



**Governmental Group of Experts
on
Nuclear Disarmament Verification**

German Position

Germany is fully committed to the goal of a world without nuclear weapons as well as undiminished security for all at lowest possible levels of armaments. We are convinced that nuclear disarmament contributes essentially to our security and can best be reached on the basis of a pragmatic step-by-step approach, which must take into account the prevailing political and security environment and engages both, the Nuclear Weapon States (NWS) and non-Nuclear Weapon States (NNWS). Germany is actively and consistently supporting various efforts towards nuclear disarmament and non-proliferation based on the established and accepted principles of effective verifiability, transparency, non-discrimination and irreversibility.

The principles of transparency and irreversibility as reiterated e.g. in the 2010 NPT Action Plan (action 2) are an integral part of any progress towards the goal of a global zero and, necessitate that nuclear disarmament be accompanied by a robust and transparent verification and compliance regime, in order to ensure that commitments made under a nuclear disarmament treaty are effectively met and provide the kind of assurances necessary to embark on concrete irreversible reductions. Transparency measures result in greater predictability with regard to the intentions and capabilities of States, thus facilitating mutual trust and understanding, easing of tensions and reducing misperceptions. The clear lesson emerging from relevant international verification experience is the need of transparency to be effective, and at the same time cost-efficient verification. A verification regime must be credible, while respecting the requirement to maintain confidentiality in relation to proliferation sensitive weapons design and composition. Transparency has benefits for NWS and NNWS alike as a confidence-building measure and as a prerequisite for further international arms control and disarmament. Transparency measures will have a positive effect on cooperation among NWS and NNWS in arms control but also on their national security, by diminishing the security gap that currently exists between them and the NWS.

Therefore, Germany believes that any future nuclear disarmament arrangement should comprise a multilateral verification regime which is non-discriminatory, notwithstanding necessary differentiation between NWS and NNWS. Even though NWS bear the prime responsibility for reducing and eventually eliminating their nuclear arsenals, NNWS should contribute to this end. This recalls the 10th principle of the UN Disarmament Commission, which reads “all States have equal rights to participate in the process of international verification agreements to which they are parties.” From our perspective this entails as well that NNWS have a legitimate claim to be assured that NWS actually carry out their obligations under future multilateral nuclear disarmament regimes. As article VI of the NPT calls on all States to take measures towards nuclear disarmament it implies that taking practical steps towards nuclear disarmament is a shared responsibility, and not one that falls on the NWS alone. For this, the international

community is in need of a coordinated and comprehensive approach that is assured of long-term commitment (funding and other resources) and includes all relevant stakeholders.

For Germany, effective verifiability means linking disarmament steps to scientifically based and proven methods to achieve concrete reductions as demonstrated by the Quad Nuclear Verification Partnership and the International Partnership for Nuclear Disarmament Verification (IPNDV) which have played a focal role for developing practical verification measures. The objective of the International Partnership is to promote increased international understanding of, and confidence in, the monitoring and verification of future nuclear arms control and disarmament agreements by strengthening cooperative work between nuclear-weapon States and non-nuclear-weapon States. Germany supports the International Partnership with three external technical experts, hosted one of its working Group meetings in March 2017 and is planning a joint practical verification exercise in 2018/2019.

In many instances, a political process and the conclusion of a regulatory framework has preceded the development of verification methods and technologies, as being the case for the START treaties and the INF Treaty. There are also examples where the technical solutions have preceded and paved the way for a treaty. Technical solutions have in these instances helped to create necessary confidence and helped parties to agree politically, such as during the CTBT negotiations. The lessons learnt from the CTBT process are that there is particular value in pressing ahead with scientific and technical work even when the diplomatic negotiations face a stalemate due to overriding unfavourable political or security conditions. The technical preparations, discussions and respective engagement- in the years before actual treaty negotiations commenced - proved essential to keep the momentum going and make it possible to use a political window of opportunity to start negotiations.

Germany advocates for a multilateral and comprehensive approach to nuclear disarmament verification. Capacities should be built among States with and without nuclear weapons to develop solutions for monitoring and verification challenges across the whole nuclear weapons lifecycle: from material production and control to warhead storage and dismantlement and disposition. Only verification of the entire nuclear weapons lifecycle provides sufficient insurances. This would also have to include the militarily especially sensitive “midstream section” which includes following and tracing all agreed-upon materials during their weaponization. It would thus also cover the production of warheads and the monitoring during various phases of deployment and storage. Due to military secrets involved and respective non-proliferation requirements, this approach would require rather sophisticated and tailored solutions. Those could notably build on experiences made during bilateral arms control and reduction agreements but also could include the use of new technologies. An important tool for any verification approach would have to include consistent initial declarations of nuclear weapons and materials which in the initial phases also have an important role to play as a TCBM.

