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REPORT

# Possible Models of BWC Verification

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# Possible Models of BWC Verification

At the Biological Weapons Convention (BWC) Ninth Review Conference in 2022, States Parties agreed to establish a new Working Group on the strengthening of the Convention, which will operate during the current intersessional period. The agenda for the Working Group includes discussion on, among other things, compliance and verification. This is the first time in 20 years that verification has explicitly been added to the BWC agenda, initiating a new process that opens a window of opportunity for States to advance work around verification and compliance.

This UNIDIR briefing serves as a primer for consideration of possible models of verification. Past discussions of verification in the BWC have largely focused on the development of a more traditional disarmament verification regime, akin to the model established in the Chemical Weapons Convention (CWC) and envisaged in the BWC Protocol Negotiations. Such a model is often considered the standard model for verification and could provide greater confidence in compliance with the BWC.

However, the traditional model of verification is not the only model available to BWC States Parties. As discussed in the previous briefing paper, verification could serve different functions and have a very different focus, in part depending on how States Parties perceive the BW threat in the twenty-century.

Depending on the function(s) and focus of any verification mechanism, other options could be developed for BWC verification that might more effectively address the concerns of BWC States Parties and potentially reduce costs of verification while still increasing confidence in compliance. Among other possible options are:

- some form of BWC **'Verification Light'** model which includes many components of the CWC approach but without routine on-site industry inspections;
- a **'Demonstrative Verification'** approach that relies on voluntary demonstrations of compliance augmented by structured consultations and—where necessary—voluntary transparency visits;
- or a **decentralized open-source verification** approach drawing from experiences of civil society initiatives in other domains.

The following table presents an overview of these four possible BWC verification options, along with analogous mechanisms and an assessment of the costs, advantages, and disadvantages.

Such models—and their components—are not necessarily mutually exclusive. Components can be combined, and models integrated, to strengthen confidence in compliance. Additionally, different components may be pursued by various actors both within and outside the Convention, generating a broad range of indicators to inform compliance assessments.

In this context, the models are not intended to be prescriptive but rather to offer options to explore. States Parties will need to strike a balance between developing a system that is technically feasible, financially viable, and politically acceptable, while ensuring the mechanism is sufficiently robust and resilient to adapt to both technological advances and an evolving geopolitical landscape.

## Possible Models of BWC Verification – James Revill

	TRADITIONAL VERIFICATION	VERIFICATION LIGHT	DEMONSTRATIVE VERIFICATION	OPEN-SOURCE VERIFICATION
<b>Summary</b>	<p>Traditional model of verification as envisaged in the BWC Protocol negotiations (and applied to the CWC). This would allow States to demonstrate compliance and could enable the identification and investigation of concerns related to non-compliance.</p>	<p>Traditional legally binding model of verification with open-source analysis to verify declaration by the Secretariat instead of routine on-site industry inspections. This would allow States to demonstrate compliance, with the option for investigation of concerns related to non-compliance.</p>	<p>A voluntary process through which States unilaterally participate in activities designed to demonstrate compliance with obligations under the BWC.</p>	<p>A decentralized external process of civil society verification using open-source tools (including satellite imagery, bibliometrics, disease outbreak data, facility details, social media intelligence etc.) to investigate alleged non-compliance.</p>
<b>Process</b>	<p>Baseline data collection through binding declarations to be confirmed through industry inspections of selected facilities with issues or ambiguities addressed initially through structured consultation and, where required, a challenge-type inspection process targeted at facilities.</p>	<p>Baseline data collection through binding declarations followed by Secretariat analysis of open-source indicators of compliance. Issues or ambiguities addressed initially through structured consultation and voluntary transparency visits but, when required, a challenge-type inspection process targeted at facilities.</p>	<p>States voluntarily provide information on selected compliance indicators. Any issues or ambiguities would be addressed through structured consultations and, where necessary, voluntary transparency visits.</p>	<p>Civil society actors or States collect data and publish analysis on cases of suspect non-compliance drawing on a range of open-source tools. Findings would be published and presented through exogenous BWC meetings.</p>
<b>Components</b>	<ul style="list-style-type: none"> <li>• Declarations</li> <li>• Consultations</li> <li>• Routine on-site inspections of facilities selected on the basis of an agreed criteria.</li> <li>• Non-routine activities (e.g., challenge-type inspections)</li> </ul>	<ul style="list-style-type: none"> <li>• Declarations</li> <li>• Secretariat analysis of open-source data</li> <li>• Consultations</li> <li>• Voluntary transparency visits</li> <li>• Non-routine activities (e.g., challenge-type inspections)</li> </ul>	<ul style="list-style-type: none"> <li>• Enhanced transparency measures</li> <li>• Consultations</li> <li>• Voluntary transparency visits and related activities</li> </ul>	<ul style="list-style-type: none"> <li>• Civil society analysis of open-source data for indicators of non-compliance</li> </ul>

(continued) Possible Models of BWC Verification – James Revill

	TRADITIONAL VERIFICATION	VERIFICATION LIGHT	DEMONSTRATIVE VERIFICATION	OPEN-SOURCE VERIFICATION
<b>Additional annual costs</b>	\$34,295,045 based on OPCW costs	\$10,900,676 based on OPCW costs	\$300,000 for additional ISU staff to facilitate process	Unclear
<b>Actors</b>	States and a Secretariat	States and a Secretariat	States and an expanded ISU	Civil society
<b>Analogous mechanisms</b>	CWC verification regime	CWC verification regime minus routine inspections	Emerging TPNW verification model	Various civil society initiatives
<b>Advantages</b>	<ul style="list-style-type: none"> <li>Provides a ‘proven’ standard for verification</li> <li>Multilaterally negotiated process with greater legitimacy</li> <li>Generates original compliance related data</li> </ul>	<ul style="list-style-type: none"> <li>Lower-cost multilateral regime</li> <li>Provides option for challenge-type inspections</li> <li>Multilaterally negotiated process</li> </ul>	<ul style="list-style-type: none"> <li>Relatively cheap to set up</li> <li>Does not require legally binding agreement</li> <li>Comparatively rapid process of producing results</li> <li>Based on open-source information available to all</li> </ul>	<ul style="list-style-type: none"> <li>Relatively cheap to set up</li> <li>Does not require legally binding agreement</li> <li>Comparatively rapid process of producing results</li> <li>Based on open-source information available to all</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>Expensive to organize and maintain</li> <li>Only realistically able to cover a fraction of potential dual-use bio research facilities</li> <li>Requires multilateral negotiations and agreement on specific activities, procedures</li> <li>Requires complete and accurate declarations</li> </ul>	<ul style="list-style-type: none"> <li>Likely to be costly to maintain</li> <li>Requires multilateral negotiations</li> <li>Unable to provide routine on-site visits to check accuracy of declarations on facilities or programmes</li> <li>Requires complete and accurate declarations</li> <li>Requires credible open-source data for a range of facilities, the use of which could have unintended consequences in reducing transparency</li> </ul>	<ul style="list-style-type: none"> <li>No obligation for States to engage in process and no guarantee of reciprocity in measures</li> <li>Depends on complete and accurate transparency and no misleading information</li> <li>No formal means of investigation or inspection of facilities</li> </ul>	<ul style="list-style-type: none"> <li>Findings have no official status and lack legitimacy</li> <li>Requires credible open-source data and technical expertise</li> <li>No formal means of investigation or inspection of facilities</li> <li>Easily politicized</li> <li>There may be concerns or suspicions about information providers</li> </ul>

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