

# “The Security of All Peoples”: Leveraging Science in the NPT Review Process and Multilateralism

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The 2026 NPT Review Conference is unfolding in a world shaped not by a sudden return of nuclear danger, but by its persistence and deepening. The first week of the Review Conference featured multiple side events highlighting the humanitarian consequences of the nuclear age. These discussions—sponsored by Austria, Hiroshima, Kiribati, New Zealand, and the Philippines, among others—have emphasized the fact that nuclear risks have endured across generations, even as the structures meant to constrain them have weakened. Arms control agreements have eroded. Nuclear-armed states continue to modernize their arsenals and in some cases expand their capabilities. Paths toward disarmament remain geopolitically gridlocked. Yet one question remains as urgent as ever: what would nuclear war do to people, societies, and the planet?

NPT states parties should engage seriously with what is cited in the Treaty’s preamble concerning the “devastation that would be visited upon all mankind by a nuclear war” and its attendant obligations to “make every effort to avert the danger of such a war” and “to safeguard the security of peoples.” They should do more than reference these consequences and goals in statements in the NPT Review Conference. Commitments are needed to support and elevate the kind of scientific work that can clarify the risks posed to states parties by the paralysis that has long prevailed within the NPT framework. Two concrete opportunities for such commitments would be engaging the work of the UN Scientific Panel on the Effects of Nuclear War and the World Health Organization (WHO)’s study on the effects of nuclear war on public health.

To this end, diplomats should consider designating a national point of contact within their respective scientific communities to begin coordinating the work of professional networks on nuclear war effects research. Another possible measure would be for each NPT state party to ask its national science academy to review and develop a national research plan based on the 2024 joint statement by the science academies of the G7 countries (US, UK, Canada, France, Germany, Italy, and Japan), which declared that it is a responsibility of the scientific community “to continue to develop and communicate the scientific evidence base that shows the catastrophic effects of nuclear warfare on human populations and on the other species with which we share our planet.”

To support diplomats in this process of broadening engagement, we have developed an introductory resource guide on the global environmental effects of nuclear war that maps key areas of research, highlights major debates, and provides a starting point for those looking to understand and engage the field more deeply.

## Nuclear war effects as a multilateral problem

If scientific participation in this field is to widen, diplomats should not treat science only as something to receive at multilateral meetings, but as something states must cultivate by engaging and encouraging their own scientific communities to contribute. International scientific collaborations, to be sure, cannot dissolve political disagreement, but they can help create common reference points for international concern. That is especially important in a world where decision-making power over nuclear weapons remains highly concentrated, while exposure to broader harms is far more widely distributed. Who decides to fight a nuclear war and who suffers the consequences of a nuclear war are not the same. Put

simply, since nuclear war threatens everyone's security and wellbeing, our understanding of nuclear war effects must correspondingly draw from a global body of research.

The recognition that nuclear war effects transcend conventional boundaries between “scientific” and “humanitarian” concerns was understood by the first generation of leaders and diplomats from the Global South. This was made clear at the famous **1955 Bandung Conference of Asian and African States**, which issued an unequivocal call for an international legal convention banning nuclear weapons. Over the course of the conference, delegates introduced several proposals to undertake scientific collaborations evaluating the effects of nuclear testing on humans and the environment. Global South countries, many of which are now party to the Treaty on the Prohibition of Nuclear Weapons (TPNW), are uniquely positioned to build on this legacy.

The question of the nature and extent of nuclear war effects is not new, nor did it originate with the NPT in 1968. Since the 1940s, scientists have worked to understand and answer that question. Their research has shown that the consequences of nuclear weapon use cannot be understood only in terms of blast damage, immediate casualties, or military outcomes. Nuclear war would have broader climatic, environmental, agricultural, and public health consequences that could cross borders and unfold over time. Even limited nuclear use could produce effects far beyond the states involved. These are not only strategic concerns. They are scientific, humanitarian, and political concerns all at once.