Furthermore, we are convinced, that serious attention should be given to include delivery systems in any verification of nuclear disarmament arrangements. As we proceed towards a world without nuclear weapons and in order to reassure that risks associated with nuclear weapons are indeed effectively reduced, states will require certainty that deployed and useable nuclear weapons are indeed reduced according to the set targets. This implies naturally verification of the availability of delivery systems.

Furthermore we have to realize that the requirements for reliable verification will most likely exponentially increase as we proceed to global zero. The last nuclear weapon to be dismantled is

actually the most important but also sensitive one as it would give the holder a significant strategic advantage.

Despite its likely high costs and the complex requirements of extensive institutional backup, this comprehensive approach is considered by many as a necessary requirement to detect any possible secret production or diversion of actual nuclear weapons and would provide a very high level of assurances on a non-discriminatory basis.

Germany believes that any future nuclear disarmament agreement will need to provide for a combination of new and established, intrusive and non-intrusive provisions, including effective on-site inspections and new items subject to inspection, all of this notwithstanding the provisions of articles I and II of the Treaty on the Non-Proliferation of Nuclear Weapons. We believe that only the sum of various complementary methods and technologies will constitute an effective verification system. As a result, while methods like declarations, National Technical Means (NTM) and Multinational Technical Means (MTM) and inspections will be useful in attempting to solve some of the major challenges of verification, at the same time they should be seen in light of the need to be possibly supplemented by other ground-based, air-based and space-based technologies. We also believe that it is important to be continuously receptive to technological improvements. Important developments emerged in the areas of acoustic, optical, movement sensors and communications that give the verifiers the capacity to work with much greater speed and efficiency as well as an ability for operations around-the-clock.

We would like to draw particular attention to the case of the FMCT, which is providing interesting insights in to the role of verification and its toolbox of an emerging treaty. Previous and ongoing work, especially that of the GGE and FMCT High Level Expert Preparatory Group (HLEPG), have been valuable in gathering relevant information on technical challenges of verification, which have direct parallels to the broader disarmament verification regime.

Germany believes that the technical expertise and experience to strengthen effective nuclear disarmament verification needs to be further developed. Some of the issues to be addressed by this Group of Governmental Experts on nuclear disarmament verification, therefore, should consist of (a) furthering academic education in the field of nuclear disarmament verification, addressing both political and technical issues; (b) increasing technical expertise globally through training of experts and scientists; (c) developing innovative systems concepts for verification regimes in multilateral nuclear disarmament approaches; (d) conducting research and development projects for improving existing nuclear verification techniques and procedures, such as surveillance technologies, sealing systems, environmental sampling, nuclear measurement equipment, geospatial information analysis, statistical methodologies, and sample planning; (e) exercises aimed at testing and, where necessary, improving on-site inspection procedures; (f) applying technical knowledge, competences and experiences in nuclear verification gained through the International Atomic Energy Agency Safeguards Support Programme in Germany including the development of nuclear verification equipment, field tests and training of inspectors; and (g) further development of national and international networks of technical experts.

Germany aligns itself with the view that a verification body should be politically impartial, technically capable and apply resource-efficient, scientifically proven techniques. We believe that international verification organisations, such as the IAEA, OPCW and CTBTO, help make verification techniques, technology and data accessible to all parties, including those that have no capacity to carry out verification themselves and enhance transparency and symmetry. Given the IAEA's many decades of experience in the verification of NPT obligations and on the basis of providing it with the necessary resources and an adapted mandate, it appears well suited to

implement and oversee verification provisions, not least because all Nuclear Weapons Possessor States, with the exception of the DPRK, are already members of the organisation. Furthermore, best utilisation of the already existing expertise and infrastructure will save administrative costs and reduce financial burdens on States parties. Moreover, involving the IAEA in nuclear disarmament would reduce asymmetries between the commitments of the five NPT-recognised NWS, those already assumed by the NNWS as well as providing a framework for including the other nuclear weapons possessor states. Establishing another body for this purpose could undermine the IAEA safeguards system and would risk a duplication of efforts.

In order to ensure nuclear security we have to give special emphasis to the protection against the use of nuclear materials by terrorists and unauthorized non-state actors. Since the scope of the NPT from 1968 does not consider non-state actors, there is an increasing need for physical protection of such material from misuse or their misappropriation by state actors. We must be aware that nuclear threats do not stop at our borders. In particular, maintaining cyber security and the security of radioactive sources in civilian use continue to be a challenge for years to come – not only for my own country.