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Emerging Security Threats Framing Meeting

16 December 2013

Geneva, Switzerland

Chairs

- Mr. Ben Baseley-Walker, Emerging Security Threats Programme Lead, UNIDIR
- Dr. Gustav Lindstrom, Head of the Emerging Security Challenges Programme, Geneva Centre for Security Policy (GCSP)

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PROCEEDINGS

PANEL I: CONCEPTS, CONTEXTS AND PARAMETERS

- Mr. Baseley-Walker
- Dr. Lindstrom

Panel I was an opportunity for the Chairs of the meeting to outline the nature of emerging security threats (ESTs), how they differ from traditional security threats, and the best ways to approach them in the policy context. Mr. Baseley-Walker sought to explain the challenges policymakers encounter when dealing with the broad spectrum of ESTs. For the majority of these threats, Mr. Baseley-Walker asserted there are few, if any, established mechanisms for multilateral dialogue and engagement. If states lack necessary established patterns of behaviour, then in the event of an EST-related crisis, it becomes difficult to control rapid escalation which in turn can result in state-on-state conflict. A key question is, therefore, how can states build the capacity to manage tension and limit these ESTs from becoming issues in the traditional military realm.

A key difference between ESTs and traditional security threats is often the nature of the perpetrating actor. To illustrate this, Mr. Baseley-Walker explained that, in determining policy for traditional security arrangements, one focuses on militaries, state actors, or armed groups, yet with ESTs, an individual actor can have much more power to effect change than in traditional scenarios. Such is the case with cyber-related ESTs where an individual actor with exceptional technical capabilities can pose a greater threat to cyber stability than many states. As a result, policy formation on ESTs needs to employ innovative approaches that move away from traditional military security threat mitigation. At UNIDIR, research examines how policy can engage ESTs and limit knee-jerk reactions or subsequent escalation when a state is confronted with a threat that does not easily engender a pre-established security response.

Dr. Gustav Lindstrom then spoke on conceptualizing ESTs, determining their parameters, and posing a number of questions relevant to a policymaking audience. For him, the nature of the term “emerging security threat” begs the question when is a security threat no longer emerging? Although an EST is termed a “threat”, can one, or how does one, assess the associated costs and benefits? If one is to conduct an

assessment, what methodologies are available to frame ESTs? For Dr. Lindstrom, posing these questions helps relevant actors determine the parameters of ESTs.

Dr. Lindstrom also highlighted one defining characteristic of an EST: often the emerging technologies from which they arise are dual-use. For example, an autonomous vehicle can be greatly beneficial to society in one context, but if one were to weaponize this vehicle, then this previously benign technology develops a dangerous dual-use. Dr. Lindstrom felt that determining when an emerging technology becomes a threat, or can be manipulated to become a threat, is a chief concern among policymakers, and a challenge when attempting to prioritize these threats for policymaking.

After the opening presentations from the Chairs, the floor was opened for a discussion period. As ESTs are cross-sectoral and can be highly technical, many participants affirmed that there needs to be a more effective way to bring necessary technical knowledge into the policy discussion without overwhelming diplomats with detail. On this subject, one participant explained that bringing civilian professionals into the policymaking conversation can offer a solution, however policymakers must be aware of personal bias and how this may alter the delivery of technical knowledge. Another participant saw the technology–policy break coming not from civilian professionals but from government bureaucracy. They explained that many government agencies have pieces of information that, if put together, could give a comprehensive understanding of an EST; however because each agency has their own reasons not to divulge such information, policymakers receive limited information and cannot address ESTs in a holistic manner.

One participant explained how their government identified various ESTs through the examination of "black swans": scenarios that are difficult to predict yet have a high impact on society and security. They argued that because it is nearly impossible to predict these types of scenarios, a next best option was to build national resilience and capacity in government agencies. This approach is about coordinating more integrated responses and allowing each government agency to respond in its respective field of expertise.

PANEL II: CASE STUDIES

- Dr. Piers Millett, Deputy Head, Biological Weapons Convention Implementation Support Unit, United Nations Office for Disarmament Affairs
  "New Biological Weapons Threats"
- Mr. Mohamed Hatem Elatawy, Senior Officer in Charge of Disarmament, Permanent Mission of Egypt to the United Nations
  "Water and Environmental Conflict "
- Dr. Nils Melzer, Senior Programme Advisor and Senior Fellow, Emerging Security Challenges, GCSP
  "Lethal Autonomous Robots"

Panel II expanded on a few of the ESTs that the international community is currently facing, using the case studies as a way of analysing common themes and potential strategies for limiting the damaging impacts of ESTs. A connecting thread through these particular threats is that they concern all states, not simply those that are threatened or have the ability to threaten using these ESTs.

