

Report of the Scientific Advisory Group of the Treaty on the Prohibition of Nuclear Weapons on its activities during the year 2025

I. Summary

1. This report covers the work of the Scientific Advisory Group (SAG) of the Treaty on the Prohibition of Nuclear Weapons (TPNW) for the period January 2025 to December 2025 and reflections on future activities in 2026 up to the TPNW first Review Conference. A previous report covering the period from November 2023 to December 2024 was presented to the third Meeting of States Parties (3MSP).¹
2. The work of SAG in this period included:
 - (a) engaging with, and providing advice, to TPNW intersessional working groups, facilitators, and consultation processes.
 - (b) advancing establishment of a network of scientific and technical institutions and experts to support the goals of the Treaty.
 - (c) engaging States, international organisations, the scientific community, affected communities, civil society, and other stakeholders on TPNW 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.

II. Organisation of the work of the Scientific Advisory Group

3. In the period January 2025 to December 2025, the Group held eleven monthly online meetings, and one in-person/hybrid meeting in March 2025 during 3MSP. SAG co-chairs participated in meetings of the Coordination Committee for the intersessional programme of work of the TPNW. SAG members held informal discussions with some of the co-Chairs of the intersessional working groups (IWGs) and focal points as they prepared their 2025 and 2026 activity plans.
4. SAG received financial support from Austria and Ireland for holding meetings. Princeton University's Program 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
5. SAG met in-person during 3MSP over two days (4 and 5 March 2025) with many of its members being present and others participating online. At this meeting, SAG goals, research agenda, outreach and other activities for 2025 were discussed along with working methods, sustainability, funding, and administrative issues. At the meeting,

¹ Report of the Scientific Advisory Group on its annual activities: Third Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, 23 January 2025, <https://docs.un.org/en/TPNW/MSP/2025/8>

Patricia Lewis and Zia Mian were re-elected co-chairs up until the end of the forthcoming 2026 Review Conference. In-depth discussions were also held with about 30 representatives of affected communities and separately with about 30 academics and civil society researchers. These meetings were convened with assistance from ICAN.

6. SAG sub-group meetings were held on an ad-hoc basis to discuss issues related to Article 4 and Article 6 and 7.
7. To inform its work, SAG organized briefings by invited experts. These included:
 - Michael Janicke and Apurva Dave, senior programme officers at the U.S. National Academies of Sciences, Engineering, and Medicine, on the 2025 National Academies report ‘Potential Environmental Effects of Nuclear War’ requested by the U.S. Congress on the potential environmental, social, and economic effects that could unfold over the weeks to decades after a nuclear war (excluding radioactive fallout) and major uncertainties and data gaps.
 - Igor Moric, Princeton University Program on Science and Global Security, on the US Golden Dome missile defense system of land, sea, and space-based interceptors and sensors to detect and defeat ballistic, hypersonic, and advanced cruise missiles, including before they are launched, and its implications for the TPNW.
 - Alicia Sanders-Zakre, ICAN’s Coordinator for Policy and Research, on ICAN’s plans and priorities leading to the TPNW Review Conference and on ICAN lessons from working with their research network and with impacted communities.
 - Marcelo Camara, Director, Department of Strategic, Defence, and Disarmament Affairs, Brazil Ministry of Foreign Affairs, and Tor Andersen, Special Envoy for Disarmament Affairs in the Norwegian Ministry of Foreign Affairs, on the goals for a UN-mandated Group of Scientific and Technical Experts on Nuclear Disarmament Verification.
 - Tammy Bernasky and Sean Howard (Cape Breton University, Canada) on the 2006 UN Convention on the Rights of Persons with Disabilities and its implications for victim assistance under the TPNW and specific issues of persons with physical and/or psychosocial disabilities in affected communities as defined by the TPNW.

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

7. The first Meeting of States Parties (1MSP) mandated SAG to establish a network of scientific and technical institutions and experts to support the goals of the Treaty. As previously reported, after extensive research and consultations, SAG decided as a first step to launch a pilot network consisting of scientists already undertaking TPNW relevant research and/or engaged in other activities relevant to the Treaty and its goals. An inaugural on-line meeting was held in December 2024 to establish the ‘Network of Scientific and Technical Research Institutions and Experts in Support of the Treaty on the Prohibition of Nuclear Weapons’.
8. The second meeting of the Network in January 2025, again on-line, provided the members with an introduction to the work by States Parties for the implementation of the TPNW the role of the SAG, the outcome of 2MSP and an outlook for 3MSP by SAG and relevant actions at the United Nations. Network members were encouraged to work with scientific academies to issue a statement on nuclear weapons similar to that released by the National Science Academies of G7 countries in 2024.

9. A third Network meeting was held in May 2025. Elements for a work programme were introduced, including, risks related to nuclear weapons nuclear disarmament verification, and victim assistance and environmental remediation with an emphasis on contributions to the coming TPNW Review Conference and the UN's scientific panel regarding the effects of nuclear war. A representative of UNODA and ICAN's policy and research coordinator were invited observers. The pilot network was expanded to include as an additional member a scientist from an indigenous community affected by nuclear weapon related activities.
10. SAG encouraged Network members to submit applications for the UN Panel on the Effects of Nuclear War, and two Network members were appointed to the Panel, Ahsan Habib (Bangladesh) and Friederike Friess (Austria), in addition to a member of SAG (Sebastien Philippe).
11. Beginning in May 2025, a number of SAG members conducted in-depth conversations with individual members of the Network, in order to better understand each member's specific knowledge profile, network, and options for contribution, and to clarify any questions that they may have. This process is ongoing.
12. In December, Network members received a briefing by Tilman Ruff (Nossal Institute for Global Health, University of Melbourne and co-president of International Physicians for the Prevention of Nuclear War, IPPNW) on the 2025 decision by the World Health Assembly to mandate the World Health Organization to update their reports on the 'Effects of nuclear war on health and health services' (1983 and 1987) and the report on the 'Health and environmental effects of nuclear weapons (1993).
13. SAG is considering how to mobilize resources to expand and help manage the network and its work so that it can be more effective and sustainable in support of the Treaty.

