provision on NTM. This was based on the understanding that the CWC must include the envisaged verification scheme of systematic and challenge inspections without the right of refusal by the requested party.

Although the proposal for a provision on NTM has been dropped, these measures may still constitute a (limited) means to double-check some information on compliance collected by the TS. NTM may also play an important role in "triggering" requests for challenge inspections. NTM and international verification may therefore complement each other. Even without provisions on NTM in the Convention, it seems clear these means could be used by the parties if they were employed in consistency with international law.

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4 CD/482. See also CD/220, CD/298(Yugoslavia), CD/313(Canada), CD/393, p.2(Yugoslavia), CD/342, pp.3,11-13, CD/333, CD/334, CD/343, p.8(USA), CD/416:Annex I, p.16, CD/482(Yugoslavia), CD/500, p.8,11(USA), CD/532, pp.3-4(USSR), CD/539:Annex II, p.11, CD/613(Yugoslavia), CD/620(GDR), CD/636:Appendix II, p.38.

5 By NTM we understand technical devices such as satellites and so-called "human intelligence"

6 These positions are, for example, expressed in WP.67, p.20. Other references to this question can be found in CD/381, CD/466, CD/482, CD/620, CD/343(USA). The proposal presented by the United States contains a provision stating that no deliberate concealment measures must be taken and that NTM must be used in consistency with international law. A similar provision is included in bilateral arms control agreements between the USA and USSR.

7 PV.511.

CHAPTER IX

THE ORGANIZATION TO BE ESTABLISHED UNDER THE CONVENTION

Article VIII of the rolling text contains the basic provisions[1] on the international organization to be established for the purpose of implementing the Convention and of providing a forum for the cooperation among the parties.[2]

Some of the first draft conventions on CW[3] submitted to the predecessors of the CD had restricted organizational structures to the existing United Nations system, and the BWC of 1972 did not provide for the establishment of a special organization.

Ideas concerning an international organization for chemical disarmament began to develop since 1973, but it was only at a relatively late stage, especially since 1987 when agreement on the basic principles of verification was reached (see part one, chapter III), that the structures and functions of the projected organization began to receive their present outlook. This reflects the fact that functions of the organization and its form and structure are interdependent.

Judging from the provisions of the current rolling text, the implementation of the CWC will necessitate an organization of considerable size. There are estimates that it will be much larger and costlier than the only comparable institution in the arms control or disarmament field, the IAEA which safeguards nuclear material under the NPT.[4]

All parties to the treaty will be members of the Organization. Its principal bodies will be the "Conference of the States Parties" (CSP)[5], the "Executive Council" (EC) and the "Technical Secretariat" (TS). This corresponds to the three-partite structure of most

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1 A few provisions on institutional matters are included in other Articles as well.

2 For a comprehensive analysis of institutions under the projected CWC see: Sims, Nicolas, International Organization for Chemical Disarmament, in: SIPRI Chemical & Biological Warfare Studies No.8, Oxford 1987: Oxford University Press. For the Executive Council of the projected Organization see: Bernauer, Thomas, The Future Chemical Weapons Convention and its Organization: The Executive Council, UNIDIR Research Paper No.5, New York, May 1989. The development of the negotiations is reflected in: CCD/400(Neutral and Non-Aligned countries), CCD/403(Socialist countries), CCD/410(Netherlands), CCD/420(Japan, it proposed an international verification agency), CD/48(USA/USSR), CD/113(Canada), CD/294(Socialist countries), CD/343, CD/301(Belgium), CD/313(Canada), CD/326(Federal Republic of Germany), CD/445(Netherlands), CD/500(USA), CD/532, CD/589(UK), CD/812(GDR).

3 E.g. CD/361(Socialist countries).

4 A cost analysis of verification under the CWC can be found in: Beck, Herbert, Verifying the Projected Chemical Weapons Convention. A Cost Analysis, AFES-Press Report No.13, Mosbach 1989: Arbeitsgruppe Friedensforschung und Europaeische Sicherheitspolitik. The activities of the IAEA and the Organization of the projected CWC are compared in: Keeley, James F., International Atomic Energy Agency Safeguards. Observations on Lessons for Verifying a Chemical Weapons Convention, Ottawa 1988: The Arms Control and Disarmament Division, Department of External Affairs, Ottawa, Canada.

5 Agreement on this name was reached during the inter-sessional consultations of 1988/89.

international organizations.[6] All parties to the Convention will be members of the CSP. The latter will therefore emphasize and ensure the responsibility of all parties for the implementation of the treaty. The EC will be the main subsidiary body of the CSP and will be composed of a limited number of parties. This reflects functional requirements as well as the idea of giving preferential status to some particularly important parties. The EC will conduct the day-to-day business and will therefore be a center-piece of the Organization. The TS will be responsible for carrying out international verification activities and providing other (including administrative) support.

As a matter of principle, the Organization must conduct its verification activities under the treaty in the least intrusive manner possible and must only request the information necessary. It must take every precaution to protect the confidentiality of information it has collected on civil and military activities and facilities. It must therefore abide by the obligations provided for in the Annex on the protection of confidential information (see chapter VII). This Annex contains guidelines to be used by the TS when establishing a regime for the protection of confidential information.

Several outstanding issues which are of relevance for the whole Organization will be discussed at this point before proceeding to the examination of the single bodies of the Organization.

1. The relationship between the Organization and the United Nations: The legal relation of the Organization to the United Nations system and the role of the latter in the implementation of the Convention remain to be considered. Little attention has been paid to this aspect so far. Whereas earlier proposals tended to establish a clear connection to the United Nations, more recent ones envisage an autonomous organization.[7]

The prevailing view is that a relation to the United Nations must exist. The UN has, since the Second World War, provided the basic framework for efforts for chemical disarmament. The UN General Assembly has, since 1969, continuously adopted resolutions on the subject of chemical and biological disarmament, and the UN has become involved in investigations of allegations of the use of CBW (see part one, chapter IV). The UN has also produced two influential studies on CBW (see part one, chapter III). Even the likelihood that not all UN members will be parties to the CWC, and not all parties to the CWC members of the UN, may therefore not exclude a link of the Organization to the UN.

The legal status of the Organization which will reflect this relationship remains to be agreed upon. Should the Organization have the legal status of a specialized agency of the UN, as for example the IAEA?[8] Should a special statute for the Organization be drawn up, and in which form? Should a last resort mechanism under the Convention involve the Security Council (sanctions, assistance etc.)? Will the Organization be a legal personality under international law? As to the latter, there is agreement on this status because it would enable the Organization to enter into agreements with other international organizations and with States. This would also strengthen the position of the officers of the Organization.

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6 The most famous example is the United Nations, with its General Assembly, the Security Council and the Secretariat.

7 The Netherlands, for example, proposed a special organization for the CWC. Its formal relation to the UN was to be marginal (CCD/410). The United Kingdom (CD/589) proposed an organization which would be a legal personality under international law.

8 The relation of the International Sea-Bed Authority to the UN has been mentioned as a possible model.

One of the links to the UN will probably be that the UN Secretary-General will become the Depositary of the treaty. A possible reference to the International Court of Justice as the body to be used for the settlement of disputes remains to be discussed. Such a provision is, for example, contained in the Treaty of Tlatelolco of 1967 (Article 24), and the Antarctic Treaty of 1959 (Article XI).

2. The headquarters of the Organization: The location of the headquarters of the Organization remains to be designated. Some principles which are to govern the decision on this question were mentioned by the United Kingdom.[9] The criteria include the availability of adequate means of transportation, communications, and good access to information on chemical technology. The location of the headquarters could be mentioned in the Convention, or the decision on this matter could be taken by the Preparatory Commission or a specified body of the Organization. Several countries including Austria, Belgium, the Netherlands and (in general terms) Switzerland have offered to host the Organization.[10]

3. The financing of the Organization: Venezuela[11] expressed reservations about the whole approach to the question of the Organization. It stated that, before the provisions on the Organization were further developed, the principles which would govern its financing should be defined. The argument used by Venezuela was that the costs of operating a complex verification machinery such as the one envisaged for the CWC might discourage some States from joining the treaty. Behind this argument, however, was the view that States which did not possess CW could not be obliged to pay for the Organization. This opinion has not been shared by other delegations and has not been repeated by Venezuela for some time.

Some general principles concerning the financing of the Organization and the Preparatory Commission were mentioned by the UK.[12] As far as the costs of the Preparatory Commission are concerned, several million dollars may be required. The funding is still an open question. Loans from the UN[13] are quite unlikely regarding its current financial situation.

How the TS would be financed is not clear either. It may, for example, have to be specified which costs must be borne by a party which received an inspection and which ones by the TS. Some comments on this question were made by the UK[14] and the Soviet Union[15]. The Soviet Union stated that the costs could be split into administrative and operational expenses. Administrative costs would be covered by contributions from each State-party, made according to the UN scheme. Operational expenses would be distributed according to systematic verification activities on the territory of the parties. A party which received more inspections would have to pay more if this approach was adopted. As a comparison: the Treaty of Tlatelolco (1967, Article 16 para 2) holds that each party requesting a special inspection on the territory of another party (similar to challenge inspections under the CWC) must cover the expenses except if the council of the organization concludes, on the basis of the report on the inspection, that the costs would be borne by the Agency (organization).

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9 CD/769, pp.4-5(UK).
10 PV.457(Austria), PV.424, PV.506 (both Belgium), A/S-15/PV.3(SSOD 3)(Netherlands), PV.523(Switzerland).
11 PV.398, A/S-15/PV.3 (SSOD 3).
12 CD/769, pp.6-7, CD/575.
13 This approach was used for the IAEA (NPT).
14 CD/575, p.3(UK).
15 PV.473.

Most experts assume that the costs of the Organization will be considerable. Some estimate it at several hundred million US $ per year. It remains to be determined where and how the principles governing the financing of the Organization will be formalized. Some delegations believe that the question of costs, and recommendations on contributions from the parties, could be solved the Preparatory Commission. Others prefer to deal with these questions now and include provisions on this matter in the rolling text.[16]

9.1 The Conference of the States Parties (CSP)

9.1.1 Composition, Procedure, and Decision-Making

The CSP, the principal political body of the Organization, will be composed of all parties to the Convention. Each party will have one representative who may be accompanied by alternates and advisers. The first session of the CSP will be convened by the depositary of the treaty not later than 30 days after its entry into force. Regular sessions will be held annually unless it is otherwise decided. A special session may be convened at the request of the CSP, the EC, or at the request of a certain number of parties. The latter (request by the parties) remains to be agreed. A special session may be convened at short notice (proposed is: not later than 30 to 45 days after the request has been submitted to the TS).

The sessions of the CSP will be held at the headquarters of the Organization unless it is otherwise decided. The CSP will adopt its rules of procedure and will, at the beginning of each regular session, elect its chairman and other officers if necessary. They will hold offices until a new chairman and other officers are elected at the next regular session.

A majority of members will constitute a quorum. Each member will have one vote. Decisions on questions of procedure, including the convening of a special session, will be taken by a simple majority of the members present and voting. Decisions on matters of substance will be taken by consensus as far as possible. If consensus cannot be reached when a question comes up for decision, the chairman will defer any vote for 24 hours. In the meantime, consultations will be held. If there is still no consensus, the question concerned will be decided by a two-thirds majority of the members present and voting unless it is spelled out otherwise in the treaty. If there is disagreement on whether a matter is one of substance, it will be treated as a matter of substance unless it is otherwise decided by a two-thirds majority.

9.1.2 Powers and Functions of the CSP

The CSP may consider any question within the scope of the Convention, including issues relating to the powers and functions of the EC and the TS. It may issue recommendations and take decisions on any question related to the treaty which is raised by a party or brought to its attention by the EC.

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[16] CD/589, pp.6-7.

It will supervise the implementation of the Convention and promote its objectives. It will oversee the activities of the EC and the TS and may issue guidelines in accordance with the CWC to either of them.

Other functions of the CSP will be to: consider and adopt at its regular sessions the report of the Organization; consider other reports and adopt the programme and budget of the Organization submitted by the EC; promote international co-operation for peaceful purposes; review scientific and technological developments which could affect the operation of the treaty; decide on the scale of financial contributions by the parties; elect the members of the EC (see next section); appoint the Director-General of the TS; approve the rules of procedure of the EC, submitted by the latter; and establish subsidiary organs as required (see below).[17]

The CSP will hold, after the expiry of 5 and 10 years after the entry into force of the Convention, and at other times within this period if agreed upon, special sessions to review the operation of the Convention. After this, at intervals of 5 years, unless otherwise demanded by a majority of the parties, further special sessions will be convened.

The following questions remain to be addressed:

1. The name of the principal body of the Organization: Preliminary agreement on the name of the principal body of the Organization was reached during the inter-sessional consultations in 1988/89 ("Conference of the States Parties").[18] However, some delegations expressed the view that the term "the General Conference" which had previously been included in the rolling text as a proposal still remained to be considered. They also stated that the highest body of the Organization to which many references in the rolling text exist could only be designated after further consideration of other provisions of the Convention.

2. Decision-making in the CSP: The rules of decision-making in the CSP and other bodies of the Organization had been a controversial subject for a long time. Many of the outstanding issues have now been solved.[19]

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17 The functions of the CSP relating to the implementation of the provisions of the CWC on assistance and protection against chemical weapons (Article X, see chapter XI) and economic and technological development (Article XI, see chapter XII) remain to be discussed. Other functions such as actions to be taken in cases of non-compliance (e.g. sanctions) may perhaps be included in the provisions on the powers and functions of the CSP. The question of sanctions will be discussed in chapter X in the context of challenge inspections.

18 CD/881, p.25.

19 Before, several positions existed: The United States proposed that decisions be taken by consensus except as specified elsewhere. If consensus was not possible within 24 hours, decisions would be taken by simple majority of the members present and voting. (CD/500:Annex I, p.1) The Socialist countries proposed that matters of substance be decided by consensus. If consensus was not reached during the session, each party could record its opinion in the final report of the session for subsequent study by the governments of the other parties. Decisions on procedural matters would, if consensus was not possible, be decided by a majority of those present and voting. (CD/532, p.1) A proposal by the GDR (CD/812) indicated that the Socialist Group has now modified its position on this question. The UK (CD/589, p.3) proposed the following distinction between questions of procedure and substance: if consensus was not possible, the Consultative Committee (now CSP) would take decisions on the following issues by a two-thirds majority; financial matters, modifications to the Convention, suspension of a member from the rights and privileges of membership; all other matters would be decided by simple majority. A distinction between matters of substance and procedure was also used in a proposal by Pakistan (WP.112).

The most important outstanding question relates to a reservation expressed by the United States. It holds that the report of a fact-finding inquiry must not be put to a vote, nor must any decision be taken this concerns both the CSP and the EC as to whether a party is complying with the provisions of the Convention.[20] This reservation is both important and controversial. The underlying idea, supported by most Western and Socialist countries, is that compliance issues are crucial from the viewpoint of national security and have a predominantly bilateral character. This applies particularly to on-site inspections on challenge. In this case, one party would request another party to provide clarification. The role of the TS is regarded as that of an instrument executing the request, and a channel of communication. Decisions on questions of compliance should therefore be taken by the State concerned and not by a multilateral body. It was argued that the CSP could never be an impartial court. Other delegations, including most countries of the Group of 21, hold the view that the Organization should decide on violations of the treaty. However, most delegations prefer not to restrict too much the functions of the CSP and EC and therefore do not support the proposal by the United States.

The question of voting on compliance may also be linked to the right of withdrawal from the Convention (see chapter XIII). A violation of the treaty by a party may constitute a reason for another party to suspend the agreement with regard to the violator or even to withdraw from the CWC. If the CSP did, for example, decide that no violation of the treaty had occurred, it would be difficult for a party to suspend or withdraw from the Convention even if it had information, collected by NTM, indicating that a violation had occurred. On the other hand, precisely this point may not make much sense because it may weaken the whole regime. If an important party had strong reasons to believe that a decision by the CSP or the EC contradicted information obtained through its own NTM, it might still withdraw from the treaty or suspend it because it might feel that its security concerns were being ignored. This could, in the worst case, destabilize the whole regime. (The question of voting on compliance will also be treated in the context of challenge inspections (chapter X).

Another outstanding issue is the rules of decision-making on the convening of a special session of the CSP. It was proposed that any party, or any party supported by 5 to 10 other parties, or any party supported by one third of the parties, could request a session. The positions of the United States and the Soviet Union on this matter are very close. Both appear to favor a provision which would enable any party (even without the support of others) to request a special session.[21]

3. Subsidiary bodies: The following subsidiary bodies have been proposed:

(a) France[22] proposed to establish a **"Scientific Advisory Council"** It would be composed of a group of representatives from the scientific community and would act as a high level advisory group. It would: advise the CSP, the EC and TS on scientific or technological innovations which may be of relevance to the objectives of the Convention, e.g. the development of new toxins; propose scientific or technical improvements which might enhance compliance with the Convention; review scientific aspects of verification and proposals for new verification methods; respond to requests from other bodies of the Organization in its field of competence; provide advice to the parties upon request; give

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20 CD/343, p.6, CD/500:Annex I, p.1.

21 The USA proposed that a special meeting be convened at the request of any party or the EC (CD/500:Annex I, p.1). The USSR proposed to convene a special session upon the request of any party and within 30 days of the receipt of the substantiated request (CD/532, p.1).

22 CD/747, p.3, CD/916.

advice on the development of economic and technological cooperation among the parties; examine the lists of chemicals (Schedules) after the declarations by the parties have been made; and undertake specific studies of proposals for additions or modifications of the lists or guidelines for the lists.

The composition of the proposed council would be based on scientific criteria and criteria of professional competence. It would take into account the relevant scientific and technical disciplines. One third of the candidates would be proposed by the parties, and two thirds by international scientific institutions. Selection procedures would need to be considered. During the preparation phase (between signature and entry into force of the CWC), a "Scientific Advisory Committee" would be established as a subsidiary body of the "Preparatory Commission". This committee would be a predecessor of the Scientific Advisory Council.

The French proposal met a favorable response, but some delegations, for example the United States, argued that such a body may not necessarily have to be established on a formal basis. Notwithstanding, the negotiations on this issue have resulted, at the end of the 1989 session of the CD, in a joint document[23] on a **"Scientific Advisory Board"**. Two paragraphs which could be included in Article VIII (the Organization) were proposed. They state that the CSP may establish a Scientific Advisory Board to provide independent advice, as necessary, to the TS in areas of science and technology relevant to the CWC, and to the CSP and EC upon request. The Director-General of the TS will appoint the members of the Board in consultation with the parties. They will serve in their personal capacity. The Director-General may also establish temporary working groups of scientific experts to provide recommendations on specific issues in consultation with the Board.

(b) The United States proposed to establish a **"Fact-Finding Panel"**.[24] This panel would be set up by the depositary of the Convention and would consist of diplomatic representatives of five parties to the treaty, including the US and USSR, plus a non-voting chairman. It would be responsible for fact-finding inquiries[25]. It would serve, inter alia, as a political filter for requests for challenge inspections. It would decide whether a challenge inspection could be carried out.

The views on the necessity of the proposed Fact-Finding Panel have differed sharply.[26] The Group of 21, the Socialist Group and most Western States opposed the establishment of such a panel because they believed that it would be discriminatory. Some argued that it was not even clear whether this panel was compatible with the US proposal[27], now accepted by most delegations, for challenge inspections anytime, anywhere, and without the right of refusal. The United States has not responded in detail to the criticism expressed. There were several indications that the proposal for the Fact-Finding Panel would be withdrawn. But it still appears in the rolling text as a footnote.

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23 It is attached to the report of the Ad Hoc Committee (CD/952, p.189).

24 CD/343, pp.7-8,11(USA), CD/500, pp.8,10-11, Annex I, pp.2-3(USA). To avoid confusion: A special "challenge inspection panel" was proposed by the UK (CD/589). This panel would be different from the Fact-Finding Panel proposed by the United States. The panel proposed by the UK is merely a panel of qualified inspectors within the TS which would be established for the purpose of challenge inspections.

25 Including "ad hoc on-site inspections", other fact-finding inquiries, and the provision of expert views upon request.

26 E.g. CD/539:Annex II, p.17.

27 CD/500.

(c) A **technical training body** was proposed by the Socialist Group.[28] It would serve to train personnel of national verification bodies in standard international verification techniques and the use of equipment. It could possibly be established within Article VIII. This proposal has not been repeated during recent years. It is therefore unclear whether it is remains valid.

(d) Austria[29] proposed to establish a **multilateral information center** to assist the parties in setting up national export control systems, to arrange for the exchange of information, and to provide information on disruptions of export controls. Export controls will constitute an integral part of the CWC (obligation, expressed in Article I, not to transfer CW or to assist or encourage other countries in the development or production of CW). Such a center could provide advice and expertise to States which do not have the necessary resources or experience in this field. This would facilitate the implementation of the treaty. How this institution would be related to the CWC needs to be discussed.

4. Review Conferences: The place and wording of provisions for special sessions of the CSP to review the implementation of the Convention, as well as the possible need for separate review conferences, require further consideration. There is tentative agreement that special sessions will take place in five-year intervals unless otherwise decided. The difference between special sessions and review conferences is not very clear. In any case, the need for separate review conferences may be questioned. Review conferences are a common feature of other multilateral arms control or disarmament agreements. Nevertheless, the organizational framework of the Convention is far more developed than the one of other international arms control or disarmament agreements. Regular reviews could therefore take place on the basis of the annual report of the Organization and conclusions in its programme and budget, the annual session of the CSP, the special session every fifth year, or at other times if necessary. In addition, the EC will probably review the implementation of the treaty almost constantly.

9.2 The Executive Council (EC)

9.2.1 Composition, Procedure, and Decision-Making

The provisions on the composition and rules of decision-making of the EC remain to be developed.[30] Disagreement in this context has two reasons:

(a) The EC will be an institutional center-piece of the Convention and will conduct the day-to-day business. It will therefore have considerable powers and will probably remain in session throughout the year. But only a few parties will be members of the EC.

(b) Some of the powers and functions of the EC have not yet been defined (see below). There is the view that they must be determined before, or at least in parallel with, the composition and rules of decision-making.

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28 CD/532.

29 PV.500.

30 For a discussion of the issue see Bernauer, Thomas, The Future Chemical Weapons Convention and its Organization: The Executive Council, UNIDIR Research Paper No.5, New York, May 1989.

As far as the size of the EC is concerned, a membership of 15 to 35 is under discussion.[31] A proposal to define in advance a mechanism for an increase in membership remains to be considered.[32] The issue of non-elected (i.e. permanent) members of the EC and the re-election of members (see below) is another outstanding issue. Other questions include the length of the term for which members would be elected, and how many members would be elected at a time (not all members would be (re-)elected at once). The chairmanship of the EC has to be discussed as well. It may rotate monthly. The chairman could be elected (for a term to be defined) by the EC or the CSP, or the chairman of the CSP could act as non-voting chairman of the EC (no election).[33]

There is agreement that the size of the EC must be limited for functional reasons (time needed for its convening, rapid decision-making etc.). Another reason for the restricted membership is that of giving a (limited) preferential status to some important parties. Criteria for the selection of members must therefore be set. The prevailing view among CD delegations is that these criteria must ensure an equitable balance (however defined). The following basic criteria or combinations of criteria have been proposed[34]:

(a) The regional (geographical) distribution of some seats and reserved seats for the five permanent members of the UN Security Council.[35] This model has been rejected by most delegations and would be very difficult to agree upon.

(b) The regional allocation of seats, based, for example, on the five regional groups of the United Nations.[36]

(c) The distribution of seats according to the criteria of equitable geographical representation and the "largest industrial chemical base" (to be defined).[37]

(d) A politically (e.g. CD-model) and regionally balanced representation.[38]

It seems that every delegation prefers to ensure the most favorable composition with regard to itself or the political or regional group it belongs to. The proposed criteria reflect this fact. The Group of 21 favors model (b), the Western Group model (c), and the Socialist Group model (d), for obvious reasons.

In general terms, the problem is to find a composition which is sufficiently flexible and, at the same time, includes the countries which will be largely affected by verification under

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31 See CD/539, p.21, CD/500:Annex I, pp.2-3(USA), CD/532, p.2(Socialist countries), CD/589, p.4(UK), CD/812(GDR), PV.446(GDR). A document on consultations on the EC during the 1989 session mentions 15 to 35 (CD/952, p.185).

32 The UK proposed to increase the size of the EC with the number of ratifications of the CWC (CD/589).

33 CD/952, p.185. The USA and the UK proposed that the chairman of the Consultative Committee (now CSP) serve as the (non-voting) chairman of the EC (CD/500:Annex I, p.2(USA), CD/589, p.2(UK)). If the chairman of the last session of the CSP was to be the chairman of the EC as well, there would be no need to elect him.

34 Nine specific formula were discussed during the 1989 session. They are listed in a document attached to the report of the Ad Hoc Committee (CD/952, p.186).

35 CD/500:Annex I, p.2(USA), CD/532, p.2(Socialist countries).

36 CD/539:Annex I, p.21, CD/952, p.185.

37 CD/589, p.4(UK), CD/952, p.185.

38 CD/812(GDR). India informally proposed a similar approach. It suggested that the EC be composed of 6 Western, 6 Socialist, and 12 Neutral and Non-Aligned countries (ACR, 28 April 1988, 704.B.282-283).

the Convention. However, the EC cannot be a "club of inspected States" alone.[39] The countries and alliances whose security interests would be affected by the treaty must be represented as well. Another factor to be taken into account is the relationship between the composition and the rules of decision-making of the EC which will be discussed below.

One of the possible approaches may be to allocate some seats to parties chosen on the basis of regional criteria. The remaining seats could be distributed on the basis of the other proposed criteria. The need for regional, economic, and political criteria is widely recognized.[40] For the moment, it seems that this question will be solved only at a relatively late stage in the negotiations.

Several proposals have been made for the rules of decision-making:

(a) Consensus for questions of substance. Simple majority for procedural matters.[41]

(b) Consensus for all questions. Or, consensus for questions of substance and simple majority for procedural matters. If no consensus was reached after 24 hour, simple or two-thirds majority for all questions, or two-thirds majority for questions of substance, would apply.[42]

(c) Two-thirds majority for questions of substance, simple majority for procedural matters.[43]

(d) Two-thirds majority for all questions.[44]

In addition, a quorum may have to be defined. (In the CSP, a majority of members will constitute a quorum.)

It is likely that the rules of decision-making will only be decided once the composition of the EC is agreed upon. The latter is a politically very sensitive question which seems to be hard to solve. It is therefore not excluded that the rules of decision-making will only be defined during the "final trade-off" in the negotiations.

9.2.2 Powers and Functions

The EC will be the executive organ of the CSP to which it will be responsible. It will have the powers and functions entrusted to it by the provisions of the Convention, and those delegated to it by the CSP. It must act in conformity with the recommendations, decisions and guidelines of the CSP.

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39 PV.506(Belgium).

40 E.g. PV.449(France), PV.453(China), PV.457(USA), PV.460(Brazil), PV.461(Pakistan), PV.481(Sweden), PV.495(GDR), PV.503(Egypt), PV.506(Belgium).

41 CD/532, p.2(Socialist countries). The Socialist countries have modified their position and now support a solution based on two-thirds majority (CD/812(GDR)).

42 CD/500:Annex I, p.1(USA).

43 CD/589, pp.3-4.

44 WP.112(Pakistan), CD/812(GDR).

It will perform a wide range of activities. It will: promote the effective implementation of the Convention; supervise the activities of the TS; cooperate with the National Authorities of the parties; facilitate consultations and co-operation among them; consider any issue or matter within its competence which affects the CWC and its implementation, including questions of compliance[45]; inform the parties and bring the issue or matter to the attention of the CSP; consider and submit to the CSP the draft programme and budget of the Organization, the draft report of the Organization on the implementation of the CWC, the report on the performance of its own activities, and special reports as it deems necessary or as the CSP may request; conclude agreements with States and international organizations on behalf of the Organization, subject to approval by the CSP; and approve agreements relating to the implementation of verification activities - these agreements will be negotiated by the Director-General of the TS.

The EC will meet for regular sessions. Between these sessions, it may be convened as often as required. It will elaborate and submit its rules of procedure to the CSP for approval and make arrangements for the sessions of the CSP and prepare its draft agenda. It may request the convening of a special session of the CSP.

For the moment, the only issue which remains to be solved relates to the convening of a special session of the CSP. It is agreed that the EC may request the convening of a special session of the CSP. However, a proposal[46] that the EC must request such a session whenever obligations set forth in Article I of the CWC have been violated remains to be considered. This provision would introduce an automatism for cases of grave violations of the treaty. In this context, the question of who would decide on whether a violation has occurred (and, as a consequence, convene the CSP) needs to be examined (see chapter X).

9.3 The Technical Secretariat (TS)

Although the establishment of a Secretariat under the Convention had been proposed at an early stage of the negotiations[47], this question used to be a neglected subject for a long time.[48] Many delegations were of the view that the form of the Organization should be determined after the definition of its functions. As long as the basic approach to verification remained controversial (at least until 1986), and the TS was to carry out international verification activities, there were only few and tentative provisions on the TS.

According to the current rolling text, the TS will be established to assist the CSP and the EC. It will carry out the functions entrusted to it under the Convention as well as other functions assigned to it by the CSP or the EC.

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45 As discussed in the context of the CSP, the United States stated that the report of a fact-finding inquiry must not be put to a vote and no decision must be taken as to whether a party is complying with the provisions of the CWC.

46 Included in a footnote in the rolling text (CD/952, p.37).

47 E.g. CCD/410(Japan), CCD/512(UK).

48 The development of the negotiations is reflected in: CD/102(China), CD/105(France), CD/114(Australia), CD/131:Annex I, CD/416:Annex I, p.18, Annex II, pp.12,15-17, CD/343, p.7(USA), CD/445(Netherlands), CD/500:I, pp.3-4(USA), CD/823(Canada). The integration of the proposed secretariat and the inspectorate into one body (Technical Secretariat) was an important step in the negotiations on this issue. Proposals such as the ones by the UK (CD/589, CD/769), the United States (CD/500), or Pakistan (CD/664) consolidated this development.

Its powers and functions will include the following. It will: address and receive communications on behalf of the Organization to and from the parties on matters pertaining to the implementation of the CWC; negotiate with the parties subsidiary agreements relating to systematic international on-site verification[49]; these agreements will be subject to approval by the EC; carry out international verification activities provided for in the CWC; inform the EC of any problems which may arise during the execution of its tasks, and of other problems which may come to its notice during verification activities; and inform the EC of problems which it has been unable to resolve through consultations with the party(ies) concerned.

The TS will provide technical assistance to the parties and will prepare and submit to the EC: the draft programme and budget of the Organization; the draft report of the Organization on the implementation of the CWC; and other reports requested by the CSP or the EC. It will also provide administrative and technical support to the CSP, the EC, and other subsidiary bodies.

The TS will be headed by a Director-General and will include international inspectors, and scientific, technical and other personnel. The Director-General will be appointed by the CSP.[50] He will be responsible to the CSP and the EC for the appointment of the staff and the organization and functioning of the TS. The guiding principle in the employment of staff and the setting of the conditions of service must be the securing of the highest standards of efficiency, competence and integrity.

Only citizens of parties to the CWC may serve as international inspectors or other members of the professional and clerical staff of the TS.[51] The staff should be recruited on as wide a geographical basis as possible. Recruitment must be guided by the principle of keeping the staff to the minimum necessary. In performing their duties, the Director-General, the inspectors and other members of the TS must not seek or receive instructions from any government or from any source external to the Organization. They must refrain from any action which might reflect on their positions as international officers responsible only to the CSP and the EC.

The States parties, on the other hand, are obliged to respect the exclusively international character of the responsibilities of the Director-General, the inspectors and the other members of the staff and must not seek to influence them in their work.

9.3.1 The International Inspectorate and the Inspection Protocol

The international inspectorate will be a unit of the TS and will be supervised by the Director-General of the TS. It will carry out international inspections under the CWC.

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49 This includes in particular the "facility attachments" which will be based on model agreements (see chapter V, VI, VII).

50 How to nominate the candidate(s) remains to be agreed. One proposal is to have him/them recommended by the Executive Council, another one is that he/they be nominated by the UN Secretary-General. His term of office may be 4 or 5 years. It was proposed that his term be renewable once.

51 In this sense, it would be stricter than the United Nations which employs citizens of non-member States as well.

Guidelines for the inspectorate remain to be elaborated. Two documents which reflect the current status of negotiations are attached to the report of the Ad Hoc Committee: a report on the work undertaken in 1987 and 1988[52], and a preliminary draft of an inspection protocol[53] The second document is a modified and much expanded version of the first paper and will eventually replace it. As it has the considerable length of twenty pages, it will be discussed it in general terms. The full text of the protocol is included in the annex to this research report.

The first part of the protocol contains definitions of key terms which are used in its provisions. They include "inspector", "inspected State-Party", "inspection site" "routine inspections", "challenge inspections", "approved equipment" and others.

The second part deals with the designation of inspectors and inspection assistants. Verification activities must only be carried by inspectors and inspection assistants designated in advance for inspections in a particular State. The designated persons will be subject to approval by the party concerned.[54] Mechanisms provided for in the draft will help to prevent the abuse of the right of each party to refuse individual inspectors during the designation process (refusal shortly before or during an inspection would be impossible). Provisions on amendments to the lists of inspectors are included as well.

The third part defines privileges and immunities of the inspectors. These are very similar to those accorded to diplomats under the Vienna Convention on Diplomatic Relations (e.g. the immunity from national jurisdiction). Special procedures will apply to cases of abuse of privileges and immunities. The third part also includes provisions on the transportation of samples, and travel arrangements as well as restrictions.

The fourth part contains general rules for international inspections. (Inspections under the CWC will be governed by the Articles and Annexes of the treaty, the inspection protocol, rules established by the TS, and the agreements on subsidiary arrangements concluded between the Organization and the parties.) The inspectors must strictly observe the inspection mandate and avoid the unnecessary hampering or delaying of operations at a facility. The provisions also apply to inspections of facilities of a party which are located on the territory of another party, or a non-party.

The fifth part contains provisions on pre-inspection arrangements. It covers issues such as the notification of a party to be inspected, the designation of points of entry into the territory of a party, the travel of the inspection team from there to the facility to be inspected, and services to be provided by the host party.

The sixth part includes provisions on the actual conduct of inspections, including briefings, safety regulations, communication with the TS, interviews, sampling, on- and off-site analyses of samples, rights of the inspectors and the inspected party, the clarification of ambiguities, the duration of an inspection, the size of the inspection team, the language, and the return of the inspection team.

The seventh part covers questions such as inspection equipment and the continuous monitoring of facilities by instruments. This includes the rights and obligations of inspectors and the host party, the purpose of the equipment, its ownership, the designation and

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[52] CD/952, pp.125-136.
[53] CD/952, pp.137-156.
[54] A similar mechanism is used by the IAEA which safeguards nuclear material under the NPT.

approval of technical equipment, the right of the host party to refuse certain equipment, the use of equipment available on-site, its maintenance, and other matters. A proposal for special provisions on the collection, handling and analysis of samples is attached to the draft protocol.

The eighth part deals with the inspection report. It contains rules on timeframes for its submission, its nature, access to its findings, the clarification of uncertainties contained therein, and other questions.

Finally, the ninth part includes provisions on challenge inspections (see chapter X). Challenge inspections are a very special type of verification. Hence, a number of particular rules are necessary. Only inspectors designated for this purpose could carry them out. The procedures for the designation are to be the same as for routine inspections (see above). Each party could refuse individual inspectors during the designation process. The inspection team will have a defined size and no national of the requesting party, the host party, or another party cited by the requesting party as having been involved in the case, will be a member of the team. Other provisions deal with the notification of the country to be inspected, the dispatching of an advance team, the securing of a site, the (limited) protection of sensitive areas of a facility during an inspection, the protection of confidential information, and the timeframes for inspections and the submission of reports.

A considerable number of questions remain to be solved. They include: the structure of the protocol; definitions; several timeframes for all types of verification activities; the privileges and immunities of the inspectors and their assistants; travel restrictions for the inspectors; the rights of representatives of the host party who accompany the inspection team; the notification of a party to be inspected; safety regulations; technical equipment; and sampling. In addition, the whole process after an inspection (reports, consequences) remains to be discussed.

The results of national trial inspections (see chapter VII) have equipped the negotiators with valuable practical experience. Planned international trial inspections or verification experiments will provide additional input. In any case, remarkable progress has been made on the preliminary draft protocol during the 1989 session. It needs to be determined, however, how detailed the protocol must be. The operationalization of the verification provisions of the treaty will partly have to be undertaken by the Preparatory Commission (see below) or the TS. The protocol may even have to be amended as a consequence of practical experience acquired in the course of implementing the treaty.

As different from the rules governing routine inspections, the provisions on the conduct of challenge inspections seem to be more difficult to finalize because there are still many outstanding issues of a principal nature in this context. (See chapter X)

The following issues concerning the TS remain to be addressed:

1. The powers and functions of the TS: It has been proposed that international inspectors be permitted to request inspections in some insufficiently clear situations arising during systematic verification activities. The provisions on the powers and functions of the TS, so far agreed to, are rather vague on this aspect. The inspectors could request clarification but a party may refuse. The inspectors could then record their views in the report on the inspection and/or notify the TS. The latter could communicate the concerns to the EC.

The Federal Republic of Germany[55] made two proposals which would increase the powers of the TS in this context. It proposed that the TS be empowered to query unclear data provided by a party (data reporting, declarations). It also proposed that the international authority (now TS) conduct ad hoc checks in the chemical industry on its own initiative. The facilities to be inspected would be selected on a random basis from registers of the national chemical industry. (See chapter VII).

Whether the potential parties to the treaty would be willing to equip the TS with such powers has not yet been clarified. Another question is whether there could be sufficient confidence that the TS would query unclear data or ask for ad hoc checks (not random) even if an issue was politically sensitive. Some concerns have been expressed that this might affect the authority of the TS because it could be accused of being partial.

2. Technical assistance by the TS: The phrasing of a provision on technical assistance and technical evaluation provided to the parties by the TS remains to be considered.[56] The elaboration of other Articles in the CWC, especially the one on economic and technological development (chapter XII), will have to be taken into account in this context. One suggestion[57] is that technical assistance and evaluation may relate to developing technical procedures, improving the effectiveness of verification methods, and revising the lists of chemicals. Assistance may be provided to the parties as well as the other bodies of the Organization.

3. Resource requirements for the TS: The resource requirements for the TS have not yet been examined in detail.[58] It is very difficult indeed to obtain, at the present stage, a clear picture of these requirements. First, the practical consequences of the drafted verification arrangements are not fully known. Trial inspections on a national and later multilateral level will help to make a preliminary assessment. Second, the extent of resources required will depend on the number of parties to the Convention and the number of facilities to be monitored. The latter will partly be determined by the number of parties, the number of chemicals included in the Schedules, and the quantitative thresholds to be defined (see chapter VII). The exchange of data, on a voluntary basis, which is under way is a first step in the direction of obtaining a more detailed picture (see chapter XIV).

Another factor which will influence resource requirements is the number of CW possessors and the size of their stockpiles. This will, in particular, affect the implementation of Articles IV (on existing CW) and V (on CWPF). Only the United States and the Soviet Union have declared their possession of CW. Several other States which allegedly own CW as well have not provided details, and this fact has been criticized. However, the Soviet Union and the United States are believed to have by far the largest stockpiles and most of the CWPF.[59] Quite accurate assessments could therefore be produced.

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55 CD/791, p.2, WP.159.

56 Proposed alternatives are "in accordance with the Convention" and "in the implementation of the Convention".

57 It is contained in a footnote in the rolling text (CD/952, p.38).

58 An analysis of this question can be found in: Beck, Herbert, Verifying the Projected Chemical Weapons Convention. A Cost Analysis, Mosbach 1989: Arbeitsgruppe Friedensforschung und Europaeische Sicherheitspolitik. A meeting on this issue between CD delegations and private experts took place in June 1989 (WP.244).

59 The USSR has declared the aggregate size of its CW stockpile, but not the locations. The United States has provided detailed information on its CW storage and production sites and the composition of its stockpile, but not on the aggregate size of its stock. However, relatively accurate (but not officially confirmed) estimates of the aggregate size of the US CW stockpile exist. (See part one, chapter IV, part two, chapter XIV)

The scope of verification activities carried out by the TS and therefore resource requirements will, to some extent, also depend on the TS itself. It will determine, based on guidelines, the number, frequency, timing, and mode of inspections at particular facilities.

Notwithstanding the obstacles mentioned, some tentative proposals on resource requirements for the TS have been made by the delegations. Canada[60] put forward a document which discussed factors involved in determining verification inspectorate personnel and other resource requirements. It also examined questions such as sources of highly skilled personnel, the size of the inspectorate, and costs. The analysis was based on the verification regime as provided for in the rolling text[61] and other CD documents.

Other proposals on resource requirements for the TS were made by the Federal Republic of Germany[62], the Netherlands[63], and the United Kingdom[64]. The Netherlands, for example, estimated that approximately 50 inspectors and 90 supporting staff (75 to 100 inspectors and 100 supporting staff additionally during the first 10 years) would be required. The United Kingdom submitted somewhat different estimates. At least 60 inspectors and 120 support staff were said to be necessary to get the Convention off to an effective start. This number was thought to be rather an under-estimate.[65]

The United Kingdom[66] examined the recruitment of personnel and its training before the entry into force of the Convention, and discussed other issues related to the question of how to make the CWC effective from its entry into force. It also presented some ideas on the definition and procurement of equipment necessary to undertake initial verification activities.

How far work on the question of resource requirements should go and what should be left to the Preparatory Commission and the TS remains to be examined.[67]

Instrumental (technical) aspects of verification, connected procedures, and necessary resources have drawn considerable attention and many proposals and contributions were put forward. National research projects which are being undertaken in this respect are important. They contribute to the development of the necessary equipment and related procedures to be used by the TS in implementing the CWC.

Verification activities on a large scale will start as soon as the CWC enters into force. The technical side of verification in this field is extremely complicated and requires much research. Trial inspections as well as investigations by the Secretary-General in the Gulf war have proven this. Therefore, it is necessary to develop the technical means before the treaty enters into force.

Among the most active countries in this context are Finland, Norway, Canada, the United States[68], the UK, the Netherlands, and Sweden.[69] The work undertaken by Finland, Norway,

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60 CD/823, PV.453. Canada announced that it was working on a follow-up paper which would examine cost implications (PV.492).
61 CD/734.
62 CD/869.
63 CD/445.
64 CD/589, CD/769.
65 CD/769.
66 CD/769, PV.421.
67 The proposal by the UK (CD/769) contains some suggestions on this issue.
68 Only little information is available on verification research in the United States. Despite some funding appropriated to ACDA for such purposes, not much work has reportedly been undertaken. (New York Times, 26 September 1989, Washington Post, 26 September 1989)

and Canada will briefly be explained as an example. These countries have been particularly active in making available to the CD the results of their research.

