

Nuclear Non-proliferation the Current Situation and Challenges

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Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

- The cornerstone of the global nuclear non-proliferation regime to anchor for humanity's efforts to curb nuclear proliferation and move towards nuclear disarmament.
- An almost universal adherence. Only three nations have chosen not to join it – India, Pakistan and Israel – and one State, North Korea, has decided to withdraw from the treaty.
- The center and foundation of an interlocking network of agreements, organizations and international arrangements, designed to slow down the further spread of nuclear weapons.

New Challenges Before Us

- A renewed drive on the part of a few States and extremist groups to acquire nuclear weapons
- The emergence of clandestine nuclear procurement networks
- The renewed interest in nuclear power on the part of many countries



It becomes more important that we have strong mechanisms in place to minimize the risks of nuclear proliferation.

Topics

- Current situation and challenges in efforts for
 - nuclear disarmament
 - nuclear verification
 - physical protection
- Actions for future

Nuclear Disarmament

- One of the main conditions of the indefinite extension of the NPT in the NPT Review Conference in 1995
 - The NWS should give a pledge to speed up the implementation of their commitment to pursue nuclear disarmament, including the conclusion of the Comprehensive Nuclear-Test Ban Treaty (CTBT) which bans all nuclear explosions.
- The CTBT was concluded in 1996 but it has not entered into force yet because it still requires the ratification of 11 of the 44 States whose ratification is needed for the Treaty to become effective.

Nuclear Disarmament

- A Fissile Material Cut-off Treaty
 - aims to suppress the emergence of new nuclear weapons states by banning the production of fissile materials and restrict the production of nuclear weapons by nuclear-weapon states.
 - a practical and substantial multilateral measure for nuclear disarmament and non-proliferation to be pursued following the conclusion of the CTBT in 1996.
- Despite the efforts of many countries, the negotiations on the treaty have not yet commenced.

Nuclear Disarmament

- Non-proliferation and disarmament are complementary, not separate, goals.
- Making the North Korean test explosion a wake-up call, the community should work for a new momentum.
- A moratorium on nuclear-weapon-test explosions should be continuously affirmed.
- All the NWS should proclaim their serious intention to diminish the role of the nuclear factor in their security and foreign policies

Nuclear Verification

- The IAEA is responsible for verifying and assuring compliance with NNWSs' commitments to renounce the acquisition and possession of nuclear weapons.
- All States Party is required to sign and bring into force comprehensive safeguards agreement with the IAEA.
- The IAEA has continued to provide assurance that no nuclear material which has been declared and placed under its safeguards has been diverted for any explosive purposes or for purposes unknown.

Additional Protocol

- Allegations of nuclear development by Iraq and North Korea jolted the international community into urgently considering ways and means to strengthen the safeguards system.
- The **Additional Protocol** not only provides broader right of access for the IAEA inspectors to nuclear and nuclear related facilities and locations but also contains new administrative arrangements to improve the effectiveness and efficiency of safeguards.
- The chief problem is that it has not been universally applied. The comprehensive safeguards agreement together with the **Additional Protocol** must be the universal standard.

Cases of Non-Compliance

- Non-compliance with the respective NPT safeguards agreements: Iraq, Iran and DPRK.
- The announcement of a nuclear test by North Korea, which is a matter of grave concern, is a serious challenges to the NPT regime.
- The political reality of these cases have made clear the critical importance of the IAEA verification activities.

Physical Protection/Nuclear Security

- Protection of nuclear material in use, storage and transport, and nuclear facilities from theft and sabotage both for non-proliferation and radiation safety purposes.
- The IAEA Recommendations for the Physical Protection of Nuclear Material, which was first published in 1972 and have been revised a number of times since then.
- The Convention on the Physical Protection of Nuclear Material
 - To implement specific protection measures for nuclear material in international transport.
 - In 2005, revised to protect nuclear material and nuclear facilities in domestic use, storage as well as transport, against theft and sabotage and to criminalize an act of sabotage against nuclear material and nuclear facilities as a punishable offense.

Partnership Against the Spread of Weapons and Materials of Mass Destruction

- The Proliferation Security Initiative (PSI)
- The UN Security Council Resolution 1540
- The Global Threat Reduction Initiatives (GTRI)
- International Convention for the Suppression of Acts of Nuclear Terrorism.

Actions for Future

- Multilateral Approach for nuclear fuel cycle
- Research for nuclear non-proliferation
- Education on disarmament and non-proliferation

Multilateral Approaches to Nuclear Fuel Cycle

- Multinational alternatives to the national operation of U-enrichment and Pu-separation technologies can;
 - Remove the motivation and the justification for each country to have its own capability, through assured access to the resources.
 - Provide the benefits of cost-effectiveness and economies of scale for smaller countries or those with limited resources, while ensuring the benefits of the use of nuclear technology.

IAEA DG M. ElBaradei's Initiative

- International group of experts to assess multilateral approaches
 - identified a number of options in terms of policy, institutional and legal factors for those parts of the nuclear fuel cycle of greatest sensitivity from the point of view of proliferation risk.
 - considered, as a framework, assurances of services, conversion of existing national facilities to multinational facilities, and construction of new joint facilities.

Development of a Mechanism to Assure the Supply of Nuclear Fuel

- **A proposal by France, Germany, the Netherlands, the Russian Federation, the United Kingdom and the United States:** a concept for a multilateral mechanism for reliable access to enrichment services for nuclear fuel.
- **A proposal by Japan:** a system which incorporates both an information system to contribute to the prevention of the occurrence of market failure and the backup feature for supply assurance that is the same as that proposed in the six-nation proposal.
- **A special event during the last General Conference of the IAEA:** to facilitate discussion of these and other proposals.
- **The Secretariat of the IAEA** is studying issues related to the modalities and criteria for possible assurance mechanisms acceptable to all users of nuclear energy.

Research for Nuclear Nonproliferation

- New and changing challenges ask the IAEA to promote research and development for nuclear nonproliferation.
 - Novel technologies including those for the detection of undeclared activities and those with enhanced capabilities in the area of environmental sampling.
 - New technologies for collection and analysis of information.
- Development for more proliferation resistant nuclear energy systems, including relevant technologies of the nuclear fuel cycle.
 - An issue: how to achieve significant advances in proliferation resistance utilizing intrinsic characteristics like easiness of detection and extrinsic measures like easiness of safeguards in an optimal manner
 - The IAEA should be a partner of such efforts from the early stages of development to identify needs for innovation and clarify the issues to be resolved in a timely manner.

Education on Nuclear Disarmament and Nonproliferation

- The overall objective of the education is to impart knowledge to individuals to empower them to make their contribution, as national and world citizens, to the achievement of concrete nonproliferation measures.
- Each country is encouraged to sponsor in cooperation with the IAEA training, fellowships, and awareness programs for researchers, engineers, scientists, and other academics in areas of particular relevance but not limited to treaties and agreements on nuclear non-proliferation.

Why These Actions?

- These actions will strengthen the IAEA.
- The strengthening of the IAEA is a must to the world community as its responsibility for the assurance of non-proliferation shared with the world community is surely increasing and this assurance is vital to ensure that **the Atoms are used only for peace.**