### **What science can offer the NPT review process and multilateralism**

In a world with a handful of nuclear-armed states that endanger all, the NPT review process remains an important and consequential multilateral forum for contestation in advancing nuclear disarmament. It is not the only venue in which nuclear responsibilities are debated, but it remains one of the principal arenas in which states and civil society struggle over what it means to advance the cause of global security. For that reason, the scientific study of nuclear war effects should sit squarely within the scope of its discussions.

The UN Scientific Panel on the Effects of Nuclear War and the WHO study can help consolidate and elevate awareness of the current state of knowledge on nuclear war effects within a multilateral framework. The NPT review process should be prepared to engage the Panel and its findings as part of a broader effort to strengthen the scientific basis of the NPT process. For instance, NPT member states can invite official briefings from the Panel and the WHO in a plenary session of the next NPT Preparatory Committee.

To be clear, what science can offer the NPT review process is not consensus where politics has failed to produce it. It cannot resolve the structural inequalities or geopolitical crises that have long frustrated the Treaty's disarmament dimension. But it can help reset the terms of debate. It can clarify that the consequences of nuclear weapon use are a matter for all and that all states parties should take actions under Article VI.

### **Beyond the NPT: the wider multilateral landscape**

The NPT is by no means the sole institutional home for this work. The broader multilateral landscape also matters: the UN system, TPNW, WHO, academic networks, and civil society all have roles to play in shaping how nuclear war effects are studied, interpreted, communicated, and acted upon. This landscape already features long-standing traditions of scientific engagement on nuclear dangers, from scientists' work during the Cold War—including figures such as Frank von Hippel—to contemporary initiatives such as the **Physicists Coalition for Nuclear Threat Reduction**. The scientific study of

nuclear war effects remains one of the clearest ways to illuminate what is at stake in a world that continues to live with nuclear weapons. But science alone cannot give that knowledge political force.

For that, institutions matter. Not because they function perfectly, and not because multilateral diplomacy has overcome the deep political obstacles to disarmament, but because institutions remain the spaces in which knowledge can be publicized, contested, broadened, and connected to international responsibility. The task ahead is not only to preserve and update knowledge about the consequences of nuclear war. It is also to widen the scope of who produces that knowledge, which disciplines and regions shape it, and how it enters multilateral debate. The NPT review process is one consequential part of that longer struggle. So too are the wider institutions and networks that sustain international scientific and diplomatic engagement.

No single institution can carry the full burden. Some forums can authorize scientific inquiry. Others can connect it to humanitarian, health, or environmental agendas. Others can help elevate voices historically marginalized in the work of nuclear governance. Together, these institutions make possible forms of visibility, legitimacy, and collaboration that science alone cannot generate.

### **Creating traction: why science and multilateral diplomacy reinforce each other**

Science and multilateral diplomacy are distinct enterprises, but they are not separate worlds. Science helps build reliable knowledge from observation, testing, and comparison across diverse sites and modes of experimentation. Diplomacy helps build shared political understandings across divergent national interests and unequal power. One seeks to build consensus regarding the structure and workings of the physical world; the other seeks to build consensus regarding the structure and workings of the political world. Neither can pursue the work of disarmament alone.

This symbiotic relationship was visible in the humanitarian initiative that helped to recenter debate around the catastrophic consequences of nuclear weapon use and led to the creation of the TPNW, as well as the establishment of the Treaty's Scientific Advisory Group. A key part of the initiative's strength lay in mobilizing science as a way of clarifying foreseeable human and environmental consequences from political decisions about nuclear weapons development, testing, possession, hosting, use and threats of use.

The consequences of nuclear weapon use do not automatically translate into political understanding or action. Scientific research can illuminate the attendant harms and the many inequalities in how these could be experienced. But science alone does not determine which findings become politically urgent or which institutions respond. For that, multilateral processes matter. They are imperfect by design and often marked by contention, but they remain among the few deliberative spaces in which scientific knowledge can be translated into a shared basis for international concern and linked to state, public, and human responsibilities, including the responsibility to pursue nuclear disarmament.