First on the panel was Dr. Piers Millett, who presented on the relationship between biology and ESTs. He explained the progression of biological research and how, today, one can outsource the entire research and development process from idea to product thanks to new departments and companies that focus on each individual step of the process; this progression has allowed a multitude of new biological projects to come to fruition. However, Dr. Millett felt there needs to be a clearer distinction between biological innovation and biological ESTs.

Orienting his presentation towards the policymaking process related to biological ESTs, Dr. Millett argued that because of outsourcing capabilities in the research and development process, the risks associated with

biological ESTs are changing—yet policy responses have stagnated. He stressed that it is necessary that states and government agencies converse with one another when dealing with biological ESTs and innovation. He illustrated this using the example of the Nagoya Protocol on Biological Diversity as a case study of why there is also a need to improve intra-State cooperation on biological innovation. Negotiated primarily by governments' environmental agencies, the protocol, when it enters into force, will effectively allow states to license who can use genetic resources from their territory in order to ensure fair and equitable sharing of benefits. A side effect of this protocol is that obtaining a license could impede scientific research elsewhere in the world and provide an additional hurdle to international scientific collaboration, which could impact the work of agencies of science and technology. It could have implications for structures such as the WHO Pandemic Influenza Preparedness framework, developed under the auspices of government agencies of health. It might also be interpreted as inconsistent with the provisions of article X of the Biological Weapons Convention, traditionally serviced by government ministries of foreign affairs, which provides legal protections for access to biological resources for peaceful purposes. Through this, Dr. Millett explained the challenges to not only creating intergovernmental dialogue but intra-state dialogue as well—both of which are important for the progression of biological innovation and the establishment of comprehensive policies to combat biological ESTs.

Shifting the discussion to resource-related ESTs and speaking in a personal capacity, Mr. Mohamed Hatem Elatawy presented on issues arising from water resources and explored potential solutions. For Mr. Elatawy, access to water can certainly be categorized as a security threat, however whether it can be classified as "emerging" is debatable because obtaining water access has been a concern since the dawn of civilization. He pointed out that today is no different: with climate change and current regional tensions, securing water access is part of every state's national security agenda. For him, the issue becomes "emerging" because water-related crises are becoming more acute and have a greater potential to spur international conflict. In addition, because water aquifers/rivers/resources rarely fall solely within a single state's boundaries, the act of securing water quickly becomes an issue of regional concern and can easily augment existing tensions or spur conflict on its own.

With these ideas in mind, Mr. Elatawy questioned how policymakers might mitigate water-related crises. He suggested the development of a global regime that would benefit all states and take into account existing usage rights and concerns of all; a central goal of this regime would be to increase water sharing, not restrict usage. Mr. Elatawy also discussed other possibilities such as desalination, explaining that if done on a single-country level, desalination would be too expensive and labour intensive, but if done on a regional level with combined resources, it could be part of a comprehensive solution. However, he noted that desalination does have unintended consequences including negative effects on the ecosystem and a surplus of salt. Dealing with these consequences would involve innovative policy such as regional industrialization projects which have the added benefit of encouraging regional cooperation.

In the discussion period that followed, participants continued the conversation on framing water resources as ESTs. Unlike other resources, with the exception of hydrocarbons, water is transboundary in nature and thus has the ability to involve entire regions in tension or conflict. One participant argued that the international community needs to understand that water is not simply a regional question but a global security challenge that involves all states, not simply the "haves" and the "have-nots".

One participant explained that desalination involves hydrocarbons, which touches on energy security issues and demonstrates how addressing one EST can involve multiple sectors and industries. Another participant agreed and explained that reservoirs can be part of potential water security solutions, yet with contamination issues, be that by rising sea levels (a climate change issue) or intentional contamination (a biological issue), one can see the need to involve various sectors and stakeholders in this conversation.

