On-going and planned work that aim to reduce the risk of nuclear war: An overview

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The humanitarian impact of nuclear weapons – a risk worth taking?

Reflections by Ronald Sturm for the workshop on “Risk estimates for global challenges: Use of nuclear weapons”
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1. The humanitarian impact of nuclear weapon use: Hiroshima and Nagasaki
2. International efforts for nuclear disarmament
3. Post-cold war complacency & recent humanitarian initiatives
4. Recent findings on humanitarian consequences: preparedness, climate, food, health, environment, society, economy
5. Recent political environment for nuclear (dis-)armament: from bi-polar to multi-polar nuclear deterrence
6. A summary of known and alleged risk drivers
7. “Acceptable probability” and “sufficient improbability” – some reflections
8. A rational approach to nuclear weapons – what risk calculations should do?
1. The humanitarian impact of nuclear weapon use: Hiroshima and Nagasaki

Credit: Ruins of Hiroshima, August 6th, 1945. UN Photo/Eluchi Matsumoto

Credit: Bombing of Nagasaki, August 9th, 1945. US Army

Dr. Ronald Sturm - Federal Ministry for Europe, Integration and Foreign Affairs
2. International efforts for nuclear disarmament

- UNGA – first resolution A/RES/1(I)(1946)

  “The Commission shall proceed with the utmost despatch and inquire into all phases of the problem, and make such recommendations from time to time with respect to them as it finds possible. In particular, the Commission shall make specific proposals:

  (a) for extending between all nations the exchange of basic scientific information for peaceful ends;

  (b) for control of atomic energy to the extent necessary to ensure its use only for peaceful purposes;

  (c) for the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction;

  (d) for effective safeguards by way of inspection and other means to protect complying States against the hazards of violations and evasions.”

Dr. Ronald Sturm - Federal Ministry for Europe, Integration and Foreign Affairs
UN Special Session On Disarmament I (1978)

• Results:

• Final Document stressed the central role of the UN in the field of disarmament and placed disarmament issues in a more comprehensive perspective; reaffirmed the fundamental importance of disarmament to international peace and security.

• Immediate goal: the elimination of the danger of a nuclear war and the implementation of measures to halt and reverse the arms race.

• “[...] the increase in weapons, especially nuclear weapons, far from helping to strengthen international security, on the contrary weakens it, [...] heightens the sense of insecurity among all states, including the non-nuclear-weapon states, and increases the threat of nuclear war.”

• The urgency of preventing the proliferation of nuclear weapons and of halting nuclear tests was stressed.

• The program called for full implementation of the 1967 Treaty of Tlatelolco.

• In 1979, the Conference on Disarmament (CD) was established.
• International Atomic Energy Agency (IAEA) – nuclear non-proliferation & „... in conformity with policies of the UN furthering the establishment of safeguarded worldwide disarmament...“

• Nuclear Non-Proliferation Treaty (NPT) – 3 pillars: disarmament, non-proliferation, right to peaceful uses

• Conference on Disarmament (CD/Geneva)
3. Post-cold war complacency & recent humanitarian initiatives

- Bilateral and unilateral disarmament efforts
- CTBTO established Preparatory Commission in Vienna – CTBT still not in force
- 2009 UN Security Council Summit
- 2010 NPT Review Conference – Action Plan (disarmament, non-proliferation, peaceful uses; Middle East Zone free from Nuclear Weapons and other WMD & delivery systems
• 2012 – first joint humanitarian statement

“If such weapons were to be used again, be it intentionally or accidentally, immense humanitarian consequences would be unavoidable. In addition to the immediate fatalities, survivors of the horrendous effects of a nuclear explosion would endure immeasurable suffering. International organisations providing emergency relief would be unable to fulfil their mandates, as the ICRC has already concluded[...]."
• 2013 – OEWG Geneva & HLM New York
• 2013 – Oslo Conference
• 2014 – Nayarit Conference
• Dec. 2014 – Vienna Conference: consequences, risks, relevant international law
• 2015?
4. Recent findings on humanitarian consequences: preparedness, climate, food, health, environment, society, economy

Oslo (Chair’s summary):

• “It is unlikely that any state or international body could address the immediate humanitarian emergency caused by a nuclear weapon detonation in an adequate manner and provide sufficient assistance to those affected.

• The historical experience from the use and testing of nuclear weapons has demonstrated their devastating immediate and long-term effects. While political circumstances have changed, the destructive potential of nuclear weapons remains.

• The effects of a nuclear weapon detonation, irrespective of cause, will not be constrained by national borders, and will affect states and people in significant ways, regionally as well as globally.”
Nayarit (Chair’s summary):

- Beyond the immediate death and destruction caused by a detonation, socio-economic development will be hampered and the environment will be damaged. Suffering will be widespread, the poor and vulnerable being the most severely affected.

- Reconstruction of infrastructure and regeneration of economic activities, trade, communications, health facilities, and schools would take several decades, causing profound social and political harm.

- Radiation exposure could result in short and long-term negative effects in every organ of the human body and would increase cancer risks and future hereditary pathologies.

- Today the risk of nuclear weapons use is growing globally as a consequence of proliferation, the vulnerability of nuclear command and control networks to cyber-attacks and to human error, and potential access to nuclear weapons by non-state actors, in particular terrorist groups.

- As more countries deploy more nuclear weapons on higher levels of combat readiness, the risks of accidental, mistaken, unauthorized or intentional use of these weapons grow significantly.

- It is a fact that no State or international organization has the capacity to address or provide the short and long term humanitarian assistance and protection needed in case of a nuclear weapon explosion. Moreover, it would not be possible to establish such capacities, even if attempted.”
Vienna? (TBC)

- **Opening:** Sebastian Kurz, MFA, and Setsuko Thurlow
- **Session I – Impact of Nuclear Weapons:** Anjain-Maddison, Lester, Makhijani, Mills, Olson, Thomas
- **Session II – Risk Drivers for deliberate or inadvertent Nuclear Weapons Use:** Baum, Blair, François, Mechler, Schlosser
- **Session III – Scenarios, Challenges and Capabilities regarding Nuclear Weapons Use and other events:** Lowenthal, McKinzie, Pillay, UN OCHA
- **Session IV – A „bird‘s-eye view“ on International Norms and the Humanitarian Impact of Nuclear Weapons** Durham, Hayashi, Nystuen, Vinuales
5. Recent political environment for nuclear (dis-)armament: from bi-polar to multi-polar nuclear deterrence

- Post-cold-war multi polar world: India, Pakistan, North Korea
- Nuclear weapon ambitions?
- Middle East – weapons of mass destruction free zone?
- Terrorist threats
6. A summary of known and alleged risk drivers

- many more actors: 9 states with NWs approximately 30-40 with the capability to get there in a reasonably short time
- non state actors – terrorists, potentially even co-operations
- known instances of human error (negligence miscalculation, madness, (generic) chain of command flaws, management flaws)
- NWs alert status
- technical errors
- accidents
- cyber dimension - hacking, etc.
- political factors (turmoil in NWS thus loss of control; policy changes)
- potentials for escalation
- black swan events
7. “acceptable probability” and “sufficient improbability” – some reflections

• Gravity of consequences – can a nuclear war ever be acceptable? Principles of humanitarian law: distinction, necessity, proportionality, etc.

• At what level can a sufficient improbability be achieved – at global zero?
8. A rational approach to nuclear weapons – what risk calculations should do?

• Show, if nuclear deterrence can be “fool proof”
• Show, which drivers influence the level of risk most
• Show, how to go about eliminating risks (sequencing, prioritising)