

Third Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons

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Consideration of the status and operation of the Treaty and other matters important for achieving the objectives and purpose of the Treaty: towards the elimination of nuclear weapons (article 4)

Report of the Co-Chairs of the informal working group on the implementation of article 4 (Malaysia and New Zealand)

I. Summary

1. The informal working group on the implementation of article 4 of the Treaty on the Prohibition of Nuclear Weapons is tasked under actions 15–18 of the Vienna Action Plan with, inter alia, developing understandings and procedures to inform States parties on fully implementing the Treaty's provisions to designate or establish an international authority or authorities to execute negotiation and verification mandates on the States parties' behalf. The Co-Chairs (Malaysia and New Zealand) anticipate this to be a multi-year mission, as scientific and technical expertise is advanced.¹

2. In the period since the second Meeting of States Parties, the Co-Chairs of the informal working group have worked towards the following objectives:

(a) To advance discussions among States parties, academia and civil society on the topics of nuclear disarmament verification and the institutional arrangements for an international authority to negotiate, monitor and supervise the implementation of plans for the elimination of nuclear weapons;

(b) To undertake a range of technical consultations with experts to aid the development of a common understanding of key concepts as they relate to nuclear disarmament verification, including through the study and elaboration of key questions arrived at by the informal working group in 2023;²

(c) To engage with stakeholders in the area of nuclear disarmament verification and the implementation of safeguards.

* [TPNW/MSP/2025/1](#).

¹ Besides ongoing work within the intersessional process of the Meetings of States Parties to the Treaty, other work is relevant. See, for example, General Assembly resolution [79/240](#).

² [TPNW/MSP/2023/7](#), annex.



3. The Co-Chairs consulted with related experts over the course of this period. The present report highlights the key findings based on those interactions. Academic reports and the hosting of a workshop on the margins of the second session of the Preparatory Committee for the 2026 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, held in Geneva from 22 July to 2 August 2024, also advanced dialogue in this area. Expert papers and side events during the third Meeting of States Parties may further aid in disseminating greater awareness of the issues related to article 4 implementation and possible approaches, including the findings below.

II. Key findings

4. Nuclear disarmament verification will almost certainly be needed regardless of the framework under which disarmament occurs in the Treaty on the Prohibition of Nuclear Weapons. The Treaty allows for nuclear-armed States to “disarm then join”, or to “join then disarm”. The requirements for these two approaches differ, but the principles of verifiability and irreversibility apply in either case. This is confirmed by the Treaty.³

III. Key objective II: developing common understanding of key concepts towards the elimination of nuclear weapons

5. In general, it is understood that verifiability and transparency are interrelated and, in practice, can overlap. In broad terms, verification is understood to apply to specific treaty accountable items within a nuclear weapons complex. A political decision could be made by States parties about what items are included as treaty accountable items, and it follows that such decision-making should be informed by expert appraisal to ensure that the scope is fit for purpose in the circumstances to which it is to be applied. While including more items would, in principle, make the process more costly to complete, it could also generate additional confidence. Depending on the nuclear-armed State in question, the nature and complexity of its nuclear weapons complex and the specifics of the process of disarmament (i.e. the extent to which it is prescriptive, cooperative, etc.), this threshold could be tailored to the required level of confidence. Some experts have convincingly argued that legally-binding verification should focus on fissile material and its production facilities, and that other parts of a nuclear weapons complex be subject to less stringent measures to ensure transparency, contributing to States parties’ confidence in the disarmament process.

6. Actions speak loudest: a challenge for nuclear verification not unique to the Treaty is that, even once a State undertakes disarmament, it might reconstitute a nuclear weapon capacity with sufficient resources and determination. As part of any disarmament process, it is therefore essential that the nuclear-armed State in question take specific policy steps to demonstrate irreversible commitment to the disarmament process. These steps should demonstrate that the commitment to disarmament is becoming structurally embedded in measurable senses. Taken together, these steps should contribute to a pattern of behaviour that cumulatively establishes the irreversibility of the State’s disarmament process.

7. Scientists, including those from the Scientific Advisory Group, have also focused on establishing characterizations of nuclear weapons programmes. Such characterizations include categorizing the various constituent physical elements of a

³ Treaty on the Prohibition of Nuclear Weapons, preamble and article 4 (2).

nuclear weapons programme, for example, those involved in the nuclear fuel cycle, component manufacturing, weaponization, use infrastructure and means of delivery. The outcomes of such work could assist States parties both in understanding what needs to be eliminated or converted and in assessing the irreversibility requirement to be met in a given context. For example, disbanding a nuclear weapons transport unit would demonstrate a disarming State's commitment to the disarmament process, while contributing to demonstrable irreversibility.

8. Former sites in a nuclear weapons complex often have functions not directly related to constituting a nuclear weapon capability. It is unlikely that all such former sites would be transparently converted into non-military facilities. Indeed, this may not be necessary to meet the standard for irreversibility seen within the context of the cumulative set of disarmament decisions and actions the State would be undertaking. Nonetheless, as well as establishing a standard of irreversibility, such conversion activity could help to establish a State's record of cooperation within the disarmament process.

