Main Theses

1. The Nuclear Weapons Convention (NWC) serves as a legal framework to make the call for the abolition of nuclear weapons concrete and assemble the steps to achieve a nuclear-weapon-free world (NWFW) in an effective, reliable, irreversible and sustainable manner.
2. Umbrella negotiations on a Nuclear Weapons Convention could serve as an adaptive, multi-level process for assembling and coordinating the various elements and building blocks in the transformation to the NWFW, with the NWC as the integrative mechanism between ultimate goals and practical steps.
3. The political momentum for a NWFW needs to be built and used to prepare the conditions for getting NWC negotiations started. The Model NWC serves as a tool to involve governments and civil society into a cooperative discussion and drafting process that could transform into real negotiations.

Why a Nuclear Weapons Convention?

With the end of the Cold War, nuclear deterrence policies have been loosing ground. The continued existence of nuclear arsenals bears uncalculable risks. The missing legal ban on nuclear weapons complicates efforts to prevent further states and terrorists from acquiring nuclear weapons. The negative example of the nuclear weapon states creates incentives for imitation which drive the proliferation of know-how and technology of nuclear weapons. Proliferation and military measures against it, including missile defense, counterproliferation and more sophisticated nuclear weapons, mutually reinforce each other. The political stability necessary for the controlled maintenance of nuclear weapons cannot be guaranteed in the long run. Fatal accidents remain possible. Without a systematic and controlled elimination of the nuclear threat, an intentional or accidental use of nuclear weapons is a matter of time. A nuclear-weapon-free world which not only removes nuclear weapons but also the main incentives for their development provides security gains for all states.

The nuclear weapon states are obliged to eliminate all their nuclear arsenals. No state can indefinitely claim a right for having nuclear weapons while excluding others from this right. The existing nuclear non-proliferation regime is based on the obligation for nuclear disarmament according to Art.VI of the Non-Proliferation Treaty (NPT) which has been confirmed by the nuclear weapon states at the 1995 NPT Review and Extension Conference, with the ultimate aim of a nuclear-weapon-free world. States who want to keep their nuclear arsenal endanger the stability of the non-proliferation regime. According to the advisory opinion of the International Court of Justice (ICJ) in July 1996, “the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law”. The International Court was united in stating the “obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control.”

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1 Presented at: Atlanta Consultation III, Middle Powers Initiative, Jan. 20-22, 2010. The author is co-founder of the International Network of Engineers and Scientists Against Proliferation (INESAP) and editor of the INESAP Information Bulletin. He is one of the principal drafters of the 1997 Model Nuclear Weapons Convention and co-author of the book "Securing Our Survival" (http://inesap.org/node/22). Contact: juergen.scheffran@zmaw.de.
The nuclear threat can only be removed irreversibly and sustainably by systematic and controlled elimination of all nuclear weapons. Systematic efforts are required by all states towards a nuclear-weapon-free world, which need to be agreed upon in negotiations and codified by international law. Although the existing non-proliferation and disarmament regime slowed down the spread and development of nuclear weapons and made cuts into the nuclear arsenals possible, it does not present a path towards a nuclear-weapon-free world. The effectiveness of the NPT is restricted by the distinction between nuclear weapon states and non-nuclear weapons states, which has been criticized as discriminatory, as well as by the active spread of nuclear technology which has contributed to the proliferation of nuclear weapons because of the close link between civil and military applications. Furthermore, the NPT includes no provisions for the implementation of the disarmament obligation.

A Nuclear Weapons Convention (NWC) would be a logical and politically appealing instrument to complete the ban of all weapons of mass destruction, in addition to the Biological and Chemical Weapons Conventions. The NWC would include both measures for nuclear non-proliferation as well as disarmament und thus overcome the division between these approaches. The NWC would combine the comprehensive goal for a world without nuclear weapons by concrete measures and steps for achieving this goal, thus overcoming the division between incremental and comprehensive approaches. It would define a legal framework for a ban and elimination of all nuclear weapons, the control of the nuclear complex and fissile materials, and associated verification measures as well as the rights and duties of both States and individuals.

The Model Nuclear Weapons Convention

In 1995, the NWC working group of „Abolition 2000“ has set the goal of drafting a model treaty for nuclear disarmament. In collaboration between IALANA, IPPNW and INESAP a committee was set up in 1996 which worked out a draft document at meetings in New York und Darmstadt, Germany. The Model Nuclear Weapons Convention was presented to the public at the NPT PrepCom in April 1997 and in the same year was submitted by Costa Rica to the United Nations as an official document. The full text is included in the 1999 book "Security and Survival“ which explains the arguments for the NWC and discusses critical question on various crucial topics. After a lost decade of disarmament, at the NPT PrepCom in May 2007 and as part of the launch of the International Campaign for the Abolition of Nuclear Weapons (ICAN) an extended and updated version of the MNWC and the book “Securing Our Survival” were presented. Costa Rica and Malaysia submitted the revised Model NWC as a UN document at the end of the year. It was positively received by many governments and non-governmental organizations. According to UN resolutions, the majority of States is ready to start negotiations on the NWC.

