

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: other matters important for achieving the objectives and purpose of the Treaty: scientific and technical advice for the effective implementation of the Treaty

Report of the Scientific Advisory Group on its annual activities

I. Summary

1. This report covers the work of the Scientific Advisory Group for the period November 2023 to December 2024 and reflections on future activities in 2025. A previous report covering the period from the establishment of the Group in February 2023 until October 2023 was presented to the second Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons.¹

2. The work of the Scientific Advisory Group in this period included:

(a) Engaging with, and providing advice, to Treaty on the Prohibition of Nuclear Weapons intersessional working groups, facilitators and consultation processes;

(b) Advancing its mandate from the first Meeting of States Parties to establish a network of scientific and technical institutions and experts to support the goals of the Treaty;

(c) Engaging States, international organizations, the scientific community, civil society and other stakeholders on Treaty issues;

(d) Monitoring international developments regarding the status of nuclear weapons globally, nuclear weapon risks, the humanitarian consequences of nuclear weapons and nuclear disarmament and related issues.

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

¹ [TPNW/MSP/2023/6](#).



II. Organization of the work of the Scientific Advisory Group

3. In the period November 2023–December 2024, the Group held 10 online meetings and two hybrid meetings. The Scientific Advisory Group’s co-chairs participated in meetings of the Coordination Committee for the intersessional programme of work of the Treaty on the Prohibition of Nuclear Weapons, and the Group’s co-chairs and members participated in various meetings convened by the intersessional working groups and focal points.

4. The Scientific Advisory Group met during the second Meeting of States Parties over two days (28 and 29 November 2023) with many of its members being present in-person and others participating online. The agenda included the Group’s engagement with the second Meeting, goals and plans for 2024, including studies and reports; establishing the network of scientific and technical institutions and experts to support the goals of the Treaty, as mandated by the first Meeting of States Parties; engagement with Treaty intersessional working groups and other relevant Treaty structures and issues; outreach to, and liaison with, relevant external organizations; presentations to scientific and other appropriate conferences; and, the Group’s working methods, sustainability, funding and administrative issues.

5. The two meetings on 8 January 2024 and 5 February 2024 included:

(a) Providing input into the seventy-first session of the United Nations Scientific Committee on the Effects of Atomic Radiation, to which the Scientific Advisory Group was accepted as an official observer;

(b) Responding to requests from Kazakhstan and Kiribati, as co-chairs of the Victim Assistance, Environmental Remediation, and International Cooperation and Assistance (Articles 6 and 7) intersessional working group.

At these meetings, members also discussed how best to structure the Group and function within the limited financial and administrative resources available.

6. At the 4 March 2024 meeting, Zia Mian and Patricia Lewis were re-elected as co-chairs of the Scientific Advisory Group until the end of the third Meeting of States Parties. The Group set up an informal subgroup structure, comprising:

(a) Scientific Network subgroup;

(b) Article 4 subgroup;

(c) Article 6 and 7 subgroup.

7. The following three meetings (1 April 2024, 6 May 2024, 3 June 2024) included:

(a) A discussion with representatives of Kazakhstan and Kiribati as co-chairs of the intersessional working group on Articles 6 and 7, in response to a request for a dialogue with the Scientific Advisory Group related to possible criteria for defining victims of nuclear weapon use and testing, and what constitutes radiological contamination and remediation;

(b) A discussion with Matthew Bolton (PACE University) on the “Humanitarian and Environmental Impacts of Pacific Nuclear Testing” as well as the need for a publicly available database of nuclear testing and fallout information, exposure and contamination measurement data, historical documents and primary records of past scientific and technical studies;

(c) A discussion on “Universalizing the security concerns of States under the Treaty on the Prohibition of Nuclear Weapons” with George-Wilhelm Gallhöfer (Austria), leading to the compilation of an informal memo from the Scientific Advisory Group to Austria as the coordinator of the related consultation process. The

memo offered some initial views and suggestions from the Group's members on two of the guiding questions:

- (i) Is there specific information related to the national, regional or global humanitarian consequences from nuclear weapons use that is missing and/or important to better understand?
- (ii) What kind of additional information could help national/regional stakeholders to achieve a more comprehensive appreciation of nuclear risks, and which specific topics should be addressed and/or would merit scientific research?

8. On 30 July 2024, the Scientific Advisory Group met in person at the Palais des Nations, Geneva, on the sidelines of the 2024 meeting of the Preparatory Committee of the Treaty on the Non-Proliferation of Nuclear Weapons, with some members attending online. Various updates on the activities by the subgroups were received. Ambassador Alexander Kmentt (Austria) provided an update on the consultations regarding universalization of security concerns of Treaty States and in particular the questions drawn up that require scientific input. The Group further discussed the status of its work with representatives of the International Campaign to Abolish Nuclear Weapons. Discussions also dealt with planning the scientific network.