Finland has, since 1973, carried out research on standard operating procedures for verification purposes, and on a reference data base to be used by the TS. The latter was demonstrated to CD delegations. The Finnish project concentrates on instrumental methods for the detection, analysis, and identification of CWA and their precursors. The results of the research have, since 1977, been published in the form of the "Finnish Blue Books" which were presented to the CD. The Blue Books contain analytical data on CWA and their precursors. Their degradation products have been studied as well, using several instrumental methods. Stationary as well as mobile instruments and laboratories for the detection of CWA have been tested. The application of air monitoring for verification purposes is being examined. Finland announced that it was willing to train each year free of charge chemists from developing countries in the use of technical methods and instruments for verification under the CWC. The duration of courses would be four months. Two courses per year with three students each are planned.[70] A technical group of the Ad Hoc Committee dealing with the question of instrumentation is currently chaired by a Finnish expert.[71]

In 1981, Norway started a still ongoing programme (including field experiments) at the Norwegian Defence Research Establishment to develop procedures for the verification of allegations of the use of CW on a year around basis[72]. The procedures elaborated cover all phases of an investigation. The necessity of efficient equipment and procedures for such investigations has been demonstrated by the fact-finding missions of UN teams in the Iran/Iraq war (see part one, chapter IV).

Canada is carrying out research on the same subject and has, together with Norway, presented proposals on the verification of allegations of the use of CW. This question will be discussed in chapter X. In 1985, Canada forwarded to the CD as well as to the UN Secretary-General a handbook for the verification of the alleged use of chemical and biological weapons.[73]

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69 Proposals on technical aspects of verification include: CCD/311(USA), CCD/334(UK), CCD/343(Japan), CCD/371(UK), CCD/432(Finland), CCD/453(Finland), CCD/498(USA), CCD/502(UK), CCD/533(Netherlands), CCD/577(Finland), CCD/544(Finland), CCD/569(Sweden), CD/15(UK), CD/37(Federal Republic of Germany), CD/163(Finland), CD/196(Finland), CD/271(USA,UK,Australia), CD/299(Finland), CD/311(Norway), CD/392(Finland), CD/396(Norway), CD/424(USA), CD/505(Finland), CD/508(Norway), CD/518(Federal Republic of Germany), CD/598(Norway), CD/600(Norway), CD/601(Norway), CD/614(Finland), CD/619(Japan), CD/677(Canada), CD/702(Norway), CD/703(Norway), CD/706(Netherlands), CD/719(Finland),CD/761(Norway), CD/762(Norway), CD/764(Finland), CD/765(Finland), CD/770(Canada), CD/776(Norway), CD/785(Finland), CD/843(Finland), CD/857(Norway), CD/861(Norway), CD/873(Finland), CD/932(Finland), CD/936(Norway), CD/940(Norway), WP.204(Federal Republic of Germany), WP.214(UK), WP.239(UK), WP.253(Finland), WP.254(Canada), WP.255(UK), WP.259(Canada).

70 PV.495, PV.516, FBIS-WE, 11 January 1989.

71 CD/952, p.10.

72 Verification methods and procedures have to be adjusted to different environmental conditions such as very low or high temperatures.

73 CD/677.

9.4 The Preparatory Commission and the Preparation of the Entry Into Force of the Convention

A Preparatory Commission will be set up to prepare for the effective operation of the Convention from its entry into force. As the preceding chapters have shown, verification activities on a large scale will start immediately after the treaty has entered into force. This requires extensive preparations of an organizational as well as technical nature.

Preparatory commissions have been established for other multilateral agreements requiring much preparatory work. Examples are the preparatory commissions of the IAEA (NPT) or the Convention on the Law of the Sea.

Detailed negotiations on the Preparatory Commission for the CWC started relatively late, in 1987. This was due to the improving prospects for the conclusion of a treaty in the foreseeable future. A document containing preliminary draft provisions on the Preparatory Commission is attached to the rolling text. It states that the depositary of the treaty will convene a Preparatory Commission shortly after (30 days are proposed) a certain number of States have signed the Convention. The Commission will consist of the signatory States. It will remain in existence until the first session of the CSP has been convened. The costs will be borne by the signatory States participating in the work of the Preparatory Commission.

The Commission will take its decisions by consensus. If this is not possible, decisions on questions of procedure will be taken by simple majority, and decisions on questions of substance by two-thirds majority. This rule will apply after a delay of 24 hours during which consultations will be held. If there is disagreement on whether an issue is one of substance or procedure, it will be treated as one of substance unless it is otherwise decided by a two-thirds majority.

The Preparatory Commission will elect its own officers, adopt its rules of procedure, meet as often as necessary, and establish committees as it deems useful. It will appoint an executive secretary and establish a provisional TS to prepare the activities of the TS[74]. It will also prepare the first session of the CSP (agenda, draft rules of procedure etc.).

It will: establish a detailed staffing pattern for the TS; assess personnel requirements; draw up staff rules for recruitment and service conditions; recruit and train technical personnel; standardize and purchase equipment; organize office and administrative services; recruit and train support staff; establish a scale of financial contributions to be made to the Organization and administrative and financial regulations; prepare an agreement with the host country of the Organization; prepare guidelines for initial visits and facility attachments; prepare the programme of work and budget of the first year of activities of the Organization; prepare other studies and recommendations; and submit a final report on all these activities to the CSP and EC. The property and records of the Preparatory Commission will be transferred to the Organization once the CWC is in force.

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[74] These activities include: work relating to declarations and data reporting; activities of the inspectorate; evaluation of accounts and reports; agreements on subsidiary arrangements with the parties and negotiations therefore; training of personnel; development of verification procedures and instruments; technical support to other bodies of the Organization and the parties; finance and administration.

The following questions remain to be considered:

1. Placing of the provisions: It has not yet been decided where to place the provisions on the Preparatory Commission. They could be included in the text of the CWC, in a resolution of the UN General Assembly commending the CWC, or in a document directly associated with the CWC.[75]

2. The convening of the Preparatory Commission: The conditions for the convening of the Preparatory Commission remain to be set. The number of signatory States and/or specific countries or groups of countries may therefore have to be defined. Other conditions could be used as well. The United States[76] proposed that the Preparatory Commission be convened not later than 90 days after the CWC has been opened for signature. The United Kingdom[77] stated that the Commission should come into existence on the first day the CWC has been opened for signature. The Commission would therefore start its work irrespective of the number of signatories (except if there was none).

3. Financing: Rules governing the financing of the Preparatory Commission remain to be established. It was proposed that the contributions by member-States be made "in accordance with the UN scale of assessment, adjusted to take into account differences between the UN membership and the participation of States signatories in the Commission."[78] Some general principles to govern the financing of the Preparatory Commission were put forward by the UK[79] The UK also produced a general assessment of the costs of the Commission. The Preparatory Commission of the IAEA was financed by loans from the United Nations. Considering the present financial difficulties of the UN, such a solution for the Preparatory Commission of the CWC is unlikely. Hence, the problem of funding remains to be discussed. Switzerland[80] stated that it would make a special effort to support the work of the Commission and would make the necessary infrastructure available.

4. The preparation period: The preparation period can be defined as the period from the signing of the CWC to its entry into force. Negotiations on this question have begun only recently. As a first result, some material has been attached to the report of the Ad Hoc Committee at the end of the 1989 session.

The objective of work on this issue is to ensure the entry into force of the treaty without delay, and to create favorable conditions for its effective implementation from the very beginning. It also aims at promoting universal adherence to the CWC (see chapter XIII).

The document mentioned states that the exchange of data (see chapter XIV) will facilitate the elaboration of verification procedures, the identification of thresholds (see chapter VII), and the assessment of costs. The States involved in the negotiations should therefore exchange data on a compatible basis. An outline for the provision of data to the Preparatory Commission was drawn up as a basis for discussion.[81] It was proposed to transfer to the

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75 Proposals relating to the Preparatory Commission were submitted by the UK (CD/589, CD/769, pp.6-9). In CD/769, the UK put forward some ideas on the distribution of tasks between the Ad Hoc Committee and the Preparatory Commission. Other proposals which reflect the development of the negotiations are contained in: CD/343, pp.7,10(USA), CD/416:Annex I, p.17, Annex II, p.15, CD/500:Annex III, p.11(USA), CD/539:Annex II, pp.11,19-20, CD/589, pp.2,7(UK).

76 CD/500:Annex III, p.11(USA).

77 CD/769, p.7.

78 CD/952, p.123.

79 CD/769, p.6-7.

80 PV.523.

81 CD/952, p.222.

Commission documents which are relevant to the preparation of the implementation of the CWC but are not part of the text of the treaty. A register for this purpose could be established by the Secretariat of the Ad Hoc Committee. An example for such a register was attached to the document.[82]

Preparatory work will require intensive cooperation between the signatories and the Preparatory Commission. To facilitate discussion of this issue, a number of requirements were listed. They relate to information on the ratification process, on existing CW stockpiles, on CW production and destruction facilities, on the production of chemicals contained in the Schedules, and on National Authorities. Cooperation would also be required with regard to the acquisition and testing of verification instruments, the designation of instruments for specific purposes, the question of off-site laboratories, preparations for the designation of inspectors, their training, and pre-negotiations of facility attachments. An overview of some activities to be carried out by the Organization after the entry into force of the treaty, and of the necessary preparatory work therefore prior to this date, was attached to the report of the Ad Hoc Committee. It is included in the annex to this research report.

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[82] CD/952, p.223.

CHAPTER X

NON-ROUTINE VERIFICATION PROCEDURES

Most of the verification measures provided for in the rolling text will have a routine character. They will be initiated by the TS on the basis of agreed procedures and will cover declared facilities. Routine procedures are to be established by the Articles on chemical weapons (IV), CW production facilities (V), and the non-production of CW (VI). They will be supplemented by the provisions of Article IX on "consultations, cooperation and fact-finding". The provisions of Article IX will apply if there are doubts or ambiguities concerning compliance which cannot not be solved by the routine verification scheme. They can therefore be regarded as a "safety net" to ensure confidence in the treaty if other means of verification fail or do not produce the information necessary to solve a problem. In addition to provisions on cooperation and consultations among the parties, the Article will most likely include provisions, yet to be agreed, on on-site inspections on challenge.

The rolling text states that the parties will consult and co-operate directly among themselves, through the CSP, or other appropriate international procedures, including the United Nations. This applies to any matter relating to the objectives or the implementation of the treaty. The parties are obliged to make every possible effort to clarify and resolve, through the exchange of information and consultations, any matter which may cause doubts about compliance with the Convention.

Any party which receives a request from another party for the clarification of a matter which causes concern about compliance must provide sufficient information to clarify the situation. Nothing in the Convention must affect the right of any two or more parties to arrange by mutual consent for inspections or other procedures among themselves to clarify and resolve questions of compliance. Such arrangements must not affect the rights and obligations of the parties established by other provisions of the treaty. (Two or more parties could thus negotiate and implement further reaching verification procedures if they deemed such measures useful.[1])

10.1 Requesting Clarification

The least intrusive approach to solve problems of compliance with the Convention will be consultations among the parties. They can be assisted by the Organization, if necessary. The following procedure is provided for in the rolling text: each party will have the right to request assistance by the EC in clarifying any situation which may be considered ambiguous or which causes doubts about the compliance of a party. The EC will provide information in its possession which might dispel the doubts.

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[1] Most of the provisions described above are almost copied from the US draft convention of 1984 (CD/500, pp.8-9).

Any party may request the EC to seek clarification from another party. The following procedure will apply in these cases: the EC will forward the request for clarification to the party concerned within 24 hours after the receipt of the request; the requested party must povide clarification to the EC within 7 days of the receipt of the request; the EC will then transmit the clarification to the requesting State within 24 hours. If the requesting State deems the clarification insufficient, it may ask the EC to demand further clarification from the requested State. Therefore, the EC may also set up a group of experts to examine all available and relevant information and to submit a report. If the requesting State still deems this additional information inadequate, it may request a special meeting of the EC which will consider the matter and make recommendations. Parties involved in the issue but not members of the EC may take part in this meeting. The parties may also request the EC to clarify any situation relating to questions of compliance. In this case, the EC will provide assistance as appropriate.

If concerns about compliance cannot be resolved within two months after the submission to the EC of a request for clarification, or if the requesting party believes that its concerns warrant urgent consideration, it may request a special session of the CSP in accordance with the Article on the Organization (see chapter VIII). In this session, the CSP will consider the matter and recommend measures it deems appropriate.[2]

10.2 Fact-Finding

Procedures such as those explained in the preceding section may not be sufficient to dispel doubts or concerns about compliance and more intrusive methods of verification may be necessary. An additional means of solving problems will be to engage in fact-finding activities. In the context of Article IX, fact-finding means non-routine verification procedures which can be implemented under specified conditions. The provisions of the rolling text on fact-finding remain to be elaborated.[3]

10.2.1 On-Site Inspections On Challenge

As it looks now, systematic verification under the CWC will only cover facilities which have been declared by the parties. It will be carried out by the TS as a matter of routine and on its own initiative according to agreed procedures. This leaves some loopholes. Prohibited activities might, for example, occur at facilities which have not been declared or were declared but not subject to international monitoring for reasons discussed in chapter VII (e.g. thresholds).

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[2] A very similar provision is included in CD/500, p.9(USA).

[3] The terms "fact-finding" and "challenge inspection" are sometimes mixed up. They are not identical. Challenge inspections are one of the possible methods which can be used for fact-finding, but not the only one. However, the major and most debated fact-finding procedure under Article IX are on-site inspections on challenge. Other procedures which, in international law, is covered by the term fact-finding may be used for the clarification of suspicions and doubts (see above). The confusion in this context has partly been produced by the delegations to the CD. Pakistan (CD/664), for example, preferred to use the term "fact-finding" instead of "challenge inspection", "challenge procedure" or "on-site inspection". Provisions on fact-finding procedures which are not challenge inspections were proposed by the UK (CD/715, p.4). The distinction is more clear in this case.

To assure full confidence in compliance with the projected Convention, the concept of challenge inspections was introduced at the beginning of the 1980s. The idea is older, however. The first major arms control treaty which provided for such inspections was the Treaty of Tlatelolco (1967) which established a nuclear weapons free zone in Latin America. Article 16 of this treaty contains provisions on "special inspections" As for arms control agreements between Socialist and Western countries, challenge inspections were used only much later. This was due to the different positions on how compliance with arms control treaties must be verified (see part one, chapter IV). Today, after the position of Socialist countries on this issue has changed in 1986/87, challenge inspections are regarded by most countries as an indispensable element of arms control treaties. The Stockholm Agreement of 1986 and the INF Treaty of 1987 were milestones in this context.

The purpose of on-site inspections on challenge is to provide the parties to the Convention with additional information on problems which have not been resolved through routine verification or through consultation and cooperation procedures described above. Challenge inspections are therefore aimed at maintaining or restoring confidence in the treaty at critical moments.

Challenge inspections are considered by many as a last-resort mechanism with a high political profile. They may be used when a party to the Convention suspects another party of violating the treaty. One party will challenge another party who in turn will be obliged and have the right to show that it has not violated the agreement. This may imply an accusation or a least a suspicion and could be delicate from a political point of view. Some States, particularly some of the important members of the Group of 21 (for example Argentina, Brazil, India, and Yugoslavia) and China, have therefore been reluctant in supporting the idea.

However, it will be noted that the potentially controversial character of challenge inspections must not necessarily lead to political problems. As far as the Stockholm Agreement and the INF treaty are concerned, challenge inspections have become an almost routine matter. (The term "challenge" may perhaps be replaced by "request" at some point.) This could, of course, change if relations between the countries concerned deteriorated.

The basic concept of challenge inspections as currently envisaged for the CWC was introduced by the United States in 1984.[4] The US proposal provided for on-site inspections on challenge **anytime, anywhere, at short notice, and without the right of refusal.**[5] This measure which was labeled "open invitation" was rejected by the Socialist Group at that time. But a proposal by the United Kingdom in 1986[6], and a major shift of the Soviet position on verification in 1987, led to East-West agreement on the basic principles of challenge inspections (see part one, chapter IV).[7]

Previously, the position of the Socialist countries had been that the requested State must have the last word in whether to provide access to a facility for on-site inspection.[8] Many Western countries, on the other hand, had argued that on-site inspections without the right of refusal were necessary. In an attempt to produce a compromise, the United Kingdom proposed that the requested State be allowed to suggest alternatives to full access to a site to be inspected. This was aimed at concerns of several countries, including the Socialist Group

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4 CD/500.
5 Article X of the draft.
6 CD/715, PV.370.
7 PV.428, PV.429 (acceptance, by the Soviet Union, of inspections without the right of refusal).
8 E.g. WP.136(GDR/Poland).

(but not only), that there might be cases where full access to a site could, for important reasons relating to national security, pose problems. But the United States did not support the British proposal. Instead, it proposed a "managed access" to facilities to be inspected (see below).

In 1987, a document on challenge inspections appeared in the report of the Ad Hoc Committee[9], but there were still differences on the locations, facilities, and cases which could be covered by challenge inspections.[10] Finally, the Soviet Union[11] declared, in the second half of 1987, that it was willing to accept the mandatory character of challenge inspections at all facilities. It went further than the British proposal and accepted (with some reservations, see below) the concept proposed by the United States.[12]

Despite this basic agreement, at least between Western and Socialist countries, many questions concerning challenge inspections remain to be solved and there are no agreed provisions in the rolling text. The status of the negotiations is reflected in three documents attached to the report of the Ad Hoc Committee.[13] The first one includes the results of work undertaken on the issue from 1987 to 1988. The second contains the results of consultations during the 1989 session. The third document is an inspection protocol (see previous chapter and the annex to this research report).

According to these documents, any party will have the right to request on-site inspections at facilities of another party to solve concerns about compliance. These inspections could be undertaken anywhere, anytime, without delay, by inspectors of the Technical Secretariat, and the requested State would not have the right to refuse them. Requests must be kept within the scope of the treaty and must be addressed to a body of the Organization to be determined. Throughout an inspection, the requested State will have the right and the obligation to demonstrate its compliance with the treaty.

The mandate of the inspection team will correspond to the request (in operational terms). To establish the relevant facts, the team will have access to the site(s) it deems necessary. The inspection must be conducted in the least intrusive manner possible. The team must use only those verification methods which are necessary for the establishment of the facts and must refrain from all activities not related to the purpose of its mission. Timeframes for inspections, detailed inspection procedures, and the relationship of the representative of the requesting State to the inspection team and to the requested party are defined in the inspection protocol.

Only especially designated international inspectors may carry out challenge inspections. Procedures for their designation are the same as for inspectors for routine inspections (see chapter VIII). Each party will have the right to refuse individual inspectors during the

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9 CD/734.

10 Negotiations had focused on whether and in which cases inspections must not be refused by the requested party. The USSR, for example, said that there should be no right of refusal when CW were reportedly used, or if a facility had previously been declared (PV.389 (USSR), see also PV.400(Mongolia)).

11 PV.428, PV.429.

12 The development of the negotiations is reflected in: CD/294(USSR), CD/334, CD/342, pp.15-16, CD/343, pp.7-8(USA), CD/416:Annex II, pp.12-14, CD/431(UK), CD/532, pp.3-4(USSR), CD/539:Annex II, pp.22-23, CD/443(China), CD/500 (USA, "open invitation approach"), CD/539, CD/546:Annex, p.2, CD/575, pp.1-2(UK), CD/589, pp.6-7(UK), CD/601(Norway), CD/613, p.6(Yugoslavia), CD/636, CD/664(Pakistan), CD/685(USA), CD/698(Australia), CD/713(Japan), CD/782:Appendix II, pp.2-6, CD/791(Federal Republic of Germany), CD/795, pp.113-117, CD/831, pp.126-129, WP.120(Poland), WP.136(GDR/Poland).

13 CD/952, pp.137-156, 193-198.

designation process. A mechanism to prevent the abuse of this right is provided for in the inspection protocol. Inspection teams for challenge inspections will have a defined size and no national of the requesting, the host, or any other party cited by the requesting party as being involved in the case, will be a member of the team.

The requested party must admit the inspection team and the representative (observer) of the requesting party. It must assist the team during the inspection and facilitate its work. It may point to equipment, documents, and areas it considers sensitive and not related to the CWC, and propose ways and means for the actual conduct of the inspection. The inspection team may consider these proposals if it deems them adequate for its mission ("managed access"). The requested party must ensure that no evidence is "cleaned up" after the notification of the inspection. The TS may send an advance team to verify this and to prepare the inspection. The host party must ensure the arrival, as early as possible, of the advance team and must provide assistance. To verify that no evidence is removed or destroyed, inspectors may patrol the perimeter of the site to be inspected, station personnel at its exits, and inspect any means of transport of the inspected party leaving or entering the site.

As mentioned above, the inspection team will have, in principle, full access to any area and installation at a facility to be inspected. In the exceptional case, however, the requested party may propose alternatives ("alternative measures") to full and comprehensive access to a site and consultations will be held on this subject. What will happen if agreement on proposed alternatives cannot be reached within 24 hours remains to be defined and will be discussed below.

The report of the inspection team will be transmitted to the requesting and the host party, and the EC. The views of the requesting country will be submitted to the EC. The views of the requested, the requesting, and other States, will be conveyed to all other parties. The EC or CSP will meet upon request of any party to review the situation and consider further actions to ensure compliance with the treaty.

The following problems remain to be solved:

1. Preventing the abuse of challenge inspections: The right to request challenge inspections could be abused, for example to embarrass another party (political aims) or to gather intelligence (commercial, military, other purposes). This problem has been mentioned by delegations of all political groups. Several proposals for a solution have been made:

(a) It was proposed to establish a political "filter" through which requests for challenge inspections would be channeled. Abusive requests could be stopped at this point. A "Fact-Finding Panel" for non-refusable inspections[14] was proposed by the United States.[15] This panel would consist of five parties to the Convention: the Soviet Union; the United States; one Socialist; one Western; and one Neutral or Non-Aligned country. It would decide on whether an inspection could be carried out.

The US proposal was criticized by most delegations of all political groups. They argued that every party must have the right to initiate a challenge inspection. In this sense, the proposed panel would be discriminatory. It was also stated that, with such a mechanism,

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[14] Article X of the draft (CD/500). See also part one, chapter III.
[15] CD/500:Annex I, pp.2-3(USA). See also chapter IX.

decisions on requests would be taken on the basis of political criteria. A heavy burden would be put on the Non-Aligned member of the panel. With reference to the composition of the latter and its rules of decision-making, the Neutral or Non-Aligned country may often have the deciding vote.

The present position of the United States is not entirely clear. There were indications that the proposal might be dropped.[16] On the other hand, it still appears as a footnote in the working document on challenge inspections.[17] In September 1989, the head of the US delegation to the CD indicated, however, that it may be withdrawn.[18]

(b) In 1987, the Soviet Union proposed to compensate victims of an abuse.[19] The financial implications of "frivolous" requests would help in deterring them. The Soviet Union did neither define the abuse of the right to request inspections, nor specify the form of compensation. A comparable but more manageable approach could be to let the challenging State pay for an inspection if no violation was proven. A similar mechanism is used under the treaty of Tlatelolco.

(c) It was proposed to withdraw the rights and privileges under the Convention of a party which has abused the right to request inspections. No definition of "abuse" and the responsible body which would take this decision was put forward. This proposal will be discussed below in the context of sanctions.

(d) Challenge inspections could be based on a quota system. Each party would have the right to request a specific number of inspections within a defined period of time (active quota) and would be obliged to receive a defined number of inspections (passive quota). This may restrict the extent of possible abuse.

(e) The United Kingdom introduced the idea, now supported by many delegations, that the requested State may propose, in the exceptional case, alternatives to full and comprehensive access to the site chosen for an inspection. This would provide the parties to the treaty with a limited right to protect very sensitive installations from unnecessarily intrusive inspections or from an abuse of the challenge procedure.

Alternative measures might include partial access, external observation, photography, remote sensing, sampling at the surroundings of a site, automatic sampling inside a facility etc.[20] Some discussion on this subject has taken place, without concrete conclusions. Several delegations[21] remained critical as to the usefulness of alternative measures.

However, more important, there is no consensus on what will happen if the requesting and the requested State do not reach agreement on a proposed alternative(s) within a defined period of time. This may be called the "last word" problem. Several proposals have been made:

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16 E.g. US Ambassador Hansen, in: The Holmenkollen Report on the Chemical Weapons Convention, Flekkefjord 1987.

17 CD/952, p.197.

18 Daily Bulletin of the US Mission to the UN in Geneva, 20 September 1989 (story EU3120920). The relevant part of the statement reads: "We still have formally supported that position, but there does not seem to be much support for our proposal there."

19 The question of liability for damage caused during an inspection (e.g. the loss of confidential commercial information) was discussed in chapter VII.

20 Alternative measures are discussed in: PV.389(USSR), PV.406(USSR), and PV.408(USA). The British proposal (CD/715) which introduced the idea was not very specific on this point.

21 E.g. the United States (PV.408).

(i) One position, mainly held by Western and Socialist countries[22], is to carry out the inspection in accordance with the request and as provided for in the Convention (full access). If only the consent of the requesting State permitted alternative measures, the principle of "mandatory inspections without the right of refusal" would prevail.

(ii) Another position, recorded in the report on consultations during the 1989 session, is that the inspection team must decide.[23] This solution seems to be supported to some extent by China and India[24]. One of the problems may be that the inspection team could be under pressure in such situations and may not arrive at a decision. Leaving the decision to the inspectors may also complicate the process of designating inspectors because each country would try to have the, from its point of view, most favorable persons on the list. The advantages of the proposed procedure are that it would allow for the flexible conduct of inspections and a (limited) protection of very sensitive parts of a facility not related to the CWC. At the same time, the inspection team would have the right to full access to a site. Therefore, the principle of no right of refusal would prevail.

(iii) The third position, held by some countries of the Group of 21[25], is to report the matter to the EC. What the EC would do in this case has not been specified.

Countries supporting the first two proposals fear that, if the EC could decide whether a proposed alternative is adequate or not, this might take the teeth from the challenge procedure. The EC could delay the decision or decide on the basis of political considerations. This would not ensure confidence in the treaty which would be at stake in such situations.

The third proposal has not been included in the report on the consultations in 1989, but is included in the document on the work undertaken from 1987 to 1988 (also attached to the report of the Ad Hoc Committee). Therefore, it is not clear whether it is still valid.

(f) The inspection procedures - most of them are defined in the inspection protocol (see above) could be designed to minimize the risk of abuse ("managed access during inspections"). This refers to issues such as the designation of inspectors, the right of the challenged party to point to sensitive parts of a facility, the right of observers from the requesting party, access to a facility in a graduated fashion on the basis of adequacy, the use of standardized instruments which can only be used for purposes related to the CWC etc.

In addition to formal procedures which may be established, there are two factors which will limit the risk of "frivolous requests".

(a) There is a risk of "retaliation". A party affected by an abuse may request an perhaps also abusive - inspection on the territory of the party which has abused the challenge

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22 E.g. PV.403(USA), PV.429(USSR), PV.446(Netherlands), PV.448(USSR).

23 These proposals ((i) and (ii)) are contained in a working document attached to the report of the Ad Hoc Committee (CD/952, p.198) and read as follows: (a) "the inspection team shall carry out the inspection in accordance with the inspection mandate as it deems necessary", (b) "the inspection team shall take the decision", and (c) "the inspection team shall carry out the inspection in accordance with the guidelines set by the Director-General of the Technical Secretariat".

24 ACR, 28 April 1988, 704.B.282.

25 E.g. PV.432(Pakistan), PV.413(Pakistan), Statement by the Indian Ambassador in: The Holmenkollen Report on the Chemical Weapons Convention, Hegland Trykkeri, Flekkefjord 1987: Royal Norwegian Ministry of Foreign Affairs.

procedure first. Many observers consider this risk the strongest incentive not to abuse challenge inspection.

(b) The reputation of the parties may be another constraining factor in this context. Abusive requests of a party could render cooperation under the treaty as well as elsewhere more difficult and may reduce its benefits derived therefrom.

2. The content of requests: The working documents on challenge inspections discussed above hold that information accompanying a request must be as "precise as possible". Some delegations, mainly those with important NTMs, were concerned that, if they were forced to reveal too much information they had on a suspected violation of the Convention or other ambiguous activities, they might jeopardize their intelligence sources or reveal their methods. The draft provisions agreed to so far state that a request must include information "on the site to be inspected and the matters on which reassurance is required, including the nature of the suspected non-compliance." This provision leaves some room for interpretation and does not necessarily require very detailed and sensitive information from the requesting party. Therefore, the problem does not seem to be very grave.

Another question which has been raised in this context and is still under discussion is whether the identification of the site to be inspected could be made in two steps. The first step would be to request an inspection and identify the country concerned. Upon arrival of the inspectors at the designated point of entry into territory of the party, the site to be inspected would be indicated. This would shorten the time which might be used to "clean up" evidence.

3. Post-inspection procedures: What will happen after the report on a challenge inspection has been submitted to the TS? Who will determine, based on the information collected by the inspectors, whether a violation has occurred: the requesting State, the EC, the CSP, or the inspectors (e.g. in their report)? Two positions on this question exist:

(a) The first position is that issues of compliance relate to national security concerns of individual parties, in particular the party which has requested the inspection. Challenge inspections are regarded as bilateral actions through a multilateral instrument.[26] Consequently, the individual party must determine whether a violation has occurred or not (see also section 9.2). The EC might then meet to assess the situation and recommend appropriate actions.[27] Some Western countries argue that the EC must not meet automatically, but only if the requesting State has decided that a violation has occurred. Some Non-Aligned countries, including India, do not agree with this. They argue that two countries (challenger and challenged) may decide, for political reasons, that no violation has taken place even if this was not true. This may not be in the interest of other parties to the CWC. The view explained in this paragraph is supported by Western and Socialist countries[28], but also by some States of the Group of 21 who seek a high freedom of action for the EC.

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[26] This position was well explained by France (PV.409). It stated that there would be a crisis of confidence between two States and a challenge inspection would be a means to restore confidence. The challenge inspection procedure should therefore be activated between two parties with the assistance of international inspectors. The process should be halted as soon as the requesting party is satisfied with the information obtained.

[27] This view is reflected in the bracketed part of the first working document mentioned above. It states that the requesting party will, to the extent it deems appropriate, notify the EC of the course of action it intends to take under the Convention.

[28] E.g. PV.449(France), PV.457(USA), PV.458(Federal Republic of Germany), PV.459(Belgium), PV.516(USSR).

(b) Violations would affect the Convention as a whole and would be a potential threat to all parties. They must therefore be dealt with by the largest number of parties possible to support and maintain the effectiveness of the regime. Challenge inspections, according to this view, will be a multilateral action initiated by one party. The EC should therefore decide whether a violation has occurred or not. The composition and rules of decision making of the EC would assure that no political group could veto a finding.[29] If the requesting State was not satisfied with the results, it could issue a separate statement or request another inspection. This position is supported by some members of the Group of 21.

Therefore, some delegations seek a less important role for the EC[30] in this context than others.[31]

4. Responding to non-compliance (sanctions): Another outstanding issue concerns the consequences of non-compliance. The question of sanctions which becomes important in this context is equally relevant to routine inspections and other elements of the Convention but will be discussed at this point.

Which actions could be taken if an inspection proves that a State has violated the Convention? How to compel a guilty State to comply with the treaty if it refuses to correct its behavior? The problems involved have become obvious during the Gulf war if one considers the lack of international response to the repeated and evident breaches of the Geneva Protocol (see part one, chapter IV). Millions of dollars would be spent to collect, by the most sophisticated means, information on compliance with the projected Convention, but seemingly in vain if the findings had no consequences.

However, even without concrete sanctions provided for in the treaty, ascertained information on non-compliance would have implications for the party(ies) concerned. States affected by a violation may suspend the Convention with regard to the country they consider a violator. They may retaliate by other means (e.g. conventional weapons)[32] if they were attacked by CW, or they could impose unilateral sanctions. In addition, international pressure of a political nature could be exerted, or the matter could be taken to the Security Council (as provided for in the BWC). Still, many delegations believe that such means might not be sufficient to deter non-compliance. And withdrawals and unilateral reprisals under the treaty would destabilize the regime and would therefore be undesirable.

The issue of sanctions has been mentioned, in general terms, by some delegations. Especially Iran, a victim of repeated use of CW, but also Egypt and Pakistan, have pointed to the need for sanctions under the CWC.[33] Some exploratory discussion on this subject took place during the 1989 session. It resulted in a document[34] which recorded existing positions.

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29 India (ACR, 28 April 1988, 704.B.283) proposed two-thirds majority as the rule of decision making and the following composition: 6 Western, 6 Socialist, 12 Neutral and Non-Aligned countries.

30 The EC will "consider" the question and "recommend" further action to clarify and remedy the situation. The position of the United States that the EC and the CSP must not vote on whether a party is complying with the treaty should be seen in this context. Other countries, e.g. the Federal Republic of Germany(PV.458), did not go that far and stated that the EC should be able to address issues of non-compliance. See also PV.431(GDR), CD/715(UK).

31 The EC will "decide". This proposal was supported, inter alia, by Brazil(PV.460) and China (PV.501).

32 How reservations to the Geneva Protocol claiming the right to retaliate in kind will affect the CWC remains to be considered. If these reservations could be upheld under the CWC, a State concerned may also retaliate with chemical weapons. (This point has been discussed in chapter III and will be treated in detail in chapter XIII.)

33 E.g. PV.425(Iran), PV.404(Iran), PV.482(Pakistan), PV.419(Pakistan), PV.480(Egypt), PV.527(Egypt).

34 CD/952, pp.225-227.

Some delegations, several countries of the Group of 21 among them, stated that sanctions must be provided for under the treaty and be decided upon by the Organization (CSP or EC). Provisions on sanctions could be included in a separate Article or in other Articles of the CWC. Other delegations questioned the feasibility and effectiveness of sanctions in deterring non-compliance.

There was agreement that a provision in the CWC on sanctions, or a failure to implement it, would still permit unilateral sanctions as long as they were within the bounds of international law. A provision on sanctions would not affect the rights and obligations of the UN Security Council. (The latter has the prerogative in this context.) The effectiveness of the Security Council in deciding on and implementing enforcement measures has repeatedly been questioned, however, because the veto-right of its permanent members has, so far, prevented it from playing a crucial role in this context.

Some delegations argued that violations of the treaty would have to be differentiated. There may be minor and major violations. Automatic sanctions could perhaps constitute a response to minor violations (e.g. non-payment of contributions to the Organization). Many delegations believed that the response to major violations would require a political decision and could not be automatic. Hence, the nature of sanctions (mandatory or voluntary) would depend on the specific case.

One of the possible sanctions may be the withdrawal or restriction of certain rights and privileges of a party[35], for example membership in certain bodies of the Organization, the right to request challenge inspections, or the right to have nationals as inspectors. Membership in the Organization would not be affected by this.[36] A similar provision is contained in the statute of the IAEA. It is questionable, however, whether this sanction would be very efficient. First, it may not be able to deter violations. Second, it may lead to a destabilization of the whole regime or at least to controversial and often unproductive discussions. Debates on this question within a number of international organizations have proven to be of little if any use.

If provisions on sanctions were to be built into the treaty, the question of who would establish a violation and its extent would have to be solved. This problem was discussed above. One position is that the Organization must decide on whether a violation has occurred. The opposite position is that each individual party must do so. The latter position might not exclude the establishment of violations of a technical nature which would be automatic and self-evident. It was also proposed that sanctions depend not on the formal establishment of a violation. They could be used by the Organization to enforce its demands, and to ask parties to bring their activities in line with their obligations under the CWC.

The question of sanctions is delicate. None of the proposals just mentioned would provide for any strong collective enforcement measures. Still, the issue may have to be settled in an even less ambitious way, for example by a provision urging States to provide for sanctions in their national legislation.[37] Or, upon the entry into force of the Convention,

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35 There was no agreement on the possibility of sanctions against non-parties.

36 There seems to be agreement that exclusion from the CWC should not be possible.

37 The United States seems to be the first country which is considering concrete sanctions in this context. Two approaches are still under consideration in the legislative process. They are directed against companies involved in such cases, and countries. Efforts to provide for sanctions in national legislation started in the wake of the use of CW in the Gulf-war. One of the problems is that the US administration opposes automatic sanctions because they might limit its freedom of action. It prefers

the parties could make statements indicating sanctions they would apply against parties or/and non-parties which have violated the treaty. For the moment, it seems that, if any provisions on concrete sanctions were to be written into the treaty, they would probably relate only to administrative violations (e.g. non-payment of contributions). Assistance and protection against CW (see chapter XI) would be an additional means to cope with the worst types of violations of the treaty (the use of CW). The principal responsibility for deciding on collective enforcement measures would therefore remain with the UN Security Council.

5. The role of the challenging party and the TS throughout the inspection: This issue has been considered but remains unresolved. It has, for example, been raised the Federal Republic of Germany[38] and involves the following questions: How far would the observer of the challenging party be able to influence the decisions of the inspection team during an inspection? To let the inspection team decide on alternative measures would reduce the influence of the observer. Which would be the competence of the inspection team in determining the details of the inspection? However, it has not even been decided whether there will be an observer of the requesting State. But the Soviet Union and the United States are likely to insist on this.

6. Timeframes: Several timeframes remain to be set. They concern, in particular, the period from a request to the arrival of inspectors at the site, access to the site after the request, the conduct of the inspection, procedures for alternative arrangements, and the submission of the report after the conclusion of the inspection. Further examination of the requirements and the feasibility of specific timeframes will influence the final decisions. It has to be analyzed, for example, whether the proposed timeframes of 12 or 48 hours from the request to the arrival of inspectors at the site to be inspected are realistic. Many specific actions will have to be taken within this rather short period, and several organizational arrangements (inspection teams on call etc.) remain to be established to make specific timeframes operational.

7. Other outstanding issues: Two questions which are being considered in the context of challenge inspections but other parts of the rolling text as well are "jurisdiction and control" and how to deal with situations where a site to be inspected is not on the territory of the requested party. (See chapter II)

As far as the inspection protocol for challenge inspections is concerned, questions such as the size of the inspection team, how to select its members, the operational meaning of several principles, for example "least intrusive manner possible" must be solved. Rules on some of these issues could be included in the manual for the inspectors, to be elaborated by the TS.[39] Another problem is whom the report of an inspection must be sent to or how much of it could be made available to all parties with a view to the sensitivity of the information.

For the moment, challenge inspections belong to the most difficult outstanding questions. The concept of challenge inspections, which is originally a Western idea, is not fully supported by several States. Before 1987, there was little agreement on this issue between

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sanctions which can be implemented at the discretion of the executive. (See, for example, Scheffer, David J., Die Verhinderung der Weiterverbreitung von chemisch-biologischen Waffen sowie Traegerraketen. Amerikanische Gesetzgebung ueber Sanktionen, in: Europa-Archiv, Folge 19/1989, pp.577-587.)

38 WP.191.

39 The GDR (WP.208) submitted a proposal for such a manual.

Socialist and Western countries, and many other States did therefore not need to express their views. After 1987, it became increasingly clear that not only the Socialist countries had been concerned about this verification procedure. Among the others had been and still are several countries of the Group of 21, the most important ones among them, and China[40]. The reasons for their concerns have not been explained in detail. They may include fears of the industry or military establishments, or political concerns about a hostile neighbor.

Most Western countries, on the other hand, do not have concerns of such principal nature. However, they have pointed to specific questions such as the protection of confidential information which may arise in the context of challenge inspections. Negotiations to solve these problems have reached an advanced stage by now (see chapter VII) and they might be easier to cope with than the problems described in the previous paragraph.

Two aspects which merit special attention with regard to future developments are the bilateral talks between the United States and the Soviet Union, and experimental inspections to test the challenge procedure.

The bilateral negotiations have, inter alia, focused on the elaboration of an inspection protocol for challenge inspections. Agreement on some provisions for this protocol has reportedly been reached during the second half of 1989. The results are likely to be submitted to the CD for consideration during the 1990 session (see part one, chapter III). This could provide a strong impetus and lead to further progress on the draft provisions on challenge inspections. Challenge inspections to be carried out in the framework of the bilateral data exchange between the USA and the USSR will provide, at a later stage, an additional impression of how inspections may work under the CWC (see chapter XIV).

Some countries have conducted practical experiments with the challenge procedure. The United Kingdom carried out tests and presented preliminary results to the CD.[41] Other countries plan to do the same (see chapter VII). These trials can help in developing ways and means to solve outstanding issues such as the prevention of the abuse of challenge inspections, "managed access" to a facility, "alternative measures", the protection of confidential information, the definition of a facility to be inspected, sample taking, the role of observers of the requesting party, necessary technical instruments etc. However, efficient work on the question necessitates a clear position of all countries involved in the negotiations, a condition which has not been met so far.

10.2.2 Verification of Allegations of the Use of Chemical Weapons

The use of CW would constitute the most fundamental breach of the Convention. Therefore, allegations of use will be an extremely serious matter and will have to be investigated quickly and properly. Some delegations believe that it is necessary to include in the CWC special provisions for this purpose.

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40 See, for example, the statement by China in the First Committee of the UN General Assembly on 27 October 1989 (official text), or the Daily Bulletin of the US Mission to the UN in Geneva, 20 September 1989 (story EU3120920), PV.501.

41 CD/921.

Canada and Norway[42] proposed an Annex to Article IX containing procedures for the verification of allegations of the use of CW. The proposal is based on research projects carried out by the two countries in this field.[43] The proposed provisions cover: the initiation of an inspection; the inspection team; equipment and supplies; the survey of the allegedly contaminated area; the collection and handling of samples; interviewing; the certification and selection of designated analytical laboratories; the analysis of samples in laboratories; the report of the inspection team; the report of the analysis of samples in designated laboratories; and the elaboration and revision of inspection procedures.[44] Inspections would be announced 48 hours prior to the arrival of the inspectors. The inspectors would have unimpeded access to the site where the use has allegedly occurred. Samples would be collected and interviews conducted. The samples would be analyzed with the help of standardized procedures at two or more designated laboratories. The results obtained by the international inspectors and the laboratories would form the basis for the final judgement.

It remains to be discussed whether such special provisions in the treaty are necessary. On the one hand, regular challenge inspections might be sufficient to investigate allegations of the use of CW. Rules on technical matters which may be unique in this case could be established by the TS (e.g. inspection manuals). On the other hand, it can be argued that allegations of use would be an extremely grave matter and that, compared to regular challenge inspections, stricter and more rapid procedures must apply, perhaps even an automatic initiation of inspections by the TS. However, the need for special provisions on this question depends on the development of negotiations on challenge inspections. As a result, there has been little discussion on the Norwegian/Canadian initiative.

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42 CD/766(Canada/Norway). See also CD/601(Norway), CD/762(Norway), WP.173(Norway/Canada), PV.419(Norway), PV.420(Canada).