One purpose of the model NWC is to show that the abolition of nuclear weapons is possible and practically feasible. A complete ban has more public appeal than the limitation of certain forms of weapons or usage which would have to be distinguished and verified. The Model NWC is intended to promote an incremental-comprehensive solution to the nuclear risks of our times and bring it into the public debate. It also aims to inspire discussions on possible strategies and steps towards comprehensive nuclear disarmament and to induce negotiations on a convention banning and eliminating nuclear weapons.

The current model convention comprises 19 Articles and 8 Annexes/Protocols. Article I contains general obligations not to "research, develop, test, produce, otherwise acquire,
deploy, stockpile, maintain, retain or transfer nuclear weapons” as well as related nuclear materials, delivery systems and components, and not to use or threaten to use nuclear weapons. All existing nuclear weapons, their development and production facilities as well as delivery systems, command and control facilities are to be destroyed or converted. “Special materials” for nuclear weapons (highly-enriched uranium, uranium-233, plutonium, tritium) are to be placed under international safety controls. Other articles concern the implementation of these obligations, especially definitions and declarations; phases for implementation; verification; national implementation; rights and obligations of persons; the international agency; nuclear material, weapons, delivery vehicles, facilities; cooperation, compliance and dispute settlement; entry into force and ratification; financing; amendments. The annexes and protocols go into details, e.g. of verification, confidence building measures, nuclear activities, delivery vehicles and disposition of special nuclear materials. The Model NWC proposes a flexible series of coordinated phases for implementation. The suggested deadlines are offered as recommendations and are based on evaluations of feasibility, with the understanding that States would negotiate the actual deadlines. The Model NWC allows for extension of deadlines if a State Party is unable to complete obligations within the time allotted.

Rather than creating a final product that serves as the ultimate solution for nuclear abolition, the idea of the MNWC was to launch a process that could involve participants on governmental and non-governmental levels and would adapt to the changing circumstances, serving as a catalyst to transform the drafting process into a real negotiation process. The updated version of 2007 addresses the changing political conditions, e.g. by assessing the problem of nuclear terrorism and the renaissance of nuclear power. Different views should not be reason not to start the negotiation process, it rather offers the opportunity and forum to express and talk about differences. Next steps could be annexes on verification, fissile materials, delivery systems and any other topic that deserves particular attention.

The NWC Negotiation Process

Until the end of the Cold War a number of arms control and disarmament agreements have created favorable conditions for comprehensive disarmament negotiations. With the INF Treaty, the START Treaties, the Chemical Weapons Convention, the Comprehensive Test Ban Treaty, and new nuclear-weapon-free zones, important elements have been realized for the control of weapons of mass destruction. At the same time, various obstacles in the nuclear disarmament process have made clear that further progress would depend on responsiveness to the demands for comprehensive nuclear disarmament.

Umbrella negotiations on a Nuclear Weapons Convention could serve as a framework to focus, harmonize and integrate future non-proliferation and disarmament measures into a legal architecture, completing the current nuclear disarmament and non-proliferation regime. Within the umbrella negotiation framework, different individual measures could be negotiated and agreed upon in separate negotiation fora (NPT, CD, US-Russia, NPT nuclear weapon states, non-NPT NWS, non-NWS, states with nuclear power, etc.) and would be understood as building blocks of a comprehensive convention which could be realized step-by-step and in conjunction. Different negotiation streams could run in parallel and then be merged, adapting to progress and changing circumstance. Moratoria and temporary agreements, unilateral, bilateral, multilateral, could serve as intermediate steps in this process.

Within the umbrella negotiations, steps could include, among others: taking nuclear forces off alert; removal of warheads from delivery vehicles; ending deployment of non-strategic nuclear weapons; negotiations to further reduce U.S. and Russian nuclear arsenals; a no-first
use for nuclear weapons and further security guarantees, new nuclear-weapon-free zones, a deep reduction of the nuclear arsenals and delivery systems, a ban on nuclear-weapons materials, further restrictions on nuclear weapons development as well as the closure and conversion of nuclear weapons facilities. Each of them could be implemented as intermediate steps on the road to the NWC which would ultimately bind them together into a coherent legal framework. Such an approach would overcome the contradiction between step-by-step and comprehensive approaches to nuclear abolition. Concerns of states about asymmetries and disadvantages inherent in single steps could be balanced in the context of comprehensive disarmament negotiations. The increased transparency and trust between nuclear weapon states and non-nuclear weapon states would rather facilitate the realization of single steps. The umbrella could serve as a model for the negotiation process and for the NWC itself. Umbrella negotiations would prepare and implement the different elements needed to achieve a nuclear-weapon-free world. Each element once in place already provides an important contribution to the NWFW and the process leading to it. The ultimate goal would only be fully effective once all the components are integrated and the “NWC umbrella” would unfold its strength to effectively shield the world against all nuclear threats.