Speaking on the topic of autonomous weapons systems (AWS), Dr. Nils Melzer examined the international legal implications of this emerging technology. He first made the point that autonomous technology is not limited to drones or "killer robots" but that it involves many fields including medical, space, transportation,

et cetera, and he hypothesized that this technology and its many applications would dominate our lives in the near future. For Dr. Melzer, AWS technology is particularly relevant as an EST because it has the potential to alter the conduct of traditional warfare. Additionally, the technology's many potential applications means it will be a challenge to enact policy that limits one specific application because it constitutes an EST, while still allowing other applications to develop for peaceful purposes.

To situate AWS technology in the context of international and human security discourses, Dr. Melzer raised various legal questions. Does the development of this technology violate a human's right to life? Does the technology ensure the protection of civilians or at least prevent them from becoming collateral damage? These are essential questions when dealing with new technologies because the principles and responsibilities of international law and laws of armed conflict apply to all weapons, old and new. As a recommendation, Dr. Melzer suggested there be a reaffirmation and clarification of existing international law vis-à-vis AWS technology, and maintained that policymakers need to be vigilant to not adapt legal standards to these technologies. Breaching international law for the sake of new technology should not be acceptable nor should the international community lower the requirements for determining who is a target and who is not under international humanitarian law simply because AWS are not yet advanced enough to differentiate.

Next, Dr. Melzer sought to place AWS in disarmament and weapons law. Currently, if a state has an AWS that can recognize planes and shoot them down, it is legal under international law. However if the system is land-based and cannot identify a civilian from a soldier, then it is considered an "indiscriminate weapon" and should already be illegal. Additionally, if the weapon causes unnecessary suffering, then it should also already be deemed illegal under international law. Dr. Melzer also drew a distinction between unmanned weapons systems, which are legal, and fully autonomous weapons systems, which may be inherently indiscriminate and thus inherently unlawful. In order to continue this process of determining the legal parameters of AWS technology, he recommended that international consensus needs to be built on the legal and ethical limits to robotic autonomy and their weaponized applications. Using this particular case study, Dr. Melzer successfully laid out some essential questions that policymakers will need to explore when developing holistic and comprehensive approaches to EST policy formation.

The following discussion period touched on participant concerns over AWS technological development. For one participant, there was a strong argument to use autonomous systems in warfare because, in theory, less collateral damage might be incurred: a robot might be more precise and would not be subject to the emotions that lead to rape, looting, revenge, and pillaging. Another participant saw the AWS discussion in a North–South context and argued that the global North will soon have this technology yet the global South will not. To them, this could appear to be an instance of asymmetrical warfare. They also argued that not only does this raise ethical issues in terms of global power relations but it also makes waging war easier for the North and costlier for the South. This led to a discussion on how to manage this technology in terms of policy. One participant suggested there should be a differentiation between the prohibition of technological development and the prohibition of the weaponization of this technology, similar to legal distinctions made in laser weapon systems. As a next step, various participants suggested a moratorium until the international community can decide how to best approach this emerging technology.

PANEL III: INDIVIDUAL APPROACHES

- Mr. Neil Carson, Science and Technology Adviser, Office of the Chief Scientist, NATO Science and Technology Organization
  "An Approach to Emerging Issues: NATO"
- Mr. Gian-Luca Stössel, Directorate of Political Affairs, Division for Security Policy, Federal Department of Foreign Affairs, Switzerland
  "An Approach to Emerging Issues: Switzerland"

Panel III presented the ways in which organizations and states have individually approached ESTs. Speaking in a personal capacity, the first panellist, Mr. Neil Carson, detailed NATO's EST identification and assessment process. He explained that ESTs are handled by multiple bodies within NATO, namely the Emerging Security Challenges Division, the Defence Investment Division, and the Office of the Chief Scientist. These bodies work collaboratively to understand new threats and how they affect NATO's objectives. NATO uses a multi-disciplinary task force that assesses emerging technologies and how they might affect NATO's aims, capabilities, or their adversaries' capabilities. For Mr. Carson, this task force is the strongest tool NATO currently has for tackling ESTs. However, as with any multinational organization, he found that one of the challenges facing those dealing with ESTs is advancing their findings to the relevant policymakers.