43 Several reports on these projects were presented to the CD. They include: CD/311(Norway), CD/396(Norway), CD/397(Norway), CD/508(Norway), CD/509(Norway), CD/598(Norway), CD/600(Norway), CD/601(Norway), CD/677(Canada), CD/702(Norway), CD(703(Norway), CD/704(Norway), CD/761(Norway), CD/762/Norway), CD/770(Canada), CD/776(Norway), CD/813(Norway), CD/857(Norway), CD/861(Norway), CD/936(Norway), CD/940(Norway), WP.257(Canada). See, in particular, the "Handbook for the Investigation of Allegations of the Use of Chemical and Biological Weapons" which was conveyed to the UN Secretary-General by Canada (CD/677).

44 Explanations on the background of the proposed annex are contained in WP.173(Canada/Norway). The document stresses in particular the relationship of the proposed Annex to on-site inspections on challenge, to guidelines for the international inspectorate, and the consistency with other provisions of the rolling text. Some provisions on the verification of allegations of the use of CW and actions to be taken in case of proven use were proposed by Pakistan (CD/664, p.4). See also WP.167:Appendix II, pp.4-6, CD/343, p.8(USA), CD/416:Annex I, p.6, Annex II, pp.20-21, CD/431(UK), CD/601(Norway), CD/636:Appendix II, pp.45-46.

CHAPTER XI

ASSISTANCE AND PROTECTION AGAINST CHEMICAL WEAPONS

The projected CWC will not rid the world of chemical weapons at once. Some parties to the CWC will maintain parts of their CW stockpile (in decreasing quantities) during the 10 year destruction period, and the risk that these CW could be used in violation of the Convention has to be taken into account. Additionally, some States which have a CW capability may remain outside the treaty.

This could have two effects. First, some countries might be reluctant to join the Convention if another State which is of special concern to them (e.g. a hostile neighbor) remains outside the treaty. Second, if a party to the CWC felt that it was being threatened by another State's alleged CW potential, it might withdraw from the treaty. Both effects could become particularly important in regions where tensions exist and some States allegedly possess CW, for example the Middle East.

Therefore, many delegations are of the view that provisions to enhance the security of the parties to the CWC by assisting and protecting them against the use of CW should be included in the treaty. This applies to developing countries in particular. Most experts believe that protection against chemical weapons is, to some extent, feasible with modern masks, protective clothing, and CW detection and de-contamination equipment. But most developing countries do not have this defensive capability. If chemical weapons were to be (again) used in the future, it would probably happen in developing countries precisely for this reason. Provisions on assistance and protection against CW may hence be regarded as a component of the treaty which is to ensure the undiminished security of the parties (see chapter II and V). They would therefore increase the chances of universal adherence to the CWC and may discourage States to acquire or use CW because assistance and protection measures would reduce the military value of these weapons.

Due to disagreement on the scope of assistance and protection to be provided, the Ad Hoc Committee has not yet been able to include draft provisions in the rolling text. Some delegations, especially countries of the Group of 21, demand that the obligation to provide assistance and protection under the CWC be stronger than under the BWC of 1972 or the ENMOD Convention of 1977. As different from the types of weapons covered by these treaties, CW have repeatedly been used on the battlefield and the risk subsists. The position of those countries is reflected in proposals by Pakistan and Argentina.[1] Western and,

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[1] Pakistan (CD/752, PV.409, PV.482) submitted a proposal on assistance to States threatened by the CW capability of another State. The proposal includes provisions on: international cooperation and assistance in the development of a protective capability by States whose security might be threatened; the dissemination of scientific and technical knowledge on the protection against CW; and the investigation of the threat, including on-site inspections. Pakistan also proposed that the EC maintain a permanent stockpile of protective equipment or make use of such equipment provided by the parties. The proposal by Argentina (CD/809, PV.446, PV.428) contains a detailed list of types of assistance to be provided, a discussion of the basic criteria to govern the provision of assistance, and procedures to be initiated in specific cases of use or threat of use of CW.

occasionally, Socialist countries, on the other hand, tend to emphasize the voluntary nature of assistance and protection.

A document attached to the report of the Ad Hoc Committee reflects the present status of negotiations.[2] Its content and the outstanding issues can be summarized as follows:

1. Principles and scope of the Article: Article X of the rolling text will contain provisions for assistance and protection against CW. This will contribute to the undiminished security of the parties to the treaty. Assistance and protection could include the provision to the parties of protective and detection equipment, alarm systems, decontamination equipment, medical antidotes and treatments, advice on protective measures etc.[3] It seems to be agreed that nothing in the CWC must affect the right of the parties to conduct research into, develop, produce, acquire, transfer or use means of protection against CW for purposes not prohibited by the CWC.

The nature of assistance to be provided remains to be discussed (see below). Some States, especially some countries of the Group of 21, are seeking a substantial obligation to cooperate in this context, perhaps even automatic assistance and protection in certain cases. Others prefer to state that nothing in the treaty must be interpreted as in any way impeding the right of the parties to exchange equipment, material, and scientific and technological information on protection against CW. This reflects the view that the provision of assistance and protection must be voluntary.

2. Assistance and protection: There is disagreement on the core of the Article, namely the provision of assistance and protection. A report on the negotiations on this subject during the 1988 session[4] contained two alternative proposals. They were merged into one during the 1989 session. It is heavily bracketed, however, and does not indicate any progress. The following issues are of particular importance:

(a) Conditions for requesting assistance and protection: Under which circumstances could a party request assistance and protection? One position is, that each party must have the right to request and receive assistance and protection from the Organization and from the other parties against the use or threat of use of CW. This proposal is supported by members of the Group of 21.[5]

Another proposal is that each party will have the right to request from other parties protection against CW, and from the Organization assistance in this regard, if it considers that CW have been used against it, or if it faces actions by a State which are prohibited by the CWC. Most Western countries and some other delegations support this proposal. They fear that the provisions of the first proposal might lend themselves to easy abuse for political purposes because a "threat" is difficult to define. Delegations supporting the first proposal, on the other hand, argue that already a perceived threat may have negative consequences for the treaty and may keep a State outside the Convention or cause a withdrawal. The problem of threats must therefore, according to their view, be taken into account.

(b) The nature of assistance and protection: The most controversial issue is the nature of assistance and protection. To what extent could the parties to the CWC be obliged to

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2 CD/952, pp.199-201.
3 Argentina indicated some forms of assistance which would be needed (CD/809).
4 CD/881.
5 E.g. CD/752, PV.409(Pakistan), CD/809, PV.446(Argentina).

provide assistance and protection upon request and what kind of assistance and protection should be provided? The positions on this question are still far apart. Some delegations, mainly countries of the Group of 21, hold that mandatory and substantial assistance must be provided. Others, especially Western and, on some occasions, Socialist States, stress its voluntary nature. These views are reflected in the following proposals:

It was proposed that each party provide assistance. It may therefore contribute to a voluntary fund for assistance, or conclude agreements with the Organization on the procurement, upon demand, of medical aid, medical treatment, protection equipment, services and technical advice.[6] Or it may declare, in advance, the kind of assistance and protection it would provide in response to an appeal by the Organization. Two proposals which emphasize the mandatory character of assistance but are not included in the document attached to the report of the Ad Hoc Committee are: assistance must be provided automatically in case of an attack by chemical weapons[7]; the EC could maintain a permanent stockpile of protective equipment or make use of such equipment provided by a party to the CWC.[8]

It was also proposed that the parties provide assistance to the extent they deem appropriate. This emphasizes the voluntary character of assistance.[9]

How strong the obligation to provide assistance and protection will finally be depends not least on the type of assistance and protection. Medical support or the creation of a fund for assistance, for example, might be easier to agree upon than the provision of sensitive (perhaps secret) protection or detection equipment.

(c) Decision-making on the provision of assistance and protection, and the role of the Organization: According to the tentatively agreed parts of the document mentioned, requests for assistance and protection must be addressed to the Director-General of the TS. He will inform the EC and all parties about the request and will initiate an investigation. The latter will establish facts concerning the request and may indicate the appropriate type and scope of assistance. It will be carried out according to procedures yet to be developed. If sufficient proof exists that there are victims of CW use and immediate action is indispensable, emergency measures will be applied.

Except for the procedures mentioned, there is no agreement on how to take decisions on the provision of assistance. This is due to the dispute over the extent of obligations to be established by the Article, and disagreement on the role to be played by the Organization. The role of the Organization is emphasized by delegations which regard the projected CWC as a collective security system. In this system, the provision of assistance and protection would be an issue concerning all parties.[10] Other States which prefer a voluntary nature of assistance seek a minimal involvement of the Organization.

Therefore, it is not agreed whether the investigation by the TS (see above) would provide the background for actions by the Organization, or by the parties. The same question also

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6 Such a provision is included in the proposal by Pakistan (CD/752, PV.482). The Soviet Union expressed some support for such an arrangement (PV.473).

7 E.g. PV.453(Iran).

8 CD/752, p.6(Pakistan).

9 The voluntary character of assistance was stressed in the draft convention submitted by the United States. It holds that each party will provide assistance to the "extent it deems appropriate" (CD/500, p.11) if the UN Security Council decided that a party has been exposed to danger as a result of a violation of the CWC.

10 E.g. PV.459(India).

relates to emergency assistance to victims of a CW attack, a proposal to prepare and put at the disposal of the TS first-aid kits, and actions by the TS. The role of the EC in deciding on the provision of assistance is another outstanding issue. Also, the role of the United Nations remains to be defined. The UN Security Council has the prerogative as far as mechanisms of collective security are concerned. It is therefore important to draw up provisions on assistance and protection with due regard to this. It was proposed that the UN Security Council be informed of a request for assistance. It is conceivable that, if CW were used outside the territories of the parties to the CWC, the TS could conduct an investigation in cooperation with the Secretary-General of the UN. The relation between investigations by the TS, procedures provided for in Article IX (see chapter X), and other investigation procedures (e.g. under the auspices of the United Nations, see part one, chapter IV) remains to be discussed.

Agreement on substantial and mandatory not to speak of automatic provision of assistance and protection against CW does not seem to be within reach. The only strong supporters of this solution are some countries of the Group of 21. One of the possible outcomes may be less controversial forms of mandatory assistance (e.g. medical) in case of established use of CW. Another possibility which enjoys some support by countries of all political groups is the creation of a fund which would be available for the procurement of medical aid, and perhaps protective equipment, under defined circumstances. Agreement on assistance for the purpose of developing CW protection programmes (proposed, inter alia, by Argentina) is very unlikely regarding the sensitivity of the issue. Another option, proposed by Egypt[11], is to revive the role of the UN Security Council in the field of disarmament. The Security Council could express positive security guarantees (e.g. the provision of assistance in case of an attack with CW). This would emphasize its prerogative in the field of collective security. But it is questionable whether the permanent members of the Security Council would be willing to do so and in what form (see the discussion on security assurances for non-nuclear weapons States).

Finally, one has to keep the political realities in mind. There are military alliances, hostile relationships between countries, and regional tensions. If the parties were obliged to provide substantial assistance and protection, this could result in difficult situations. It is, for example, questionable whether country A would provide assistance and protection to a hostile neighbor (B) because B is threatened or even attacked with CW by an alliance partner of A.

3. Services by the TS: It seems to be agreed that the TS will establish and maintain a data base for use by any party. The data base will contain freely available information on protection measures against CW and information which may be provided by the parties. The TS will, within the resources available and upon request, provide experts for advice and assistance in identifying how to implement national programmes for the development and improvement of protective capacities against CW. However, there is no agreement on the extent of obligations to be established in this context.

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[11] PV.459.

CHAPTER XII

ECONOMIC AND TECHNOLOGICAL DEVELOPMENT

Some countries of the Group of 21 argue that the CWC must be "non-discriminatory" from a political, military, economic, and technical viewpoint.[1]

Non-discrimination of a political or military nature relates, inter alia, to the order of destruction of CW and CWPF (see chapter V and VI), and equal rights and obligations under the treaty. The latter implies, for example, that reservations to the Geneva Protocol must not be upheld under the CWC (see chapter XIII). Another aspect of non-discrimination is an effective system of verification providing each party on an equal basis with the necessary information about the behavior of other parties.

The demand for economic and technological non-discrimination under the treaty reflects the fear that the CWC could hinder the transfer to developing countries of chemicals, equipment, and technology for peaceful purposes. (The controversy over export controls was discussed in part one, chapter IV.) Unnecessary restrictions in this context may even be contrary to the preamble of the rolling text which holds that achievements in chemistry must exclusively be used for the benefit of mankind.

Several regional powers which are developing a chemical industry (e.g. Argentina, Brazil, India[2], or China) have been at the forefront of the debate on economic and technological non-discrimination. They argue that, to create confidence and to motivate certain States to join the Convention, its provisions must, in addition to limiting undue interference with peaceful activities in the chemical industry, promote active cooperation in this field.

A number of arms control and disarmament treaties as well as draft conventions for the CWC submitted by delegations contain clauses of this kind.[3] Most of them are of a declaratory nature. More detailed and binding provisions have been included in the NPT, with limited success or even negative impact on the transfer of technology as many members of the Group of 21 argue.

Detailed discussion on proposals for an Article on economic and technological development started in 1987, but it has been impossible, so far, to include draft provisions in the rolling text. Some delegations, the United States in particular[4], hold the view that such an Article may not be necessary because the issue is not related to disarmament. They argue that the question of cooperation in the peaceful use of chemistry is already regulated by other international agreements and institutions.

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1 E.g. PV.428, PV.446(Argentina).

2 E.g. PV.460(Brazil), PV.486(Brazil), PV.446(Argentina), PV.459(India), PV.392(India).

3 Articles IV and V of the NPT, Article X of the BWC, Article III of the ENMOD Convention. Draft conventions submitted by the delegations: CCD/361, p.4(Socialist countries), CCD/400, p.1(Non-Aligned countries), CCD/420, p.5(Japan), CCD/512, p.8(UK), CD/294(USSR).

4 The United States did not include such a provision in its draft convention of 1984 (CD/500). The head of the US delegations to the CD stated that the CWC should not include a "chemical welfare bill" (Daily Bulletin of the US Mission to the UN in Geneva, 20 September 1989 (story EU3120920).

A document attached to the report of the Ad Hoc Committee reflects the present status of work.[5] Parts of the proposed draft provisions are based on the corresponding provisions in the BWC (Article X) and the final declaration of the second BWC review conference, others on a working paper submitted by Brazil[6]. The proposed provisions consist of two components.

The first component states that the provisions of the CWC must be implemented so as to avoid, as far as possible, the hampering of economic or technological development of the parties to the treaty, and of international co-operation for peaceful purposes. Peaceful purposes include the international exchange of scientific and technical information, and of chemicals and equipment for the production, processing, or use of chemicals for purposes not prohibited by the treaty. The parties will have the right to conduct research with, develop, produce, acquire, retain, transfer, and use chemicals for these purposes.

The second component holds that the parties will facilitate and have the right to participate in the fullest possible exchange of chemicals and equipment and scientific and technical information for permitted purposes. They will not impose any restrictions which could impede the development and promotion of scientific and technological knowledge in the field of chemistry. These provisions will be without prejudice to the generally recognized principles and applicable rules of international law concerning peaceful chemical activities.[7]

No understanding exists on the key terms used in the proposed provisions, and therefore no clear picture of the obligations of the parties. Many Western countries[8] have shown little interest in provisions for the active promotion of cooperation under the treaty (the second component). Moreover, the majority of these countries believe that cooperation should be promoted by special agreements and not by a disarmament treaty. The position of the Socialist countries seems to be rather flexible. The Soviet Union[9], for example, suggested that the Article provide for the possibility to conclude voluntary bi- or multilateral agreements.

However, it was recognized by most delegations that an Article on economic and technological development was necessary. One of the possible solutions envisaged is that export controls for chemicals and equipment for their production and processing could be reduced or even abolished among the parties to the treaty. This would provide an incentive

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5 CD/952, p.203.

6 WP.176. The document submitted by Brazil constitutes, so far, the only formal proposal on this issue. It is based on the view that a CWC should include provisions which would guarantee the unfettered development of the chemical industry for peaceful purposes with due attention to the needs of the developing countries.

7 Brazil (WP.176, PV.432) proposed provisions which, in its view, would foster the development of the chemical industry for peaceful purposes and the transfer of technology in this domain with due regard to developing countries. It stated that the Convention should recognize the right to have access to world-wide technological developments in chemistry, and provide for measures designed to meet the specific need of States whose chemical industry was still in the early stage of development. Compliance with such obligations should be verified under the treaty. Peru argued that such provisions would install a link between disarmament and development (WP.157).

8 E.g. PV.457(USA).

9 PV.473. In its proposal on the basic provisions of the CWC (CD/294, p.4), the USSR put forward the following wording: "The Convention shall facilitate the creation of favorable conditions for the economic and technical development of the Parties and for international cooperation in the field of peaceful chemical activities. The possibility of interference with areas of activity unrelated to the purposes of the Convention shall be precluded."

to join the treaty and would probably be welcomed by developing countries as well as the chemical industry.

CHAPTER XIII

FINAL CLAUSES OF THE CONVENTION

13.1 The Relation of the Convention to Other International Agreements

The relation of the CWC to other international agreements has been discussed to some extent in chapter I on the preamble and chapter II on the scope of the Convention. The CWC will widen the scope of two existing treaties, the BWC of 1972[1], and Geneva Protocol of 1925. This will lead to a comprehensive ban on chemical and biological weapons. It is therefore important to close potential loopholes in this context.

Provisions on the relationship between the CWC and other international agreements have been included in all draft conventions submitted by the delegations. Most of these provisions are very similar.[2] This has resulted in a small paragraph included in Article XII of the rolling text. It holds that nothing in the Convention shall be interpreted as in any way impairing the obligations assumed under the Geneva Protocol of 1925 and the BWC of 1972.

However, there is no agreement on the substance of the relationship between the Geneva Protocol and the projected CWC. The following positions were recorded in a document attached to the report of the Ad Hoc Committee[3]:

(a) Some delegations[4] stated that an Article on the relation of the CWC to international agreements was not needed. They argued that the general rules of international law and the Vienna Convention on the Law of Treaties would apply. (If there is no special Article on this issue, only the preamble of the CWC will mention the Geneva Protocol.)

(b) Others proposed that a specific reference to other international agreements such as the Geneva Protocol and the BWC be made. They believed that the preamble and the provisions of Article XII included in the rolling text so far (see above) were adequate.

(c) Some delegations preferred a general reference to other agreements as well.

(d) It was also proposed to combine the two possibilities just mentioned (reference to both specific and other, unnamed, agreements).

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1 Article IX of the BWC explicitly establishes a link between the projected CWC and the BWC.
2 CCD/361, p.3(Socialist countries), CCD/420, p.5(Japan), CCD/512, p.8(UK), CD/294, p.9(USSR), CD/500, p.12(USA).
3 CD/952, p.208.
4 E.g. PV.471(Canada), PV.481(Sweden), PV.482(Pakistan), PV.503(Egypt).

In addition, the following provisions have been proposed[5]:

(a) The United States[6] proposed to state that each party to the CWC which is also a party to the Geneva Protocol affirms that the obligation which bans the use of CW in any armed conflict (Article I of the US draft convention) supplements its obligations assumed under the Protocol.

(b) The Convention shall not affect the rights and obligations of the parties which arise from other agreements compatible with the Convention.

(c) None of the provisions in the Convention shall suspend or modify the commitments of the parties pursuant to other international instruments related to the Convention.

The seemingly small differences in the wording of the proposed provisions all point to the same problem: how will reservations to the Geneva Protocol be affected by the projected Convention; and how far could interpretations of the Geneva Protocol, concerning in particular the use of irritant agents and herbicides in armed conflict, be upheld under the CWC. (See chapter II and chapter III) The problem of reservations to the Geneva Protocol will be explained in more detail at this point.

A considerable number of countries have attached reservations to the Geneva Protocol.[7] Two types of reservations have been expressed: many States have reserved themselves the right to retaliate (proportionally) in-kind if they were attacked by CW; most of them have also stated that they regarded the Protocol as binding only among the parties to it. What will happen to these reservations once the CWC enters into force? The first type of reservation is particularly important in this context.

Some countries, the United States and France[8] among them, prefer to uphold their reservation under the CWC, at least during the destruction period. They believe that the right to retaliate in-kind would act as a deterrent against the possible use of CW by a party (in violation of the CWC) or by a non-party. It would therefore ensure their "undiminished security" (see chapter II and V).

It is self-explanatory that only countries which presently possess CW or which intend to keep the option of producing or acquiring them before the CWC enters into force may be interested in upholding their reservation. (One of the questions which arises in this context, but cannot be discussed here, is how existing CW could be used to retaliate in-kind if they were to be under permanent international surveillance as currently envisaged.[9]) After the destruction period, reservations claiming the right to retaliate in-kind would not make much sense. There would hardly be any CW left if one assumes that all significant CW possessors and CW-capable States will join the treaty[10].

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5 CD/952, p.208.

6 CD/500, p.12, CD/952, p.208.

7 See United Nations, Status of Multilateral Arms Regulation and Disarmament Agreements, Third Edition 1987, New York 1988: United Nations.

8 See part one, chapter IV.

9 France therefore proposed to keep a hidden stockpile of CW (see part one, chapter IV, part two, chapter V).

10 This issue has to be addressed when setting the conditions for the entry into force of the treaty. It will be discussed below.

Countries preferring to uphold their reservation believe that this right is implied in the proposed provisions stating that nothing shall detract from the rights and obligations assumed under the Geneva Protocol (i.e. also the right to retaliate in kind).

The opposite position, supported by the majority of delegations of all political groups, is that, according to the Vienna Convention on the Law of Treaties, the CWC would supersede the Geneva Protocol (principle of "lex posterior"[11]). The reservations to the Protocol would therefore cease to exist once the CWC enters into force. Delegations supporting this view argue that the clear and unambiguous ban on the use of CW, expressed in Article I of the rolling text, does not allow for such reservations. They would undermine the very purpose of the treaty, which is to render any use of CW impossible. Upholding the reservations would, in addition, create unequal rights under the CWC and would therefore be discriminatory.

The position of the Socialist countries, the Soviet Union in particular, is not very clear. It seems to depend on the position of the United States. If the latter insisted on upholding its reservation, the Soviet Union would probably do the same. This reflects the fact that the principle of "undiminished security" is perceived by both powers as a predominantly bilateral problem (see chapter II and V).

Another question which remains to be considered arises in the context of a possible withdrawal of a party from the Convention, if this right is to be provided for. Will a party which withdraws from the CWC still be bound by the Geneva Protocol? If this is the case, will the reservation(s) which a party has attached to the Protocol earlier be effective again or will the Protocol without reservation(s) apply?

There is agreement that a party which withdraws from the Convention will still be bound by the rules of the Geneva Protocol, not least since the provisions contained therein have, according to the prevailing view, become part of customary international law. But there is no consensus on the reservations. Most of the countries preferring to uphold, under the CWC, their reservation(s) to the Geneva Protocol are in favor of the renewed effectiveness of the reservations after withdrawal from the Convention. Delegations which argue that the CWC will supersede the Protocol hold that the latter will be effective again, but without previous reservations.

13.2 Amendments to the Convention

No provisions on amendments to the CWC have been included in the rolling text so far. A document attached to the report of the Ad Hoc Committee reflects the status of negotiations and the different positions[12].

There is an understanding that any party to the CWC may, in accordance with agreed procedures, propose amendments to the treaty. It is also understood that this right might be limited by other provisions of the Article on Amendments. The provisions would not affect special amendment procedures provided for elsewhere in the Convention. Proposed amendments would be discussed at the next session of the CSP, or if a two-thirds majority

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[11] Article 30 and 59 in particular.
[12] CD/952, pp.205-206.

of the parties requests so, at a special session of the CSP. The appropriate forum is still under discussion.

The major part of Article XIII on amendments remains to be considered.

1. Limits of the right to amend the treaty: Some delegations hold that amendments to certain provisions of the CWC must be excluded. Article I (general scope of the treaty), Article IV (especially the destruction of CW), and Article V (particularly the destruction of CWPF) were mentioned in this context. Another limitation may be to establish a specific "immunity" period during which no amendments, or no amendments to certain provisions, must be made.[13] The 10 year destruction period was mentioned in this context because it would constitute a particularly critical phase. It has also been proposed that, if the parties still wish to amend the treaty during this period, a conference of the parties must unanimously adopt a proposed amendment. It would enter into force only after ratification by all parties present and voting at the conference.

2. A differentiated amendment mechanism: The majority of delegations believe that a differentiated amendment mechanism is necessary to take into account the special character of various provisions of the CWC. Certain provisions could be subject to more rigid amendment procedures than others. Therefore, specific requirements concerning the adoption or entry into force of an amendment to defined provisions will have to be established (e.g. unanimous agreement, qualified majority, or simple majority, or all original parties).

The Annexes to the rolling text include provisions on a large number of technical details. They may have to be amended from time to time as a result of new technological developments. The lists of chemicals are an example. Special amendment procedures may therefore have to be established. Some provisions on this question are contained in the Annex on Chemicals which was explained in chapter VII. However, it remains to be further discussed which provisions must be subject to strict amendment procedures and which ones could be amended in a simplified manner.

3. The adoption of amendments: Several decision-making rules for the adoption of amendments have been proposed. The include 3/4, 4/5 or 9/10 of all parties to the CWC, or (alternatively) only of those present and voting.

4. The entry into force of amendments: The entry into force of amendments is the most controversial issue to be solved. One position is that amendments must, regardless of the type of procedure for their adoption, enter into force for all parties at the same time. Different requirements such as ratification by all parties, by a qualified majority, by a simple majority, or by the original parties, and specific requirements with regard to individual provisions might be used for this purpose. This implies that an amendment may also enter into force for a party which has not ratified. The opposite position is that an amendment must only enter into force for a party if the latter has ratified or accepted the amendment. This view is reflected in draft conventions submitted by the delegations, and in other multilateral arms control and disarmament agreements.[14] However, one of the problems of this solution would be that a multi-legal system might emerge (some rights and obligations only for certain parties).

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[13] E.g. PV.490(Peru).

[14] CCD/361, p.4(Socialist countries), CCD/420, p.6(Japan), CCD/512, p.9(UK), CD/500, p.12(USA). Article VI of the ENMOD Convention, Article XI of the BWC, Article VII.2 of the NPT.

5. Institutional questions: Several questions relating to the bodies of the Organization to be involved in the amendment process remain to be addressed. Proposals for amendments will probably have to be addressed to the depositary of the CWC. They will be discussed in a regular or special session of the CSP. Whether review conferences would constitute an appropriate forum to discuss and take decisions on proposals for an amendment has to be considered.

13.3 Duration of and Withdrawal from the Convention

The only provision for this Article included in the rolling text so far states that the withdrawal of a party from the CWC shall not in any way affect its duty of fulfilling the obligations assumed under the relevant rules of international law, particularly the Geneva Protocol of 1925.

The results of negotiations on this question are expressed in a document attached to the report of the Ad Hoc Committee[15].

1. Duration of the treaty: There seems to be general agreement that the treaty must be of unlimited duration. Notwithstanding, it has also been proposed to link the duration to performance under the Convention, in particular the destruction of CW and CWPF. The obligations deriving from the provisions of the treaty would cease to exist if, after 90 days of the end of the destruction period, the CSP was not in a position to declare that all CW had been destroyed.

2. The right of withdrawal: Many delegations are of the view that it must be possible to withdraw from the Convention or to suspend its application with regard to individual parties, but that strict regulations and limitations must apply. Many arms control and disarmament agreements allow for the withdrawal of a party or the suspension of the treaty if the supreme interests of the party were jeopardized. However, there are different views on how or whether to express this right in the CWC.

(a) Some delegations have stated that the CWC must prohibit withdrawal from the Convention.

(b) Others have said that the right of withdrawal must not be exercised within a fixed, comparatively long period of time (10 year destruction period or other).

(c) Others again have argued that the right of withdrawal must depend on extraordinary circumstances. (Those may include grave violations of the treaty affecting the party concerned, the acquisition of CW by a hostile neighbor which may be a non-party[16].) This position has, for example, been taken by countries of the Socialist Group[17] the United States[18], and the United Kingdom[19]. A similar provision is included in Article XIII of the BWC. The circumstances of withdrawal might be differentiated according to their urgency,

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15 CD/952, pp.209-211.

16 This implies that acts which do not constitute a violation of the treaty could be a reason to withdraw.

17 CCD/361, p.4.

18 CD/500, p.12. The provisions on the right of withdrawal included in the US draft convention are mentioned in the document as an alternative to all other proposed provisions on withdrawal.

19 CD/715, p.5.

and different periods for withdrawal could thus be granted. The Federal Republic of Germany[20], for example, proposed a differentiated right of withdrawal relating to violations of specific provisions of the CWC.

(d) It has been proposed that any party may withdraw from the Convention at any time with few formalities, if any.

(e) It has been stated that no reference to the right of withdrawal should be made in the CWC.

(f) The possibility of writing a "pause" into the treaty has been discussed. "Pause" means that there would be the option to withdraw from the CWC at a certain time after its entry into force (4, 5 or 8 years have been mentioned), or to suspend the implementation of some provisions of the treaty (e.g. the destruction of CW). The parties could, at this point, review the CWC and continue cooperation or "duck out".[21] The Soviet Union has indicated its opposition to such a "get out arrangement".[22] The proposal for a pause has mainly been related to the order of destruction of CW and CWPF (see chapter V and VI).[23]

The following procedures for withdrawal have been proposed. Agreement on them depends, of course, on the form in which the right of withdrawal will be expressed in the treaty, or whether this right will be provided for. The depositary of the Convention, the UN Security Council, and the EC must be notified of a withdrawal, including a statement on the reasons. An investigation of the reasons may be undertaken and an appropriate body of the Organization would act within its competence to remedy the situation. The CSP may hold a special session. The period after which the withdrawal would become effective remains to be discussed.[24] Several timeframes for different reasons and circumstances of withdrawal could be defined. It was also proposed that the withdrawing party be not discharged from financial or other obligations which have accrued while being a party.

13.4 Other Final Clauses

The major part of the other final clauses of the CWC, including the signature of the treaty, its ratification, accession to it, the deposit of instruments of ratification or accession, the entry into force of the CWC, and languages, remains to be agreed. This applies to the structure of the provisions as well. It was, for example proposed that all provisions mentioned, except for languages, be included in one Article. So far, however, separate Articles have been established for signature (XV), ratification (XVI), accession (XVII), the deposit of instruments of ratification or accession (XVIII), the entry into force of the treaty (XIX), and languages (XX).

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20 CD/496, pp.2-3.

21 ACR, 13 March 1989, 704.B.377.

22 ACR, 24 April 1989, 704.B.384.11.

23 The United States proposed to destroy the remaining 2 % of CW stockpiles only if all CW-capable States have signed the treaty. This may not allow withdrawal from the treaty altogether but would install a pause in the implementation of the destruction of CW, one of the major obligations under the treaty.

24 The United States (CD/500, p.12), for example, proposed a period of 3 months after all parties, the depositary of the treaty, and the UN Security Council have been notified by the withdrawing party.

13.4.1 Signature, Ratification and Accession

There is an understanding that the CWC will be open for signature to all States and may be ratified by the signatories according to their constitutional procedures. It remains to be discussed whether the treaty will be open for signature until its entry into force or indefinitely. If the former is to apply, States willing to join the CWC after its entry into force will have to accede to it.

13.4.2 Deposit of Instruments of Ratification or Accession

The UN Secretary-General is likely to be designated as the depository of the Convention. The need for special provisions on his duties in this context may have to be discussed. Some proposals on this subject as well as the registration of the treaty pursuant to Article 102 of the UN Charter have been included in a document attached to the report of the Ad Hoc Committee.[25]

13.4.3 Entry into Force of the Convention

There is agreement that the provisions on the entry into force must ensure the widest possible adherence of States to the treaty. It is likely that 60 ratifications will be required for the entry into force[26], but it remains to be decided whether additional conditions should be set.[27] The UK[28], for example, proposed that the ratification of 60 States including all countries which have publicly declared their possession of CW be required. It has also been proposed that the ratification of all CW-possessors or (alternatively) all CW-capable States be required. The latter was supported by the United States. The US has modified its position, however, and now proposes that the remaining 2 % of CW stockpiles be destroyed only after all CW-capable countries have signed the treaty.[29] How CW-capable States could be identified remains unclear and may be difficult to agree upon. The production of Schedule 2 chemicals (see chapter VII) was mentioned as a possibility. The US proposal was criticized by most delegations for the reason just mentioned and because it might create a loophole for States which would like to possess CW. Moreover, it might lead to uncertainty about the total elimination of stocks and might therefore motivate some States not to join the treaty.

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25 CD/952, p.212.

26 Before, the Soviet Union preferred 40 to 50 ratifications because it was concerned about having all NATO and WTO States join the treaty. It believed that the Neutral and Non-Aligned countries could be brought under the regime later, if necessary.

27 The NPT, for example, required the ratification of the three nuclear powers which were involved in the negotiations (USA, USSR, UK) and 40 others. The ratification by the three countries mentioned and 22 others was required for the BWC.

28 CD/769, p.2.

29 This condition was, according to the United States, set to motivate countries to join the treaty, and to guarantee legislative approval.

Another issue which remains to be addressed is how to integrate in the regime CW possessors which join the treaty at a later stage (if the treaty could enter into force without them).

An additional means of ensuring the widest possible adherence to the treaty may be to hold an international conference for the opening for signature of the Convention instead of submitting the draft to the UN General Assembly for adoption. In 1988, Yugoslavia[30] put forward a proposal to this end. It has been supported by some countries of the Group of 21.[31] Such a conference, open to all potential signatories of the treaty, is believed to be an appropriate forum to consider and adopt the final draft and promote it on a universal level.

Some countries[32] have stated that the negotiations on the CWC must be open to non-members of the CD as well, and that they might be reluctant to join a treaty in the elaboration of which they have not participated. In 1989, the CD has granted observer status to 28 non-member States, including most countries which allegedly have a CW capability. Observers cannot take part in the decision-making process (see part one, chapter I) and some of their concerns may therefore not be adequately reflected in the draft Convention. But this risk seems to be limited. It is likely that there would be CD members with similar interests which could take care of particular concerns of non-members.

Assuring the widest possible adherence to the treaty becomes particularly important in the regional context. It is likely that there will be a number of key countries[33] on whom signature and ratification by other States depends. In some cases, it may even be necessary that all or the most significant States of a region join the CWC more or less simultaneously.[34] Therefore, and in connection to what has been said in the preceding paragraph, it is indispensable that all relevant countries participate in the negotiations, if only as observers.

The intention of some Arab countries, first expressed at the Paris Conference in January 1989 (see part one, chapter IV), to link chemical and nuclear disarmament has caused great concern in this context. These countries have stated that they may not join the projected CWC as long as Israel possesses nuclear weapons. They have implicitly considered CW as a means of deterrence and retaliation against nuclear weapons, something most experts question. If this position were to be upheld, it could seriously affect the future regime, especially since several alleged CW-possessors are located in this region. It may, however, not prevent the entry into force of the treaty.

13.4.4 Languages and Authentic Texts

It has been proposed that the editions of the treaty in the six official languages of the United Nations[35] be equally authentic.[36]

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30 It was made at SSOD III in 1988 (PV.466).
31 E.g. Yugoslavia (PV.466) and Egypt (PV.480, PV.503).
32 E.g. Iraq and Syria at the Paris Conference of January 1989 (see part one, chapter IV, ACR, 13 January 199, 704.B.338.1).
33 E.g. India and Pakistan, Brazil and Argentina, Israel and some Arab States etc.
34 This issue was commented on by Egypt (PV.480, PV.503).
35 They include Arabic, Chinese, English, French, Russian, and Spanish.
36 CD/952, p.212.

13.4.5 Reservations

Several delegations have stated that the right to express reservations to the CWC should not be provided for. Neither the NPT nor the ENMOD Convention or the BWC contain such a provision. The right to express reservations would therefore be governed by general customary law or by the Vienna Convention on the Law of Treaties. Other proposals are to prohibit reservations explicitly[37], or, on the other hand, to permit them only with regard to certain provisions of the CWC as long as they are compatible with its scope and purpose.[38] It has been noted that due attention must be paid to interpretative statements which could have the character of reservations.

13.4.6 Status of the Annexes

There is no agreement on whether a separate Article on the status of the Annexes to the CWC is needed. If needed, the corresponding provision may state that the Annexes (individually mentioned) form an integral part of the treaty.

13.4.7 The Settlement of Disputes

In 1988 and 1989, the possibility of including in the CWC a provision on the settlement of disputes was discussed in the Ad Hoc Committee. Such a provision is contained in the treaty of Tlatelolco[39], the Antarctic Treaty of 1959[40], and the Treaty of Rarotonga[41] of 1985, but not in the BWC, the ENMOD Convention, or the NPT. The provision in the treaty of Tlatelolco states that, unless the parties concerned agree to another mode of peaceful settlement, any question or dispute relating to the interpretation or application of the treaty which cannot be settled will be referred to the International Court of Justice with the prior consent of the relevant parties.

Several delegations support a special article in the CWC on this issue or at least some provisions. Others have argued that the consideration of this question is premature because other provisions of the draft treaty should be established before. This applies in particular to those on the Organization (see chapter IX) and its possible role in dispute settlement. If, however, the inclusion of a provision on the settlement of disputes is agreed to in principle, the disputes to be covered (e.g. only disputes not related to compliance?) would have to be defined.

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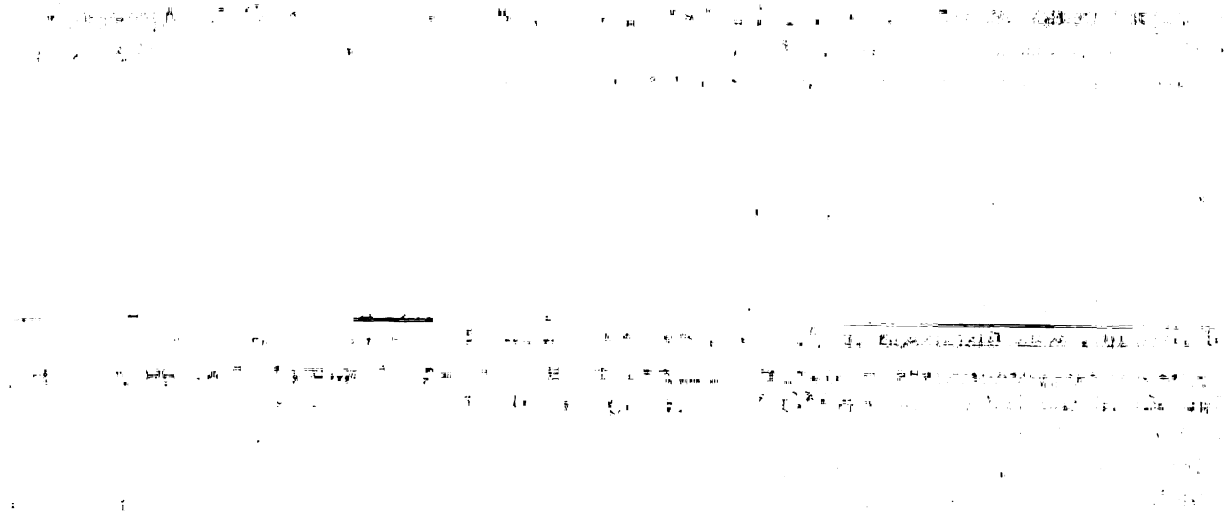
37 Such a provision is contained in the treaty of Tlatelolco (Article 27).

38 Sweden (PV.506) stated that reservations concerning the scope of the treaty must not be possible, and reservations regarding the "use of CW" must be explicitly banned. The latter refers to the relation of the CWC to other international agreements, the Geneva Protocol in particular (see 13.1).

39 Article 24.

40 Article XI.2.

41 Annex 4 (complaint procedure).



CHAPTER XIV

VISITS AND EXCHANGES OF DATA

Several visits to CW storage, destruction, training and research facilities, and exchanges of data have been proposed or have taken place. Such voluntary activities before the conclusion of the CWC have become an important and integral part of the negotiating process[1] and serve as CBMs.

14.1 Visits to CW Storage, Destruction or Training Facilities, and to CW Defence Research Establishments

Several international visits to CW storage, destruction or training facilities, and to CW defence research establishments have taken place. One of them, the visit to the Shikhany facility (USSR) in 1987 was mentioned in part one of this report. The USSR submitted a document[2] to the CD describing the presentation during the visit of standard chemical munitions and of technology for the destruction of CW at a mobile unit. It stated, on several occasions, that it would invite CD delegations to its CW destruction facility at Chapayevsk as soon as operations begin. However, the Soviet Union has in the meantime announced that the Chapayevsk facility will not be used for the destruction of CW (see part one, chapter IV).

In 1983, the United States tabled a working paper on the verification of CW destruction. The document described the "Chemical Agent Munitions Disposal System" (CAMDS) operating at the Tooele Army Depot in Utah.[3] The United States invited delegations to the CD to visit this facility (a large proportion of the US CW stockpile is located there) and attend a workshop on the destruction of CW and its verification.[4] It invited a Soviet delegation (the USSR had not participated in the previous visit) to visit the Tooele Army Depot from 18 to 21 November 1987. Subsequently, it submitted a working paper[5] on the information presented to the visitors, including details of actual weapons making.

In 1979, some CD delegations visited the former British CW pilot plant at Nancekuke.[6] On 30 June 1988, a British delegation visited the Brunkovo training base for Soviet chemical troops, and, from 30 June to 4 July 1988, the Shikhany facility. From 24 to 26 April 1988, a Soviet delegation visited the Porton Down facility in the UK as part of the regular British-Soviet exchanges of technical visits which the British government had

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1 Visits and exchanges of data before 1979 are described in the Annex to this report and are not mentioned in this chapter.
2 CD/789, PV.436.
3 CD/387.
4 CD/419.
5 CD/830.
6 CD/15, PV.458.

proposed in 1986.[7] The Porton Down facility carries out research on defence and protection against CW.

Soviet military experts paid a visit to a CW destruction facility near Münster (Federal Republic of Germany). Some CD delegations had visited this facility in 1984.[8] It is used to destroy old and obsolete CW which stem from the two World Wars and are still being discovered.

In April 1985, CD delegations visited the Swiss AC (atomic, chemical) Defence Research Establishment in Spiez, and, in January 1989, a Soviet delegation was invited to the CW Defence Research Establishment at Suffield, Alberta, Canada.[9]

14.2 Exchanges of Other Information Relevant to the Negotiations

Only the United States and the Soviet Union have officially declared their possession of chemical weapons. A considerable number of other countries allegedly have these weapons in their military arsenals or are planning to produce them.