9. The four subsequent meetings (2 September, 7 October, 4 November and 2 December 2024) included discussions related to:

- (a) The next steps in establishing the network of scientific and technical institutions and experts, including preparations for the first meeting of a pilot network on 9 December 2024;
- (b) A United Nations General Assembly mandated Scientific Panel on the Effects of Nuclear War and study on the consequences of nuclear war, and potential input from the Scientific Advisory Group to the study;
- (c) The General Assembly request to seek the views of Member States on the establishment of a Group of Scientific and Technical Experts on nuclear disarmament verification;
- (d) The General Assembly request for further cooperation and discussions to assist victims and assess and remediate environments contaminated by use and testing of nuclear weapons and other nuclear explosive devices;
- (e) The compilation of a list of relevant organizations and United Nations institutions that could provide assistance for the victims and survivors of the use or testing of nuclear weapons or other nuclear explosive devices and for environmental remediation;
- (f) The utility and scope of possible scientific surveys to understand better the long-term medical and social impact and environmental consequences of the use or testing of nuclear weapons or other nuclear explosive devices;
- (g) The collection and archiving of legacy nuclear testing data to enable better reconstruction of the radiological fallout and impacts of the testing of nuclear weapons or other nuclear explosive devices.

10. Meetings of the Scientific Advisory Group's subgroup were held on an ad hoc basis to discuss issues related to Article 4 (focused the scope and definition of a nuclear weapons programme for the purposes of elimination), Article 6 and 7 (the experience of Kazakhstan with national measures for classification and compensation of victims of nuclear testing and environmental surveying and monitoring) and the needs for these in Kiribati), and the consultations on security concerns of States parties to the Treaty on the Prohibition of Nuclear Weapons, as well as the

participation of the Group as an observer to the seventy-first session of the United Nations Scientific Committee on the Effects of Atomic Radiation.

11. The Scientific Advisory Group acknowledges with gratitude the assistance of the States parties to the Treaty on the Prohibition of Nuclear Weapons, the President of the third Meeting of States Parties, the secretariat of the United Nations Office for Disarmament Affairs and experts who were invited to give briefings to the Group or who made themselves available for consultations.

12. The Scientific Advisory Group received financial support from Austria and New Zealand to support its in-person meetings, including at the second Meeting of States Parties and during the 2024 meeting of the Preparatory Committee of the Treaty on the Non-Proliferation of Nuclear Weapons in Geneva. Princeton University's Programme on Science and Global Security continued to manage these funds and to provide administrative and communication support. Several members of the Group also received support from their respective institutions.

III. Scientific Advisory Group member participation in national, regional and international meetings

13. Scientific Advisory Group members participated in and presented papers to, various national, regional and international meetings. The aim of such participation was to highlight the Treaty on the Prohibition of Nuclear Weapons, the role of scientists in supporting the Treaty and its goal of a world without nuclear weapons; and, to build partnerships with the relevant broader research community. These activities and events included in particular:

(a) The Norwegian People's Aid and International Committee of the Red Cross "Science Expo on Nuclear Weapons, Risks and Impacts" (April 2024, Oslo);

(b) The General Assembly of the European Geophysical Union (April 2024, Vienna). Group members presented as part of the session "Science Policy Interface: Shaping debates and building bridges" and at a special town-hall meeting introducing the Treaty and the Group;

(c) The seventy-first session of the United Nations Scientific Committee on the Effects of Atomic Radiation (May 2024, Vienna). The Group was an official observer and provided review and feedback on the draft report of the Scientific Committee on public exposure to ionizing radiation (including from nuclear testing);

(d) The Alva Myrdal Centre's Conference 2024: "Reinvigorating Nuclear Disarmament" (June 2024, Uppsala University, Sweden);

(e) A workshop on "Characterization of a Nuclear-Weapon Programme for the Purposes of Article 4 of the Treaty on the Prohibition of Nuclear Weapons". This was organized by the Institute for Peace Research and Security Policy at the University of Hamburg and the Programme on Science and Global Security of Princeton University (July 2024, Geneva);

(f) The "Africans Against the Bomb" conference (September 2024, Pretoria). This event was co-sponsored by the International Campaign to Abolish Nuclear Weapons and the University of Leicester's Third Nuclear Age Project;

(g) The Technical Meeting on Legacy Data from Nuclear Tests, organized by the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (September 2024, Vienna);

(h) A United Nations First Committee side event "Expert panel on nuclear war impacts and the role of the scientific community" (October 2024, New York). This

event was sponsored jointly by the United Nations missions of Ireland and New Zealand, as well as the Office for Disarmament Affairs and Princeton University's Programme on Science and Global Security. Izumi Nakamitsu (Under-Secretary-General and High Representative for Disarmament Affairs) delivered the opening remarks at this panel, with contributions by representatives from Ireland and New Zealand. Technical presentations were made by Group members as well as by Lili Xia (Rutgers University) and Neta Crawford (Oxford University).