After his presentation, Mr. Carson was asked to detail NATO's methodology when conducting their strategic analysis and assessment of ESTs. He explained that the first step is a horizon scan focused on identifying emerging technologies, determining how people are using these technologies, and what about these uses are changing. Next, analysts look at the threat impact, the vulnerabilities created, and the consequences of the technology if used. All of these assessments are done on three levels—in terms of NATO, NATO's adversaries, and society as a whole. These assessments produce materials for workshops for relevant actors and an unbiased report detailing the technology and its risks, opportunities, challenges, and outliers. Next, "communities of interest" take this report and decide how to shape or target it for their respective audience. Mr. Carson detailed the nature of common threats and how it has created new groups of actors. For NATO, the "us versus them" mentality does not always apply, particularly with ESTs. He drew on the example of 3-D printing technology used to create weapons—although there are states who do not agree with all of NATO's policies, some of those states may share a common view on these weapons. Such common positions may group actors together in new security arrangements when mitigating particular ESTs. Combined, the activities that Mr. Carson presented help inform policies and determine the threat level of an EST, both of which are positive exercises when working towards conflict mitigation.

The next panellist elaborated on the Swiss approach to ESTs. Mr. Stössel explained that Switzerland conceptualizes ESTs in three ways: technologically, demographically, and in a globalized sense. As Switzerland is a decentralized state, the spread of technology and the technological empowerment of individuals and groups are particularly relevant to policy formation. Switzerland predicts medium- and long-term changes in its demographics due to immigration, which will alter the shared values and economic prowess of the country; the Swiss government also expects new forms of transnational identities to develop. Looking at ESTs in a globalized sense focuses the national approach on the interdependence of global societies and the global economy, to which, as previously mentioned, Switzerland's contribution may be expected to change. This tri-faceted conceptualization of ESTs helped inform Switzerland's approach to addressing cyber malfeasance. Due to Switzerland's lack of natural resources, the state relies heavily on an export- and service-based economy. Switzerland views cyber issues as exceptionally important ESTs because many aspects of the service-based economy are susceptible to cyber malfeasance. Therefore to confront this issue, Switzerland devised a 2012 Cyber Security Strategy that called for information exchange on a permanent basis among states, and stressed the importance of international cooperation.

As a closing remark, Mr. Stössel listed the two ESTs that appear on Switzerland's immediate horizon scan and are expected to be central in the next 5 to 10 years: the political/social issue of "identitarianism" which

is defined as the regression of political allegiances to kinship and other allegiances within a given society—viewed as a threat to the current state system; and nanotechnology and relevant technical developments in the field.

The discussion following this panel touched on the collective value of risk assessment/future studies conducted by relevant actors—the European Union, NATO, states, and corporations such as Shell Oil Company, Nestlé S.A., Deutsche Post DHL, among others. It was argued by one participant that corporations' studies are likely to be the most accurate considering that corporations rely on long-term access resources and markets for their products. Another participant saw the potential for "groupthink" in these assessments and studies because they often only draw on documents published in one language; for example, rarely does an English-speaking set of actors examine documents published in Hindi, Urdu, Spanish, Mandarin, et cetera.

The discussion moved to an examination of various governments' general approaches to ESTs. One participant explained that their government does not use the term "emerging security threats" but rather "emerging technologies". Another cited their government's issues with translating highly technical information on ESTs into a policy-oriented document. Another government approach has been to establish working groups with other states to coordinate approaches; this was found to be exceptionally useful for comprehensive policy formation. One participant noted that cooperation between Western and non-Western states on ESTs posed challenges because of underlying mistrust that some states might not share the same concerns. Another participant noted that their government was interested in exploring ESTs further, however traditional security threats currently require the majority of manpower. One person explained that their government weighed ESTs through a threat assessment—determining the threats' effects economically, socially, and politically. The assessment results then determined the proportionality of the threats in terms of immediacy and the necessary resources needed to confront them. In summary, it was clear that ESTs can be conceptualized in a myriad of ways which—due to many of the threats' cross-sectoral nature—highlights the necessity of continued discussion of EST policymaking practices.

CONCLUSIONS AND LOOKING AHEAD

This meeting aimed to shed light on the difficult process of developing national and international policy responses to threats which governments have little experience addressing. Many of the current challenges are highly globalized and, as such, require a new type of policy approach.

There is great value in exploring the various approaches to ESTs and having frank discussions on the subject. Conversations like the ones that took place at this meeting help to identify which ESTs are on the radar of policymakers and how they can best be prioritized.

UNIDIR's Emerging Security Threats Programme and GCSP's Emerging Security Challenges Programme look forward to continuing to support analysis and dialogue on the framing of ESTs for the policymaking audience.