In 1987, the USSR declared, for the first time, that it possessed chemical weapons and that the aggregate size of its CW stock was approximately 50'000 agent tons. It announced that it had stopped producing CW in 1987, and that it had no CW outside its borders. It indicated that it had started to build a CW destruction plant at Chapayevsk.[10]

The United States, on the other hand, stopped the production of CW in 1969, but has resumed manufacturing in 1987. Although much is known about its CW stockpile from public sources[11], the United States has not declared the aggregate size of its arsenal. But it has indicated that its stock is smaller than the Soviet one.[12] The US stockpile is estimated at approximately 30'000 agent tons.[13] However, the United States has provided detailed information on the location of its CW production, destruction, and storage facilities, the weapons in its stockpile, including binary CW, the percentage of its total stockpile located at each declared site, and the US destruction programme for CW.[14]

The Soviet Union stated that the declaration of the aggregate size of CW stockpiles was important whereas the United States stressed the need to declare the location of stockpiles.[15]

First exchanges of data on the industrial production of chemicals relevant to the projected CWC occurred in the CD in 1983 and 1984. The United Kingdom raised the issue and

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7 FBIS-WE, 25 May, 27 May 1988, Tass, 27 May 1988, in: FBIS-SU, 27 May 1988, Tass, 23 May 1988, in: FBIS-SU, 25 May 1988, Washington Times, 6 May 1988, Foreign Office (UK) Arms Control and Disarmament Quarterly Review, October 1987.

8 CD/518.

9 Edmonton Journal, 26 January 1989, ACR, 30 January 1989, 704.B.366-367.

10 CD/751, CD/790, PV.394, see part one, chapter III and IV of the report.

11 See the compilation of information on the CW arsenals of the Soviet Union and the United States in the Chemical Weapons Convention Bulletin, No.2 (Autumn 1988, US CW) and No.4 (May 1989, Soviet CW).

12 Daily Bulletin of the US Mission to the UN in Geneva, 25 September 1989 (story EU1060925).

13 Chemical Weapons Convention Bulletin, No 2 (Autumn 1988), pp.12-18.

14 CD/849, CD/711, PV.369, PV.403, CD/830, PV.458, PV.469, PV.500.

15 E.g. PV.448(USSR), PV.448(USA).

submitted information on its production of certain key precursors for civil use.[16] This was to facilitate an assessment of which compounds could be included in the list of key-precursors, and to create confidence. Several countries including, for example, Denmark[17], Australia[18], and Spain[19], submitted some data and the UK[20] summarized them in a working paper. The document indicated the number of companies per country which were producing key precursors for super-toxic lethal chemicals.

Discussions on a systematic multilateral exchange of data relevant to the negotiations took place in 1988 and 1989. In 1988, the USSR[21] submitted a memorandum on this question and presented the information required under its proposal[22]. It stated that the proposed exchange of data would facilitate the practical resolution of verification issues, and create confidence. It proposed that, as an act of good will, every State participating in the negotiations submit in the first half of 1988 information on CW stockpiles, CWPF, and past transfers to other States or acquisitions of CW, or of technology or equipment for their production. Information on the number of CW storage and production facilities, the number of laboratories and research institutions active in this field, and the commercial production of key precursors and dual-purpose chemicals could be exchanged at a later stage.

The Federal Republic of Germany[23] submitted, on behalf of a group of Western countries[24], another proposal for a multilateral data exchange. It proposed to exchange data defined in the proposal on a voluntary basis and prior to the signing of the CWC. The annex to the proposal listed the information to be provided and the reasons why information on particular aspects was necessary. It stated that the data would help in assessing the extent of verification activities relating to CW stockpiles. The aggregate number of facilities for the production and storage of CW, and facilities producing or consuming chemicals included in Schedules 1, 2 or 3 in excess of a defined quantity, would be required to determine the approximate number of inspections to be carried out, the size of the international inspectorate, and the financial implications of verification. Information on types and names of CWA, munitions, and chemicals included in one of the three Schedules would indicate the equipment needed for verification, and the resulting costs. Information on plans and method of CW destruction, the number of facilities involved, and the anticipated length of the destruction process would facilitate an assessment of the practicability of the destruction process as currently envisaged.

The data required under the two proposals differ. Western countries prefered more detailed data, including information on the industrial production of chemicals listed in the Schedules. The Soviet Union, on the other hand, proposed to submit such data only during the second phase of the exchange and focused on information directly related to CW. In general terms, the Soviet Union proposed to exchange data which it had already provided.[25] It has indicated, however, that it would take a flexible position.[26] At the time of writing this

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16 CD/353:Annex.
17 CD/537.
18 CD/541:Annex.
19 CD/585.
20 WP.86.
21 CD/808, PV.441, PV.458, PV.460, PV.473.
22 PV.448.
23 CD/828, PV.457, PV.474. See also PV.458(UK), PV.474(UK).
24 France has reportedly not supported the proposal (PV.449).
25 It declared that the size of its CW stockpile was approximately 50'000 agent tons; that it had no CW on the territory of another State; that it had CWPF; that it had not transferred to another State CW technology or CW; and that it had, since 1.1.1946, not received any such technology or CW.
26 PV.473.

report, it is preparing to submit the data required under the proposal by the Federal Republic of Germany.[27]

A considerable number of countries have put forward data in the context of this data exchange, and on other occasions. Many States have declared that they do not possess CW.[28] Countries which have submitted other data as well include, for example, Australia[29], Austria[30], Bulgaria[31], Czechoslovakia[32], the Federal Republic of Germany[33], the GDR[34], Hungary[35], Indonesia[36], Italy[37] Japan[38], the Netherlands[39], Norway[40], Poland[41], and the UK[42]. The provision of accurate industrial data is not always easy. In Western countries, for example, there are often no laws by which a government could force private enterprises to declare certain data on the production of chemicals. This information is usually provided on a voluntary basis (e.g. by associations of the chemical industry) and is not always complete.

In September 1989, the United States and the Soviet Union signed a memorandum of understanding on a bilateral verification experiment and data exchange.[43] (The text of the memorandum is attached to this research report.) This memorandum will be implemented in two steps.

During phase one, general data on CW capabilities will be exchanged (the exchange took place in Washington on 29 December 1989[44]), and visits to a number of CW storage and production facilities as well as two industrial chemical production facilities will be undertaken.[45] The sites will be chosen by the host country. The visits are to start in June 1990.

During the second phase, the two countries will exchange more detailed data on CW capabilities. To verify the accuracy of the information, on-site inspections will be carried out. The second phase will begin as soon as both countries jointly and formally agree that the projected CWC could be initialed within four months. Prior to the initialing of the treaty, up to five inspections of CW storage and production facilities will be carried out. The sites will be chosen from a list established by the country which is to receive the inspection. Up to ten challenge inspections of undeclared sites (with some limitations) can

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27 PV.531.
28 See part one, chapter IV.
29 CD/907 (based on CD/828). This document also includes information on the Australian CW Defence Research Establishment.
30 WP.238, PV.457.
31 PV.457.
32 WP.261, CD/949 (based on CD/808 and some provisions of CD/828).
33 WP.207, PV.474.
34 CD/871 (includes information on the production, processing and consumption of chemicals included in Schedules 1, 2, and 3.
35 PV.437, PV.452.
36 PV.466.
37 WP.220 (based on CD/828).
38 PV.475.
39 WP.203.
40 WP.221 (based on CD/828).
41 PV.457.
42 CD/856, PV.474. The United Kingdom (WP.206) also submitted detailed information on its past production of CW from 1938 to 1956. It stopped production of CW in 1956.
43 Signed during a meeting of the US Secretary of State and the Soviet Foreign Minister at Jackson Hole, Wyoming, on 22-23 September 1989.
44 ACDA press release.
45 The United States did not want to reveal specifics on its CW in the Federal Republic of Germany. Therefore, the initial exchange of information will not include locations with less that 2 % of the total stockpile.

be requested by each country. Five out of the ten may be undertaken within four months before the initialing of the CWC, the remaining five afterwards.[46] The inspections will be carried out according to the provisions of the rolling text (with some modifications due to their bilateral character).

These inspections may, for example, help in clarifying allegations that the Soviet CW stockpile is much larger than 50'000 tons, the figure given by the Soviet Union. It will be noted that the United States has recently scaled its estimates of the Soviet CW stockpile almost down to the figure declared by the Soviet Union.[47] The inspections under the bilateral memorandum may not indicate, however, whether the Soviet Union has, in contrast to what it declared, CW on the territory of some of its allies.

The two countries also agreed to reciprocal visits to monitor their CW destruction operations and to exchange information on past, current and planned destruction activities and procedures.[48]

The US-Soviet agreement was the result of intensified bilateral consultations on the exchange of data. In October 1987, the USSR had proposed a verifiable exchange of data between the two countries on their CW arsenals before signing the Convention. Some Western countries had demanded this for a long time.[49] The Soviet Union had proposed that a first phase of the process be implemented during the final stage of the negotiations on the CWC. The information to be provided would include the size of stockpiles and the number and location of CW storage and production facilities. The second stage would include the provision of more detailed data. During this stage, each side could carry out on-site inspections at three facilities of its choice, and any three undeclared facilities, upon request, if there were suspicions.[50]

Visits and exchanges of data may have three effects:

First, they may facilitate the elaboration of a time-table for the destruction of CW and an estimate of costs, and resources and methods necessary to verify compliance with the CWC (see chapter VII and IX).

Second, they may facilitate the early and effective functioning of the CWC because much of the information which could be exchanged already prior to signature will have to be made available very soon after the agreement has entered into force.

Third, these activities may create confidence and are therefore of outstanding importance for the negotiations. The CW domain has, so far, been one of the most secretive military matters and suspicions have often prevailed over factual and substantive discussion. There is consensus that total (100%) verification of compliance with the CWC is not feasible. Therefore, every country which becomes a party to the Convention must accept a certain risk (violation of the Convention by another State, abuse of verification procedures, loss of intellectual property during verification activities etc.). Verification procedures, the order of

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46 US State Department Fact Sheet, in: ACR, 22-23 September 1989, 704.B.384.42.
47 ACR, 7 November 1989, 704.B.410.
48 A/C.1/44/2 (USA/USSR).
49 Press release of the Soviet Mission to the UN in New York, 13 October 1987. It will be noted that the United States has proposed to declare, when signing the CWC, whether CW or CWPF are under the control of a party anywhere or located within its territory (CD/500:Annex III, p.11).
50 E.g. FBIS-SU, 12 November 1987.

destruction, and other provisions, must be designed to ensure the highest possible degree of security for all parties. Which degree of security and which level of risk is acceptable, however, must be determined by each individual country. At this point, confidence in the behavior of other States is crucial. If confidence is high, a State may be willing to accept a higher risk. Visits and exchanges of data may therefore speed up the work on the draft treaty and may permit the countries involved to accept a higher degree of uncertainty by leaving the resolution of some questions to practice, i.e. the implementation of the treaty.

CHAPTER XV

THE SITUATION AT THE END OF 1989: A SUMMARY

At the time of writing this report, the basic framework and the general scope of the projected comprehensive ban on chemical weapons seemed to be well established. The treaty will prohibit the development, production, acquisition by other means, stockpiling, retention, transfer, and use of chemical weapons, and will provide for the destruction of existing CW stockpiles and production facilities within ten years. After challenges to the proposed timing for a total ban on the production of CW, first by France and subsequently by the United States (part one, chapter III and IV), agreement appeared to emerge that the production of CW must be stopped once the treaty enters into force.

The question of the relationship between the CW Convention and the 1925 Geneva Protocol which prohibits the use of chemical weapons was not solved (part two, chapter XIII). On joining the Protocol, more than 40 States have reserved themselves the right to retaliate with chemical weapons if they were attacked by such means. A few countries claim that this reservation could be upheld even after the CW Convention has entered into force. Others argue that such a reservation would undermine the very purpose of the treaty, which is to render any use of CW impossible.

It was practically agreed that existing CW stockpiles and production facilities will have to be declared within 30 days after the treaty has entered into force, and will be placed under permanent international surveillance until they are destroyed. Only France remained opposed to an early declaration of the location of stockpiles (part two, chapter IV).

A multilateral exchange of data, on a voluntary basis, was already under way, even though the treaty had not yet been concluded. The purpose of the exchange was to facilitate the development of verification procedures, and to serve as a confidence building measure. The Soviet Union and the United States agreed bilaterally on a separate data exchange and verification experiment, including challenge inspections. Only these two countries have declared their possession of CW, whereas several other States allegedly possess such weapons, too. (See part two, chapter XIV)

The draft provisions for the destruction of CW stockpiles and production facilities, and the verification of compliance with these obligations, were largely agreed to (part two, chapter V and VI). The only major outstanding issue was the order of destruction. In 1989, the United States and the Soviet Union moved closer to an agreement on this question. The United States proposed a bilateral accord on the destruction of 80% of US-Soviet stockpiles even before the entry into force of the multilateral treaty; 98% of the stockpiles would be destroyed within eight years after the entry into force of the Convention if the Soviet Union joined the treaty; the rest, according to the US proposal, would be destroyed if all CW-capable countries had signed the Convention. The principle of levelling out all CW stockpiles within five to eight years after the entry into force of the multilateral treaty seemed to be accepted by the majority of delegations to the CD.

The most complex part of the projected treaty, which still remained to be worked on, was how to verify the non-production of chemical weapons (part two, chapter VII). The basic structure of the "non-production regime" - consisting of lists of chemicals posing a risk to the objectives of the convention, and of specific verification procedures applied to each list - seemed to be approved.

Concerns about the protection of confidential commercial and other information during verification activities, expressed especially by Western countries, were in part responsible for the slowing down of the pace of negotiations. Whereas experimental inspections on a national level helped in assessing the practicability of verification procedures, mechanisms to protect confidential information were developed.

The regimes of declarations and verification measures for facilities producing or consuming the listed chemicals remained to be further elaborated. This concerned in particular chemicals produced and consumed in the chemical industry in moderate to very large quantities. One of the problems was how to avoid undue intrusiveness which would interfere with peaceful activities in the chemical industry.

Although the basic concept for challenge inspections enjoyed wide support by countries of all political groups, the concrete provisions for such inspections were still incomplete (part two, chapter X). The main problem was whether challenge inspections could be requested and carried out "anytime", "anywhere" on the territory of any party, and without the right of refusal. To prevent the abuse of these inspections for political or other purposes, special procedures were planned to be devised.

Additional (ad hoc) verification procedures to supplement the system of routine and challenge inspections were examined but no agreement was reached. (Part two, chapter VII)

The structure of the Organization to be set up for the purpose of implementing the CW Convention was already quite well defined (part two, chapter IX). The Organization is to consist of a "Conference of the States Parties" an "Executive Council". and a "Technical Secretariat". The most important of the outstanding issues were the composition of the Executive Council and the decision-making rules for this body.

No consensus existed on the question of assistance to be provided to States attacked or threatened to be attacked with chemical weapons. (Part two, chapter XI)

As regards the use of chemicals for peaceful purposes, industrialized countries were reluctant to enter into any firm obligation to transfer technology under the CW Convention. (Part two, chapter XII)

The question of how to respond to violations of the treaty was raised by several countries but the issue remained controversial. (Part two, chapter X)

Means to ensure the widest possible adherence to the treaty were discussed (problem of universality). It was recognized that this question will have to be solved by setting the conditions for the entry into force of the CW Convention (part two, chapter XIII), and by taking into consideration the concerns of all participants in the negotiations when elaborating the provisions of the agreement.

Although a series of important matters remained to be solved, the year 1989 brought some positive developments. At the Paris Conference in January 1989, all States expressed their full support for a comprehensive ban on CW, and, at the Canberra Conference in

September 1989, the world-wide chemical industry endorsed the idea. The United States and the Soviet Union appeared to be moving close to a mutual understanding with regard to the CW Convention. One of the crucial questions for 1990 will be whether, and if so how, this bilateral process is conducive to the multilateral negotiations. (Part one, chapter III)

POSTSCRIPT

After the manuscript of this research report had been sent to the printers, the report of the Ad Hoc Committee containing the results of inter-sessional consultations was released.[1] Progress on the following issues was made.

The Inspection Protocol: The Ad Hoc Committee spent most of the time working on and expanding the inspection protocol a first version of which had been elaborated during the 1989 session. This protocol has now a length of more than 30 pages and is well structured and very detailed. However, many questions remain to be addressed, especially the level of detail necessary, the overlaps with verification provisions included in other annexes to the rolling text (particularly the annexes to Articles IV, V, and VI), the status of the protocol, and the modalities for its revision. The new version of the protocol consists of a general part, a part for routine inspections pursuant to Articles IV, V, and VI, a part for challenge inspections, and a part for inspections in case of allegations of the use of CW. (Compare with part two, chapters IX and X)

Challenge Inspections: The consultations on this question continued and a document, containing the results of the 1989 session, was modified. Although the major stumbling blocks were not removed, the different positions and proposals were clarified. The concepts of "managed access" and "alternative measures" and their relationship, were discussed. The part of the inspection protocol which contains provisions on the conduct of challenge inspections now gives a better view of what "managed access" means. Also, the role of the observer of the requesting State and the possibility of extending the site(s) to be inspected were treated, and the different positions regarding post-inspection procedures were clarified. (Compare with part two, chapter X)

The production of Schedule 1 chemicals: The provisions for the regime for Schedule 1 chemicals were revised and were almost agreed. Up to 10 kg of Schedule 1 chemicals may be produced for protective purposes at one facility outside the SSSPF. Production of 100 g to 10 kg per year and facility for research, medical or pharmaceutical purposes will also be allowed outside the SSSPF (no limit on the number of facilities). Both types of facilities must be approved by the State-party concerned. Up to 100 g per year of Schedule 1 chemicals may be synthesized by laboratories outside the SSSPF for research, medical or pharmaceutical purposes, but not for protective purposes. The modalities remain to be agreed. The verification provisions for the SSSPF and for facilities or laboratories producing Schedule 1 chemicals outside the SSSPF were slightly improved. (Compare with part two, section 7.1)

The text concerning **modalities for the revision of the Schedules and Guidelines** was further elaborated. The role, in this regard, of the Scientific Advisory Board (see below) was

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[1] CD/961, 1 February 1990. See also the statement of France in the plenary meeting of the CD on 13 February 1990.

addressed. Several important problems, especially the rules of decision-making, were not solved. (Compare with part two, chapter VII)

The Scientific Advisory Board: A short paragraph on a Scientific Advisory Board was included in Article VIII (Organization). This subsidiary body, to be established by the Director-General of the TS upon the direction of the CSP, will provide independent advice on technical questions to the TS, the EC, the CSP, and the parties. The terms of reference for the Board will be set when the CWC has entered into force. (Compare with part two, chapter IX)

Final clauses of the CWC: Wording for some of the final clauses was added or slightly changed, but the main problems were not solved. The duration of and terms for withdrawal from the treaty were clarified and more text was added. It seemed to be agreed that, in principle, each State-party could withdraw from the treaty if its supreme interests were jeopardized. Provisions on the depositary of the CWC and his duties, and the languages of the treaty were elaborated. Moreover, the presentation of the provision on the relation of the CWC to other international agreements was improved. (Compare with part two, chapter XIII)

Instrumentation: The Ad Hoc Committee's technical group on instrumentation submitted a report (WP.272) which contained an inventory of technical means and procedures necessary to implement the treaty. The report also indicated questions to be further examined. (Compare with part two, chapter IX)

Declarations: France withdrew its reservation concerning the early declaration of locations of CW stockpiles. (Compare with part two, chapters IV and V)

In addition to the multilateral developments mentioned, the following **agreement between the United States and the Soviet Union** was reached during the Moscow meeting of US Secretary of State Baker and Soviet Foreign Minister Shevardnadze (7 to 9 February 1990):[2]

The two States expressed their commitment to the negotiations on a multilateral ban on CW. However, they will work on a bilateral agreement pending the multilateral Convention. The bilateral agreement will provide for the destruction of the "bulk of their CW stocks to equal low levels" The objective is to conclude this agreement at the June 1990 summit meeting of the two countries. Together with this accord, a programme of cooperation on technology and procedures for the safe, expeditious, and economically and environmentally sound destruction of CW will be established. This will help the Soviet Union which does, at present, not possess any destruction capacity for CW.

After the entry into force of the multilateral treaty, "the sides" will further reduce their stockpiles "to equal levels at a very small fraction of their present holdings over the first eight years" The rest will be eliminated during the remaining two years. There was no agreement on the condition, proposed by the United States, that the remaining stocks be destroyed only after all CW-capable States have joined the treaty.

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[2] US-Soviet joint statement, Moscow, 10 February 1990. (Press Bulletin of the Soviet Mission to the UN in Geneva, 13 February 1990, Daily Bulletin of the US Mission to the UN in Geneva, 14 February 1990)

The production of CW will have to cease once the CW Convention enters into force. The United States withdrew its informal proposal to allow the continuation of production even after the entry into force of the treaty. No agreement existed on a Soviet proposal to stop the production of CW and withdraw reservations to the Geneva Protocol once the bilateral agreement enters into force. (Compare with part one, chapter III)

ANNEXES

ANNEX I

THE NEGOTIATIONS ON CHEMICAL WEAPONS IN THE ENDC, CCD, and CD from 1968 to 1979

CONTENTS

INTRODUCTION

Part two of this research report focuses on more recent developments in the negotiations on the projected CWC but takes into account some of the earlier positions and proposals to the extent that this may facilitate the understanding of the present status of work. Major developments in the negotiations have also been described in general terms in part one of the report.

This Annex supplements the information contained in these two parts. It provides a short summary concerning issues on which negotiations concentrated from 1968 to 1979. It includes detailed references.[1] It may be of use to persons who are engaged in historically oriented research on the negotiations or are simply interested in finding out what was said on particular issues at an earlier stage. The reader of the following chapters will note that some of the questions referred to have remained important until today.

Major proposals submitted in the ENDC, CCD, or CD from 1968 to 1979 will briefly be described. Whenever possible, we have tried to summarize the positions of the principal countries or groups of countries which participated in the negotiations. We have not covered developments related to the conclusion of the BWC. They were explained to some extent in part one, chapter III of the report.

The negotiations on chemical weapons from 1968 to 1979 were not very systematic. There was no special working group to deal with this subject. No joint draft text on which efforts could concentrate and where agreements and disagreements could be recorded existed until 1984. One may even say that there were no negotiations in the narrow sense of the term, but only discussions to clarify some of the basic issues and to prepare concrete negotiations. It is therefore difficult to assess agreements and disagreements as the following chapters will show.

In writing this summary, the author was able to build on a compilation of material which had been prepared in 1979 by the Secretariat of the Committee on Disarmament.[2]

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1 References to "CCD/PV.(number)" are indicated only as "PV.(number)". "CD/PV.(number)" are referred to as such.

2 CD/26. The compilation was prepared by Dr. Johan Lundin.

1. THE SITUATION AS OF 1979: A SUMMARY

The following summary outlines the situation as of 1979 and sketches, in a tentative way, the main points of agreement and disagreement concerning the principal negotiating issues. Many of the agreements referred to below were only very preliminary and not binding on any delegation. Additionally, the term agreement does not necessarily imply that every delegation had given its consent (many delegations did not express their views).

1.1 Scope of the Projected Convention

In 1979, the United States and the Soviet Union reached agreement that the CWC should be comprehensive in its coverage. It would prohibit the development, production, stockpiling, acquisition by other means, possession, retention, and transfer of CW, and the assistance, encouragement or inducement of others in this context. It would provide for the destruction of defined CWA, CW stockpiles and production facilities, or for their diversion to permitted purposes. Other delegations to the CD seemed to approve the bilateral proposal. This put an end to a long debate on whether the treaty was to be comprehensive or whether a partial ban could be concluded as a first step.

Whether or how to prohibit testing and planning for chemical warfare purposes remained unresolved. The same applied to the use of CW. The latter referred to the question of how the Convention would relate to the Geneva Protocol of 1925, and how reservations to the Protocol would be affected by the CWC (see part two, chapter XIII). A few delegations sought to uphold under the CWC their reservation to the Protocol claiming the right to retaliate in-kind. Most other delegations were opposed.

There was preliminary agreement that activities and objects to be prohibited by the CWC should be identified on the basis of their general purpose and the toxicity criterion. The toxicity criterion would supplement the general purpose criterion and help in defining CWA and other chemicals the production of which would have to be monitored. It was proposed to ban the development, production, stockpiling, acquisition by other means, possession, or retention of super-toxic lethal chemicals, other lethal or highly toxic chemicals or their precursors, with the exception of chemicals intended for permitted purposes and of types and in quantities appropriate for these purposes. Additional criteria were proposed but not agreed. One example was an "evaluation number" system proposed by the Federal Republic of Germany. Under this approach, the suitability of chemicals for CW purposes would be assessed. This would be done on the basis of their toxicity as well as other characteristics such as volatility or explosion stability. The option of listing relevant chemicals, perhaps in an annex to the treaty, was not mentioned in the joint report by the United States and the USSR (7 August 1979) but remained under consideration. This approach was advocated especially by Japan.

In 1979, the United States and the Soviet Union agreed to specific categories of chemicals to be covered by the treaty, including toxicity values to delimitate them. The general purpose criterion would apply to each of these categories. There was tentative agreement that the substances would comprise super-toxic lethal, other lethal, and highly toxic but not necessarily lethal chemicals (incapacitants). The precursors for these chemicals (also precursors for binary CW) would be included as well. There was agreement that the

objects to be prohibited by a comprehensive treaty would include CW, CW production facilities, and munitions and other means of chemical warfare. However, no agreement existed on a number of key terms (e.g. the term chemical weapon and CW production facility). Agreement on the definition of CW was partly blocked by the controversy over whether or how to cover irritant agents and herbicides.

There was agreement that dual-purpose chemicals produced or consumed for non-hostile purposes would not be prohibited altogether. But there was no consensus on how to determine which types and quantities of chemicals or other objects under which circumstances would be permitted or prohibited under the Convention. How to monitor their production and consumption to verify the non-production of CW was far from being solved. However, it was recognized that different degrees of prohibition and limitation should apply to chemicals and other items which were of varying relevance to the objectives of the CWC. Therefore, the means of verification would be differentiated. The transformation of this general concept into concrete provisions was only achieved at the beginning of the 1980s (see part two, chapter VII).

There was preliminary agreement that permitted activities would include civilian industrial production, peaceful scientific and medical research, domestic law enforcement, development and testing of means of protection against CW, and military purposes not related to chemical warfare. Agents and munitions used for smoke dissemination, and missile and torpedo fuel would not be prohibited.

In 1979, the United States and the Soviet Union agreed that each party to the treaty would have to destroy CW stockpiles and production facilities or convert them to permitted purposes within ten years after the entry into force of the treaty. Production facilities would be shut down and would eventually be destroyed or dismantled. This would start not later than eight years and be completed not later than 10 years after the entry into force of the treaty. Provisions on the timetable for destruction remained to be elaborated. There was disagreement on whether some of the prohibited objects, for example CW production facilities, could be converted to peaceful use or would have to be destroyed.

The United States and the Soviet Union agreed that declarations of CW stockpiles and production facilities would have to be made immediately after the entry into force of the CWC. The parties would submit plans for the destruction of their CW stockpiles and production facilities. The contents and timing of these declarations remained to be determined.

1.2 Verification and Institutions

There was no agreement on whether national or international means of verification of compliance should dominate. Western countries stressed the importance of international procedures. Socialist countries were of the view that national measures (self-surveillance and "national technical means") and some limited (and ill-defined) international procedures would suffice. The Non-Aligned countries did not take a clear position and supported a combination of national and international procedures without going into details (except for Sweden).

In 1979, the United States and the Soviet Union agreed that a consultative committee should be established. A proposal for such a committee had been submitted by the United

Kingdom at an earlier stage. The committee would be open to all parties and would have a permanent secretariat. Because of the different positions on verification, there was disagreement on the functions of this committee. It was proposed that it serve to exchange among the parties data and other information and help in implementing the treaty. It could also establish the state of affairs in case of complaints or suspicions about compliance with the agreement. A preparatory committee could be established upon signature of the CWC.

There was strong disagreement on the question of mandatory international on-site inspections to verify compliance with the treaty. Socialist countries were only willing to consider international on-site inspections as a non-mandatory verification technique (any inspection could be refused by the State concerned). The United States and most other Western countries, on the other hand, insisted on mandatory on-site inspections. They argued that such means were necessary to verify the destruction of CW, to monitor "moth-balled" CW production facilities, and to verify the non-production of CW in facilities producing or consuming dual-purpose chemicals. However, some countries, particularly Western ones, noted that routine checks on a large scale in the civil chemical industry might be impracticable. Optional inspections by challenge, i.e. upon request by a party or by an international organization, might suffice.

There was tentative agreement that production and consumption data for chemicals, including precursors for CW, would have to be exchanged. Some countries stated that exchanges of data could start before the treaty entered into force. Socialist countries, on the other hand, stated that they would not accept any obligations before the entry into force of the treaty.

Procedures to monitor or verify particular activities to be covered by the CWC were examined. The debate on verification of compliance with the ban on development and production of CW remained inconclusive. Some potential for agreement on verification of the destruction of CW stockpiles and production facilities existed but no concrete results were achieved.

As a response to concerns about the intrusiveness of on-site inspections (e.g. the risk of losing secret commercial or military information or the abuse of inspections for purposes not related to the treaty), non-intrusive verification techniques were discussed and their utility for the verification of specific activities was assessed. The discussion did not lead to a common view.

The USA and USSR proposed that national means of verification consistent with generally accepted principles of international law (e.g. satellite monitoring) be not impeded.

1.3 Other Provisions

Several proposals for other provisions of the projected treaty were made, notably its final clauses. They were not discussed in much detail. It was proposed to hold review conferences at defined intervals. Some Non-Aligned countries stated that disarmament savings should be used for development purposes. But some other countries, especially Western ones, argued that chemical disarmament might cost more than it would save. It was proposed to provide assistance to victims of a CW attack.

The duration of and withdrawal from the treaty were considered as well. It was proposed that each party be able to withdraw from the treaty if its supreme interests were threatened. The conditions for the entry into force of the CWC were discussed. A defined number of ratifications and the ratification by specific countries of groups of countries might be required.

There was agreement that many of the technical questions could be dealt with in annexes to the treaty.

1.4 Confidence Building Measures

It was proposed to exchange information on: existing CW; protection measures against CW; and the destruction of CW. Other data relevant to the negotiations, for example on the production of certain chemicals for peaceful purposes, could be exchanged as well. However, actual cooperation was only limited. A few technical exchange visits took place and were discussed in the CCD(CD). It was recognized that, in addition to their confidence building value, such exchanges could also have a practical side. They might help in designing effective provisions for the CWC.

1.5 Conclusion

Many delegations to the CD, especially Non-Aligned[3] and some Western ones, were of the view that, after the presentation of the joint report by the United States and the Soviet Union in August 1979, time was ripe to establish an ad hoc working group to commence with more systematic work. This would include negotiations on a joint draft convention. The United States and the Soviet Union as well as most other Socialist countries first opposed the establishment of such a group. However, the latter was set up during the 1980 session. From that date on, negotiations were intensified and the structure of a joint preliminary draft treaty was agreed to in 1984. This facilitated the negotiations. It became possible to record concrete results and lock them in, and many delegations were now under pressure to express their preferences more clearly than before.

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[3] CD/11.

2. SCOPE OF THE CONVENTION

As far as the scope of the CWC is concerned, three basic questions were discussed:

(a) Whether a comprehensive ban on chemical weapons or a step-by-step approach towards a treaty should be aimed at.
(b) The definition of activities and objects to be covered by the projected Convention.
(c) Criteria to delimitate and define these activities and objects.

2.1 Comprehensive Ban or Step-By-Step Approach?

Whether a comprehensive ban or a step-by-step approach should be aimed at was a contentious subject for a long time.

As to a comprehensive ban, a broad range of activities and objects to be covered by the treaty were considered. They included the development, production, acquisition by other means, stockpiling, transfer, and use of chemical weapons, and the destruction or conversion of existing CW stockpiles and production facilities. Research on CW was mentioned only rarely as an activity to be banned under a comprehensive treaty. Many countries believed that a ban on research in this field would be impossible to verify.[4]

Already during the starting phase of the negotiations, some Western countries had questioned the feasibility of a comprehensive ban. They doubted whether adequate verification of compliance with a comprehensive treaty was possible, especially because dual-purpose chemicals were produced or consumed by the chemical industry in large quantities. And, if possible, there would be a risk of excessive interference with the civil chemical industry. Therefore, several Western countries proposed the conclusion of a partial ban as a first step.

Such a treaty could provide for limited steps to facilitate the conclusion of a comprehensive ban at a later stage. Obligations which could not be adequately verified would not be included in the initial agreement. This was thought to be the case with dual-purpose chemicals.[5]

Many formulae for a partial ban were proposed. The most important ones include:

(a) A ban on the development, production, and stockpiling of super-toxic CWA and the destruction of existing ones.[6]
(b) A ban on the "most dangerous, lethal means of chemical warfare".[7]
(c) A ban on all lethal CWA, with or without the phased destruction of CW stockpiles.[8]

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4 A summary of the proposed formula for a comprehensive ban is included in CD/26, pp.5-6.
5 CCD/414, PV.623, PV.638(USA), PV.636(Italy), PV.496(Canada), CCD/360(USA), PV.557(UK), PV.643(Japan).
6 PV.631(Japan).
7 PV.642(USSR), PV.643(USA), PV.731(Bulgaria).
8 PV.687(USA), PV.702(USA).

(d)A ban on all lethal chemical agents and other toxic chemical agents intended primarily to cause long-term physiological harm to human beings, and their phased destruction.[9]
(e)A ban on the production of CW as a first step ("freeze" or "moratorium").[10]
(f) A treaty which would keep CW production facilities "moth-balled" and would provide for the destruction of CW stockpiles.
(g)A phased approach to destruction within a comprehensive scope of the Convention.[11]
(h)Bringing under a ban, at appropriate times, items which had been left out in the previous steps.[12]
(i) Temporary exceptions, or obligatorily banned chemical agents or activities listed in an annex to the Convention.[13]
(k)A conditional prohibition of dual-purpose chemicals and activities, and an unconditional ban on single-purpose chemicals and activities.[14]

The large number of proposed approaches to a partial ban notwithstanding, the prevailing view remained that a comprehensive ban was necessary.[15] Even the group of States favoring a partial ban remained divided. A Japanese proposal, for example, advocated a "freeze" of existing arsenals by banning the development, production, transfer, and acquisition of super-toxic CWA[16]. It aimed at preventing the proliferation of CW. Other countries such as Brazil[17] proposed to start in the opposite direction by disposing of existing CW first.

Many countries feared that a partial ban might simply result in a diversion of military efforts into sectors not covered by the agreement, or an indefinite delay of the conclusion of a comprehensive ban[18]. Another concern was that, in the absence of a specified programme for the phased destruction of stockpiles, certain States would be reluctant to become parties to the Convention.[19]

To respond to these concerns and to create a favorable negotiating climate, Mexico[20] suggested a moratorium on the development, production, and stockpiling of the most lethal CWA until the Convention was concluded. Many countries expressed the need to include in a partial ban, if such a treaty was acceptable, a binding obligation to reach a comprehensive Convention. This would help in preventing a delay at infinitum of the conclusion of a comprehensive treaty.[21]

To establish a strong link between a partial and a comprehensive ban, Japan[22] proposed two documents which would be signed simultaneously. The first document would be a treaty setting the ultimate goal, namely a comprehensive Convention. The second document, inseparable from the first, would determine the scope of the initial ban by specified temporary exceptions from the prohibition. A complete ban would be approached by gradually expanding the range of prohibited objects, or by eliminating exceptions.

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9 CCD/512(UK).
10 CCD/360(USA), CCD/413(Japan), PV.643(Canada), CCD/512(UK), PV.720(UK).
11 PV.643(Canada), PV.702(USA), PV.717(Iran), CCD/512(UK), PV.720(UK).
12 CCD/360(USA), PV.537(USA), PV.631(Japan), PV.643(Canada), PV.702(USA).
13 CCD/420(Japan), PV.740(Canada).
14 PV.457(Sweden), CCD/372(Sweden), PV.569(Sweden), CCD/414(Canada).
15 CCD/361(Socialist countries), CCD/400(Non-Aligned countries).
16 CCD/413.
17 PV.597, PV.625.
18 E.g. PV.742(Yugoslavia), PV.630(Netherlands).
19 PV.740(USA).
20 CCD/346, PV.545.
21 E.g. PV.742(Yugoslavia), PV.743(Romania).
22 CD/413.

The announcement of a joint US-Soviet initiative to deal, as a first step, with the "most dangerous, lethal means of chemical warfare" indicated increasing support for a partial ban.[23] But this initiative did not materialize until 1979. Instead, a Japanese draft convention which built upon the earlier Japanese proposal (see above) and advocated a step-by-step approach was discussed.[24] The treaty proposed by Japan was to aim at a comprehensive ban but would allow for temporary exemptions. Two alternatives were mentioned:

A: Specific chemicals could temporarily be exempted from the ban.
B: Certain chemicals which could be excluded from the general prohibition and other chemicals which could not be exempted would be listed.

A comprehensive ban would gradually be approached by decreasing the number of exemptions (under A) or by increasing the number of obligatorily banned chemicals (under B) according to a specified procedure. Negotiations and review conferences would play a crucial role in this process.[25] During discussions on the Japanese draft, Sweden[26] suggested a combination of option A and B. Canada[27] proposed to base this approach on exempted or prohibited activities, not chemicals. As a first step, development and production should be banned, then stockpiling in agreed types and quantities (destruction).

In August 1976, the United Kingdom[28] submitted a draft convention. It proposed to ban the development, production, acquisition, use, and transfer of CW, and assistance, encouragement or inducement of other States or international organizations in this context. Existing CW and CW production facilities were to be destroyed or converted according to a "phased programme" of destruction agreed to and supervised by a consultative committee.

Four draft conventions put forward by the delegations were therefore on the negotiating table by August 1976. Those submitted by the Non-Aligned countries[29], the Socialist Group[30] and the United Kingdom[31] advocated a comprehensive treaty. The one submitted by Japan[32] proposed a step-by-step approach.

Although there had been indications that the Soviet Union and other Socialist countries might accept a partial ban[33], their position remained ambiguous[34] Poland stated that, if a partial ban was concluded, binary CW must be prohibited during the first stage. Otherwise, a treaty would be of no use.[35] Later on, the CSSR[36] and Bulgaria[37] stated that they would not obstruct a partial treaty. Still, the discriminatory character of this option was stressed.[38]

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23 Summit communique, 3 July 1974.
24 CCD/420, see also CCD/413.
25 E.g. PV.643(Canada).
26 PV.652.
27 PV.643, PV.740.
28 CCD/512.
29 CCD/400.
30 CCD/361.
31 CCD/512.
32 CCD/420.
33 PV.642.
34 PV.627, PV.767, PV.635(Poland).
35 PV.635. The issue of binary CW was discussed in part one, chapter IV of the report. If a partial treaty were to cover only super-toxic lethal CWA, special provisions to take into account binary CW might be necessary because at least one of the two precursors included in binary CW is not super-toxic lethal.
36 PV.644.
37 PV.649, PV.731.
38 E.g. PV.649(Bulgaria), PV.744(USSR), PV.744(Mongolia).

Discussion on whether to conclude a partial ban remained inconclusive.[39] The position of most Socialist countries changed to such an extent that a partial ban seemed to be acceptable. But it was emphasized that a partial treaty must provide for a strong link to a comprehensive Convention.[40] During the first round of bilateral consultations from 16 to 27 August 1976, the USA and USSR agreed to proceed with efforts to reach a partial ban as a first step. These consultations continued throughout 1977 and 1978. Italy[41] proposed to establish a working group to continue multilateral negotiations on the basis of the British draft but most States favored the waiting for results of the bilateral consultations before establishing an ad hoc working group.[42] This situation was criticized by several delegations.[43]

However, the bilateral consultations between the Soviet Union and the United States led to agreement that the Convention should be comprehensive in its coverage.[44] This agreement was recorded in a joint report by the two countries submitted to the CD in August 1979.[45] This put a preliminary end to the inconclusive debate described above. The two countries proposed to ban the development, production, stockpiling, acquisition otherwise, possession, retention, and transfer of CW, and the assistance, encouragement or inducement of others in this context. They proposed to destroy existing CW stockpiles and production facilities or divert them to permitted use during a ten year period. This definition of the general scope of the CWC is, with some modifications, still used in the present rolling text.[46]

2.2 The Definition of Activities and Objects to Be Covered By the Convention

2.2.1 Activities

Efforts to define activities to be covered by the treaty resulted in a large number of proposals. Some of them were mentioned in previous sections of this annex. The development, production, and stockpiling of CW and the destruction of existing CW stockpiles and production facilities were the fundamental activities in this connection. The most important proposals include:

(a) A ban on the development, production, stockpiling, acquisition, and retention of CWA or CW.[47]
(b) A ban on the activities mentioned above and, additionally, the use of CW and CWA.[48]

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39 E.g. PV.653(Canada), PV.652(Sweden), PV.652(Italy), PV.733(Mongolia), PV.731(Bulgaria), PV.747(GDR), PV.767(Poland).
40 E.g. PV.664, PV.766, PV.743, PV.747, PV.742, PV.759, CCD/403.
41 PV.728, PV.741.
42 E.g. PV.750(Mexico).
43 E.g. PV.758 (Netherlands), PV.760(Italy).
44 PV.776(Japan), PV.781(USA), PV.789(USSR, Yugoslavia).
45 CD/48(USA/USSR).
46 CD/952.
47 CCD/361(Socialist countries), CCD/400(Non-Aligned countries), CCD/420(Japan), CCD/512(UK), PV.788(USSR), PV.802(USA), CD/PV.29(Venezuela).
48 CCD/512 (UK), PV.720(UK).

(c) The activities mentioned above would be prohibited not only with regard to CW and CWA, but also to munitions, equipment and means of delivery.[49]
(d) CWA, CW, equipment and means of delivery would be destroyed or converted to peaceful use.
(e) Offensive military training for chemical warfare would be prohibited.[50]
(f) A ban on the transfer to any State or international organization of the objects prohibited by the CWC, or assistance in their development, production, acquisition....[51]
(g) A ban on the issuing of patents for CWA or CW, and the voiding of existing ones.[52]

The proposed range of activities to be prohibited, especially stockpiling, depended on whether a comprehensive or a partial ban was aimed at (see 2.1). For the purpose of a partial ban, combinations such as all activities (especially development, production, and stockpiling of CW) with regard to certain objects (see below), certain activities (e.g. only development and production) with regard to all relevant objects, and certain activities with regard to certain objects were proposed.[53]

The prevailing view was that the Convention must not hinder peaceful activities, the development of the parties, and cooperation and activities related to protective purposes. Some delegations stated that activities for the protection against CW ("protective purposes") should be promoted.[54] Some concerns were expressed that, if the scope of the Convention was too wide, these activities might be hindered.[55]

There was agreement that the ban on the "use" of CW included in the Geneva Protocol of 1925 must be reinforced by the Convention, and that nothing must detract from the obligations established by the Protocol. However, there was no consensus on precisely how to bring the two agreements in line. One proposal was that this could be done by including a prohibition of the "use" of CW in the new treaty. Some countries, especially Non-Aligned ones, preferred this solution, others were against. The USA, for example, stated that a special paragraph on use was not necessary.[56] Mongolia argued that an explicit ban on use may even lead to doubts about the Geneva Protocol.[57] The underlying issue was that a few countries sought to uphold under the CWC their reservations attached to the Geneva Protocol claiming the right to retaliate in-kind.