To get started with NWC negotiations as early as possible, the current political momentum for a NWFW needs to be used to prepare the conditions, building on the NPT Review Conference and other events in 2010 to conclude the negotiation process within this decade. Cooperation and communication among governments and NGOs is essential in creating the NWFW and improving the international system. Cooperation concerns integrated concepts for disarmament, the realization of single steps, disposal of nuclear materials, verification, building of security structures, and citizens’ involvement. Negotiations on the NWC could serve as a forum to organize the necessary communication among delegates, NGOs and the public. Progress in these negotiations could stimulate cooperation in other fields of the international system, including environment, development and democracy building.

Preparing and Building a Monitoring and Verification Capability

Improving transparency, information exchanges and building components of a monitoring and verification systems for the NWC serve as important components in the preparation for the NWC and its negotiation process. A Verification Annex to the Model NWC could make important contribution in gathering expertise and building momentum.

The NWC would have the goal of permanently eliminating the world’s existing nuclear arsenals, to prevent the production of new nuclear weapons and to establish high barriers for the diversion of nuclear-weapons materials. The illegal acquisition of nuclear weapons is to be prevented or at least detected with sufficient reliability. A wide variety of objects and activities is to be monitored, from research, development and testing of single components to the removal and elimination of complete nuclear weapons, delivery systems and materials. Some of the activities are easily detectable (such as nuclear explosions), others require considerable verification efforts (such as the search for hidden warheads). The risks of uncertainties are increasing with declining warhead numbers, because then clandestine nuclear weapons activities have a higher significance. On the other hand in a NWFW the acquisition of nuclear weapons is easier to detect because there is no existing infrastructure that can be used to hide these activities.

The abolition of nuclear weapons can succeed if the disarmament process is transparent and strengthens the trust between the parties. Efficient verification measures are important to
detect clandestine activities related to nuclear weapons with sufficient reliability. A variety of measures and methods of verification can be used: remote sensing in the visible, infrared and radar part of the electromagnetic spectrum; seismic, radiological, hydroacoustic and infrasound detectors; onsite sensors; cooperative verification, including information exchange, inspections, preventive controls and joint overflights.

The development, testing and deployment of nuclear weapons is a tremendous effort that leaves many traces in the environment that can be detected. The production of nuclear weapons materials requires large facilities, such as reactors and enrichment facilities, which are difficult to hide. Even if they release only tiny amounts of decay products, these are potentially detectable with sensitive sensors and allow for getting hints about its source. So-called nuclear archeology helps to reconstruct a sufficiently accurate picture of previous nuclear activities. Social verification, confidence-building measures and institutional mechanisms (international agency, consultations, conflict resolution) aim at strengthening the societal context of verification.

The Model NWC prescribes to put all nuclear weapon materials under comprehensive preventive controls which not only discover the diversion of significant amounts of materials but also reduce or block the access to these materials. To achieve this goal, it is essential to go beyond previous safeguards measures of the International Atomic Energy Agency (IAEA) which are designed to improve the accounting, containment and surveillance of nuclear materials. An international registry and surveillance system comprises non-destructive methods of onsite detection and sensors for detecting radionuclides in the environment (e.g. Krypton-85). While baseline inspections provide information about the basic inventory, challenge inspections provide access to critical facilities at any location and any time. Special techniques such as tagging have been developed to uniquely identify treaty-limited items. Some of these methods are principally available, others require additional research and development, and may be available when a NWC enters into force.

**Building an International Security Community**

The creation of a nuclear-weapon-free world goes hand in hand with the creation of an international security community, minimizing incentives for acquiring nuclear weapons and building concepts for comprehensive security, facing the world’s global problems. Verification of a NWC would aim for the best possible security but should not give the illusion of perfect security. There should be a reasonable relationship between the verification efforts and the expected outcome. The risk of treaty violation needs to be compared to the security gains in a NWFW. To minimize the risk, a verification system is to be embedded into an effective regime of international security. One aim would be to increase the detection probability of treaty violation, and to discourage non-compliance by limiting the usability of eventually remaining nuclear weapons capabilities and imposing unacceptable risks for the violator by determined action of the international community. In order to dissuade a potential violator not to undertake his plan, a gradual and adapted reaction would be adequate, allowing for a face-saving exit. In such efforts, the use of force which might rather increase the motives for keeping or using nuclear weapons should be a measure of last, not first resort. It should be made clear that clandestine nuclear weapons activities do not permit any gains but everything can be lost. For Joseph Rotblat, who was awarded the 1995 Nobel Peace Prize, the abolition of nuclear weapons would be an important contribution to the abolition of war and a more peaceful world order. This would free the political will and resources to face the global challenges, including energy, environmental destruction, climate change, hunger, poverty and violence.