IV. Statement on the 80th anniversary of the development, use, and threat of use of nuclear weapons

14. On 6 August 2025, SAG issued a public statement to mark the 80th anniversary of the development, testing, use, and threat of use of nuclear weapons.² The statement reiterated SAG's belief that scientists, the public and decision makers worldwide require a deeper understanding of the full range of destructive impacts of nuclear weapons. It called on all scientists in all countries to lend their expertise and support to the scientific and technical efforts for furthering nuclear disarmament, arms control, and non-proliferation. The statement further appealed to scientists to work together 'to educate each other, especially the next generation, and the public and policy makers on the risks posed by nuclear weapons arsenals and policies; and expand the role of science for disarmament, conflict resolution and peace and as a bridge between states and societies globally'. SAG members engaged with the academic community, media organisations and other institutions about the statement.³

² Scientific Advisory Group for the Treaty on the Prohibition of Nuclear Weapons, Statement on the 80th anniversary of the development, use, and threat of use of nuclear weapons, 6 August 2025, <https://sgs.princeton.edu/sites/default/files/2025-08/SAG-06082025-Statement.pdf>

³ Patricia Lewis & Zia Mian, 'The Scientific Advisory Group for the Treaty on the Prohibition of Nuclear Weapons and Its Statement on the 80th Anniversary of the Nuclear Weapon Era', *Journal for Peace and Nuclear Disarmament*, pp. 1 – 7, 4 November 2025: <https://doi.org/10.1080/25751654.2025.2583006>

V. Relevant UNGA resolutions and processes

15. SAG closely followed the adoption and/or implementation of recent UNGA resolutions that are of relevance to its work and to the TPNW more broadly, namely: A/RES/79/240 and A/RES/80/53 (Group of Scientific and Technical Experts on Nuclear Disarmament Verification); A/RES/79/238 (Nuclear war effects and scientific research); and, A/RES/79/60 (Addressing the legacy of nuclear weapons: providing victim assistance and environmental remediation to Member States affected by the use or testing of nuclear weapons).
16. SAG co-chair, Zia Mian, delivered the first invited presentation to the UN Independent Scientific Panel on the Effects of Nuclear War, during its first round of informal expert consultations, held 1 to 3 December 2025, at the United Nations Headquarters. The creation of the panel was a recommendation of SAG in its report in 2023 to the second Meeting of States Parties (2MSP).⁴
17. SAG met with the sponsors of the UNGA resolution to establish a Group of Scientific and Technical Experts on Nuclear Disarmament Verification.

VI. SAG member participation in national, regional and international meetings

18. SAG members participated in, and presented papers to, various national, regional and international meetings. The aim of such participation was to highlight and raise awareness of the TPNW, the role of scientists in support of the goal of a world without nuclear weapons; and, to build partnerships with the relevant broader research and nuclear disarmament and non-proliferation community, academia, national academies of sciences, engineering, and medicine, multilateral entities and implementation support units of related treaties.
19. In addition, meetings and discussions were held with professional scientific associations, unions and societies, including on meteorology and geoscience.
20. Members participated in various events initiated by research organisations investigating various aspects of relevance to the TPNW's provisions or more broadly in relation to the implications of the current global political context for nuclear disarmament.
21. Members were also contacted by media outlets on a broad range of topics relevant to nuclear disarmament and non-proliferation.
22. SAG members further participated in, and/or delivered presentations to, various States Parties' IWG meetings.

VII. Activities of the Scientific Advisory Group in 2026

23. SAG will continue to:
 - (a) monitor, conduct research and report on the status and developments regarding nuclear weapons, nuclear weapon risks, the humanitarian consequences of

⁴ Report of the Scientific Advisory Group on the status and developments regarding nuclear weapons, nuclear weapon risks, the humanitarian consequences of nuclear weapons, nuclear disarmament and related issue, Second Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons TPNW/MSP/2023/8, 27 October 2023, <https://front.un-arm.org/publications/tpnw-sag-report.pdf>

nuclear weapons and nuclear disarmament and related issues with a view to reporting to the TPNW Review Conference in 2026.

- (b) 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.
- (c) Manage the pilot phase of the network of scientific and technical experts, including facilitating the network's expansion and sustainability.
- (d) engage with the work of the UNGA-mandated Independent Scientific Panel on the Effects of Nuclear War; the one-day international meeting to be convened by the UN Secretary-General in April 2026 on victim assistance and environmental remediation; and, the establishment of a Group of Scientific and Technical Experts on Nuclear Disarmament Verification.

- 24. SAG members will participate in the consultative process coordinated by Mexico on the renewal of the mandate of SAG.
- 25. The work in this period will take into account the availability and expertise of SAG members, the decisions of the meetings of States Parties, the intersessional process after 3MSP leading up to the Review Conference, as well as SAG financial and administrative resource constraints.