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49 CCD/361(Socialist countries), CCD/400(Non-Aligned countries), CCD/420(Japan), CCD/512(UK).
50 PV.499(Sweden), CCD/322(Sweden), CCD/377(Yugoslavia), PV.622(Sweden), PV.740(USA), PV.764(Sweden), CD/PV.2(Sweden), PV.785(Sweden), CD/PV.29(Venezuela).
51 CCD/360(USA), CCD/361(Socialist countries), CCD/400(Non-Aligned countries), CCD/420(Japan), PV.714(Yugoslavia), CCD/512(UK).
52 PV.583(USSR), CCD/403(Socialist countries).
53 PV.702(USA).
54 PV.758(Netherlands).
55 CCD/361(Socialist countries), CCD/400(Non-Aligned countries), CCD/420(Japan), CCD/512(UK), PV.758(Netherlands).
56 PV.740.
57 PV.744.

2.2.2 Objects

(a) Chemical Weapons

A very general characterization of chemical weapons holds that they are weapons of mass destruction.[58] Because the term CW would be one of the key terms in the text of the Convention, major efforts focused on a precise definition. The definitions which were proposed differ but most delegations regarded a chemical weapon as a combination of a CWA and the means (e.g. munitions filled with the CWA) and organizational structure for its military use.[59]

The question of binary CW drew particular attention. The debate was fueled by tentative plans in the United States to produce such weapons in the near future. Binary CW contain two chemicals of relatively low toxicity. These react with each other and form a highly toxic agent while the munition is on its way to the target (see part one, chapter IV. part two, chapter III).[60]

The United Kingdom stated that binary CW could be covered by the term "munitions", "equipment", and "system".[61] This position was shared by the USA[62], the Federal Republic of Germany[63], and Italy[64]. The GDR, on the other hand, held the view that neither the British nor the Japanese draft convention covered binary weapons adequately.[65] A special definition for binary CW was therefore demanded. The prevailing view on this issue was that binary CW must be banned by the CWC[66].

Yugoslavia proposed to consider "multi-purpose CW" as well. These are weapons which produce a physiological, mechanic, and thermal effect at once.[67] There was some discussion on CW which may be designed to react with elements of the target or make elements of the target react with each other.[68]

Whether harassing and incapacitating agents and herbicides should be covered by the treaty and whether their use under specified circumstances should be considered as chemical warfare was another important question.

There was preliminary agreement that incapacitants (see glossary) would be prohibited.[69] They were said to have unpredictable effects. This makes them unsuitable for domestic riot-control purposes. The latter was to be permitted under the treaty.[70]

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58 PV.552(Mongolia), PV.608(Romania), PV.721(Sweden). See also the definition by the Commission for Conventional Disarmament, contained in a resolution of 12 August 1948.
59 PV.567(USSR), CCD/508(CSSR). Some comments on the definition of weapons, equipment and delivery systems are contained in CCD/360(USA), PV.560(Netherlands) and PV.622(Sweden).
60 CCD/360(USA), PV.622(Sweden), CCD/414(Canada), CCD/504(Yugoslavia).
61 CCD/512, PV.720, PV.752.
62 PV.740.
63 PV.740.
64 PV.741.
65 PV.747.
66 PV.740(USA).
67 CCD/502.
68 CCD/508(CSSR), CCD/514(USSR).
69 CCD/433(Canada), PV.801(Japan), CCD/531(USA), PV.740(USA), PV.642(CSSR), CCD/512(UK).
70 CCD/433(Canada).

Harassing agents and herbicides appeared to be more difficult to cope with. This question had already been discussed in connection with the scope of the Geneva Protocol (see part one, chapter III). A few countries, especially the United States, argued (at least until 1974) that the use of herbicides and irritants in war was not prohibited by the Geneva Protocol. Most other countries considered such use of herbicides and irritants as chemical warfare and therefore prohibited. A UN General Assembly resolution, passed in 1969, aimed at establishing an authoritative definition of CW. It included herbicides and was passed with three votes against and many abstentions (see part one, chapter III).

It was recognized that the use of herbicides and irritants could not be prohibited altogether under a treaty. Both types of chemicals were used for peaceful activities (e.g. agriculture and domestic riot control). One of the possible solutions which was discussed was to prohibit harassing agents, irritants, and herbicides only for war purposes.[71] Sweden[72] proposed to define specific exemptions from a general ban on the use of harassing agents and herbicides in a special protocol rather than try and define them by technical criteria. The controversy persists until today (see part two, chapter III).

(b) Chemical Warfare Agents (CWA)

The term CWA was discussed in the context of efforts to establish a definition of CW. CWA together with munitions, other equipment, and the organizational structure for their use constitute CW.

Most delegations regarded CWA as chemical substances which might be used in war for reasons of their toxic properties.[73] Some delegations sought to include in the definition of CWA the effects on animals and plants[74], others did not. This reflected the controversy over whether or how to cover herbicides by the CWC (see part one, chapter III). Chemicals used in war for explosives, fuel, smoke-generation, lubrication, or napalm were not regarded as CWA.[75]

Various criteria to distinguish chemicals to be prohibited from substances to be permitted were proposed. They included the toxic properties of chemicals, their effects, and their purpose. The following categories of chemicals to be covered by the treaty were discussed: super-toxic single-purpose chemicals (particularly nerve agents); binary nerve agent components (especially single-purpose precursors); dual-purpose agents (many of the World War I agents belong to this category); and incapacitating agents with long lasting effect (e.g. BZ, LSD).[76]

There was tentative agreement that the general purpose of chemicals and their toxicity would be the main criteria in determining whether and to what extent to cover them by the CWC (e.g. whether they would be considered as CWA). Sweden, the Federal Republic of Germany, the USA, and Venezuela stated that other properties than toxicity should be taken

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71 E.g. CCD/433(Canada), PV.758(Netherlands).
72 PV.764.
73 PV.567(USSR), PV.569(Yugoslavia), CCD/427(Sweden).
74 PV.742(Yugoslavia).
75 PV.557(UK), PV.635(Sweden), CCD/505(Yugoslavia).
76 PV.741(UK).

into account as well.[77] The identification of the chemicals by their structures or the listing of the specific substances including their structural formula were mentioned as additional possibilities.[78] One of the arguments used against the identification of the chemicals only on the basis of their toxicity was that, in the absence of protective measures or medical treatment, also less toxic substances could be used for chemical warfare purposes.[79]

Using the toxicity criterion to define CWA may have implications for the definition of binary CW. Some of the precursors for binary CW may not be highly toxic. If only their toxicity was used as a criterion, they might not be covered by the definition of CWA.[80] Hence, the prevailing view was to use the purpose criterion for less toxic precursors. The same would apply to incapacitants which were not super-toxic.[81]

Sweden proposed that toxins, although covered by the BWC, be explicitly mentioned in the CWC to avoid ambiguities.[82] Other delegations argued that this was not necessary and would only duplicate the BWC which outlaws toxins for war purposes. (See part two, chapter III).

As the following sections will show, no agreement was reached on a clear delimitation of CWA and other chemicals which would be relevant to the Convention, and on the delimitation of CW and CWA. How single- and dual-purpose chemicals could be defined, which chemicals should be prohibited altogether, which ones must be monitored (production and consumption), and how they could be monitored remained to be addressed.

In the current rolling text[83], the term CWA is not used anymore (see part two, chapter III). Chemicals which are relevant to the treaty are listed. Specific limitations on the production and consumption of certain chemicals and verification procedures for each list have been established. However, a general definition of CW and types of chemicals relevant to the treaty is contained in the main part of the rolling text (Article II).

2.3 Criteria to Define Relevant Activities and Objects

Several criteria to delimitate activities and objects to be prohibited from those to be permitted under the treaty were proposed.

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77 CCD/372(Sweden), CCD/458(Federal Republic of Germany), CCD/499(USA), CD/PV.29(Venezuela).

78 CCD/320(Netherlands), CCD/360(USA), CCD/365(USA), CCD/374(Japan), CCD/383(Netherlands), CCD/414(Canada). For a discussion and analysis of additional criteria see e.g. CCD/499(USA), CCD/461(Sweden).

79 PV.551(Poland), PV.555(Egypt), CCD/375(Yugoslavia), PV.567(USSR), PV.569(Yugoslavia), CCD/400(Non-Aligned countries), PV.687(USA), CCD/503(Yugoslavia), CCD/508(CSSR), PV.611(Poland), PV.742(CSSR).

80 CCD/301(Japan), CCD/320(Netherlands), CCD/322(Sweden), CCD/414(Canada), CCD/537/Rev.1(Hungary), PV.758(Hungary).

81 CCD/360(USA), CCD/365(USA), CCD/427(Sweden), PV.567(USSR), CCD/381(Finland), PV.622(Sweden), PV.652(Sweden), PV.678(Iran), CCD/504(Yugoslavia), PV.740(USA).

82 PV.697, PV.742.

83 CD/952.

2.3.1 Purpose and Quantity

An important criterion to distinguish activities and objects to be banned from those to be permitted is their purpose. This criterion was used for the BWC. The term referred to in this connection is "general purpose criterion".[84] All single-purpose activities and objects (for prohibited purposes, to be defined) would be prohibited unconditionally. Dual-purpose activities and objects, on the other hand, would only be prohibited conditionally (to be defined).[85]

The advantage of the general purpose criterion was said to be that it would cover incapacitants and binary weapons. They may not be identified on the basis of the toxicity of the CWA involved. The general purpose criterion may also help to exempt from the prohibition small quantities of chemicals produced or consumed for medical and protective research purposes.[86]

But intentions which would, according to this criterion, indicate the purpose of an activity or an object are difficult to assess. At this point, the quantity of chemicals involved in a particular activity may serve as an indication of its purpose ("quantity criterion"). The terminology used in this context was: "...substances in types and quantities that have no justification for protective or other peaceful purposes".[87]

This phrase shows that the quantity criterion is linked to the general purpose criterion[88] and to the definition of permitted and prohibited activities and objects. There was no agreement on particular quantities of chemicals related to specific activities or objects under defined circumstances. These quantities may vary to a high degree. This has strong implications for possible approaches to verification.[89] The quantity criterion was regarded as a possible solution for particular groups of substances such as organophosphorus chemical agents. The production of the latter is based on a relatively homogeneous consumption of certain types of phosphor and its derivates.[90] The quantity criterion is still used in the present rolling text[91] (see part two, chapter VII).

The prevailing view was that the general purpose and quantity criterion should be supplemented by other technical criteria. This would facilitate the implementation of the treaty.[92]

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84 E.g. CCD/360(USA), CCD/365(USA), PV.567(USSR), PV.577(Hungary), PV.788(USSR), PV.802(USA).

85 PV.457(Sweden), PV.499(Sweden), CCD/365(USA), PV.567(USSR), PV.578(Argentina), PV.764(Sweden).

86 CCD/381(Finland), PV.616(Mongolia), CCD/461(Sweden), CCD/331(USA).

87 E.g. PV.740(USA).

88 PV.567(USSR), PV.572(Egypt), CCD/461(Sweden).

89 PV.499(Sweden), PV.758(Netherlands), CCD/403(Socialist countries), PV.714(USSR), CCD/420(Japan), CCD/512(UK).

90 PV.496(Canada), CCD/360(USA), PV.557(UK), PV.575(UK), PV.588(Japan), CCD/420(Japan), PV.631(Japan), PV.702(USA), CCD/430(Japan).

91 CD/952.

92 PV.801(Japan).

2.3.2 Effect and Toxicity

The military value of most CWA is based on their toxic effect. Canada proposed to define toxic as "poisonous in the sense of causing physiological injury to a human; this includes blistering, blindness and death".[93] Another wording included the phrase "long-term physiological harm to human beings".[94] Sweden stated that terms such as "lethal", "harm" etc. required a better definition.[95] The United Kingdom proposed a definition based on "long-term harm". It argued that this might help to delimitate riot-control from incapacitating agents.[96] Some delegations[97] preferred to have the effects on animals and plants included in the definition. This reflects the controversy over how to deal with herbicides.

If the toxicity of chemicals were to be used as a criterion to identify CWA, the precise toxicity of the substances under consideration would have to be determined. A system to establish the toxicity of chemicals was therefore proposed.[98] This system would be partly responsible for determining the scope of the ban.[99] It would serve to delimitate super-toxic, single-purpose, from less toxic, dual-purpose agents, and the latter from substances produced and consumed only for peaceful purposes.[100] To delimitate the three categories of substances, defined in general terms by the purpose criterion, two toxicity thresholds would be required.[101] Several proposals for specific toxicity values were therefore made[102]. Methods to establish toxicity values and the reliability of different approaches were discussed.[103] The need for standardized procedures for toxicity measurement and experiments was stressed.[104]

The prevailing view was that the definition of activities and objects to be prohibited by the treaty must be based on the general purpose criterion supplemented by the toxicity criterion.[105] It was noted that for organophosphorus compounds the toxicity criterion might be supplemented by structural formula (see below).[106]

In 1979, the United States and the USSR[107] reached agreement on the definition of two categories of chemicals to be covered by the projected treaty. They agreed on a set of toxicity values for those categories and stated that the general purpose criterion would apply to each of the two categories.

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93 CCD/414.
94 CCD/512(UK).
95 PV.742.
96 PV.752.
97 E.g. Yugoslavia (PV.742).
98 CCD/301(Japan), CCD/375(Yugoslavia).
99 CCD/360(USA), PV.714(USSR).
100 CCD/360(USA), CCD/372(Sweden).
101 CCD/414(Canada), CCD/473(Canada), PV.685(Canada), PV.702(USA), PV.788(USSR), PV.802(USA).
102 CCD/499(USA), CCD/301(Japan), CCD/320(Netherlands), CCD/322(Sweden), CCD/372(Sweden), CCD/374(Japan), CCD/414(Canada), CCD/430(Japan), CCD/435(USA), CCD/473(Canada), CCD/515(Japan).
103 CCD/301(Japan), CCD/320(Netherlands), CCD/322(Sweden), CCD/372(Sweden), CCD/374(Japan), CCD/414(Canada), CCD/430(Japan), CCD/435(USA), CCD/473(Canada), CCD/508(CSSR), CCD/515(Japan), PV.537/Rev.1(Hungary), PV.758(Hungary).
104 CCD/365(USA), CCD/374(Japan), CCD/375(Yugoslavia), CCD/387(Canada), CCD/430(Japan), CCD/435(USA), CCD/473(Canada), CCD/515(Japan).
105 PV.736(Japan), PV.714(USSR) PV.727(USSR), PV.744(Mongolia).
106 See below, CCD/374(Japan), CCD/383(Netherlands), PV.702(USA).
107 CD/48.

Some progress notwithstanding, there was no agreement on the precise delimitation of single- from dual-purpose, lethal from non-lethal, and incapacitant from irritant agents.[108] Different methods or criteria were said to be necessary, especially for the identification of less toxic substances such as harassing, incapacitating agents, or binary CW precursors.[109] The advantage of the toxicity criterion was said to be the possibility of its relatively uniform application (objectivity) and its ability to cover substances which may be synthesized only in the future. A weakness which was recognized was that there were factors other than toxicity which may determine the military relevance of a chemical substance.[110]

2.3.3 General Structural Formula

Some delegations stated that it was theoretically possible to define entire groups of chemicals by their chemical structures. This may allow, to a certain extent, predictions about substances which may be discovered only in the future.[111] Groups of chemicals to be covered by the Convention on the basis of their structural formula may include super-toxic organophosphorus compounds (among them are nerve agents), certain binary CW components, mustard type CWA, and arsines.[112] One of the disadvantages of this criterion was said to be the fact that it could never take into account all future developments.[113]

2.3.4 Other Criteria

(a) "Evaluation Numbers": Certain chemicals may be highly toxic but still unsuitable for chemical warfare. Therefore, the Federal Republic of Germany proposed to use additional criteria to assess the relevance of chemicals to the CWC. This would include certain properties of chemicals which make them suitable for chemical warfare (e.g. their shelf-life, volatility, or explosion stability). Weighted numbers could be attributed to these properties and an "evaluation number" or index could be calculated on this basis. The latter would indicate the chemical warfare suitability of a particular substance.[114]

(b) Listing: Another approach may be to list the substances to be covered by the treaty and/or those to be exempted from the ban[115], and to determine different degrees of prohibition and limitation on this basis. This could also serve to illustrate the abstract definition of CW and CWA.[116] It was proposed that the lists include the name and specific structural formula of the chemicals. Additional criteria such as toxicity or general structural

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108 E.g. PV.758(Netherlands).

109 CCD/433(Canada), CCD/473(Canada), PV.764(Sweden), CCD/531(USA), PV.765(Federal Republic of Germany).

110 PV.765(Federal Republic of Germany), see "other criteria".

111 CCD/320(Netherlands), CCD/360(USA), CCD/365(USA), CCD/374(Japan), CCD/383(Netherlands), CCD/414(Canada), PV.758(Hungary).

112 CCD/365(USA), CCD/414(Canada), CCD/497(USA).

113 PV.758(Hungary).

114 CCD/458, PV.674, PV.767, see also CCD/372(Sweden), PV.752(UK).

115 CCD/335(Italy), CCD/365(USA), CCD/372(Sweden), CCD/430(Japan), CCD/499(USA), CD/PV.2(Australia), CCD/529(Japan), PV.758(Netherlands).

116 PV.801(Japan).

formula might reduce the number of agents which would need to be listed.[117] In the context of a step-by-step approach to a treaty (see above), the agents to be prohibited, those to be exempted, or both, could be listed in an annex to the CWC. Chemicals not mentioned would be covered by the general purpose criterion.[118] Japan proposed to establish three lists:

1. Single-purpose agents
2. Dual-purpose agents
3. Other chemicals which have the dangerous characteristics of CWA or are precursors for binary CW.

The Japanese proposal included procedures for the listing of chemicals.[119] The review and updating of the lists would introduce a dynamic component into a comprehensive as well as a partial ban.[120] The (amended) single Convention on Narcotic Drugs of 1961 was mentioned as a model for the listing approach. Japan stated that the UNEP International Register of Particularly Toxic Compounds may also be useful in this context.[121] One disadvantage of listing was said to be that it would require constant updating in accordance with agreed procedures. Additionally, lists of chemicals may never be complete.[122]

However, the listing of chemicals became more and more acceptable during the first half of the 1980s and is now the principle means of identifying substances to be subjected to certain limitations and verification measures (see part two, chapter VII). The other criteria are still used for the evaluation of candidates for the lists, and as part of the abstract definitions of CW, toxic chemicals etc. (See part two, chapter III)

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117 CCD/374(Japan).
118 PV.652(Sweden), PV.661(Japan), PV.764(Sweden).
119 PV.739, PV.529.
120 PV.578(Argentina), PV.676(Sweden), CCD/461(Sweden).
121 PV.739, CCD/529.
122 PV.758(Hungary).

3. VERIFICATION AND INSTITUTIONS

Verification of compliance with the projected CWC was one of the fundamental problems to be solved in the negotiations. It can be divided into four issue areas:

(a)The question of whether national or international means of verification must dominate.
(b)The verification of specific activities to be covered by the treaty.
(c)The organizational framework for international verification.
(d)Procedures to deal with complaints and suspicions.

3.1 National or International Verification?

One of the basic problems was the controversy over whether compliance with the Convention must be monitored by national or international means, and to what extent each of these means should be used.

Verification through national means was supported by the Group of Socialist countries and a few other States. Their position was based on the assumption that the Convention would be an expression of trust among the parties to it.[123] The assurance of compliance should therefore be produced by national means of verification (self-supervision and "national technical means"). They could be supplemented by international procedures.[124] According to the proposals which were submitted, the national approach would have two components:

(a)National verification organizations or control committees. Members of these bodies would be governmental employees, persons from public organizations, or other experts. National verification organizations would exchange and analyze national and international information.[125] They would make proposals for national legislation to implement verification measures.[126] They would report to an international verification organization, as Japan suggested.[127] To draw up standardized programmes for national verification organizations, expert meetings or basic principles for these organizations, elaborated at the international level, could be useful.[128] Additional supervision of these organizations could be further investigated.[129] Procedures such as those mentioned would lead to self-supervision of compliance.

(b)Extra-territorial verification: This includes means of verification which could be operated from outside the country whose compliance with the Convention is to be observed. Examples are remote monitoring (e.g. satellites) and indirect monitoring (e.g. the analysis of statistical data).[130] The former is usually subsumed under the term national technical

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123 PV.569(Sweden), PV.569(Yugoslavia), CCD/377(Yugoslavia), PV.583(USSR).
124 CCD/361(Socialist countries), PV.567(USSR), PV.571(Pakistan), PV.583(USSR), PV.572(Mongolia), CCD/403(Socialist countries), PV.621(CSSR), PV.714(USSR).
125 PV.567(USSR), CCD/403(Socialist countries), PV.702(USA), PV.704(USSR).
126 PV.621(CSSR).
127 PV.631, CCD/420.
128 PV.583(USSR), PV.616(Mongolia), PV.621(CSSR).
129 CCD/522(USSR), PV.728(USSR).
130 E.g. PV.759(USSR), CCD/358(USSR), CCD/740(USSR).

means. Finland undertook a project on national means of verification and presented some results.[131]

Countries which were of the view that national verification must dominate stated that the connection of national and international verification should be voluntary. It would be based on the exchange of information, the discussion of the data, expert group meetings, review conferences etc. No or only very limited international institutions should be established.[132]

Critics of national verification argued that its first component (self-supervision) would lack the necessary objectivity. As to the second component (national technical means), the technical feasibility and availability of these means was questioned. It was stated that, if the CWC was to be verified by national means of verification, parties lacking the necessary technical equipment (e.g. satellites) would be discriminated.[133]

International verification, in the form which was demanded by Western countries, was to be based on mandatory international verification measures. These measures were deemed indispensable because the parties to the CWC would give up a military option (retaliation and deterrent capacity against a potential CW attack).[134] International verification would be needed to provide assurance against non-compliance. It would deter violations of the treaty and would enable the parties to obtain the necessary objective information on the compliance of other parties early enough to initiate certain counter-measures.[135] Although it was argued that international verification must be effective, it was realized that a 100%-efficiency was not required.[136] National means of verification could, in the view of countries favoring international verification, supplement but not replace international measures.[137]

Many delegations, Western ones in particular, believed that international verification must include mandatory on-site inspections.[138] The Group of Socialist countries, on the other hand, considered on-site inspections and the establishment of international control organs as too intrusive and stated that such bodies must not have supranational powers.[139] They argued that on-site inspections could serve as a pretext for violations of sovereignty, including the gathering of intelligence, and stressed the problems these inspections would create for the civil chemical industry.[140]

However, the Federal Republic of Germany noted that countries already subject to some form of on-site verification could share their experience with others. It was mentioned that mandatory international verification of the non-production of CW was successfully being carried out by the WEU on the territory of the Federal Republic of Germany according to an obligation this country accepted in 1954 (see part one, chapter III).[141]

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131 CCD/412.
132 E.g. CCD/403(Socialist countries).
133 PV.567(USSR), PV.572(Egypt), PV.578(Argentina), CCD/412(Finland).
134 PV.702(USA), CCD/360(USA), PV.551(USA).
135 PV.613(USA), PV.618(USA), PV.624(Netherlands), PV.630(Netherlands), CCD/395(Sweden), PV.590(Sweden), PV.618(USA), PV.622(Sweden).
136 PV.576(Argentina), CCD/375(Sweden), PV.590(Sweden), PV.631(Japan).
137 CD/PV.29(Federal Republic of Germany).
138 E.g. PV.588(Japan), PV.702(Japan), CD/PV.29(Venezuela), PV.765(Federal Republic of Germany).
139 PV.740(USSR).
140 E.g. PV.593(USSR), PV.747(GDR), PV.744(Mongolia), PV.764(Poland).
141 PV.771(Federal Republic of Germany).

Several proposals were made in an effort to address concerns about the intrusiveness of on-site inspections. It was stated that on-site inspections could vary in intrusiveness.[142] Sweden said that non-intrusive verification measures could provide indications of violations of the treaty. This would constitute a basis for further verification and complaint procedures.[143] Sweden proposed "amplified verification" This concept was based on the idea that several and independent methods of verification, applied at the same time, could reinforce each other.[144] The Swedish proposal was supported by the Netherlands.[145]

The Non-Aligned members of the CCD(CD) (except for Sweden) did not take a clear position on whether national or international verification should dominate. They indicated their support for a combination of national and international means without going into further details.[146]

3.2 The Verification of Specific Activities to Be Covered by the Treaty

In addition to discussing the general approach to verification, the delegations to the CCD(CD) also examined how compliance with specific obligations established by the treaty could be verified. For reasons of simplicity, the following explanations are structured on the basis of the verification of specific activities (see 2.2.1). However, the issue was also discussed with regard to different categories of chemicals.[147]

3.2.1 Development

One of the obligations under the CWC would be not to develop CW. The United States noted that much research and development for peaceful purposes had implications for weapons development later.[148] Some indications concerning chemicals with potential use as CW could be obtained by the systematic and computerized search of international scientific and technical literature on a routine basis.[149] Sweden called for open reporting and internationalization of information in this context.[150]

Verification measures could also be applied to field testing of CW. The latter was said to be an activity related to the development of CW. It could, for example, be detected and monitored by remote sensing techniques.[151] Remote sensing can be defined as the use of analytical equipment to provide information on phenomena at a distance from the analyzing equipment or observer.[152] One means to detect field testing with nerve agents may be

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142 PV.624(Netherlands), CCD/485(Sweden), PV.702(USA), PV.704(Sweden).
143 CCD/395, PV.590.
144 CCD/395(Sweden).
145 PV.741.
146 E.g. CCD/310.
147 E.g. CCD/420(Japan).
148 CCD/360.
149 CCD/395(Sweden), PV.590(Sweden), PV.785(Sweden), CCD/569(Sweden), CD/5(Italy), CCD/538(USSR).
150 PV.463, PV.569.
151 CCD/334(Canada), CCD/502(UK).
152 CCD/360(USA).

satellite-based infra-red sensitive spectrophotometric instruments. Their use for verification purposes was analyzed by the USSR and the UK.[153]

2.2.2 Production

The verification of non-production of CW, together with the verification of destruction of existing CW stockpiles and production facilities, drew most of the attention.

Several countries noted that ensuring the non-production of CW was one of the biggest problems to be solved.[154] Some delegations stated that it would require on-site inspections.[155] The Federal Republic of Germany[156] and the United Kingdom[157] said that verification activities within production facilities, e.g. regular on-site inspections arranged by an international control agency, were feasible without the disclosure of production or other secrets. The Netherlands[158] and Egypt[159] pointed to the difficulties involved in obtaining access to military facilities for verification purposes.

The United States argued that, even if adequate methods of verification existed, their practical application may be a problem because of the magnitude and diversity of the chemical industry.[160] However, it was noted that the production of dangerous substances had increasingly come under national and international regulations.[161] This might reduce the magnitude of the task.

To address concerns about the intrusiveness of verification, less intrusive verification methods were discussed. It was proposed to provide information on pertinent production activities.[162] The continued listing of known CWA might be another source of information on CW production facilities.[163] A "familiarization exchange" of information was proposed.[164]

The monitoring of production statistics, transportation data etc. was mentioned as a method to keep track of the production of chemicals.[165] The United States proposed an "accounting method" for organophosphorus compounds. These substances are used in the production of nerve agents. The proposed method comprised a system designed to prevent the diversion of phosphorous compounds from permitted to nerve agent production. Possible evasions were described. This means of verification would involve national and international organizations and would be based on independent sources of information. The monitoring of

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153 CCD/371(UK), CCD/538(USSR). Analyses of similar instruments and others which are based on different principles and are to be placed on earth outside the country to be monitored are contained in CCD/334(Canada), CCD/371(UK), and CCD/502(UK).

154 E.g. CCD/308(UK).

155 CCD/512(UK), CD/PV.2(Australia).

156 CD/PV.29.

157 CD/PV.29.

158 PV.560.

159 PV.555.

160 CCD/283, CCD/293, CCD/360.

161 PV.549(Sweden), CCD/369(USA), CCD/384(Sweden), CCD/466(Japan).

162 CCD/395(Sweden), PV.590(Sweden), CCD/403(Socialist countries).

163 PV.740(USA).

164 PV.702(USA), PV.722(Poland).

165 CCD/301(Japan), CCD/311(USA), CCD/368(USA), CCD/335(Italy), CCD/344(Japan), CCD/403(Socialist countries), CCD/437(USA), PV.702(USA), PV.704(USSR), PV.714(USSR), CD/PV.2(Australia), CCD/538(USSR).

production sites and basic information on different production levels would be used to check the overall balance of the system, if warranted by the analysis of statistics.[166] One of the conclusions was that economic monitoring of the phosphorus industry could be useful.

It was also examined whether air or satellite photographing or ocular observation from the outside of production facilities would be useful and efficient.[167] According to the view of the United Kingdom, relying only on satellite inspection would be too costly and inadequate.[168]

Remote sensing techniques were mentioned as another non-intrusive means of verification. They could be used to monitor outlets and surroundings of chemical plants under certain conditions.[169] Highly sensitive chemical analyses of samples collected in such areas could be useful.[170] Efforts could be made to detect CWA or other substances which were leaked into the environment during production. Certain precursors for binary CW might be detectable this way.[171] Analyzing chemical traces in the environment some time after their release would be helpful, also in cases of alleged use of CW.[172] A prerequisite for the application of these techniques would be to obtain access to the locations to collect samples or to see that "unmanned verification activities" were not interfered with. It was stated that "black boxes" and their application should be investigated.[173] Some of these "on-site but non-intrusive" technical devices could, for example, be applied for the monitoring of "moth-balled" facilities. Similar methods (e.g. photographic equipment or seals) had been developed for the safeguarding of nuclear facilities under the NPT.[174]

An indirect indicator relevant to the verification of non-production of CW may be safety measures at a facility. The Federal Republic of Germany stated that the absence of such measures may be a sign that no CWA were produced.[175] But this would not be a proof.

Nuclear safeguards under the NPT were said to be a useful example for the verification of non-production. However, doubts were expressed as to whether a similar verification system could be applied for the purpose of verifying compliance with the CWC.[176]

3.2.3 Stockpiling

Some delegations pointed to the difficulty of finding hidden CW stockpiles.[177] The USSR stated that only remote monitoring of munitions transports could possibly help in detecting secret stockpiles of CW.[178] The United States, on the other hand, argued that monitoring by airplane or satellite reconnaissance was only of limited value.[179] Solely on-site inspections

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166 CCD/437, PV.702.
167 CCD/293(USA), PV.702(USA).
168 PV.752.
169 CCD/332(USA).
170 CCD/332(USA), CCD/501(Finland), CCD/502(UK), CCD/577(Finland).
171 PV.748(Netherlands), CCD/533(Netherlands), CCD/538(USSR).
172 CCD/412(Finland), CCD/453(Finland).
173 PV.702(USA), CCD/485(Sweden).
174 CCD/332(USA), CCD/360(USA), CCD/498(USA), PV.702(USA).
175 CD/PV.29.
176 PV.745(Iran).
177 PV.654(USA), CCD/485(Sweden), PV.702(USA), CCD/538(USSR).
178 CCD/538.
179 CCD/366(USA).

would provide information on the nature of the stockpiles. It was noted that access to the immediate surroundings of a site may permit some conclusions.[180] Stockpiles usually begin to leak after a long time of storage and precaution measures in this context could be observed, if there were any.[181]

It was noted, for example by the Netherlands, that a comprehensive prohibition of CW would facilitate verification of compliance with the ban on stockpiling of CW.[182] Declarations of CW stockpiles before the Convention entered into force, or upon its entry into force, could lead to more confidence among the parties.[183] They would also facilitate the planning of the destruction programme.[184] Both the USSR[185] and the USA[186] seemed to be in favor of provisions on the declaration of CW stockpiles. This common view was recorded in a joint report submitted by the two countries to the CW in 1979.[187]

3.2.4 Destruction

Technical aspects of destruction of CW and means of its verification drew considerable attention.[188] The USA, for example, described in detail the incineration process for mustard gas type agents and methods for its verification. It stated that reliable verification was possible without revealing military, industrial, or other secrets.[189] Canada and the UK expressed similar views.[190] Canada noted that it had practical experience in this field, and that the process was both economical and non-hazardous.[191]

The United States stated that on-site inspections were the only means to verify the destruction of CW, and that the latter would be easier to verify than the conversion of certain chemicals and facilities to peaceful use.[192] Sweden[193] expressed similar views. To illustrate the problems to be solved, the USA[194] and Hungary[195] described possible ways of evading verification measures.

The Soviet Union[196] said that additional procedures for the verification of destruction should be discussed. Extra-territorial monitoring might be of some use.[197] The USSR remained opposed to more intrusive means of verification, i.e. on-site inspections[198] but its

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180 CCD/485(Sweden).
181 CCD/366(USA).
182 PV.741.
183 PV.714(Yugoslavia), CCD/512(UK), PV.720(UK).
184 PV.758(Netherlands).
185 PV.788.
186 PV.802.
187 CD/48.
188 E.g. CCD/324(Sweden), CCD/360(USA), CCD/366(USA), CCD/367(USA), CCD/381(Finland), CCD/403(Socialist countries), CCD/434(Canada), CCD/436(USA), CCD/485(Sweden), CCD/497(USA), CCD/498(USA), CCD/508(GDR).
189 CCD/436, PV.654.
190 PV.638(Canada), PV.741(UK).
191 CCD/434.
192 PV.654, PV.740.
193 CCD/485.
194 CCD/436.
195 PV.721.
196 CCD/522, PV.728.
197 CCD/538.
198 PV.638.

position became more flexible[199] It presented two working papers on verification[200], one of them dealing with the verification of destruction of CW[201]. In general terms, however, Socialist countries did not express support for on-site inspections.[202] Hungary, for example, stated that, except for destruction, national means and some international measures would be sufficient.[203]

Various proposals for less intrusive verification were discussed. It was proposed that each party could choose a destruction site where access of foreign inspectors or observers for verification purposes would be acceptable.[204] CW would be transported from storage facilities to this site for destruction. Japan proposed that destruction could be monitored by observers instead of inspectors.[205] The observation of destruction would not need to be regarded as a recurrent on-site inspection. The observation of a particular destruction or conversion process would occur only once.[206] Different degrees of disclosure might be used. This could range from total disclosure of the process and types and quantities involved to only the assurance that some toxic substances had been destroyed or converted.[207] It was stated that verification must not lead to the disclosure of military information because this might lead to the proliferation of CW.

The destruction of CW would be a protracted process. It could, for example, lead to environmental problems. Rigorous procedures would therefore be necessary.[208] The USSR stated that the monitoring of destruction must account for a particular agent, the quantity and quality of it, and the weight and volume of other components in the stockpile.[209] Undeclared stocks must be destroyed as well. This may involve the disposal of obsolete munitions.[210]

It was noted that a "familiarization" exchange of information on destruction sites would be useful.[211] It was proposed to arrange for technical exchange visits during on-going negotiations and the utility of visits to presently working destruction facilities was mentioned.[212]

The order of destruction of CW was discussed. The Federal Republic of Germany stated that it was in favor of the destruction of fixed quantities, not percentages of the stockpiles.[213] The implications of this option were discussed in part two, chapter V As to the timetable for destruction, Japan proposed 5 years for agents mentioned in list 1 of its draft convention (single-purpose agents). Chemicals named in list 2 (dual-purpose agents) would meanwhile be controlled.[214] The United States said that the destruction programme should be specified in the treaty.[215]

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199 PV.759(USSR), PV.638(Canada).
200 CCD/538, CCD/539.
201 CCD/539.
202 E.g. PV.744(Mongolia), PV.764(Poland).
203 PV.754.
204 CCD/436(USA), PV.631(USA).
205 CCD/420, PV.631.
206 CCD/400(Non-Aligned countries), PV.622(Sweden).
207 CCD/485(Sweden).
208 CCD/367(USA), CCD/436(USA), CCD/434(Canada).
209 PV.759, CCD/539.
210 CCD/367(USA).
211 PV.702(USA), PV.722(Poland).
212 PV.711.
213 PV.740.
214 PV.739.
215 PV.740(USA).

In 1979, the United States and the Soviet Union reached agreement that all CW stockpiles and production facilities should be destroyed within 10 years after the treaty had entered into force.[216] There was no consensus on further details (e.g. whether parts of the CW stockpiles and production facilities could be converted to peaceful use).

3.2.5 Other Activities

In addition to development, production, and stockpiling, a chemical warfare capacity includes planning and training for the use of CW (see above).[217] A comprehensive treaty would lead to changes in military doctrine, training, organization, and equipment. This might be observable.[218] Sweden therefore proposed to monitor military training activities.[219] The United Kingdom noted that, in this context, it may be difficult to distinguish defensive from offensive measures.[220]

3.3 The Organizational Framework for International Verification

The positions and proposals by the delegations on organizational aspects of international verification were shaped by their respective views on the basic approach to verification.

It was proposed that:

(a) International verification measures be implemented on a voluntary basis and proceed in cooperation with national control committees.[221]

(b) A consultative committees be established from among the parties as a result of a formal agreement.[222]

Verification of compliance would, inter alia, involve the exchange of information (data reporting, declarations by the parties). The agreed type of information, prepared by national verification committees or otherwise provided, could be circulated, studied and analyzed for consistency by:

(a) Expert groups established by the parties to the CWC.[223]

(b) A consultative body or committee[224] which would, for example, supervise the destruction of CW stockpiles.[225] The idea of a consultative committee used for the ENMOD

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216 CD/48.
217 PV.499(Sweden), PV.560(Netherlands), PV.377(Yugoslavia), PV.740(USA).
218 PV.560(Netherlands), PV.764(Sweden), PV.758(Netherlands).
219 PV.738.
220 CCD/308(UK).
221 PV.567(USSR), CCD/403(Socialist countries).
222 CCD/360(USA), PV.610(Sweden), CCD/512(UK), PV.720(UK), PV.788(USSR), PV.802(USA).
223 PV.552(Italy), PV.569(Sweden), PV.569(Yugoslavia), CCD/377(Yugoslavia), PV.578(Argentina).
224 CCD/365(USA), PV.702(USA), CCD/512(UK).
225 CCD/512(UK).

convention and discussed in the context of a CTB was mentioned as a model.[226] Strong differences on several aspects of such committees persisted.[227]

(c) An international verification agency.[228]

An international body authorized to carry out inspections at the request of a party to the Convention, or on its own, was deemed necessary by some Western and Non-Aligned countries.[229] Several names for and modes of functioning of such an international institution were proposed.[230] Some delegations stated that costs of and manpower for international verification activities must be kept as low as possible.[231]

Many delegations pointed to the risk of disclosing sensitive military, technical, or industrial information during international verification activities.[232] It was noted that this problem would, to some extent, have to be dealt with in the context of organizational issues. Sweden proposed a number of measures to reduce the risk of illegal and unwanted disclosure of sensitive information.[233]

The Secretariat of the United Nations could be assisted by experts when considering technical problems of verification.[234] Efforts to collect technical material (for example in the form of an "analytical handbook") to facilitate the implementation of the Convention were undertaken by Finland.[235] Existing international organizations with technical resources might take over some of the monitoring activities (e.g. UNEP or WHO).[236] This may include the collection of technical information on chemicals and methods of analysis. These organizations may also provide experts.[237]

3.4 Complaints and Clarification Procedures

In addition to verification procedures to be applied on a routine basis, there may be a need to establish mechanisms to be invoked in exceptional cases, for example to clarify suspicions or doubts about the compliance of a party with the treaty. Many proposals for such procedures were made. Again, they reflected the positions on the basic approach to verification (see above). The most important proposals include:

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226 PV.764(Sweden).
227 PV.740(USA), PV.741(Italy).
228 CCD/377(Yugoslavia), CCD/395(Sweden), CCD/420(Japan), CD/PV.31(Egypt).
229 E.g. CCD/400(Non-Aligned countries), CCD/420(Japan), CCD/512(UK), CCD/377(Yugoslavia).
230 CCD/360(USA), PV.560(Netherlands), PV.589(Sweden), PV.572(Egypt), PV.603(Egypt), CCD/400(Non-Aligned countries), CCD/410(Netherlands), CCD/420(Japan), PV.623(Japan), PV.702(USA), CCD/512(UK), PV.743(Romania).
231 CCD/360(USA), PV.611(Poland), PV.613(USA), PV.622(Sweden), PV.631(Japan).
232 PV.551(Poland), PV.593(USSR), CCD/400(Non-Aligned countries), PV.613(USA), PV.621(CSSR), PV.702(USA), PV.647(USSR), PV.652(Sweden), PV.652(USSR), CCD/485(Sweden), PV.704(Sweden).
233 CCD/485.
234 PV.569(Sweden), PV.702(USA).
235 CCD/412, CD/PV.31, CD/14.
236 PV.549(Sweden), CCD/360(USA), PV.702(USA).
237 PV.549(Sweden), PV.712(Yugoslavia).

(a) A procedure for submitting complaints to the UN Security Council according to the provisions of the Charter.[238] With a view to the difficulties involved in Security Council decisions (veto-right), some delegations suggested an international investigation and fact-finding mechanism to be applied before complaints were lodged at the Security Council.[239]

(b) Provisions on consultations among the parties to the treaty.[240] Consultations could take place within the multilateral framework of:

a) A consultative body.[241]
b) A consultative committee.[242]
c) A verification organization.[243]

Sweden noted that consultations could help in solving the problem that requests by a party for clarification might appear as complaints or allegations of non-compliance.[244]

(c) "Verification by invitation": To allay suspicions or to respond to certain provisions of the CWC, a party to the Convention could seize the initiative and invite other parties to verify its compliance with the treaty.[245] This concept of "verification by cooperation" rather that by "obligation" enjoyed considerable support.

(d) "Verification upon challenge": The treaty could contain provisions on the basis of which a party could request the verification of compliance by another party. The challenged party would be obliged to cooperate and provide sufficient information to clarify the doubts or concerns of the requesting State.[246] This may include on-site inspections.

(e) If consultations among the parties failed or actual complaints were filed at an appropriate body, the collecting of additional information or fact-finding investigations or inspections might be necessary.[247] If these procedures were invoked as a result of complaints, technical expertise for assistance would be required. It could be made available either within the competent body or by other experts. It may be provided by national or international organizations.[248] If a violation of the treaty was confirmed by an investigation of an international organization, a complaint could be lodged at the Security Council for political decision.[249] Japan stated that specific provisions on the role of the Security Council would not be necessary since this question was covered by the Charter of the UN.[250] Some countries said that the ultimate sanction against a violation of the treaty may be the withdrawal of the affected party from the convention or the suspension of the treaty vis-a-vis the violating State.