14. Scientific Advisory Group members further participated in, and/or delivered presentations to, various States parties' intersessional working group meetings, including a meeting of the intersessional working groups on universalization in August 2024 at which the key findings and recommendations in the Group's second Meeting of States Parties report were discussed and developments considered.

IV. Establishing a network of experts to support the goals of the Treaty

15. At the first Meeting of States Parties, the Scientific Advisory Group was mandated to establish a network of scientific and technical institutions and experts to support the goals of the Treaty. After extensive research and consultations, the Group decided that, as a first step, a pilot network would be launched consisting of scientists undertaking Treaty relevant research and/or engaged in other activities relevant to the Treaty and its goals. A detailed terms of reference document was drafted and finalized.

16. Relevant experts were identified and invited to express their interest in joining the network for the pilot phase, while declaring that they have no conflict of interest, whether financial, institutional, legal or professional in nature, with regards to the goals of the Treaty. It is envisaged that, once firmly established, network members, would engage in a broad range of research, capacity-building, outreach, educational and cooperation activities of relevance to the Treaty.

17. An inaugural, online meeting was held on 9 December 2024 with 23 network members from 11 countries attending. There were brief remarks by Christopher King (Office for Disarmament Affairs), and on behalf of the Presidencies of the first, second and third Meeting of States Parties, respectively by Alexander Kmentt (Austria), María Antonieta Socorro Jáquez Huacuja (Mexico), Azamat Kairolda (Kazakhstan).

18. Network members were asked to contribute memoranda highlighting scientific publications and research activities of note relevant to the Treaty, research gaps in related areas, possible data sources on legacy environmental radioactivity and medical consequences due to nuclear weapon use and testing, and suggestions for scientific and technical institutions suitable for inclusion in the broader network.

19. A follow-on meeting was scheduled for 27 January 2025, with plans to hold regular meetings on a quarterly basis.

20. Further work is still required by the Scientific Advisory Group in collaboration with States parties and others to identify adequate resources to expand and manage the network and its work so that it can be an effective, sustainable and independent source of broad-based scientific and technical expertise in support of Treaty and its goals.

V. Activities of the Scientific Advisory Group in 2025

21. Additional Scientific Advisory Group meetings are planned for 13 January and 3 February 2025 to continue to prepare for the Group's participation in the thematic

debates during the third Meeting of States Parties as well as the discussions on the status and operation of the Treaty; other matters important for achieving the objectives and purpose of the Treaty; and scientific and technical advice for the effective implementation of the Treaty.

22. The Scientific Advisory Group will engage with States parties and the intersessional process to provide advice and assistance upon request as well as through discussions and consultations with other relevant bodies and experts.

23. The Group will continue the pilot phase of the network of scientific and technical experts for the period to the first Review Conference of the Treaty on the Prohibition of Nuclear Weapons with a view to developing a work programme, facilitating the network's expansion, and assessing its utility, resource requirements and sustainability, while taking into account the needs and decisions of States parties to the Treaty.

24. The Group will continue to work on the compilation of a list of relevant organizations and United Nations institutions that could provide assistance for the victims and survivors of the use or testing of nuclear weapons or other nuclear explosive devices and for environmental remediation in line with Article 7.

25. The Group will engage with the work of the General Assembly-mandated independent Scientific Panel on the Effects of Nuclear War; the planning process for the one-day international meeting to be convened by the Secretary-General in 2026 on victim assistance and environmental remediation; and the Secretary-General's consultations on the possible establishment of a Group of Scientific and Technical Experts on Nuclear Disarmament Verification.

26. The Group will continue to monitor, conduct research and report on the status and developments regarding nuclear weapons, nuclear weapon risks, the humanitarian consequences of nuclear weapons and nuclear disarmament and related issues with a view to reporting to the Treaty Review Conference in 2026.

27. The work in this period will take into account the availability and expertise of Scientific Advisory Group members, the decisions of the Meetings of States Parties, the intersessional process after the third Meeting of States Parties leading up to the Review Conference, as well as the Group's financial and administrative resource constraints.