IV. Key objective I: advance discussions on nuclear disarmament and institutional arrangements in the Treaty

9. The text of the Treaty is not prescriptive in terms of which specific verification-related activities it requires. Rather, the Treaty text leaves room for verification provisions to be developed that are tailored to a particular context, although it is clear that there is a general understanding among States parties to the Treaty and experts that general principles apply. In other words, the verification approach should be fit for purpose while being flexible enough to be developed and agreed depending on the specifics of the nuclear weapons complex of the joining State. Before a nuclear-armed State joins the Treaty, States parties would have to generate a working understanding of the verification approach for that context, while also exploring details regarding costs, time frames and what elements of its nuclear programme would (and would not) be subject to international verification. As a general rule of thumb, verification should be kept as simple as possible.

10. Some experts have argued that nuclear disarmament verification under the Treaty needs to be contextualized within a broader reality. In their view, a nuclear-armed State joining the Treaty would reflect a transformation in the security perceptions of that State concerning both the risks of its own security environment and, linked to this, its sense that nuclear weapons have declining or no real value. This point alone will significantly simplify the processes of verification and transparency, they argue. Under this approach, disarmament of nuclear weapons complexes would occur in a cooperative manner, in which the disarming State has decided that nuclear disarmament is in its security interests. According to this viewpoint, the Treaty's role is to enable such a State to demonstrate its commitment to the disarmament process, while tightly regulating the area of most risk (fissile material, which is the crucial ingredient of nuclear weapons). The International Atomic Energy Agency (IAEA) would then be invited in to implement and monitor safeguards on this material and production facilities. Separately, a time-bound plan would guide implementation and be regularly monitored by States parties to the Treaty. The end goal of this process would be for the Agency to be able to deliver a broader conclusion of non-diversion of nuclear materials once dismantlement is completed.

11. One issue that has not yet been settled has centred around the extent to which, and with whom, the disarming State should share access to sensitive data throughout

the dismantling process. Some experts⁴ have argued that the model outlined above would mean that this would be unnecessary. Instead, they argue that all fissile material should be separated and placed under safeguards to be monitored by IAEA, pursuant to its statute and existing international mandate. The disarming State would then be responsible for the dismantling process according to a time-bound plan, and therefore no sensitive information would be disclosed to other States.

V. Concluding points

12. The view of all the experts consulted by the Co-Chairs is that the verification of irreversible nuclear disarmament is possible. This view has been reiterated by other related expert groups.⁵ Furthermore, irreversible verification approaches could be implemented using today's systems, tools and expertise. It would not require States parties to the Treaty and their representatives to gain access to sensitive nuclear weapons information and data.

13. A key fallacy to be avoided is that complete information about all aspects of a State's nuclear activities is required for effective nuclear disarmament verification. What is required is reliable information sufficient to establish that nuclear disarmament is being or has been undertaken, irreversibly, and that a nuclear weapon capability could not be reconstituted in the future without unambiguous signals that it is occurring. This should be the standard for Treaty compliance. In practice, such a standard is not unique to the Treaty and has applied to all nuclear arms control, non-proliferation and disarmament to date. However, the Treaty is unique in being the only legally binding instrument to create a pathway towards the total elimination of nuclear weapons. As such, States parties to the Treaty have an important stake and interest in the various international processes under way towards nuclear disarmament verification. The Co-Chairs therefore encourage all States parties to actively participate and engage in them.

⁴ See <http://www.unidir.org/files/publications/pdfs/watch-them-go-simplifying-the-elimination-of-fissile-materials-and-nuclear-weapons-en-817.pdf>.

⁵ For example, the International Partnership for Nuclear Disarmament Verification.

Annex

Further work

Having completed the work outlined above, the Co-Chairs have identified the following questions for further investigation over the course of future intersessional periods. This is not necessarily an exhaustive list.

1. If the International Atomic Energy Agency (IAEA) is to take on a central role in assisting States to implement and verify compliance with the Treaty, including through the monitoring of safeguards, what related confidence-building measures need to be established? Should these be tailored to the particular nuclear-armed State joining the Treaty?
 2. Would the models that IAEA currently implements to make and verify its non-diversion and peaceful uses findings in respect of non-nuclear-weapon States have utility in verifying a nuclear disarmament verification process in the case of former nuclear-armed States?
 3. What legal structure would that entail? For example, an Additional Protocol agreed between the joining State and IAEA?
 4. What constitutes a nuclear weapons complex, both in terms of treaty accountable items and more broadly? Are these ingredients essential in every nuclear weapons complex, or are some optional? What role will they play, if any, in a verification model under the Treaty on the Prohibition of Nuclear Weapons?
 5. What is the role of the Comprehensive Nuclear-Test-Ban Treaty Organization in verifying the Treaty's prohibition on nuclear weapons testing, and should this role be formalized?
 6. What mechanisms need to be established for clarifying communications and dispute resolution? How are such mechanisms established in a way that would be flexible enough to suit the particularities of any nuclear-armed State? How do you establish an approach that involves a gradual system of escalation?
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