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238 CCD/360(USA), CCD/361(Socialist countries), CCD/400(Non-Aligned countries), CCD/512(UK).
239 PV.549(Sweden), PV.560(Netherlands), PV.569(Sweden), PV.571(Pakistan).
240 CCD/361(Socialist countries), PV.560(Netherlands), CCD/400(Non-Aligned countries), CCD/420(Japan).
241 CCD/360(USA), PV.702(USA).
242 CCD/512(UK).
243 CCD/420(Japan).
244 CCD/395, PV.590.
245 CCD/420(Japan), PV.631(Japan).
246 PV.499(Sweden), PV.738(Sweden), CCD/420(Japan).
247 CCD/400(Non-Aligned countries), CCD/420(Japan), CCD/512(UK).
248 CCD/420(Japan), CCD/381(Finland), PV.702(USA), CCD/512(UK).
249 CCD/400(Non-Aligned countries).
250 PV.623.

4. OTHER PROVISIONS OF THE PROJECTED TREATY

4.1 Review Conferences and Amendments to the Convention

The prevailing view was that review conferences should be held periodically.[251] Their objective would be to ensure compliance with the preamble and the provisions of the CWC and to consider new scientific and technical developments in the field of chemistry. Review conferences may play an important role in a step-by-step approach.[252] They could assess the implementation of each step and decide on how to proceed with subsequent steps (see above).

Possible procedures to amend the Convention were specified in a number of proposals.[253]

4.2 Technical Assistance and the Use of Disarmament Savings

Most delegations recognized that, as a principle, technical developments in chemistry must benefit peaceful purposes. Some stated that the exchange of information and equipment for peaceful purposes should therefore be facilitated by the Convention.[254]

Some Non-Aligned countries demanded that a substantive part of disarmament savings in this context should be released for economic and social development, particularly in developing countries.[255] Other delegations questioned the feasibility of this with regard to chemical disarmament[256], or said that it was too early to consider the question.[257] Some Western delegations noted that the costs of destroying existing CW stockpiles and production facilities and verifying compliance with the treaty may be higher than the savings.

4.3 Duration of and Withdrawal from the Treaty

The Convention could be of limited[258] or (alternatively) unlimited[259] duration. Some delegations stated that each party must have the possibility to withdraw from the treaty after prior notification if its supreme interests were threatened.[260]

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251 CCD/361(Socialist countries), CCD/420(Japan), CCD/512(UK).
252 E.g. PV.643(Canada).
253 CCD/360(USA), CCD/361(Socialist countries), CCD/420(Japan), CCD/512(UK).
254 CCD/360(USA), CCD/361(Socialist countries), CCD/400(Non-Aligned countries), CCD/420(Japan), CCD/512(UK), PV.742(Yugoslavia).
255 CCD/400, CD/PV.29(Venezuela).
256 E.g. PV.608(USA).
257 E.g. PV.611(Poland).
258 CCD/360(USA).
259 CCD/361(Socialist countries), PV.554(Hungary), CCD/420(Japan), CCD/512(UK).
260 CCD/361(Socialist countries), CCD/420(Japan), CCD/512(UK).

4.4 Adherence, Entry into Force, and Depositary of the CWC

Several proposals for provisions on the signature, ratification, and entry into force of the CWC were made.[261] It was proposed that the UN Secretary-General or another institution (to be defined)[262] serve as depositary of the treaty.

4.5 Protocols and Annexes

Some provisions of the CWC could be included in protocols, annexes, or "agreed interpretations". Examples are:

(a)Principles for the definition of CWA.[263]
(b)Other definitions, lists of chemicals, and reporting procedures.[264]
(c)Provisions on the proposed consultative committee.[265]
(d)The verification organization and detailed verification procedures.[266]

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261 E.g. CCD/360(USA), CCD/361(Socialist countries), CCD/420(Japan), CCD/512(UK).
262 PV.720(UK).
263 PV.569(Sweden), PV.567(USSR), CCD/400(Non-Aligned countries), PV.611(Poland).
264 CCD/420(Japan), PV.741(UK).
265 PV.720(UK).
266 CCD/420(Japan), CD/PV.29(Venezuela), PV.740(USA).

5. CONFIDENCE BUILDING MEASURES AND OTHER QUESTIONS

(a) Several delegations proposed that the countries involved in the negotiations, or the parties to the Convention, declare their CW policies. If they possessed CW, they should also declare their CW stockpiles and production facilities, actual or potential.[267] Japan proposed to deliver, together with the declaration of CW stockpiles, programmes for their destruction.[268] As to the timing of these declarations, there were three positions:

- Upon signature of the treaty.[269]
- Upon its ratification.[270]
- Upon entry into force of the treaty.[271]

The United States agreed to some measures before the entry into force of the Convention, but proposed their specification in a separate document.[272] The USSR[273] and the GDR[274], on the other hand, stated that they would not accept any obligation before the entry into force of the treaty.

(b) Some countries proposed a moratorium on the production of chemical weapons pending the conclusion of the CWC.[275]

(c) Some delegations stated that the principle of equal security must be observed.[276] The Non-Aligned members of the CCD(CD), for example, proposed to provide security guarantees which went further than those expressed in the context of existing arms control agreements.[277] Yugoslavia said that the CCD must pay attention to the security concerns of States which did not possess CW.[278] Egypt stated that the convention must ensure support and assistance to the victim of a CW attack.[279]

(d) Several delegations proposed to invite observers of other countries to the destruction of CW stockpiles before the CWC was concluded[280], or to arrange for "technical exchange visits" to CW or civilian facilities.[281] Invitations to "technical visits" were discussed and the results of visits which actually took place were described in a number of documents.[282] In June 1978, the Federal Republic of Germany invited experts to a representative chemical plant. The non-production of CW in the Federal Republic of Germany, an obligation entered

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267 PV.714(Yugoslavia), PV.740(Canada), PV.745(Iran).
268 PV.643.
269 CCD/512(UK), PV.720(UK).
270 PV.569(Sweden), CCD/512(UK).
271 PV.560(Netherlands), CCD/400(Non-Aligned countries).
272 PV.740.
273 PV.740.
274 PV.747.
275 E.g. PV.738(Sweden), CD/512(UK).
276 PV.747(GDR).
277 CCD/400.
278 PV.742.
279 PV.744.
280 CCD/322(Sweden), PV.569(Sweden).
281 PV.702(USA), PV.711(USA), PV.740(USA), PV.801(UK).
282 CD/PV.2(UK), CD/PV.5(Federal Republic of Germany), CD/PV.6(Netherlands), CD/PV.31(Switzerland), CD/PV.29(Federal Republic of Germany), CD/PV.29(Sweden), CD/15(UK), CD/PV.31(Egypt), CD/PV.29(UK), CD/PV.29(Italy).

into by the Federal Republic of Germany in 1954, is monitored by the WEU, i.e. an international organization.[283]

(e) It was proposed to exchange information on the protection against CW.[284] The United Kingdom presented a working paper on the prophylaxis against nerve gas poisons[285], Yugoslavia a working paper on medical protection against the same type of CW[286], and the CSSR a working paper on some medical aspects of the CW problem[287]. Some countries proposed regular expert meetings or exchanges of information, especially on organophosphorus poisoning, therapy and prophylaxis.[288]

(f) Yugoslavia declared its support for international cooperation in the peaceful use of chemicals.[289] The United States noted that cooperation and information on chemical plants might reduce suspicions about facilities which were producing chemicals for protective purposes.[290]

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283 PV.771.
284 PV.702(USA), PV.761(UK), CCD/541(UK).
285 CCD/541.
286 CCD/503.
287 CCD/508.
288 CCD/503(Yugoslavia), PV.714(Yugoslavia), CCD/512(UK), PV.761(UK), CCD/541(UK).
289 PV.742.
290 PV.740(USA).

ANNEX II

SOURCES OF INFORMATION ON THE NEGOTIATIONS AND SUGGESTED ADDITIONAL READING

1. Sources

A most useful source is the compilations of official documents and working papers of the Conference on Disarmament and its predecessors by the Arms Control and Disarmament Division of the Department of External Affairs of Canada. They include:

(a) Official documents of the Conference (ENDC/..., CCD/..., CD/...) concerning chemical weapons from 1969 until today.

(b) (Officious) Working Papers (CD/CW/WP...) of the Ad Hoc Committee on Chemical Weapons (previously Ad Hoc Working Group on Chemical Weapons) since 1980 when the Ad Hoc Working Group was established.

(c) The final records (PVs) of statements by the delegations in the plenary meetings of the Conference (only sections concerning chemical weapons).

A (crude) index facilitates work with these compilations.

The recent official documents of the Conference on Disarmament (including the reports of the Ad Hoc Committee on Chemical Weapons which contain the rolling text) can be ordered from the "Distribution des Documents (Désarmament)" C.111, Palais des Nations, 1211 Genève 10. The Geneva Branch of the UN Department for Disarmament Affairs has a complete set of all documents of the CD and its predecessors. They can be consulted on the spot.

Detailed information on developments outside the CD (e.g. bilateral meetings or CW proliferation) as well as on the negotiations in the Conference can be found in the "Arms Control Reporter" and the "Chemical Weapons Convention Bulletin".

The Arm Control Reporter provides a very detailed monthly update on all arms control issues (including chemical weapons). It can be ordered for approx. US $ 250 (back volumes at a cheaper rate) from the following address: IDDS, The Arms Control Reporter, 2001 Beacon Street, Brookline Ma. 02146 USA.

The CWC Bulletin can be ordered for a suggested contribution of $10 from Gordon Burck, Chemical Weapons Convention Bulletin, Federation of American Scientists, 307 Massachusetts Avenue NE, Washington DC 20002. This Bulletin is published around four times a year and usually contains an article, a news chronology, a review of existing world CW armament (twice so far, Soviet Union and United States), a calendar of upcoming events, and a bibliography of recent publications on the issue. The chronology is taken from the Sussex-Harvard rolling CBW chronology. The latter is continuously updated and is more

complete than the one in the CWC Bulletin. It provides full citations of sources. Applications for access can be made to Julian Perry Robinson, SPRU, University of Sussex, Brighton, BN1 9RF, England.

Other sources of information are disarmament yearbooks, including the ones by SIPRI (Stockholm, Sweden), the IISS (London, UK), the United Nations (New York), IMEMO (USSR Academy of Sciences Institute of World Economy and International Relations), the Royal United Services Institute for Defence Studies, and Brassey's Defence Yearbook. Some information can also be found in the Press Bulletin of the Permanent Mission of the Soviet Union to the UN in Geneva (Editor: V.Shebanov, 15, avenue de la Paix, CH-1202 Genève), and the Daily Bulletin of the United States Mission in Geneva (Responsible Editor: John D. Garner, 11, route de Pregny, CH-1292 Chambésy).

2. Suggested Additional Reading

Beck, Herbert, Verifying the Projected Chemical Weapons Convention: A Cost Analysis, Mosbach, FRG, 1988: AFES-PRESS Report No.13 (ISBN 3-926979-10-0).

Clausen, Hannes-Christian, Mauerer, Michael, Smid, Ivica, Nahlik, Walter, Zum Problem chemischer Abrüstung, Wien 1989: Institut für strategische Grundlagenforschung an der Landesverteidigungsakademie, Studien und Berichte (2 volumes).

Ehrhart, Hans-Georg, Frankreich und das Problem der chemischen Abrüstung, Bonn, May 1988: Forschungsinstitut der Friedrich-Ebert-Stiftung, Abteilung Aussenpolitik und DDR-Forschung, Studie Nr.30.

Gasparini Alves, Péricles, The Interest of Non-Possessor Nations in the Draft Chemical Weapons Convention: A Brazilian Case-Study, New York 1990: Vantage Press.

Keeley, James F., International Atomic Energy Agency Safeguards. Observations on Lessons for Verifying a Chemical Weapons Convention, Arms Control Verification Occasional Paper No. 1, Ottawa 1989: External Affairs Canada, Arms Control and Disarmament Division.

Robinson, Julian Perry, Verifying a Ban on Chemical-Warfare Weapons, Faraday Discussion Paper No.12, London 1988: The Council for Arms Control.

Stockholm International Peace Research Institute (SIPRI), The Problem of Chemical and Biological Warfare, 6 Vols, New York 1971-1975: Humanities Press. (Annual reviews of CBW developments are contained in the SIPRI Yearbooks back to 1982.)

SIPRI Chemical and Biological Warfare Studies:

No.1 Effects of Chemical Warfare: A Selective Review and Bibliography of British State Papers, by Andy Thomas.

No.2 Chemical Warfare Arms Control: A Framework for Considering Policy Alternatives, by Julian Perry Robinson.

No.3 The Detoxification and Natural Degradation of Chemical Warfare Agents, by Ralf Trapp.

No.4/5 The Chemical Industry and the Projected Chemical Weapons Convention: Proceedings of a SIPRI/Pugwash conference, 2 Vols.

No.6 Chemical and Biological Warfare Developments: 1985, by Julian Perry Robinson.

No.7 Chemical Weapon Free Zones?, edited by Ralf Trapp.

No.8 International Organization for Chemical Disarmament, by Nicholas A. Sims.

No.9 Non-Production of Chemical Warfare Agents: Technical Verification under a Chemical Weapons Convention, edited by S.J. Lundin.

No.10 Strengthening the BW Convention by Confidence-Building Measures, by Erhard Geissler.

No.11 National Implementation of the Future Chemical Weapons Convention, edited by Thomas Stock and Ronald Sutherland.

Spiers, Edward M., Chemical Weaponry. A Continuing Challenge, New York 1989: St.Martin's Press.

United Nations, Chemical and Bacteriological (Biological) Weapons and the Effects of their Possible Use, New York 1969: United Nations.

Westing, A.H., ed., Herbicides in War: The long-term ecological and human consequences, London 1984: Taylor and Francis.

World Health Organization (WHO), Health Aspects of Chemical and Biological Weapons. Report of a WHO Group of Consultants, Geneva 1970: WHO.

ANNEX III

GLOSSARY

The following glossary contains short explanations of a few terms used in the report.[1] None of the definitions is intended to be authoritative.

Annex on Chemicals

Annex to the preliminary draft convention (rolling text) which contains lists of chemicals relevant to the treaty (Schedules), and guidelines and procedures for their modification.

Binary chemical weapons

Binary chemical weapons consist of two chemical agents of comparatively low toxicity which are mixed to produce a highly toxic chemical (usually a nerve agent) only shortly before employment of the weapon (artillery shell, rocket, bomb etc.) or during the way of the munition to the target. The two components may be produced, stockpiled, and transported separately. Although the principle of binary weapons had already been known for some time, technical progress in obtaining efficient binary munitions was only made in the 1960s. At present, the United States is the only country to have officially admitted the production and stockpiling of such weapons. A short description of the US programme for binary chemical weapons is included in part one, chapter IV.

Biological weapons

Biological weapons are living organisms or infective material derived from them which are intended to cause disease or death, and which depend for their effects on their ability to multiply in the person, animal or plant attacked.

Blister agents

(Other name: Vesicants) Blister agents are general tissue irritants with an additional systemic action. Usually, they are oily liquids which, in the main, burn and blister the skin within hours after exposure. They also have general toxic effects. Contact with the eyes causes rapid injury and leads to inflammation and possible temporary loss of sight. Injury to the respiratory tract is similar to that caused by lung irritants (see below). The most important blister agents are

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[1] Some of the definitions are taken from the UN report of 1969 and the WHO report of 1970 (see Annex II).

Yperite or Mustard gas, and dichloroarsine derivatives. The name Yperite stems from the first use of this agent by German armed forces near the city of Ypern in 1917. The name mustard gas stems from the smell of the impure agent. Mustard gas was first synthesized in the late 19th century. It was employed on a massive scale during the First World War and was the most extensively stockpiled chemical agent during the Second World War. Another well known blister agent is Lewisites which are arsenical vesicants.

Blood agents

Blood agents usually enter the body through the respiratory tract. The term blood agent is an allusion to the supposed mechanism of action of these substances which involves either a blockage of oxygen uptake from the blood or a blockage of the exchange of carbon dioxide between the blood and the tissues, and between the blood and the air in the lungs. Two important agents of this category are hydrogen cyanide and cyanogen chloride.

Challenge inspection

In the context of the CWC, challenge inspection means an on-site inspection at a facility or installation of a party to the CWC. Such an inspection would be carried out by international inspectors of the Technical Secretariat upon request by another party.

Choking agents

(Other names: Lung irritants, asphyxiants) Usually, choking agents are highly volatile liquids which, when breathed as gases, irritate and severely injure the lungs and cause death from choking as a result of physical injury to the tissues of the respiratory tract. The protective membranes lining the air passages may be damaged, thus increasing susceptibility to microbial infection and possibly leading to bronchopneumonia or similar diseases. In addition, the lung capillaries through which oxygen is taken up into the circulation may be damaged, and the resultant oedema may eventually prevent uptake altogether. Examples of choking agents are phosgene, chloropicrin, and HCN. Many of the lethal chemical warfare agents employed during the First World War were lung irritants.

Group of 21

The 21 Neutral and Non-Aligned countries which are members of the Conference on Disarmament.

Harassing agents

Harassing agents are short-term incapacitants used to cause rapid disablement that lasts little longer than the time of exposure. Examples are CN, CR, and CS (see tear and harassing agents).

Herbicides or Defoliants

Herbicides or defoliants are chemicals which poison or desiccate plants, causing them to lose their leaves or die. In war, they are used to deprive the enemy of cover by clearing

the vegetation. Some chemicals can also be used as soil sterilants to contaminate soil and prevent or retard growth within it. The employment of chemicals for such purposes is usually meant to affect the enemy's food supply.

Incapacitating agents

Incapacitating agents are chemicals whose purpose is to cause temporary disease or induce temporary mental or physical disability the duration of which greatly exceeds the period of exposure. The most prominent agent in this category which was specifically developed for war purposes is BZ, an anticholinergic agent. It was first reported in 1952 by a commercial drug house. It acts on both the mind and the body and can disable people temporarily for up to a period of days.

LCt50

Median lethal dose for acute inhalation of a toxic chemical. Dose of a chemical per kg/g of body weight which kills 50% of a test population of animals. The term is used to identify the toxicity of a chemical.

LD50

Median lethal dose for subcutaneous administration of a toxic chemical. Dose of a chemical per kg/g of body weight which kills 50 % of a test population of animals. The term is used to identify the toxicity of a chemical.

Multi-component weapon

Chemical weapon consisting of more than two chemicals which are contained in separate containers within the same weapon. See binary CW.

Mustard gas

See blister agents.

Nerve agents

Nerve agents are usually colorless, odorless, and tasteless chemicals of the same family as organophosphorus insecticides. They poison the nervous system and disrupt vital body functions by inhibiting tissue cholinesterase in man at small dosages. They disrupt nerve impulse transmission. Nerve agents are the most modern chemical warfare agents known so far. They kill quickly and are more potent than any other chemical warfare agent (except toxins). Two families of nerve agents are presently used for military purposes: G-agents and V-agents. These two groups theoretically include several hundred different substances. Currently, the most important nerve agents are Tabun, Sarin, Soman, and VX. Tabun was first synthesized in 1936 in Germany. Sarin and Soman were discovered a few years later. The most toxic nerve agent is VX. VX was discovered in the UK in the 1950s.

The Organization

This term is used in the research report for the international organization to be established for the purpose of implementing the projected Convention.

Schedules

Lists of chemicals to be covered by the monitoring regimes under the treaty. Three lists have so far been included in the Annex on Chemicals.

Systematic or routine verification

International verification activities to be initiated and carried out by the Technical Secretariat of the Organization in facilities and installations which have previously been declared by the parties to the CWC. They will be governed by the provisions of the treaty, the corresponding facility attachments (based on a Model Agreement), and other rules established by the TS.

Tear and harassing agents

Tear and harassing agents are sensory irritants which cause a temporary flow of tears, irritation of the skin and respiratory tract and, occasionally, nausea and vomiting. They have been widely used as riot-control agents but also in war. Examples are CN, CS, and CR. CN, for example, is essentially a lachrymator. Exposure to a concentration exceeding around 0.5 mg/m3 induces a copious flow of tears very quickly. At higher concentrations, or with prolonged exposure, intense irritation is experienced in the nose and upper respiratory tract, soon followed by an itching and burning of moist areas of exposed skin, which may even lead to blistering. At cessation of exposure, recovery is swift, but at high dosages, such as might be experienced within an enclosed space, serious lung damage may occur. CS was developed for police use in the 1950s as a replacement for CN. After being tried out by police forces, it has been used as a military harassing agent as well.

Toxins

Toxins are biologically produced (by plants, animals, bacteria etc.) substances which can be highly toxic and may act by ingestion or inhalation. Unlike biological warfare agents, they are not capable of reproducing themselves. Examples are botulinal toxins or ricin. It is not certain whether toxins have been developed and stockpiled for war purposes. Their development, production, and stockpiling is prohibited by the BWC concluded in 1972.

ANNEX IV

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APPENDIX I

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APPENDIX II

This Appendix contains papers reflecting results of work undertaken on issues under the Convention. They are enclosed to serve as a basis for future work.

Preamble 1/

The States Parties to this Convention,

Determined to act with a view to achieving effective progress towards general and complete disarmament under strict and effective international control, including the prohibition and elimination of all types of weapons of mass destruction,

Desiring to contribute to the realization of the purposes and principles of the Charter of the United Nations,

Recalling that the General Assembly of the United Nations Organization has repeatedly condemned all actions contrary to the principles and objectives of the Protocol for Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925,

Recognizing that the Convention reaffirms principles and objectives of and obligations assumed under the Geneva Protocol of 17 June 1925, and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction signed at London, Moscow and Washington on 10 April 1972,

Bearing in mind the objective contained in Article IX of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction,

Determined for the sake of all mankind, to completely exclude the possibility of the use of chemical weapons, through the implementation of the provisions of this Convention, thereby complementing the obligations assumed under the Geneva Protocol of June 1925,

Considering that the achievements in the field of chemistry should be used exclusively for the benefit of mankind,

Convinced that the complete and effective prohibition of the development, production and stockpiling of chemical weapons, and their destruction, represents a necessary step towards the achievement of these common objectives.

Have agreed as follows:

1/ Some delegations consider that the texts contained in the Preamble require further consideration.

I. GENERAL PROVISIONS ON SCOPE 1/ 2/

1. Each State Party undertakes not to:

- develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone.

2. Each State Party undertakes not to:

- assist, encourage or induce, in any way, anyone to engage in activities prohibited to Parties under this Convention.

3. Each State Party undertakes not to use chemical weapons. 3/ 4/

4. [Each State Party undertakes not to [conduct other activities in preparation for use of chemical weapons] [engage in any military preparations for use of chemical weapons].]

5. Each State Party undertakes to destroy chemical weapons which are in its possession or under its [jurisdiction or] control. 5/

6. Each State Party undertakes to destroy chemical weapons production facilities which are in its possession or under its [jurisdiction or] control.

1/ One delegation pointed out, the preoccupying effects, in its view, on the security of States deriving from the very large disproportion, during the transitional period, between existing chemical weapons capabilities.

2/ Other delegations believed that the problem of disproportion between chemical weapons capabilities can be solved through their levelling out by a certain time after the entry into force of the Convention.

3/ It is understood that this provision is closely linked to the definition of chemical weapons in another part of the Convention, the final formulation of which is yet to be agreed upon. It is also understood that this provision does not apply to the use of toxic chemicals and their precursors for permitted purposes still to be defined and to be provided for in the Convention. This provision is also closely linked to a provision in the Convention to be agreed upon relating to reservations.

4/ The question of herbicides is subject to ongoing consultations. The 1986 Chairman of these open-ended consultations has suggested the following formulation for a provision on herbicides: "Each State Party undertakes not to use herbicides as a method of warfare; such a prohibition should not preclude any other use of herbicides".

5/ The view was expressed that the application of this provision to the destruction of discovered old chemical weapons needs to be further discussed. Another view was expressed that the application of this provision does not allow for any exceptions.

II. DEFINITIONS AND CRITERIA

For the purposes of this Convention:

1.1/ The term "chemical weapons" shall apply to the following, together or separately: 2/

(i) toxic chemicals, including super-toxic lethal chemicals, other lethal chemicals, other harmful chemicals and their precursors, including key precursors [and key components of binary and/or multicomponent chemical systems for chemical weapons], 3/ except such chemicals intended for purposes not prohibited by the Convention as long as the types and quantities involved are consistent with such purposes;

(ii) munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals, as referred to above, which would be released as a result of the employment of such munitions and devices;

1/ The definitions of chemical weapons are presented on the understanding that problems related to irritants used for law enforcement and riot control, and also to chemicals intended to enhance the effect of the use of chemical weapons if their inclusion in the Convention is agreed could be handled outside the definitions of chemical weapons if this will result in a more clear and understandable definition. Preliminary suggestions to solve these problems are given below and consultations on them will be continued.

2/ One delegation expressed its reservation on the present formulation of the definition of chemical weapons and on the terminology used in (i) that failed to reflect the general purpose criterion.

3/ Some delegations consider that further deliberation is required in order to clarify at a later stage of the negotiations the implications of this definition for other parts of the Convention. This applies to other relevant parts of the Appendix. Other delegations consider that key component of binary and/or multicomponent chemical system for chemical weapons means: a component which poses a special risk to the objectives of the Convention as it can be an integral part in a chemical weapons munition or device and can form toxic chemicals at the moment of their employment and possesses the following characteristics: (a) reacts (interacts) rapidly with other component(s) of binary and/or multicomponent chemical system during the munition's flight to the target and gives a high yield of final toxic chemical; (b) plays an important role in determining the toxic properties of the final product; (c) may not be used, or be used only in minimal quantities, for permitted purposes; (d) possesses the stability necessary for long-term storage.

(iii) any equipment specifically designed for use directly in connection with the employment of such munitions or devices.

- [The term "chemical weapons" shall not apply to those chemicals which are not super-toxic lethal, or other lethal chemicals and which are approved by the Conference of the States Parties for use by a Party for domestic law enforcement and domestic riot control purposes.]

- [States Parties agree not to [develop, produce, stockpile or] utilize for chemical weapons chemicals intended to enhance the effect of the use of such weapons.]

[2. "Toxic chemicals" means:

chemicals [however or wherever they are produced], [whether produced in plants, munitions or elsewhere] [regardless of the method and pattern of production] whose toxic properties can be utilized to cause death or temporary or permanent harm, to man or animals involving:]

[2. "Toxic chemicals" means:

any chemical, regardless of its origin or method of production which through its chemical action on life processes can cause death, temporary incapacitation, or permanent harm to man or animals]

[For the purpose of this Convention toxic chemicals are listed in Schedules contained in the Annex on Chemicals.] 1/

3. "Purposes not prohibited by the Convention" means:

(a) industrial, agricultural, research, medical or other peaceful purposes, domestic law enforcement purposes; and military purposes not connected with the use of chemical weapons.

(b) protective purposes, namely those purposes directly related to protection against chemical weapons; 2/

4. "Precursor" means:

a chemical reagent which takes part in the production of a toxic chemical.

[For the purpose of this Convention precursor chemicals are listed in Schedules contained in the Annex on Chemicals.] 1/

1/ The issue of a reference to the Annex on Chemicals in Article II should be further considered.

2/ The suggestion that such permitted protective purposes should relate only to "an adversary's use of" chemical weapons was removed pending a decision on whether in the Convention the question of prohibiting other military preparations for use of chemical weapons than those mentioned under scope should be dealt with.

5. The term "chemical weapons production facility": 1/

(a) means any equipment, as well as any building housing such equipment, that was designed, constructed or used since 1 January 1946:

(i) as part of the stage in the production of chemicals ("final technological stage") where the material flows would contain, when the equipment is in operation, any Schedule 1 chemical, or any other chemical that has no use for permitted purposes above ... kilograms per year but can be used for chemical weapons purposes; 2/ or

(ii) for filling chemical weapons. 3/

(b) does not include any facility with an annual capacity for synthesis of chemicals specified in subparagraph (a) (i) above that is less than [1,000-2,000] kilograms. 4/ 5/

(c) does not include the single small-scale facility provided under Annex 1 to Article VI of the Convention.

1/ A view was expressed that this definition may need to be reviewed to take into account further elaboration of Article VI.

2/ Any such chemical should be included in a relevant schedule of chemicals in the convention.

3/ The filling of chemical weapons includes, inter alia:

- the filling of Schedule 1 chemicals into munitions, devices, or bulk storage containers;
- the filling of chemicals into containers which form part of assembled binary munitions and devices and into chemical submunitions which form part of assembled unitary munitions and devices;
- the loading of the containers and chemical submunitions into the respective munitions and devices.

4/ The disposition of such facilities should be decided in the context of Articles III and VI of the Convention.

5/ This threshold should be decided once an agreed definition for the term "capacity" has been developed. Further work is needed on it, taking into account, inter alia, the report on how to define production capacity reproduced in Appendix II.

III. DECLARATIONS 1/

1. Each State Party shall submit to the Organization, not later than 30 days after the Convention enters into force for it, the following declarations:

(a) Chemical Weapons

(i) whether it has any chemical weapons under its jurisdiction or control 2/ anywhere;

(ii) whether it has on its territory any chemical weapons under the jurisdiction or control of others, including a State not Party to the Convention;

(iii) whether it has transferred or received any chemical weapons and whether it has transferred to or received from anyone the control over such weapons since [1 January 1946] [26 March 1975].

(b) Chemical Weapons Production Facilities

(i) whether it has any chemical weapons production facilities under its jurisdiction or control anywhere or has had such facilities at any time since [1.1.1946];

(ii) whether it has any chemical weapons production facilities on its territory under the jurisdiction or control of others, including a State not Party to this Convention, or has had such facilities at any time since [1.1.1946];

(iii) whether it has transferred or received any equipment for the production of chemical weapons [and documentation relevant to the production of chemical weapons] since [1.1.1946], and whether it has transferred to, or received from, anyone the control of such equipment [and documentation].

1/ The view was expressed that the Annex to this Article needs to be reviewed.

2/ It is agreed that the concept of "jurisdiction or control" requires additional discussion and elaboration. To facilitate work on the issue an informal discussion-paper dated 20 March 1987 was prepared, on the request of the Chairman of the Committee, by Dr. Bolewski (Federal Republic of Germany), Dr. Szénási (Hungary) and Mr. Effendi (Indonesia).

(c) Other declarations

The precise location, nature and general scope of activities of any facility and establishment 1/ on its territory or under its jurisdiction or under its control anywhere 2/ designed, constructed or used since [1.1.1946] for development of chemical weapons, inter alia, laboratories and test and evaluation sites.

2. Each State Party making affirmative statements in regard to any of the provisions under subparagraphs 1a and 1b of this Article shall carry out all relevant measures envisaged in any or all of Articles IV and V.

1/ The scope of the phrase "any facility and establishment" is to be clarified and an appropriate formulation found.

2/ It is agreed that the concept of "on its territory or under its jurisdiction or under its control anywhere" requires additional discussion and elaboration.

IV. CHEMICAL WEAPONS

1. The provisions of this article and its Annex shall apply to any and all chemical weapons under the jurisdiction or control of a State Party, regardless of location, including those on the territory of another State.

2. Each State Party, within 30 days after the Convention enters into force for it, shall submit a declaration which:

(a) specifies the [precise location,] 1/ aggregate quantity and detailed inventory of any chemical weapons under its jurisdiction or control;

(b) reports any chemical weapons on its territory under the jurisdiction or control of others, including a State not Party to this Convention;

(c) specifies any transfer or receipt by the State Party of any chemical weapons since [1 January 1946] [26 March 1975] or any transfer of control by that State Party of such weapons; and

(d) provides its general plan for destruction of its chemical weapons.

3. [Each State Party shall, immediately after the declaration under paragraph 2 of this Article has been submitted, provide access to its chemical weapons for the purpose of systematic international on-site verification of the declaration through on-site inspection. Thereafter, each State Party shall ensure, through access to its chemical weapons for the purpose of systematic international on-site verification and through on-site inspection and continuous monitoring with on-site instruments, that the chemical weapons are not removed except to a destruction facility.] 1/

4. Each State Party shall submit detailed plans for the destruction of chemical weapons not later than six months before each destruction period begins. The detailed plans shall encompass all stocks to be destroyed during the next coming period, and shall include the precise location and the detailed composition of the chemical weapons which are subject to destruction during that period.

5. Each State Party shall:

(a) destroy all chemical weapons pursuant to the Order specified in the Annex to Article IV, beginning not later than 12 months and finishing not later than 10 years after the Convention enters into force for it;

(b) provide information annually regarding the implementation of its plans for destruction of chemical weapons; and

(c) certify, not later than 30 days after the destruction process has been completed, that all chemical weapons have been destroyed.

1/ One delegation reserved its position on this question.

6. Each State Party shall provide access to any chemical weapons destruction facilities and the facilities' storage for the purpose of systematic international on-site verification of destruction through the continuous presence of inspectors and continuous monitoring with on-site instruments, in accordance with the Annex to Article IV.

7. Any chemical weapons discovered by a State Party after the initial declaration of chemical weapons shall be reported, secured and destroyed, as provided in the Annex to Article IV. 1/ 2/

8. All locations where chemical weapons are [stored or] 3/ destroyed shall be subject to systematic international on-site verification, through on-site inspection and monitoring with on-site instruments in accordance with the Annex to Article IV.

9. Any State Party which has on its territory chemical weapons which are under the control of a State that is not a Party to this Convention shall ensure that such weapons are removed from its territory not later than [30 days] after the date on which the Convention entered into force for it.

10. The declaration, plans and information submitted by each State Party under this article shall be made in accordance with the Annex to Article III and the Annex to Article IV.

[11. Reminder: undiminished security during the destruction period.] 4/

1/ Consultations were carried out on this issue. The results are reflected in CD/CW/WP.177/Rev.1. Different views were expressed, inter alia on the question of the responsibility for the destruction of these weapons. Further work is needed.

2/ For some delegations, the question of the applicability of this Annex to obsolete chemical weapons (ordnances) retrieved from the combat zones of World War I will have to be resolved later.

3/ One delegation reserved its position on this question.

4/ The question of the proper place in the text of the Convention for provisions concerning undiminished security during the destruction period is to be further discussed.

V. CHEMICAL WEAPONS PRODUCTION FACILITIES

1. The provisions of this article shall apply to any and all chemical weapons production facilities under the jurisdiction or control of a State Party, regardless of location. 1/

2. Each State Party with any chemical weapons production facility shall cease immediately all activity at each chemical weapons production facility except that required for closure.

3. No State Party shall construct any new facility or modify any existing facility for the purpose of chemical weapons production or for any other purpose prohibited by the Convention.

4. Each State Party, within 30 days after the Convention enters into force for it, shall submit a declaration which:

(a) specifies any chemical weapons production facilities under its jurisdiction or control, or on its territory under the control of others, including a State not party to this Convention, at any time since [1 January 1946] [at the time of entry into force of the Convention];

(b) specifies any transfer or any receipt by the State Party of any equipment for the production of chemical weapons [and documentation relevant to the production of chemical weapons] since [1.1.1946] or any transfer of control by that Party of such equipment [and documentation];

(c) specifies actions to be taken for closure of each chemical weapons production facility;

(d) outlines its general plan for destruction for each chemical weapons production facility. and

(e) outlines its general plan for any temporary conversion of any chemical weapons production facility into a facility for destruction of chemical weapons.

5. Each State Party shall, immediately after the declaration, under paragraph 4, has been submitted, provide access to each chemical weapons production facility for the purpose of [systematic] international on-site verification of the declaration through on-site inspection.

6. Each State Party shall:

(a) close within three months after the Convention enters into force for it, each chemical weapons production facility in a manner that will render each facility inoperable; and

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1/ It is understood that the above provisions also apply to any facility on the territory of another State [regardless of ownership and form of contract, on the basis of which they have been set up and functioned for the purposes of production of chemical weapons].

(b) provide access to each chemical weapons production facility, subsequent to closure, for the purpose of systematic international on-site verification through periodic on-site inspection and continuous monitoring with on-site instruments in order to ensure that the facility remains closed and is subsequently destroyed.

7. Each State Party shall submit detailed plans for destruction of each facility not later than [3] [6] months before the destruction of the facility begins.

8. Each State Party shall:

(a) destroy all chemical weapons production facilities, and related facilities and equipment specified in Section II-C-3 of the Annex to Article V, in accordance with the provisions of that Annex, beginning not later than 12 months, and finishing not later than 10 years, after the Convention enters into force;

(b) provide information annually regarding the implementation of its plans for the destruction of its chemical weapons production facilities, and

(c) certify, not later than 30 days after the destruction process has been completed, that its chemical weapons production facilities have been destroyed.

9. A chemical weapons production facility may be temporarily converted for destruction of chemical weapons. Such a converted facility must be destroyed as soon as it is no longer in use for destruction of chemical weapons and, in any case, not later than 10 years after the Convention enters into force.

10. Each State Party shall submit all chemical weapons production facilities to systematic international on-site verification through on-site inspection and monitoring with on-site instruments in accordance with the Annex to Article V.

11. The declaration, plans and information submitted by each State Party under this article shall be made in accordance with the Annex to Article V.

[12. Reminder: undiminished security during the destruction period.] 1/

1/ The question of the proper place in the text of the Convention for provisions concerning undiminished security during the destruction period is to be further discussed.

VI. ACTIVITIES NOT PROHIBITED BY THE CONVENTION 1/ 2/ 3/

1. Each State Party:

(a) has the right, subject to the provisions of this Convention, to develop, produce, otherwise acquire, retain, transfer and use toxic chemicals and their precursors for purposes not prohibited by the Convention.

(b) shall ensure that toxic chemicals and their precursors are not developed, produced, otherwise acquired, retained, transferred, or used within its territory or anywhere under its jurisdiction or control for purposes prohibited by the Convention.

2. Toxic chemicals and their precursors listed in Schedules 1, 2A, 2B and 3 in the Annex on Chemicals which could be used for purposes prohibited by the Convention, as well as facilities which produce, process or consume these toxic chemicals or precursors, shall be subject to international monitoring as provided in Annexes 1, 2 and 3 to this Article.

The schedules of chemicals contained in the Annex on Chemicals may be revised according to part IV to that Annex.

3. Within 30 days of the entry into force of it, each State Party shall declare data on relevant chemicals and the facilities which produce them, in accordance with Annexes 1, 2 and 3 of this Article.

4. Each State Party shall make an annual declaration regarding the relevant chemicals in accordance with Annexes 1, 2 and 3 to this Article.

5. Each State Party undertakes to subject chemicals listed in Schedule 1 and facilities specified in Annex 1 to this Article to the measures contained in that Annex.

6. Each State Party undertakes to subject chemicals listed in Schedule 2, Parts A and B and facilities declared under Annex 2 to this Article to monitoring by data reporting and routine systematic international on-site verificiation, through on-site inspection and use of on-site instruments as long as production and processing are not impaired.

1/ This Article and its Annexes 2 and 3 are subject to further considerations in Working Group 1, based on CD/CW/WP.256.

2/ One delegation considers that the terminology used in this article and its annexes should be consistent with the final definition of chemical weapons to be agreed upon.

3/ One delegation expressed the view that the question of collection and forwarding of data and other information to verify non-production requires further consideration. This delegation made reference to the Working Paper CD/CW/WP.159 of 19 March 1987, which includes draft elements for inclusion in the rolling text.

7. Each State Party undertakes to subject chemicals listed in Schedule 3 and facilities declared under Annex 3 to this Article to monitoring by data reporting.

8. The provisions of this article shall be implemented in a manner designed in so far as possible to avoid hampering the economic or technological development of parties to the Convention and international co-operation in the field of peaceful chemical activities including the international exchange of scientific and technical information and chemicals and equipment for the production, processing or use of chemicals for peaceful purposes in accordance with the provisions of the Convention. 1/

9. In conducting verification activities, the Technical Secretariat shall avoid undue intrusion into the State Party's peaceful chemical activities.

10. For the purpose of on-site verification, each State Party shall grant to the International Inspectors access to facilities as required in the Annexes to this Article.

1/ The inclusion of this paragraph in this Article is to be considered further.

VII. NATIONAL IMPLEMENTATION MEASURES 1/

General undertakings

1. Each State Party to this Convention shall adopt the necessary measures in accordance with its constitutional processes to implement this Convention and, in particular, to prohibit and prevent anywhere under its jurisdiction or control any activity that a State Party to this Convention is prohibited from conducting by this Convention.

Relations between the State Party and the Organization

2. Each State Party shall inform the Organization of the legislative and administrative measures taken to implement the Convention.

3. States Parties shall treat as confidential and afford special handling to information which they receive in connection with the implementation of the Convention from the Organization. They shall treat such information exclusively in connection with their rights and obligations under the Convention and in accordance with the provisions set out in the Annex on the Protection of Confidential Information. 2/

4. In order to fulfil its obligations under the Convention, each State Party shall appoint a National Authority and inform the Organization of the designated National Authority at the time that the Convention enters into force for it. The National Authority shall serve as the national focal point for effective liaison with the Organization and other States Parties. 3/

5. Each State Party undertakes to co-operate with the Organization in the exercise of all its functions and in particular to provide assistance to the Technical Secretariat including data reporting, assistance for international on-site inspections, provided for in this Convention, and a response to all its requests for the provision of expertise, information and laboratory support.

1/ The view was expressed that the placement of Article VII needs to be discussed further.

2/ A view was expressed that further discussion on this subject is necessary.

3/ The view was expressed that the role of the National Authority might need to be further developed.

VIII. THE ORGANIZATION 1/

A. General Provisions

1. The States Parties to the Convention hereby establish the Organization for the Prohibition of Chemical Weapons, to achieve the objectives of the Convention, to ensure the implementation of its provisions, including those for international verification of compliance with it, and to provide a forum for consultation and co-operation among States Parties. 2/

2. All States Parties to the Convention shall be members of the Organization.

3. The seat of the headquarters of the Organization shall be ...

4. There are hereby established as the organs of the Organization the Conference of the States Parties, 3/ the Executive Council and the Technical Secretariat.

5. The verification activities described in this Convention shall be conducted in the least intrusive manner possible consistent with the timely and efficient accomplishment of their objectives. The Organization shall request only the information and data necessary to fulfil its responsibilities under the Convention. It shall take every precaution to protect the confidentiality of information on civil and military activities and facilities coming to its knowledge in the implementation of the Convention and, in particular, shall abide by the provisions set out in the Annex on the Protection of Confidential Information. 4/

1/ One delegation has expressed reservations with regard to the approach being given to the concept of an Organization for the Prohibition of Chemical Weapons, or any other similar solution for this purpose, and has expressed the view that before proceeding further in the examination of this question, there is a need to define the principles that will govern the financing of such an Organization.

2/ A view was expressed that the achievement of these objectives should be sought in close co-operation with the United Nations.

3/ A view was expressed that the designation of this highest organ, to which many references are made throughout the text, should be determined only after further consideration of other provisions of the Convention and that, in this connection, the possibility of using the designation "the General Conference" may also be considered.

4/ A view was expressed that further discussion on this subject is necessary.

B. Conference of the States Parties

(a) Composition, procedure and decision-making

1. The Conference of the States Parties shall be composed of all the States Parties to this Convention. Each State Party to the Convention shall have one representative in the Conference of the States Parties, who may be accompanied by alternates and advisers.

2. The first session of the Conference of the States Parties shall be convened by the Depositary at (venue) not later than 30 days after the entry into force of the Convention.

3. The Conference of the States Parties shall meet in regular sessions which should be held annually unless it decides otherwise. Special sessions shall be convened:

- when decided by the Conference of the States Parties;
- when requested by the Executive Council; or
- when requested by any State Party [and supported by [5-10] [one third of the] States Parties]

The special session shall be convened not later than [30-45] days after lodgement of the request with the Director-General unless specified otherwise in the request.

4. Sessions shall take place at the headquarters of the Organization unless the Conference of the States Parties decides otherwise.

5. The Conference of the States Parties shall adopt its rules of procedure. At the beginning of each regular session, it shall elect its Chairman and such other officers as may be required. They shall hold office until a new Chairman and other officers are elected at the next regular session.

6. A majority of the members of the Conference of the States Parties shall constitute a quorum.

7. Each member of the Conference of the States Parties shall have one vote.

8. The Conference of the States Parties shall take decisions on questions of procedure, including decisions to convene special sessions of the Conference, by a simple majority of the members present and voting. Decisions on matters of substance should be taken as far as possible by consensus. If consensus is not attainable when an issue comes up for decision, the Chairman shall defer any vote for 24 hours and during this period of deferment shall make every effort to facilitate achievement of consensus, and shall report to the Conference prior to the end of the period. If consensus is not possible at the end of 24 hours, the Conference shall take the decision by a two-thirds majority of members present and voting unless otherwise specified in the Convention. When the issue arises as to whether the question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Conference by the majority required for decisions on questions of substance.

(b) Powers and functions

1. The Conference of the States Parties shall be the principal organ of the Organization. It shall consider any questions, matters or issues within the scope of the Convention, including those relating to the powers and functions of the Executive Council and Technical Secretariat. It may make recommendations and take decisions 1/ on any questions, matters or issues related to the Convention raised by a State Party or brought to its attention by the Executive Council.

2. The Conference of the States Parties shall oversee the implementation of the Convention, and act in order to promote its objectives. It shall review compliance with it. It shall also oversee the activities of the Executive Council and the Technical Secretariat and may issue guidelines in accordance with the Convention to either of them in the exercise of their functions.

3. In addition, the powers and functions of the Conference of the States Parties shall be:

(i) To consider and adopt at its regular sessions the report of the Organization, consider other reports and consider and adopt the programme and budget of the Organization, submitted by the Executive Council;

(ii) to [encourage] [promote] international co-operation for peaceful purposes in the chemical field;

(iii) to review scientific and technological developments which could affect the operation of the Convention;

(iv) to decide on the scale of financial contributions to be paid by States Parties; 2/

(v) to elect the members of the Executive Council;

(vi) to appoint the Director-General of the Technical Secretariat;

(vii) to approve the rules of procedure of the Executive Council submitted by the latter;

1/ A view was expressed that the report of a fact-finding inquiry should not be put to a vote, nor should any decision be taken as to whether a Party is complying with the provisions of the Convention.

2/ The entire problem of the costs of the Organization needs to be considered.

(viii) to establish such subsidiary organs as it finds necessary for the exercise of its functions in accordance with this Convention. 1/ 2/ 3/

(ix) .. 4/

4. The Conference of the States Parties shall, after the expiry of 5 and 10 years from the date of entry into force of this Convention and at such other times within that time period as may be agreed on, meet in special sessions to undertake reviews of the operation of this Convention. Such reviews shall take into account any relevant scientific and technological developments. At intervals of five years thereafter, unless otherwise agreed upon by a majority of the States Parties, further sessions of the Conference of the States Parties shall be convened with the same objective. 5/

[5. The Chairman of the Conference of the States Parties shall serve as non-voting Chairman of the Executive Council.]

C. The Executive Council

(a) Composition, procedure and decision-making 6/

(To be elaborated)

(b) Powers and functions

1. The Executive Council shall be the executive organ of the Conference of the States Parties, to which it shall be responsible. It shall carry out the powers and functions entrusted to it under the Convention and its Annexes, as well as such functions delegated to it by the Conference of the States Parties. In so doing, it shall act in conformity with the recommendations, decisions and guidelines of the Conference of the States Parties and assure their continuous and proper implementation.

1/ It has been proposed that a Scientific Advisory Board be established as a subsidiary body.

2/ It has been proposed that a Fact-finding Panel be established as a subsidiary body.

3/ Work was undertaken in 1989 on the Scientific Advisory Board, the result of which is included in Appendix II.

4/ The question of functions relating to the implementation of Articles X and XI will be considered at a later stage. Other functions, e.g. the action to be taken in the event of non-compliance by a State Party, could be included as well.

5/ The placement and wording of this provision as well as the possible need for separate review conferences require further consideration.

6/ Consultations on this issue were carried out by the Chairman of the Ad Hoc Committee for the 1989 session. The outcome of these consultations is contained in Appendix II, pp. 185-187.

2. In particular, the Executive Council shall:

(a) promote the effective implementation of, and compliance with, the Convention;

(b) supervise the activities of the Technical Secretariat;

(c) co-operate with the appropriate national authorities of States Parties and facilitate consultations and co-operation among States Parties at their request;

(d) consider any issue or matter within its competence, affecting the Convention and its implementation, including concerns regarding compliance, and cases of non-compliance, 1/ and, as appropriate, inform States Parties and bring the issue or matter to the attention of the Conference of the States Parties;

(e) consider and submit to the Conference of the States Parties the draft programme and budget of the Organization;

(f) consider and submit to the Conference of the States Parties the draft report of the Organization on the implementation of the Convention, the report on the performance of its own activities and such special reports as it deems necessary or which the Conference of the States Parties may request;

(g) conclude agreements with States and international organizations on behalf of the Organization, subject to approval by the Conference of the States Parties, and approve agreements relating to the implementation of verification activities, negotiated by the Director-General of the Technical Secretariat with States Parties;

(h) (i) meet for regular sessions. Between regular sessions, it shall meet as often as may be required for the fulfilment of its functions;

[(ii) elect its Chairman;]

(iii) elaborate and submit its rules of Procedure to the Conference of the States Parties for approval;

(iv) make arrangements for the sessions of the Conference of the States Parties including the preparation of a draft agenda.

3. The Executive Council may request the convening of a special session of the Conference of the States Parties. 2/

1/ A view was expressed that the report of a fact-finding inquiry should not be put to a vote, nor should any decision be taken as to whether a Party is complying with the provisions of the Convention.

2/ It has been proposed that the Executive Council should request the convening of a special session of the Conference of the States Parties whenever obligations set forth in Article I of the Convention are violated.

D. Technical Secretariat

1. A Technical Secretariat shall be established to assist the Conference of the States Parties and the Executive Council in the performance of their functions. The Technical Secretariat shall carry out the functions entrusted to it under the Convention and its Annexes, as well as such functions assigned to it by the Conference of the States Parties and the Executive Council.

2. In particular, the Technical Secretariat shall:

(a) address and receive communications on behalf of the Organization to and from States Parties on matters pertaining to the implementation of the Convention;

(b) negotiate the subsidiary agreements with States Parties relating to systematic international on-site verification for approval by the Executive Council;

(c) execute international verification measure provided for in the Convention; 1/

(d) inform the Executive Council of any problems which have arisen with regard to the execution of its functions, and of [doubts, ambiguities or uncertainties about compliance with the Convention] which have come to its notice in the performance of its verification activities and/or which it has been unable to resolve or clarify through its consultations with the State Party concerned;

(e) provide technical assistance and technical evaluation to States Parties [in accordance with] [in the implementation of the provisions of] the Convention; 2/

(f) prepare and submit to the Executive Council the draft programme and budget of the Organization;

(g) prepare and submit to the Executive Council the draft report of the Organization on the implementation of the Convention and such other reports as the Executive Council and/or the Conference of the States Parties may request;

(h) provide administrative and technical support 2/ to the Conference of the States Parties, the Executive Council and other subsidiary bodies.

1/ It has been suggested that the International Inspectorate may request inspections for some insufficiently clear situations in the context of their systematic verification activities.

2/ The phrasing of this paragraph needs to be considered further in the light of the elaboration of the relevant provision of the Convention. It has been suggested that the technical assistance or evaluation may relate, *inter alia*, to developing technical procedures, improving the effectiveness of verification methods, and revising lists of chemicals.

3. The International Inspectorate shall be a unit of the Technical Secretariat and shall act under the supervision of the Director-General of the Technical Secretariat. Guidelines on the International Inspectorate are specified in ... 1/

4. The Technical Secretariat shall comprise a Director-General, who shall be its head and chief administrative officer, and inspectors and such scientific, technical and other personnel as may be required.

5. The Director-General of the Technical Secretariat shall be appointed by the Conference of the States Parties [upon the recommendation of the Executive Council] 2/ for [4] [5] years [renewable for one further term, but not thereafter] The Director-General shall be responsible to the Conference of the States Parties and the Executive Council for the appointment of the staff and the organization and functioning of the Technical Secretariat. The paramount consideration in the employment of the staff and in the determination of the conditions of services shall be the necessity of securing the highest standards of efficiency, competence and integrity. Only citizens of States Parties shall serve as international inspectors or as other members of the professional and clerical staff. Due regard shall be paid to the importance of recruiting the staff on as wide a geographical basis as possible. Recruitment shall be guided by the principle that the staff shall be kept to a minimum necessary for the proper execution of its responsibilities. 3/

6. In the performance of their duties, the Director-General of the Technical Secretariat, the inspectors and other members of the staff shall not seek or receive instructions from any Government or from any other source external to the Organization. They shall refrain from any action which might reflect on their positions as international officers responsible only to the Conference of the States Parties and the Executive Council.

7. Each State Party shall undertake to respect the exclusively international character of the responsibilities of the Director-General of the Technical Secretariat, the inspectors and the other members of the staff and not seek to influence them in the discharge of their responsibilities.

1/ Because of considerations under way in some capitals, the question of how to approach these guidelines will be decided later. The result of the work undertaken in this regard during the 1987 and 1988 sessions is contained in the Addendum to Appendix I of this report. During the 1989 session, work has been undertaken on a Protocol on Inspections Procedures, the text of which is contained in Appendix II. After further in-depth consideration, this Protocol will replace the Guidelines on the International Inspectorate in the Addendum to Appendix I.

2/ It has been proposed that the Director-General of the Technical Secretariat be appointed by the Conference of the States Parties upon the recommendation of the Secretary-General of the United Nations.

3/ Work was undertaken in 1989 on the Scientific Advisory Board, the result of which is included in Appendix II.

IX. CONSULTATIONS, CO-OPERATION AND FACT-FINDING 1/

1. States Parties shall consult and co-operate, directly among themselves, or through the Organization or other appropriate international procedures, including procedures within the framework of the United Nations and in accordance with its Charter, on any matter which may be raised relating to the objectives or the implementation of the provisions of this Convention.

2. States Parties to the Convention shall make every possible effort to clarify and resolve, through exchange of information and consultations among them, any matter which may cause doubt about compliance with this Convention, or which gives rise to concerns about a related matter which may be considered ambiguous. A Party which receives a request from another Party for clarification of any matter which the requesting Party believes causes such doubts or concerns shall provide the requesting Party, within .. days of the request, with information sufficient to answer the doubts or concerns raised along with an explanation on how the information provided resolves the matter. Nothing in this Convention affects the right of any two or more States Parties to this Convention to arrange by mutual consent for inspections or any other procedures among themselves to clarify and resolve any matter which may cause doubts about compliance or gives rise to concerns about a related matter which may be considered ambiguous. Such arrangements shall not affect the rights and obligations of any State Party under other provisions of this Convention.

Procedure for requesting clarification

3. A State Party shall have the right to request the Executive Council to assist in clarifying any situation which may be considered ambiguous or which gives rise to doubts about the compliance of another State Party with the Convention. The Executive Council shall provide appropriate information and data in its possession relevant to the situation which can dispel such doubts.

4. A State Party shall have the right to request the Executive Council to obtain clarification from another State Party on any situation which may be considered ambiguous or which gives rise to doubts about its compliance with the Convention. In such a case, the following shall apply:

(a) The Executive Council shall forward the request for clarification to the State Party concerned within 24 hours of its receipt.

(b) The requested State Party shall provide the clarification to the Executive Council within seven days of the receipt of the request.

1/ Some delegations expressed the view that the issue of verification of alleged use of chemical weapons and procedures for conducting such inspections had not yet been considered in-depth and should be discussed at a later stage on the basis of the proposed Annex to Article IX (documents CD/766 and CD/CW/WP.173).

(c) The Executive Council shall forward the clarification to the requesting State Party within 24 hours of its receipt.

(d) In the event that the requesting State Party deems the clarification to be inadequate, it may request the Executive Council to obtain from the requested State Party further clarification.

(e) For the purpose of obtaining further clarification requested under paragraph 2 (d), the Executive Council may set up a group of experts to examine all available information and data relevant to the situation causing the doubt. The group of experts shall submit a factual report to the Executive Council on its findings.

(f) Should the requesting State Party consider the clarification obtained under paragraphs 2 (d) and 2 (e) to be unsatisfactory, it may request a special meeting of the Executive Council in which States Parties involved not members of the Executive Council shall be entitled to take part. In such a special meeting, the Executive Council shall consider the matter and may recommend any measure it deems appropriate to cope with the situation.

5. A State Party shall also have the right to request the Executive Council to clarify any situation which has been considered ambiguous or has given rise to doubts about its compliance with the Convention. The Executive Council shall respond by providing such assistance as appropriate.

6. The Executive Council shall inform the States Parties to this Convention about any request for clarification provided in this Article.

7 If the doubts or concerns of a State Party about compliance have not been resolved within two months after the submission of the request for clarification to the Executive Council, or it believes its doubts warrant urgent consideration, without necessarily exercising its right to the challenge procedure, it may request a special session of the Conference of the States Parties in accordance with Article VIII. In such a special session, the Conference of the States Parties shall consider the matter and may recommend any measure it deems appropriate to cope with the situation.

Procedure for requesting a fact-finding mission

The further contents of Article IX remain to be elaborated. 1/ 2/

1/ Consultations on this issue were carried out by the Chairman of the Ad Hoc Committee for the 1987 session and the Chairman of Group C for the 1988 session. The state of affairs, as seen by them is presented in Appendix II with the aim of facilitating further consideration of the issue.

2/ The Chairman of the Ad Hoc Committee for the 1989 session undertook consultations on Article IX, Part 2, the outcome of which is contained in Appendix II, pp. 197-198.

X. ASSISTANCE AND PROTECTION AGAINST CHEMICAL WEAPONS 1/

XI. ECONOMIC AND TECHNOLOGICAL DEVELOPMENT 1/

XII. RELATION TO OTHER INTERNATIONAL AGREEMENTS 2/

Nothing in this Convention will be interpreted as in any way impairing the obligations assumed under the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925 and in the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed at London, Moscow and Washington on 10 April 1972.

XIII. AMENDMENTS 2/

XIV. DURATION, WITHDRAWAL 2/

..

The withdrawal of a State Party from this Convention shall not in any way affect the duty of States to continue fulfilling the obligations assumed under any relevant rules of international law, particularly the Geneva Protocol of 17 June 1925.

XV. SIGNATURE

This Convention shall be open for signature for all States before its entry into force at (venue). 3/ 4/

XVI. RATIFICATION

This Convention shall be subject to ratification by States signatories according to their respective constitutional processes.

1/ Work on this Article continued. With the aim of facilitating further consideration of the issues involved, the text reflecting the current stage of discussion is included in Appendix II.

2/ During the 1989 session, work on this Article was continued. With the aim of facilitating further consideration of the issues involved, the text reflecting the current stage of discussion is included in Appendix II.

3/ One delegation expressed the view that the Convention should be open for signature indefinitely.

4/ One delegation was of the view that this Article and the following Articles related to ratification, accession, deposit of instruments and entry into force should be contained under one Article.

XVII. ACCESSION

Any State which does not sign the Convention before its entry into force may accede to it at any time. 1/

XVIII. DEPOSIT OF INSTRUMENTS OF RATIFICATION OR ACCESSION

Instruments of ratification and instruments of accession shall be deposited with the Secretary-General of the United Nations (hereby designated as Depositary). 2/

XIX. ENTRY INTO FORCE

(a) This Convention shall enter into force (30) days after the date of the deposit of the (60th) instrument of ratification.

(b) For States whose instruments of ratification or accession are deposited subsequent to the entry forces of this Convention, it shall enter into force on the (30th) day following the date of deposit of their instrument of ratification or accession. 3/

XX. LANGUAGES 4/

1/ One delegation expressed a view that accession would not be necessary.

2/ One delegation was of the view that the procedures for the Depositary to inform States Parties of the deposit of instruments of ratification or accession need to be elaborated in this Article.

3/ It is to be discussed further how to ensure that all "chemical weapons possessing" and "chemical weapons capable" States be among those States whose ratification would be required for the Convention to enter into force.

4/ During the 1989 session, work on this Article was continued. With the aim of facilitating further consideration of the issues involved, the text reflecting the current stage of discussion is included in Appendix II.

ANNEX V

ANNEX ON CHEMICALS

Table of Contents

ANNEX ON CHEMICALS

I. DEFINITIONS 1/

A. Definitions related to toxicity

(a) "super-toxic lethal chemicals" means chemicals which have a median lethal dose which is less than or equal to 0.5 mg/kg (subcutaneous administration) or 2,000 mg-min/m^3 (by inhalation) when measured by an agreed method 2/ set forth in ..

["Ultra-toxic chemicals" means super-toxic lethal chemicals which have a median lethal dose which is less than or equal to 0.1 mg/kg.]

[(b) "other lethal chemicals", means chemicals which have a median lethal dose which is greater than 0.5 mg/kg (subcutaneous administration) or 2,000 mg-min/m^3 (by inhalation) and less than or equal to 10 mg/kg (subcutaneous administration) or 20,000 mg-min/m^3 (by inhalation) when measured by an agreed method set forth in ...

[(c) "other harmful chemicals", means any [toxic] chemicals not covered by (a) or (b) above, [including toxic chemicals which normally cause temporary incapacitation rather than death] [at similar doses to those at which super-toxic lethal chemicals cause death].]

[and "other harmful chemicals", means chemicals which have a median lethal dose which is greater than 10 mg/kg (subcutaneous administration) or 20,000 mg-min/m^3 (by inhalation).]]

B. Definitions related to precursor chemicals

(a) "Key Precursor" means:

a precursor which poses a significant risk to the objectives of the Convention by virtue of its importance in the production of a toxic chemical.

It may possess [possesses] the following characteristics:

(i) It may play [plays] an important role in determining the toxic properties of a [toxic chemicals prohibited by the Convention] [super-toxic lethal chemical]

1/ The final placement of these definitions within the Covention will be decided at a later stage.

2/ It was noted that after such measurements had actually been performed, the figures mentioned in this and the following section might be subject to slight changes in order to cover sulphur mustard gas under the first category.

(ii) It may be used in one of the chemical reactions at the final stage of formation of the [toxic chemicals prohibited by the Convention] [super-toxic lethal chemical].

[(iii) It may [is] not be used, or [is] used only in minimal quantities, for permitted purposes.] 1/

[(b) Key component of binary and/or multicomponent chemical systems for chemical weapons means:]

[a precursor which forms a toxic chemical in the binary or multicomponent weapons munition or device and which has the following additional characteristics (to be elaborated):]

1/ The position of this subparagraph should be decided in relation to how some chemicals, for instance, isopropylalcohol, are dealt with in the Convention.

II. SCHEDULES OF CHEMICALS

A. Schedule 1

1. O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates 1/

e.g. Sarin: O-isopropyl methylphosphonofluoridate (107-44-8)
Soman: O-pinacolyl methylphosphonofluoridate (96-64-0)

2. O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates 1/

e.g. Tabun: O-ethyl N,N-dimethylphosphoramidocyanidate (77-81-6)

3. O-Alkyl (H or $\leq C_{10}$, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding quarternary ammonium compounds 1/

e.g. VX: O-ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate (50782-69-9)

4. Sulphur mustards [e.g.]:

Mustard gas (H): bis(2-chloroethyl)sulphide (505-60-2)
Sesquimustard (Q): 1,2-bis(2-chloroethylthio)ethane (3563-36-8)
O-Mustard (T): bis(2-chloroethylthioethyl)ether (63918-89-8)
bis(2-chloroethylthio)methane (63869-13-6)
1,3-bis(2-chloroethylthio)-n-propane (63905-10-2)
1,4-bis(2-chloroethylthio)-n-butane
2-Chloroethylchloromethylsulphide (2625-76-5)

5. Lewisites:

Lewisite 1: 2-chlorovinyldichloroarsine (541-25-3)
Lewisite 2: bis(2-chlorovinyl)chloroarsine (40334-69-8)
Lewisite 3: tris(2-chlorovinyl)arsine (40334-70-1)

6. Nitrogen mustards:

HN1: bis(2-chloroethyl)ethylamine (538-07-8)
HN2: bis(2-chloroethyl)methylamine (51-75-2)
HN3: tris(2-chloroethyl)amine (555-77-1)

7 3-Quinuclidinyl benzilate (BZ) 2/ (6581-06-2)

1/ The precise delimitation of this group requires further discussion.

2/ The desirability of extending this item to include also related chemicals should be further discussed.

[8. Saxitoxin 1/ (35523-89-8)]

[9. Ricin 1/]

10. Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluoride 2/

e.g. DF: methylphosphonyldifluoride (676-99-3)

11. O-Alkyl (H or $\leq C_{10}$, incl. cycloalkyl) O-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, N-Pr or i-Pr) phosphonites and corresponding quarternary ammonium compounds 2/

e.g. QL: O-ethyl O-2-diisopropylaminoethyl methylphosphonite (57856-11-8)

[12. O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonochloridates 3/4/

e.g. Chloro Sarin: O-isopropyl methylphosphonochloridate (1445-76-7)
Chloro Soman: O-pinacolyl methylphosphonochloridate (7040-57-5)]

[13. 3,3-Dimethylbutan-2-ol (pinacolyl alcohol) 5/ (464-07-3)]

1/ A view was expressed that, since toxins are covered by the Biological and Toxin Weapons Convention, they should not be covered by the Chemical Weapons Convention. Another view was expressed that since toxins are toxic chemicals, they would automatically be covered by the Chemical Weapons Convention. In addition, a view was expressed that relevant toxins should also be considered for inclusion in Schedule 2 part B. Another view was expressed that saxitoxin and ricin should only be considered examples of toxins that could be included in Schedule 1.

2/ The view was expressed that other members than DF and QL should be put on Schedule 2 part A, where however they are already covered by the first item.

3/ The precise delimitation of this group requires further discussion.

4/ A view was expressed that this group belongs to Schedule 2 part A, where it is already covered by the first item.

5/ A view was expressed that this chemical should be included in Schedule 2 part A.

B. Schedule 2 part A

1.	Chemicals, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group [radical] but not further carbon atoms, except for those chemicals listed under Schedule 1. 1/	
2.	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides	
3.	Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates	
4.	Arsenic trichloride	(7784-34-1)
5.	2,2-Diphenyl-2-hydroxyacetic acid 2/	(76-93-7)
6.	Quinuclidin-3-ol 2/	(1619-34-7)
7.	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chloride and corresponding quarternary ammonium compounds 3/4/	

1/ The precise delimitation of this group requires further discussion.

2/ If item 7 on Schedule 1 is expanded into a group, a corresponding expansion should be considered for items 5 and 6 on Schedule 2 part A. Item 5 could, e.g., then include:

> 2-phenyl-2-(phenyl, cyclohexyl, cyclopentyl or cyclobutyl)-2-hydroxyacetic acids and their methyl, ethyl, n-propyl and iso-propyl esters,

and item 6 could, e.g., include:

> 3- or 4-hydroxypiperidine and their [derivatives] and [analogs].

3/ It was suggested that a limitation of the group to contain only the N,N-diisopropyl compounds should be considered in view of the scale of the commercial production of other group members. These other group members could then be included in Schedule 3. In this context, a view was also expressed that it could be sufficient to have only the N,N-diisopropyl compounds in Schedule 2 part A from the viewpoint that they are key precursors to VX. Furthermore a view was expressed that unless an appropriate limitation of the group can be provided, the placement of this group on this schedule should be reconsidered in light of existing commercial production of substances included in the group.

4/ A view was expressed that "and corresponding quarternary ammonium compounds" should be replaced by "and corresponding salts"

8. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ol and corresponding quarternary ammonium compounds 1/2/

9. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiol and corresponding quarternary ammonium compounds 1/2/

10. Bis(2-hydroxyethyl)sulphide (thiodiglycol) 3/ (111-48-8)

[11. 3,3-Dimethylbutan-2-ol (pinacolyl alcohol) 4/ (464-07-3)]

C. Schedule 2 part B 5/6/7/

Amiton: O,O-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate (78-53-5)

1/ It was suggested that a limitation of the group to contain only the N,N-diisopropyl compounds should be considered in view of the scale of the commercial production of other group members. These other gorup members could then be included in Schedule 3. In this context, a view was also expressed that it could be sufficient to have only the N,N-diisopropyl compounds in Schedule 2 part A from the viewpoint that they are key precursors to VX. Furthermore a view was expressed that unless an appropriate limitation of the group can be provided, the placement of this group on this schedule should be reconsidered in light of existing commercial production of substances included in the group.

2/ A view was expressed that "and corresponding quarternary ammonium compounds" should be replaced by "and corresponding salts".

3/ A view was expressed that this chemical should be included in Schedule 3.

4/ A view was expressed that this chemical should be included in Schedule 1.

5/ A view was expressed that saxitoxin and ricin should be included in Schedule 2 part B.

6/ A view was expressed that CS and CR should be included in one of the Schedules.

7/ A view was expressed that 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (PFIB) CAS No. 382-21-8 be included in Schedule 2 B.

D. Schedule 3 1/

Phosgene	(75-44-5)
Cyanogen chloride	(506-77-4)
Hydrogen cyanide	(74-90-8)
Trichloronitromethane (chloropicrin)	(76-06-2)
Phosphorus oxychloride	(10025-87-3)
Phosphorus trichloride	(7719-12-2)
Di- and Trimethyl/Ethyl Esters of Phosphorus [P III] Acid 2/	
[e.g.]: Trimethyl phosphite	(121-45-9)
Triethyl phosphite	(122-52-1)
Dimethyl phosphite	(868-85-9)
Diethyl phosphite	(762-04-9)
Sulphur monochloride	(10025-67-9)
Sulphur dichloride	(10545-99-0)
Thionyl chloride	(7719-09-7)
Phosphorus pentachloride	(10026-13-8)

1/ It was observed that no precursors for nitrogen mustards had been included and it was proposed that the three compounds triethanolamine, ethyldiethanolamine and methyldiethanolamine should be discussed in this context for possible inclusion in Schedule 3.

2/ Some felt that this heading might be superfluous and a possible source of misunderstandings, and therefore should be deleted.

III. GUIDELINES FOR SCHEDULES OF CHEMICALS

A. Guidelines for Schedule 1 1/

The following guidelines, singly or in combination, should be taken into account in considering whether a chemical should be included in Schedule 1:

1. Super-toxic lethal chemicals which had been stockpiled as chemical weapons.

2. Super-toxic lethal chemicals which pose a particular risk of potential use as chemical weapons.

3. Super-toxic lethal chemicals which have little or no use except as chemical weapons.

4. Super-toxic lethal chemicals which possess physical and chemical properties enabling them to be used as chemical weapons. 2/

5. Super-toxic lethal chemicals with chemical structure related/similar to those super-toxic lethal chemicals already listed in Schedule 1. 3/

6. Chemicals whose principal effect is to cause temporary incapacitation and which possess physical and chemical properties enabling them to be used as chemical weapons.

7. Any toxic chemical with a chemical structure related/similar to those chemicals already listed in Schedule 1. 3/

8. Other chemicals which have been stockpiled as chemical weapons.

9. Other chemicals which have little or no use except as chemical weapons.

10. Key precursors which participate in a one-stage process of producing toxic chemicals in munitions and devices. 4/

11. Key precursors which pose a high risk to the objectives of the Convention by virtue of their high potential for use to produce chemical weapons.

1/ These guidelines were developed in 1987 As no agreement has been reached on them, they are presently considered for revision partly on the basis of a new conceptual approach, contained in CD/CW/WP.258.

2/ A view was expressed that compounds listed in Schedule 1 should possess the properties of chemical warfare agents.

3/ The view was expressed that this by itself would not be sufficient to include a chemical in Schedule 1.

4/ One delegation believes that this provision is not necessary and that it is already covered under point 12.

12. Key precursors which may possess the following characteristics:

(i) it may react with other chemicals to give, within a short time, a high yield of a toxic chemical defined as a chemical weapon;

(ii) the reaction may be carried out in such a manner that the toxic product is readily available for military use; and

(iii) key precursors which have little or no use except for chemical weapons purposes.

B. Guidelines for Schedule 2 part A 1/

The following criteria shall be taken into account in considering whether a precursor to a Schedule 1 chemical would be included in Schedule 2 part A:

1. It may be used in one of the chemical reactions at the final stage of formation of a chemical listed in Schedule 1.

2. It may pose a significant risk 2/ to the objectives of the Convention by virtue of its importance in the production of a chemical listed in Schedule 1.

[3. It is not produced in large commercial quantities for purposes not prohibited by the Convention. 3/]

C. Guidelines for Schedule 2 part B 1/

Super-toxic lethal chemicals and other chemicals which are not included in Schedule 1 and are not precursor chemicals but which are deemed to pose a significant risk to the objectives of the Convention. 4/5/

1/ These guidelines are in the process of further consideration and development.

2/ The view was expressed that the degree of the risk of a chemical is determined on the basis of the contribution made by a precursor to the formation of the structure, or on the basis of the role it plays in determining the toxic properties of a Schedule 1 chemical.

3/ The question of the applicability of a quantitative criterion requires further discussion, taking into account, inter alia, the aim of the measures stipulated in Article VI, paragraph 6, as set forth in Annex 2 to Article VI, paragraph 4, the likelihood of meeting the various aspects of this aim by routine systematic on-site inspections and use of on-site instruments and the necessity of efficient implementation of verification.

4/ A view was expressed that, when assessing the risk to the objectives of the Convention, factors such as the lethal or incapacitating effects of a chemical, as well as its suitability as a chemical weapon in terms of physical and chemical properties should be taken into account.

5/ A view was expressed that chemicals included in Schedule 2 part B may have commercial use.

D. Guidelines for Schedule 3 1/

The following criteria shall be taken into account when considering whether a dual purpose chemical or a precursor chemical, not listed in other schedules, would be included in Schedule 3:

A. Dual purpose chemical

1. It is produced in large commercial quantities 2/ for purposes not prohibited by the Convention, and

2. it has been stockpiled as a chemical weapon, or

3. it may pose a risk to the objectives of the Convention by virtue of its physical, chemical and toxicological properties being similar to those of chemical weapons.

B. Precursor chemical

1. It is produced in large commercial quantities 2/ for purposes not prohibited by the Convention, and

2. it may pose a risk to the objectives of the Convention by virtue of its importance in the production of one or more chemicals listed in Schedule 1, or in the production of precursors to such chemicals 3/ [, and

3. it contributes one or more atoms other than hydrogen, carbon, nitrogen or oxygen to the final listed end-product 4/]

1/ These guidelines are in the process of further consideration and development.

2/ The question of a quantitative criterion, possibly including a numerical threshold, requires further discussion.

3/ A view was expressed that only precursors which may pose a risk to the objectives of the Convention by virtue of their importance in the production of one or more chemicals listed in Schedule 1 or 2 part A should be included.

4/ Whether this criterion is unduly restrictive should be further discussed.

IV. MODALITIES FOR REVISION OF SCHEDULES AND GUIDELINES 1/2/

A. General provisions

1. The revisions envisaged consist of additions to, deletions from, or shifts between the schedules and modifications of, additions to or deletions from the guidelines.

2. A revision shall be proposed by a State Party which may request the assistance of the Technical Secretariat in the preparation of its proposal. If the Technical Secretariat has information which in its opinion may require a revision of the schedules of chemicals or one or more of the guidelines, it shall provide that information to the Executive Council and communicate it to all States Parties.

3. A proposal for revision shall be transmitted to the Technical Secretariat, substantiated with necessary information.

4. The Technical Secretariat shall inform the Executive Council and States Parties about a proposal for a revision within [5] days of its receipt. 3/

5. Any State Party and [, as requested,] the Technical Secretariat, may also provide relevant information for the evaluation of the proposal.

6. The Technical Secretariat shall provide assistance to any State Party, when requested, in evaluating an unlisted chemical. This assistance shall be confidential [unless it is established in the evaluation that the chemical has chemical weapon properties] 4/

B. Decisions regarding revision of schedules

1. When a proposal is made regarding a deletion of a chemical from a schedule or a shift between schedules the régime for that chemical shall be maintained while a decision on the proposed deletion or shift is being reached.

2. When an addition to a schedule of chemicals is proposed no régime shall be applied to that chemical until a decision has been taken to include it on one of the schedules.

1/ These modalities are in the process of further consideration and development.

2/ It has been proposed that the Scientific Advisory Board should be involved in the modalities for revision.

3/ The Executive Council shall examine in light of all information available to it, the proposal for a revision to a Schedule and promptly provide its recommendation to all States Parties for consideration.

4/ It has been stated that this paragraph is not necessary and could be deleted.

3. The decision on a proposal shall be taken by the Organization 1/ [Conference of the States Parties] by [a [two-third] majority vote] [consensus] [tacit approval of all States Parties 60 days after they have been informed of the proposal by the Technical Secretariat. If there is no tacit approval, the matter shall be reviewed by the [Conference of the States Parties] at its next meeting.] [If urgent consideration is requested by five or more Parties, a special meeting of the Conference of the States Parties shall be promptly convened.]

4. The decision on a proposal shall be taken within [60 days] after the receipt by the Technical Secretariat of the proposal. The decision shall be notified to all States Parties. An approved revision shall enter into force [30] days after such notification.

C. Decisions regarding revision of guidelines

1. The decision on a proposal shall be taken by the Organization 1/ by [a majority vote] [consensus] 2/3/4/

1/ The question of which organ(s) of the Organization should be entrusted with this task should be considered further.

2/ The questions of the decision-making for and entry into force of revisions of guidelines require further consideration in the light of the work on amendment procedures to the Convention.

3/ The issue of revision of schedules pursuant to a revision of guidelines should be further considered.

4/ A view was expressed that a minimum time period for evaluation of a proposal before decision should be considered.

PROTOCOL ON INSPECTION PROCEDURES 1/

After further in-depth consideration, the Protocol on Inspection Procedures shall replace the Guidelines on the International Inspectorate now included in the Addendum to Appendix I of this report.

I. Definitions

"Inspector" means an individual designated by the Director-General of the Technical Secretariat according to the procedures as set forth in part II of this Protocol to carry out an inspection in accordance with the Convention, its annexes, and facility agreements between States Parties and the Organization of the Convention.

"Inspection assistant" means an individual designated by the Director-General of the Technical Secretariat according to the procedures as set forth in part II of this Protocol to assist inspectors in an inspection (e.g. medical, security, administration, interpreters).

"Inspection Team" means the group of inspectors and inspection assistants assigned by the Director-General of the Technical Secretariat to conduct a particular inspection.

"Inspected State Party" means the State Party to the Convention on whose territory an inspection pursuant to the Convention, its annexes and facility agreements between Parties and the Organization of the Convention takes place, or the State Party to the Convention whose facility on the territory of a host State is subject to such an inspection.

"Inspection Site" means any area or facility at which the inspection is carried out and which is specifically defined in the respective facility agreement or inspection mandate or request.

"Period of Inspection" means the period of time from arrival of the inspection team at the inspection site until its departure from the inspection site, exclusive of time spent on briefings before and after the verification activities.

"Point of Entry" (POE) means the location(s) designated for the in-country arrival of inspection teams for inspections pursuant to the Convention and for their departure after completion of their mission.

"In-Country Period" means the period from the arrival of the inspection team at a point of entry until its departure from the State at a point of entry.

1/ The structure of this Protocol and the ordering of the provisions contained in it are subject to further work.

"Host State" means that State on whose territory lie States Parties' facilities subject to inspection under the Convention.

"In-Country Escort" means individuals specified by the inspected State Party and, if appropriate, by the Host State, if they so wish to accompany and assist the inspection team throughout the in-country period.

"Routine Inspections" means the systematic, on-site inspection [, subsequent to initial inspections,] of facilities declared pursuant to Articles IV, V, VI and the Annexes to those Articles.

"Initial [inspection] [visit]" means the first on-site inspection of facilities to verify data declared pursuant to Articles IV, V, VI and the Annexes to those Articles.

"Challenge Inspection" means the inspection of a State Party requested by another State Party pursuant to Article IX, part II.

"Approved Equipment" means the devices and/or instruments essential for the performance of the inspection team's duties that have been certified by the Technical Secretariat in accordance with agreed procedures. Such equipment may also refer to the administrative supplies or recording materials that would be used by the inspection team.

"Facility Agreement" means (to be developed)

"Inspection Mandate" means (to be developed)

II. Designation of inspectors and inspection assistants

1. Verification activities in a State Party to the Convention shall only be performed by Inspectors and inspection assistants designated to this State in advance.

2. Not later than ... days after entry into force of the Convention the Technical Secretariat shall communicate, in writing, to all States Parties the names, nationality and ranks of the Inspectors and inspection assistants proposed for designation. 1/ Furthermore, it shall furnish a description of their qualifications and professional experience.

3. Each State Party shall immediately acknowledge receipt of the list of Inspectors and inspection assistants, proposed for designation communicated to it. Any Inspector and inspection assistant included in this list shall be regarded as designated unless a State Party, within 30 days after acknowledgement of receipt of the list declares its non-acceptance.

1/ It has been suggested that, in order to facilitate early implementation of the verification activities, States might, upon signature, make declarations concerning the number and types of facilities which shall be subject to verification. The Preparatory Commission, on the basis of these declarations, might initiate the designation and clearance process.

In the case of non-acceptance, the proposed Inspector or inspection assistant shall not undertake or participate in verification activities within the State Party which has declared his non-acceptance. The Director-General shall, as necessary. submit further proposals in addition to the original list.

4. A State Party has the right at any time, to object to an Inspector or inspection assistant who may have been already designated in accordance with the procedures in paragraph 3 above.

It shall notify the Technical Secretariat of its objections [and include the reason for the objection.] Such objections shall come into effect 30 days after receipt by the Technical Secretariat. The Technical Secretariat shall immediately inform the State concerned of the withdrawal of the designation of the Inspector or inspection assistant.

5. A State Party that has been notified of an inspection shall not seek to have removed from the inspection team for that inspection any of the designated inspectors or inspection assistants named in the inspection team list.

6. The number of Inspectors and inspection assistants accepted by and designated to a State Party must be sufficient to allow for availability and [random] 1/ selection of appropriate numbers of Inspectors and inspection assistants.

7 If, in the opinion of the Director-General the non-acceptance of proposed Inspectors or inspection assistants impedes the designation of a sufficient number of Inspectors or inspection assistants or otherwise hampers the effective fulfilment of the task of the International Inspectorate, the Director-General shall refer the issue to the Executive Council.

8. Whenever amendments to the above-mentioned lists of Inspectors and inspection assistants are necessary or requested, replacement Inspectors and inspection assistants shall be designated in the same manner as set forth with respect of the initial list.

9. The members of the inspection team carrying out an inspection of a facility of a State Party located in the territory of another State Party shall be designated in accordance with the procedures set out in this Protocol both to the State Party whose facility is subject to inspection and the host State.

1/ The view was expressed that the pool of Inspectors should be sufficiently large to permit availability and rotation of Inspectors, but that it would not be feasible or necessary to designate such large numbers of Inspectors to each country that random selection could be ensured.

III. Privileges and Immunities 1/

1. Each State party shall, within 30 days after acknowledgement of receipt of the list of designated Inspectors and inspection assistants or of changes thereto and for the purpose of carrying out inspection activities, provide for multiple entry/exit and/or transit visas and other such documens which each Inspector or inspection assistant may need to enter and to remain on the territory of that State Party. These documents shall be valid for at least 24 months from the date of their provision to the Technical Secretariat.

2. To exercise their functions effectively, Inspectors and inspection assistants shall be accorded privileges and immunities in the country of the inspection site as set forth in paragraph (i) through (ix). Privileges and immunities shall be granted to members of the inspection team for the sake of the Convention and not for the personal benefit of the individuals themselves. Privileges and immunities shall be accorded for the entire in-country period in the country in which an inspection site is located, and thereafter with respect to acts previously performed in the exercise of official functions as Inspector or inspection assistant. 2/

(i) The members of the inspection team shall be accorded the inviolability enjoyed by diplomatic agents pursuant to Article 29 of the Vienna Convention on Diplomatic Relations of 18 April 1961.

(ii) The living quarters and office premises occupied by the inspection team carrying out inspection activities pursuant to the Convention shall be accorded the inviolability and protection accorded the premises of diplomatic agents pursuant to Article 30 of the Vienna Convention on Diplomatic Relations.

(iii) The records of the inspection team shall enjoy the inviolability accorded to all papers and correspondence of diplomatic agents pursuant to Article 30 of the Vienna Convention on Diplomatic Relations. The inspection team shall have the right to use codes for their communications with the Technical Secretariat.

1/ Some delegations expressed the view that this section required further consideration. A view was expressed that Article VI ("Experts on mission for the United Nations") of the Convention on the Privileges and Immunities of the United Nations should be taken into account in this later consideration.

2/ The rights and privileges of the inspectors and inspection assistants during transportation over and through non-inspected States Parties and non-State Parties needs further consideration.

A view was expressed that an Inspector or inspection assistant shall be considered to have assumed his inspection duties on departure from his primary work location, on Technical Secretariat arranged transportation, and shall be considered to have ceased performing those duties when he has returned to his primary work location and on termination of Technical Secretariat provided transportation.

(iv) Samples and approved equipment carried by members of the inspection team shall be inviolable subject to provisions contained in the Convention and exempt from all customs duties. Hazardous samples shall be transported in accordance with relevant transport regulations.

(v) The members of the inspection team shall be accorded the immunities accorded diplomatic agents pursuant to paragraphs 1, 2 and 3 of Article 31 of the Vienna Convention on Diplomatic Relations.

(vi) The members of the inspection team carrying out their prescribed activities pursuant to the Convention shall be accorded the exemption from dues and taxes accorded to diplomatic agents pursuant to Article 34 of the Vienna Convention on Diplomatic Relations.

(vii) The members of the inspection team shall be permitted to bring into the territory in which an inspection site is located, without payment of any customs duties or related charges, articles for personal use, with the exception of articles the import or export of which is prohibited by law or controlled by quarantine regulations.

(viii) The members of the inspection team shall be accorded the same currency and exchange facilities as are accorded to representatives of foreign Governments on temporary official missions.

(ix) The members of the inspection team shall not engage in any professional or commercial activity for personal profit on the territory of the inspected Party or that of the host countries.

3. Without prejudice to their privileges and immunities the members of the inspection team shall be obliged to respect the laws and regulations of the State Party or host country on whose territory an inspection is carried out and, to the extent that is consistent with the inspection mandate, shall be obliged not to interfere in the internal affairs of that State.

If the inspected party considers that there has been an abuse of privileges and immunities specified in this Protocol, consultations shall be held between the Party and the Technical Secretariat to determine whether such an abuse has occurred and, if so determined, to prevent a repetition of such an abuse.

The immunity from jurisdiction of members of the inspection team may be waived by the Director-General of the Technical Secretariat in those cases when it is of the opinion that immunity would impede the course of justice and that it can be waived without prejudice to the implementation of the provisions of the Convention. Waiver must always be express.

[4. If at any time, a member of the inspection team is on the territory of the inspected State Party or host country and is suspected or accused of violating a law or regulation, consultations shall be held between the State concerned and the inspection team chief to determine whether such an abuse has occurred, and if so determined, to prevent a repetition of such an abuse. If requested by the State Party or host country, the Technical Secretariat shall remove that individual from the country. If the inspection team chief is the

individual suspected or accused, the inspected State Party shall have the right to communicate with the Technical Secretariat and request his removal and replacement. The deputy team chief shall assume the duty of team chief until the Technical Secretariat has acted on the inspected State Party's request.]

5. If the inspected State Party so decides, Inspectors and inspection assistants monitoring destruction of chemical weapons during the active phase of destruction pursuant to article IV and its annex shall only be allowed to travel 1/ up to (...) kilometres from the inspection site with the permission of the in-country escort, and as considered necessary by the inspected State Party shall be accompanied by the in-country escort. Such travel shall be taken solely as leisure activity. 2/

6. The State Party on whose territory a facility of another State Party is to be inspected shall accord to the inspection team the privileges and immunities granted to Inspectors and inspection assistants for the effective exercise of their functions in this Protocol.

IV. General rules governing inspections

1. The members of the inspection team shall discharge their functions in accordance with the Articles and Annexes of the Convention, this Protocol as well as rules established by the Director General of the Technical Secretariat and facility agreements between States Parties and the Organization.

2. The inspection team dispatched shall strictly observe the inspection mandate issued by the Director General of the Technical Secretariat. 3/ It shall refrain from activities going beyond this mandate.

3. The activities of the inspection team shall be so arranged as to ensure on the one hand the timely and effective discharge of the inspector's functions and, on the other, the least possible inconvenience to the State concerned and disturbance to the facility or other location inspected. The inspection team shall avoid unnecessarily hampering or delaying the operation of a facility [or] [and avoid] affecting its safety. In particular, the inspection team shall not operate any facility or direct the staff of the facility to perform any operation.

If inspectors consider that, to fulfil their mandate, particular operations should be carried out in a facility, they shall request the designated representative of the management of the facility to perform them. The representative shall carry out the request [to the extent possible].

1/ It is understood that "travel" does not imply the right of access to areas restricted for security reasons or to private property.

2/ Further study on the rights of members of an inspection team to communicate with the embassy of their respective nationality is necessary.

3/ The use of the terms "Technical Secretariat" and "Director General of the Technical Secretariat" needs to be reviewed throughout the Convention.

4. In the performance of their duties on the territory of a State Party, the members of the inspection team shall, if the State Party so requests, be accompanied by representatives of this State, but the inspection team must not thereby be delayed or otherwise hindered in the exercise of its functions. 1/ With the same proviso, at the inspection site, representatives of the inspected facility shall be included among the in-country escort if requested by the inspected State Party.

5. Each facility declared and subject to on-site inspection pursuant to Articles IV, V and the Annexes 1 and 2 of Article VI shall be liable to receive an initial [visit] [inspection] from the international inspectors promptly after the facility is declared. The purpose of the initial [visit] [inspection] shall be to verify information provided [concerning the facility to be inspected] and to obtain any additional information needed for planning future verification activities at the facilities, including on-site inspections and the use of continuous on-site instruments. 2/

6. Each State Party shall conclude a facility agreement with the Organization for each facility declared and subject to on-site inspection pursuant to Articles IV, V and the Annexes 1 and 2 of Article VI. These agreements shall be executed within .. months after the Convention enters into force for the State or after the facility has been declared for the first time. They shall be based on models for such agreements and provide for detailed arangements which shall govern inspections at each facility.

7 In cases where facilities of a State Party subject to inspection are located in the territory of another State or where the access from the point of entry to the facilities subject to inspection requires transit through the territory of another State, inspections shall be carried out in accordance with this Protocol.

States Parties on whose territory facilities of other States Parties subject to inspection are located shall facilitate the inspection of those facilities and shall provide for the necessary support to enable the inspection team to cary out its tasks in a timely and effective manner.

8. In cases where facilities of a State Party subject to inspection are located in the territory of a non-State Party the State Party subject to inspection shall ensure that inspections of those facilities can be carried out in accordance with the provisions of this Protocol. A State Party that has one or more facilities on the territory of a non-State Party shall ensure acceptance by the host State of inspectors and inspection assistants designated to that State Party.

1/ The rights of host State representatives need to be further considered.

2/ The consistency of this provision with all verification provisions in the Convention needs further consideration.

V. Pre-inspection arrangements

1. [Unless otherwise provided for in this Convention] the (Director General of the) Technical Secretariat shall notify the State Party of its intention to carry out an inspection [[12] [24] [48] 1/ hours prior to the planned arrival of the inspection team [at the point of entry] [at the facility/site to be inspected]] [within the prescribed timeframes where specified].

2. The inspected State Party shall within [one] hour acknowledge the receipt of a notification by the Technical Secretariat of an intention to conduct an inspection. Notifications made by the Technical Secretariat shall include the following information:

- the point of entry
- the date and estimated time of arrival at the point of entry
- the means of arrival at the point of entry
- [- the site to be inspected]
- the names of Inspectors and inspection assistants
- if appropriate, aircraft clearance of special flights.

[The inspection site shall be specified by the chief of the inspection team at the point of entry not later than 24 hours after the arrival of the inspection team.]

3. Initial [inspections] [visits] shall be notified no less than 72 hours in advance of the estimated time of arrival of the inspection team at the point of entry. Such notifications shall in addition to the information specified in paragraph 2 above also include the specification of the inspection site.

4. In the case of an inspection of a facility of a State Party located in the territory of another State Party both State Parties shall be simultaneously notified in accordance with paragraphs 1, 2, 3 of this section.

5. Each State Party shall designate the points of entry and shall supply the required information to the Technical Secretariat not later than 30 days after the Convention enters into force. 2/ These points of entry shall be such that

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1/ Consideration needs to be given to balance the time required for logistical purposes and the amount of advance warning given to a Party of a pending inspection.

2/ In order to ensure that the process of designation of Inspectors, experts and supporting staff as well as of points of entry (and departure) function smoothly as from the date of entry into force of the Convention, the idea of the signatories indicating advance acceptance on the basis of a preliminary list drawn up by the Preparatory Commission should be considered.

the inspection team can reach any inspection site from at least one point of entry within [12] hours. Locations of points of entry shall be provided to all States Parties by the Technical Secretariat.

Each State Party may change the points of entry by giving notice of such change to the Technical Secretariat. Changes shall become effective .. days after the Technical Secretariat receives such notification to allow appropriate notification to all States Parties.

If the Technical Secretariat considers that there are insufficient points of entry for the timely conduct of inspections or that changes to the points of entry proposed by a State Party would hamper such timely conduct of inspections, it shall enter into consultations with the State Party concerned to resolve the problem.

6. The State Party, which has been notified of the arrival of an inspection team, shall ensure its immediate entry into the territory and shall through an in-country escort [if such an escort is requested] do everything in its power to ensure the safe conduct of the inspection team and their equipment and supplies, from their points of entry to the site(s) to be inspected and to their points of exit. It shall provide or arrange for the facilities necessary for the inspection team such as communication means, interpretation services to the extent necessary for the performance of interviewing and other tasks, transportation, working space, lodging, meals and medical care of the inspection team. The State receiving the inspection shall be reimbursed for its expenses by the Organization (details to be developed).

7 In accordance with paragraphs 7 and 8 of Part IV of this Protocol, the inspected Party, [or host State Party] shall ensure that the inspection team is able to reach the inspection site within [12] 1/ hours from the arrival at the point of entry or, if appropriate, from the time the inspection site is specified at the point of entry.

8. (a) For inspections pursuant to Article IX and for other inspections where timely travel is not feasible using scheduled commercial transport, an inspection team may need to utilize aircraft owned or chartered by the Technical Secretariat. Within 30 days after entry into force of the Convention, each Party shall inform the Technical Secretariat of the standing diplomatic clearance number for non-scheduled aircraft transporting inspection teams and equipment necessary for inspection into and out of the territory in which an inspection site is located. Aircraft routings to and from the designated point of entry shall be along established international airways that are agreed upon between the Parties and the Technical Secretariat as the basis for such diplomatic clearance.

(b) When a non-scheduled aircraft is used, the Technical Secretariat shall provide the inspected Party with a flight plan, through the National Authority, for the aircraft's flight from the last airfield prior to entering the airspace of the country in which the inspection site is located to the

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1/ Further study is required on whether a longer or shorter time period is desirable or feasible.

point of entry, no less than [6] hours before the scheduled departure time from that airfield. Such a plan shall be filed in accordance with the procedures of the International Civil Aviation Organization applicable to civil aircraft. For its owned or chartered flights, the Technical Secretariat shall include in the remarks section of each flight plan the standing diplomatic clearance number and the notation: "Inspection aircraft. Priority clearance processing required."

(c) No less than [3] hours prior to the scheduled departure of the inspection team from the last airfield prior to entering the airspace of the country in which the inspection is to take place, the inspected Party shall ensure that the flight plan filed in accordance with paragraph B of this section is approved so that the inspection team may arrive at the point of entry by the estimated arrival time.

(d) The inspected Party shall provide parking, security protection, servicing and fuel as required for the airplane of the inspection team at the point of entry when such airplane is under charter to the Technical Secretariat. Such aircraft shall not be liable for landing fees, departure tax, and similar charges. The Technical Secretariat shall bear the cost of such fuel, security and servicing. 1/

[9. In the case of routine inspections pursuant to Articles IV, V and VI, if the inspectors intend to conduct another inspection within the same inspected State Party or host State the inspection team shall return to the point of entry which it used to enter the State and await notification by the Technical Secretariat to the inspected State Party of the next inspection.]

VI. The conduct of inspections

1. Upon arrival at the site and prior to the commencement of the inspection, the inspection team shall be briefed, with the aid of maps and other documentation as appropriate, by facility representatives on the facility, the activities carried out there, safety measures and administrative arrangements necessary for the inspection. The time spent for the briefing shall be limited to the minimum necessary, in any event not exceeding 3 hours, and shall not be counted within the duration of the inspection.

2. In carrying out their activities, Inspectors and inspection assistants shall observe safety regulations, established at the inspection site, 2/ including those for the protection of controlled environments within a facility and for personal safety. Individual protective clothing and

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1/ The Technical Secretariat will need to negotiate arrangements for costs of such services.

2/ Consideration will need to be given with regard to those areas which for safety reasons preclude or limit the entrance of personnel (e.g. unexploded munitions, hazardous areas of destruction facilities).

equipment shall normally be provided by the Technical Secretariat. 1/ 2/ [For inspections pursuant to Article IX of the Convention, at the inspected Party's request, the clothing and equipment shall be left at the site. The inspected Party shall reimburse the Technical Secretariat for the cost of any clothing and equipment left by it.]

3. Inspectors shall have the right throughout the period of inspection to communications with the Headquarters of the Technical Secretariat. For this purpose they [may use their own equipment and/or] may request that the inspected Party provide them with access to other telecommunications. 3/ The inspection team shall have the right to use its own 4/ two-way system of radio communications between personnel patrolling the perimeter and other members of the inspection team. Communication systems should conform to power and frequency instructions established by the Technical Secretariat.

4. The inspection team shall, in accordance with the relevant Articles and Annexes of this Convention as well as with facility agreements, have the right to:

- unimpeded access to the facility inspected. The items to be inspected will be chosen by the inspectors;

- interview any facility personnel in the presence of representatives of the State Party receiving the inspection [with the purpose of establishing relevant facts. Inspectors shall only request information and data which are necessary to the conduct of the inspection, and the inspected Party shall furnish such information upon request. The in-country escort shall have the right to object to questions posed to the facility personnel if those questions are deemed not relevant to the inspection. If the inspection team chief objects and states their relevance, the questions shall be provided in writing to the inspected Party for reply;]

- have samples taken at its request and in its presence by representatives of the State Party receiving the inspection or take samples itself, if so agreed in advance with those representatives;

- perform on-site analysis of samples or request that appropriate analysis be performed in their presence;

1/ Agreements between the Technical Secretariat and States Parties should specify that all protective clothing and equipment meet pre-agreed safety standards or a State Party may require the team to use the clothing and equipment of that Party.

2/ For safety reasons, the inspected State Party should have the right to provide appropriate alternative equipment and protective clothing of its own for the inspection team, provided this does not hinder the conduct of the inspection.

3/ The issue of communications requires further consideration.

4/ See footnote 2 above.

- transfer, if necessary, samples for analysis off-site at a laboratory designated by the Organization in accordance with agreed procedures;

- afford the opportunity to the State Party receiving the inspection to be present when samples are analysed;

- ensure that samples transported, stored and processed are not tampered with;

- inspect documentation and records it deems relevant to the conduct of its mission;

- have photographs taken at its request by representatives of the State Party receiving the inspection. Photographic cameras shall be capable of producing instant development photographic prints. Inspectors shall allow the inspected Party, upon its request, to take the pictures desired by the Inspectors. Two photographs will be taken of each item requested by the Inspectors. The inspected Party and the Inspectors shall each receive one.

5. The State Party receiving the inspection shall:

- have the right to accompany the International Inspectors at all times during the inspection and observe all their verification activities;

- have the right to retain portions of all samples taken and be present when samples are analysed on-site; 1/

- receive copies of the reports on inspections of its facility(ies);

- receive copies, at its request, of the information and data gathered about its facility(ies) by the Technical Secretariat. 2/

6. Inspectors shall have the right to request clarifications in connection with ambiguities that arise during an inspection. Such request shall be made promptly through the in-country escort. The in-country escort shall provide the inspection team, during the inspection, with such clarifications as may be necessary to remove the ambiguity. In the event questions relating to an object or a building located within the inspection site are not resolved, the object or building shall be photographed for the purpose of clarifying its nature and function. If the ambiguity cannot be removed during the inspection, the Inspectors shall notify the Technical Secretariat immediately. The Inspectors shall include the question, relevant clarifications and a copy of any photographs taken in the inspection report.

1/ The feasibility of retaining portions of all samples taken should be further discussed.

2/ The question has to be considered when the inspected State Party should be provided with an opportunity to comment on the inspection report drafted upon conclusion of the inspection.

The text of the preceding pages 137-148 reflects the results of the work undertaken on the Protocol in the course of this session. With the aim of facilitating further consideration of the issues involved, it was accepted to include the text of the following pages which have not been considered this session.

[7. Periods of inspection may be extended by agreement with the in-country escort, by no more than (xx hours). Post-inspection procedures shall be completed by the inspection team at the inspection site within (xx hours)] 1/

[8. An inspection team conducting routine inspections pursuant to Articles IV, V and VI shall include no more than (xx) Inspectors and (xx) inspection assistants.] 2/

[9. At least two Inspectors on each team must speak the language of the Convention which the inspected Party has agreed to work in. 3/ 4/ Each inspection team shall operate under the direction of a team leader and deputy team leader. Upon arrival at the inspection site, the inspection team may divide itself into subgroups consisting of no fewer than two Inspectors each.]

[10. In the case of inspections conducted pursuant to Articles IV. V, VI and IX, upon completion of the post-inspection procedures, the inspection team shall return promptly to the point of entry at which it entered the inspected State and it shall then leave, within 24 hours, the territory of that State.] 5/

1/ The view was expressed that, as no fixed period was foreseen for routine inspections, this paragraph might be superfluous. The view was also expressed that for some kinds of routine inspections there cannot be any time limit without changing the substance of agreed provisions of Articles IV and V and their Annexes.

2/ The view was expressed that routine inspection effort expressed in inspection man-days should be agreed between the inspected State Party and the Technical Secretariat and not be provided for in the Convention.

3/ Consideration should be given to include provision in the Convention for the selection by States Parties of what language of the Convention they will operate in for the conduct of inspections and submission of reports to the Technical Secretariat.

4/ The Technical Secretariat should also make arrangements for interpreters for national languages of States Parties, to the extent possible, to facilitate inspections.

5/ The view was expressed that this paragraph could not apply to routine inspections.

VII. Inspection equipment and continuous monitoring by instruments

1. There shall be no restriction by the State Party receiving the inspection on the inspection team bringing on to the inspection site such instruments and devices which the Technical Secretariat has determined to be necessary to fulfil the inspection requirements.

This includes, inter alia, equipment for discovering and preserving evidence related to the compliance with the Convention, equipment for recording 1/ and documenting the inspection, as well as for communication with the Technical Secretariat 2/ and for determining that the inspection team has been brought to the site for which the inspection has been requested. The Technical Secretariat shall to be extent possible, prepare and, as appropriate, update a list of standard equipment which may be needed for the purposes described above and regulations governing such equipment which shall be in accordance with this Protocol. 3/ 4/

2. The equipment shall be in the property of the Technical Secretariat and be designated and approved by it. The Technical Secretariat shall, to the extent possible, select that equipment which is specifically designed for the specific kind of inspection required. Designated and approved equipment shall be specifically protected against unauthorized alteration.

3. The State Party receiving the inspection shall have the right, without prejudice to the time frames set forth in part V to inspect the equipment at the point of entry, i.e. to check the identity of the equipment. To facilitate such identification, the Technical Secretariat shall attach documents and devices to authenticate its designation and approval of the equipment. The State Party receiving the inspection may exclude equipment without the above-mentioned authentication documents and devices. Such equipment shall be kept at the point of entry until the inspection team leaves the respective country. 5/

1/ The possible use of photographic or imaging equipment requires further consideration.

2/ The issue of communication requires further consideration.

3/ Further consideration needs to be given to when and how such equipment will be agreed and to what extent they will need to be specified in the Convention.

4/ The relationship between equipment for routine inspections and challenge inspections and provisions for their respective uses will need to be considered.

5/ A view was expressed that consideration should be given to the possibility for the State Party receiving the inspection to check, in exceptional circumstances, any piece of equipment to ascertain that its characteristics correspond to the attached documentation.

4. In cases where the inspection team finds it necessary to use equipment available on site not belonging to the Technical Secretariat and requests the State Party to enable the team to use such equipment, the State Party receiving the inspection shall comply with the request to the extent it can. 1/

5. Where applicable, the Technical Secretariat shall have the right to use continuing monitoring systems and seals as set forth in the Convention and in facility agreements between States Parties and the Technical Secretariat. It shall have the right to carry out necessary engineering surveys, construction, emplacement, maintenance, repair, replacement and removal of such systems and seals. In such cases the State Party receiving an inspection shall, at the request of and at the expense of the Technical Secretariat, provide the necessary preparation and support for the establishment of continuous monitoring systems.

6. The inspection team shall verify during each inspection that the monitoring system functions correctly and that emplaced seals have not been tampered with.

VIII. Inspection Report

1. Within ... days after the inspection, Inspectors shall submit to the Technical Secretariat a report 2/ on the activities conducted by them and on their findings. The report shall be factual in nature. It shall only contain facts relevant to compliance with the Convention, as provided for under the inspection mandate. Relevant regulations, governing the protection of confidential information, shall be observed. The report shall also provide information as to the manner in which the State Party inspected co-operated with the inspection team. Different views held by Inspectors may be attached to the report.

2. The report shall be kept confidential. The National Authority of the State Party shall be informed of the findings of the report. Any written comments, which the State Party may immediately make on these findings shall be annexed to it. Immediately after receiving the report the Technical Secretariat shall transmit a copy of it to the State Party receiving the inspection.

3. Should the report contain uncertainties, or should co-operation between the National Authority and the Inspectors not measure up to the standard required, the Technical Secretariat shall approach the State Party for clarification.

4. If the uncertainties cannot be removed or the facts established are of a nature to suggest that obligations undertaken under the Convention have not been met, the Technical Secretariat shall inform the Executive Council without delay.

1/ A view was expressed that the possibility of agreed procedures should be considered in this regard.

2/ Further consideration needs to be given on when and how the receiving State/facility will be able to comment on the contents of the report.

IX. Challenge Inspections conducted pursuant to Article IX

1. (a) Inspections under Article IX shall only be performed by Inspectors especially designated for this function. In order to designate Inspectors for inspections under Article IX, the Director General shall, by selecting Inspectors from among the full-time Inspectors for routine inspection activities, establish a list of proposed Inspectors. It shall comprise a sufficiently large pool of International Inspectors having the necessary qualification, experience, skill and training, to allow for rotation and availability of Inspectors.

(b) The designation of Inspectors shall follow the procedures provided for under Chapter I of this Protocol.

2. The Director General shall select the members of an inspection team. 1/ Each inspection team shall consist of not less than [5] Inspectors and shall be [kept to a minimum necessary for the proper execution of its task] [not more than ... members]. No national of the requesting State Party, the State Party receiving the inspection, or another State Party cited by the requesting State Party as having been involved in the case to be inspected shall be a member of the inspection team.

[3. If so requested by the State Party requesting the challenge inspection, the site to be inspected may only be specified upon arrival of the inspection team at the point of entry.]

4. Upon receipt of the notification of the request for inspection [and upon the specification of the site to be inspected] and pending the arrival of the inspection team at the inspection site, the State Party receiving the inspection shall ensure that no action is taken at the site to clean up, conceal or remove material of relevance, alter facility records or otherwise jeopardize the proper conduct of the inspection, while keeping possible disruption to the normal operation of the facility to a minimum.

5. (a) The Technical Secretariat may, as far as feasible, dispatch an advance team to monitor how the obligations under paragraph 7 above are fulfilled and to prepare for the securing of the site, prior to the arrival of the remainder of the inspection team. The State Party receiving the inspection shall arrange for the earliest possible arrival of the advance team and shall assist it in its activities at the site.

(b) In securing the site, upon arrival and up to the completion of the inspection, the inspection team shall be permitted to patrol the perimeter of the site, station personnel at the exits and inspect any means of transport of the inspected Party leaving or entering the site, in order to ensure that there is no removal or destruction of relevant material.

1/ The detailed procedure for selection needs to be addressed later

6. In the course of the pre-inspection briefing, the State Party receiving the inspection may indicate to the inspection team the equipment, documentation or areas it considers sensitive and not related to the purpose of the inspection. The Inspectors shall consider the proposals made to the extent they deem them adequate for the conduct of their mission.

7. The Inspectors shall have the [unimpeded] access to the site they deem necessary for the conduct of their mission.

8. In carrying out the inspection in accordance with the request, the inspection team shall use only those methods necessary to provide sufficient relevant facts to clarify doubts about compliance with the provisions of the Convention, and shall refrain from activities not relevant thereto. It shall collect and document such evidence as is related to the compliance with the Convention by the State Party receiving the inspection but shall neither seek nor document information which is clearly not related thereto, unless the State Party receiving the inspection expressly requests it to do so. Any material collected and subsequently found not to be relevant shall not be retained. 1/

9. The inspection team shall be guided by the principle of conducting the inspection in the least intrusive manner possible, consistent with the effective and timely accomplishment of its mission. 2/ It shall, to the extent it deems them appropriate, take into consideration and adopt proposals which may be made by the State Party receiving the inspection, at whatever stage of the inspection, to ensure that sensitive equipment or information, not related to chemical weapons, is protected.

10. Challenge inspections shall not last longer than ...

11. Within ... days after the inspection the report by the Inspectors shall be submitted to the Head of the Technical Secretariat. He shall promptly transmit the report to the requesting State, the requested State and to the Executive Council.

1/ It has been pointed out that the operational meaning of this paragraph would be largely contingent on the specificity of the request, which needs to be considered in the context of paragraph 4, p. 143.

2/ Possible standardization of procedures to facilitate the implementation, inter alia, of this principle may be considered in the context of a manual for Inspectors to be elaborated by the Technical Secretariat.

Also with the aim of facilitating further consideration of the issues involved one delegation submitted the following material related to parts VII - IX above for equal consideration in conjunction with them

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Section VII, paragraph 1, the second paragraph should also include the following equipment in the inter alia equipment: "Temporary and permanent monitoring equipment and seals for emplacement, and equipment for discovering and preserving information"

Section VII, paragraph 3, should also include the following: "Equipment and supplies shall be examined by the in-country escort in the presence of the inspection team members to ascertain to the satisfaction of the inspected party that the equipment and supplies cannot perform functions irrelevant to the inspection requirements of the Convention. If it is established upon examination that the equipment or supplies are unconnected with these inspection requirements, then they shall not be cleared for use and shall be impounded at the point of entry until the departure of the inspection team from the country where the inspection is conducted. Storage of the inspection team's equipment and supplies at the point of entry shall be in tamper-indicating containers provided by the inspection team within a secure facility provided by the inspected party. Access to each secure facility shall be controlled by a 'dual key' system requiring the presence of both the inspected party and representative of the inspection team to gain access to the equipment and supplies. The Technical Secretariat may allow a State Party to maintain equipment storage, as described here, in lieu of bringing it in for each inspection."

Section VII, paragraph 6 should be more specific regarding what a State Party shall be responsible for providing for monitoring systems. Language suggested follows:

"In support of the establishment of continuous monitoring systems for routine verification activities, the inspected State Party shall, at the request of and at the expense of the Technical Secretariat, provide the following:

(1) All necessary utilities for the construction and operation of the monitoring systems, such as electrical power and heating;

(2) Basic construction materials;

(3) Any site preparation necessary to accommodate the installation of continuously operating systems for monitoring;

(4) Transportation for necessary installation tools, materials and equipment from the entry point to the inspection site."

An additional paragraph should be added after paragraph 6, which states that:

"Seals placed by Inspectors on facilities and monitoring devices shall only be removed in the presence of Inspectors except in extraordinary

circumstances. If for some reason a seal must be removed, the Party shall immediately notify the Technical Secretariat and Inspectors will return as soon as possible to validate the inventory and replace the seal."

After section VII, a new section VIII on collection, handling and analysis of samples should be added. Proposed language follows:

VIII. Collection, handling and analysis of samples

A. In cases of alleged use of chemical weapons, Inspectors have the right to collect samples themselves. The inspected Party(ies) shall assist in sample collection upon request. In all other inspections, except as specified in ..., representatives of the inspected Party shall take samples at the request of the Inspectors and in the presence of the Inspectors. Samples shall be taken pursuant to procedures set forth in articles, annexes and agreements between the Technical Secretariat and States Parties.

B. Where possible, Inspectors shall perform on-site analysis of samples using approved equipment brought by the inspection team.

C. The inspected Party has the right to be present during sample analysis and to retain duplicates of samples.

D. Inspectors may transfer, if necessary, samples for analysis off-site at laboratories designated by the Technical Secretariat. 1/ The inspection team shall be responsible for the security and preservation of the samples, and for the maintenance of a detailed history chronicling the chain of custody of the samples, until the samples are delivered to the designated analytical laboratories, at which time responsibility will pass to the Technical Secretariat.

E. The Technical Secretariat shall:

(a) select and certify the laboratories designated to perform different types of analysis;

(b) oversee the standardization of equipment and procedures at these designated laboratories and mobile analytical equipment and procedures, and monitor quality control and overall standards in relation to the certification of these laboratories and mobile equipment/procedures; and

(c) select from among the designated laboratories those which shall perform analytical or other functions in relation to specific investigations.

F. Samples shall be analysed in at least two designated laboratories. The Technical Secretariat shall oversee the expeditious processing of the analysis. The samples shall be accounted for and any unused samples 2/ or portions thereof shall be returned to the Technical Secretariat.

1/ Transportation of toxic samples and existing international transportation regulations will need to be addressed.

2/ Consideration should be given to the retention of unused samples taken during challenge inspection for which the findings were inconclusive.

G. The Technical Secretariat shall compile the results of the laboratory analysis of samples and include them in the final inspection report. The Technical Secretariat shall include in the report detailed information concerning the equipment and methodology employed by the designated laboratories.

For the current section VIII on inspection report, we suggest adding a new first paragraph to read as follows:

"1. During the post-inspection procedures, the inspection team shall provide the in-country escort with a list of any samples to be taken off-site by the inspection team for analysis".

ATTACHMENT 1

Overview of some activities of the Organization to be carried out after entry into force of the Convention, the ensuing preparatory work to be accomplished prior to this date and the information and co-operation requirements arising for signatories

Provision	Activity of the Organization	Time to start after entry into force	Preparatory work	Information and co-operation requirements
III, IV, V	Declarations to receive, compile and distribute to States Parties i.e. general and detailed declarations on CW stocks, CW production facilities, general and detailed plans for CW destruction and destruction/ conversion of production facilities	30 days 6 months or 9 months	Establishment of administrative framework for declaration and data as well as preparation for the study, compilation and dissemination of data and declaration to States Parties and other units of the Secretariat	Information on the progress in the process of ratification to enable planning for the date when the Convention enters into force
VI	Declarations on activities not prohibited by the Convention (relevant chemicals and facilities which produce, process or consume them)	30 days resp. annually		
IV (3)	Verification of declaration on CW at the location of each stockpile	Immediately after 30 days	Recruitment and training of (...) inspectors & supporting staff	Information on CW stocks, their size and number of locations
IV (3)	Verification of non-removal of CW-stockpiles (continuous presence of inspectors and monitoring with instruments)	30 days/ continuously	Development and procurement of monitoring instruments and devices for the inventory control procedure	Acquiring and testing of monitoring instruments and devices

ATTACHMENT 1 (continued)

IV (6)	Verification of destruction (continuous presence of inspectors and monitoring with instruments during active destruction phase)	After 1 year or earlier until the end of destruction	Recruitment and training of (...) inspectors & supporting staff, development and procurement of instruments	Number of destruction facilities. Approximate time of operation, operation schedules, acquiring and testing of instruments and devices
V (5)	Verification of declarations of CW production facilities	Immediately after 30 days	Recruitment and training of (...) inspectors & supporting staff	Information on CW production facilities, their number and location
V (6)	Inspection and continuous monitoring of closure of CW production facilities (periodic & on-site instruments)	3 months until destruction	See above & development and procurement of instruments	See above & acquiring and testing of instruments
V (8)	International verification of destruction of CW production facilities	Not later than 12 months until the end of destruction	Recruitment and training of (...) inspectors & supporting staff	Support in training activities
V (9)	International verification of temporary conversion of a CW production facility into a CW destruction facility	See above	See above	Information about intention of conversion
VI Annex VI (1) II, 4	Initial visits to SSPFs and "other facilities"	Immediately after 30 days	Recruitment and training of (...) inspectors & supporting staff	Information on SSPFs and "other facilities" in operation upon entry into force
	Systematic on-site verification of SSPFs and "other facilities" through on-site inspection and monitoring with instruments	Immediately after 30 days	See above & development and procurement of instruments	See above & acquiring and testing of instruments

ATTACHMENT 1 (continued)

VI Annex VI (2), 9 Annex VI (2), 5	Initial visits Systematic on-site verification on routine basis	Immediately after 30 days	Recruitment & training of (...) inspectors & supporting staff development and procurement of instruments	Information on facilities producing, processing or consuming chemicals listed in Schedule (2), acquiring and testing of instruments
IV Annex IV, II, 3 IV Annex IV, V, 5	Conclude agreements concerning storage facilities Conclude agreements concerning on-site verification of CW destruction facilities resp. combined plans for destruction and verification	Within (6) months Earlier than 12 months	Establishment of administrative framework for agreements and negotiations, further refinement of models for agreements, prenegotiation of such agreements with States Parties which will be needed during the first year	Prenegotiation of agreements on facilities under Articles IV, V, VI respectively with the Preparatory Commission
V Annex V, V, 2	Conclude agreements concerning on-site verification of declarations and systematic monitoring of closure and verification of destruction of CW production facilities	Within (6) months	See above	See above
VI Annex VI (1) II,	Conclude agreements concerning on-site verification of SSPFs and "other facilities"	Immediately after 30 days	Further elaboration of the model for an agreement, prenegotiation of agreements with signatories	Prenegotiation of agreements with the Preparatory Commission

ATTACHMENT 1 (continued)

VI Annex VI (2), 11	Conclude agreements concerning on-site verification of facilities producing etc. chemicals listed in Schedule (2)	(6) months	Prenegotiation of agreements with signatories	Prenegotiation of agreements with the Preparatory Commission
IV Annex IV, II, 7 and V, 7 VI (2) 14	Samples analysis in off-site laboratories designated by the Organization	Immediately after 30 days	Setting up a scheme of standardized equipment for off-site laboratories, designation of off-site laboratories and procedures for transport and handling of samples	Co-operation in the designation of off-site laboratories, installation of such laboratories pursuant to the schemes of the Preparatory Commission
Guidelines on the International Inspectorate (routine and challenge)	Designation of inspectors and inspection personnel	Immediately	Indication to signatories which inspectors are chosen for designation	Indication to the Preparatory Commission whether the inspectors might be acceptable
	Agreement on points of entry	Immediately	Preliminary agreement	Preliminary agreement
IX, 2	Carrying out of challenge inspections	Immediately	Training of inspectors for challenge inspections	Support in training activities
IX, 2	Designation of instruments for purposes of challenge inspection	Immediately	Development, procurement, testing, preliminary designation	Acquiring and testing of instruments
VII	Communicate with National Authorities	Immediately	Preparation of a list of names, addresses, communication lines	Providing data on National Authorities

ANNEX VI

MEMORANDUM OF UNDERSTANDING BETWEEN THE GOVERNMENT OF THE UNION OF SOVIET SOCIALIST REPUBLICS AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA REGARDING A BILATERAL VERIFICATION EXPERIMENT AND DATA EXCHANGE RELATED TO PROHIBITION OF CHEMICAL WEAPONS

The Government of the Union of Soviet Socialist Republics and the Government of the United States of America,

Determined to facilitate the process of negotiation, signature and ratification of a comprehensive, effectively verifiable, and truly global convention on the prohibition and destruction of chemical weapons,

Convinced that increased openness about their chemical weapons capabilities is essential for building the confidence necessary for early completion of the convention,

Desiring also to gain experience in the procedures and measures for verification of the convention,

Have agreed as follows:

I. General Provisions

1. As set forth below, the two sides shall conduct a bilateral verification experiment and data exchange related to the prohibition of chemical weapons.

2. The bilateral verification experiment and data exchange shall be conducted in two phases. In Phase I, the two sides shall exchange general data on their chemical weapons capabilities and carry out a series of visits to relevant facilities. In Phase II, the two sides shall exchange detailed data and perform on-site inspection to verify the accuracy of those data.

3. The bilateral verification experiment and data exchange is intended to facilitate the process of negotiation, signature and ratification of a comprehensive, effectively verifiable and truly global convention on the prohibition and destruction of chemical weapons by:

(1) enabling each side to gain confidence in the data on chemical weapons capabilities that will be provided under the provisions of the convention;
(2) enabling each side to gain confidence in the inspection procedures that will be used to verify compliance with the convention; and
(3) facilitating the elaboration of the provisions of the convention.

4. Terms used in this Memorandum shall have the same meaning as in the draft convention text under negotiation by the Conference on Disarmament. The draft convention text that is current as of the date of the exchange of data shall be used.

5. Data shall be current as of the date of the exchange, and shall encompass all sites and facilities specified below, wherever they are located.

6. Each side shall take appropriate steps to protect the confidentiality of the data it receives. Each side undertakes not to divulge this data without the explicit consent of the side that provided the data.

II. Phase I

In Phase I, each side shall provide the following data pertaining to its chemical weapons capabilities:

1. the aggregate quantity of its chemical weapons in agent tons;

2. the specific types of chemicals it possesses that are defined as chemical weapons, indicating the common name of each chemical;

3. the percentage of each of its declared chemicals that is stored in munitions and devices, and the percentage that is stored in storage containers;

4. the precise location of each of its chemical weapons storage facilities;

5. for each of its declared chemical weapons storage facilities:

-- the common name of each chemical defined as a chemical weapon that is stored there;
-- the percentage of the precise aggregate quantity of its chemical weapons that is stored there; and
-- the specific types of munitions and devices that are stored there;

6. the precise location of each of its chemical weapons production facilities, indicating the common name of each chemical that has been or is being produced at each facility; and

7. the precise location of each of its facilities for destruction of chemical weapons, including those currently existing, under construction, or planned.

In Phase I, each side shall permit the other side to visit some of its chemical weapons storage and production facilities, the exact number of which will be agreed upon as soon as possible. In addition, each side shall permit the other side to visit two industrial chemical production facilities. Each side will select the facilities to be visited by the other side.

III. Phase II

In Phase II, each side shall provide the following data pertaining to its chemical weapons capabilities:

1. the chemical name of each chemical it possesses that is defined as a chemical weapon;

2. the detailed inventory, including the quantity, of the chemical weapons at each of its chemical weapons storage facilities;

3. its preliminary general plans for destruction of chemical weapons under the convention, including the characteristics of the facilities it expects to use and the time schedules it expects to follow;

4. the capacity of each of its chemical weapons production facilities;

5. preliminary general plans for closing and destroying each of its chemical weapons production facilities under the convention, including the methods it expects to use and the time schedules it expects to follow;

6. the precise location and capacity of its planned single small-scale facility allowed under the convention for the production, for non-prohibited purposes under strict safeguards, of a limited quantity of chemicals that pose a high risk, i.e., Schedule 1 chemicals;

7. the precise location, nature and general scope of activities of any facility or establishment designed, constructed or used since 1 January 1946 for development of chemical weapons, *inter alia*, laboratories and test and evaluation sites.

IV. Timing

1. Except as specified below, Phase I data shall be exchanged not later than 31 December 1989. Visits shall begin not later than 30 June 1990, provided that the sides have agreed, with appropriate lead time, on the number of visits, as well as on the programs and other detailed arrangements for the visits, and assuming that the sides have agreed by 31 December 1989 on the type of facility to be visited by each side in its first visit to the other side.

2. In Phase I each side may withhold temporarily, for reasons of security, data on the locations of storage facilities that together contain a total quantity of chemical weapons that is not more than two percent of the precise quantity of its chemical weapons. In addition, the other data pertaining to these locations, as specified in Section II, paragraph 5, shall be grouped under the heading "other storage locations" without reference to specific locations. Precise data pertaining to these locations shall be exchanged later in Phase I on a subsequent date to be agreed.

3. Phase II data shall be exchanged on an agreed date not less than four months prior to the initialing of the text of the convention. At that time, both sides shall formally and jointly acknowledge the possibility of initialing the convention within four months.

V. Verification

1. Each side shall use its own national means to evaluate Phase I data and Phase II data.

2. During Phase I, the sides shall hold consultations to discuss the information that has been presented and visits that have been exchanged. The sides will cooperate in clarifying ambiguous situations.

3. During Phase II, each side shall have the opportunity to verify Phase I and Phase II data by means of on-site inspections. The purpose of these inspections shall be to verify the accuracy of the data that has been exchanged and to gain confidence that the signature and ratification of the convention will take place on the basis of up-to-date and verified data on the chemical weapons capabilities of the sides.

4. Prior to the initialing of the convention, each side shall have the opportunity to select and inspect at its discretion up to five facilities from the list of chemical weapons storage facilities and chemical weapons production facilities declared by the other side. During Phase I, the sides will consider whether each side may inspect not less than half of the declared facilities of the other side if their number is more than 10. Should either side as of the date of the Phase II exchange possess a single small-scale facility for production of Schedule 1 chemicals, it shall be subject to an additional inspection.

Each side shall also have the opportunity to carry out up to five challenge inspections, as specified below. All inspections shall be carried out within the agreed four months from the date of the declaration pertaining to Phase II, referred to in Section IV.

5. While the signed convention is being considered by their respective legislative bodies, each side shall have the opportunity to request from the other side, and to obtain from it, updated data. Each side shall have the opportunity to conduct up to five challenge inspections, as specified below. During this process, the two sides will consult with their respective legislative bodies, as appropriate, in accordance with their constitutional requirements.

For each side, these inspections shall be carried out within a four-month period, beginning with the date that it conducts its first inspection. The sides shall consult and agree on the dates when the first inspection will be conducted by each side. The dates shall be chosen to ensure that the inspections shall be conducted by both sides at approximately the same time. Once the inspections begin, the sides may, by mutual consent, extend the four-month periods for an additional specified period.

6. Inspections of declared facilities, as well as challenge inspections, shall be conducted in accordance with the corresponding provisions of the draft convention, taking into account that these inspections are being carried out on a bilateral basis and do not involve the bodies that will be established under the convention. If necessary, the two sides shall supplement the provisions of the draft convention by mutually-agreed procedures.

7. Challenge inspections may be made at any location or facility of the other side, as provided for in the draft convention text, except that, for the purposes of this Memorandum and without creating a precedent, challenge inspections at facilities not on the territory of the sides may be made only at military facilities of a side in a limited number of countries; the sides will agree later on these specific countries.

8. Challenge inspections conducted pursuant to this Memorandum shall be conducted in a manner consistent with the domestic law of the side being inspected and shall be based on a recognition by both sides of the need to resolve concerns and build confidence.

9. To clarify questions related to the data provided during Phase I and Phase II, the two sides shall employ normal diplomatic channels. specifically-designated representatives, or such other means as may be agreed upon.

VI. Format

1. Unless otherwise provided in this Memorandum, the agreed data shall be provided according to the specifications contained in the draft convention text for the declarations that are to be made not later than 30 days after the convention enters into force.

2. Precise locations shall be specified by means of site diagrams of facilities. Each diagram shall clearly indicate the boundaries of the facility, all structures of the facility, and significant geographical relief features in the vicinity of the facility. If the facility is located within a larger complex, the diagram shall clearly specify the exact location within the complex. On each diagram, the geographic coordinates of the center of the facility shall be specified to the nearest second.

VII. Entry into Force

This Memorandum of Understanding shall enter into force upon signature.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments, have signed this Memorandum of Understanding.

DONE at Jackson Hole, Wyoming, in duplicate this 23rd day of September, 1989, in the English and Russian languages, both texts being equally authentic.

FOR THE GOVERNMENT OF THE UNION OF THE SOVIET SOCIALIST REPUBLICS:
Eduard Shevardnadze

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA: James A. Baker III

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