

Nuclear Safety, Safeguards and Security
– Strengthening the Global Nuclear Order

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As the IAEA Director General Emeritus, Hans Blix put it “A nuclear accident anywhere is an accident everywhere”. Fukushima revealed that no one state is immune from fallacies that resulted both before and after the nuclear accident. That will be also true with any nuclear terrorism event, which we have been spared thus far.

Safeguards, security and safety (Triple S) are commonly seen as separate areas in nuclear governance. While there are technical and legal reasons to justify this, they also co-exist and are mutually reinforcing in many ways. Safety, security and safeguards are close ‘triplets’ that have synergetic effects on one another, and contribute to the efficiency and effectiveness of the overall nuclear order. For instance, near real-time nuclear material accountancy, together with monitoring systems, provide valuable information about the location and status of nuclear material. This in turn is useful for nuclear security measures. Similarly, such information serves to benefit nuclear safety by contributing as input to criticality controls and locations of nuclear materials.

An important global nuclear norm is for states to adhere to the latest IAEA and United Nations legal instruments¹ in these fields as well as demonstrate their full

¹ These are:

IAEA:

The Convention on Nuclear Safety
The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
The Convention of on the Physical Protection of Nuclear Material (CPPNM)
The Code of Conduct on the Safety of Research Reactors
Code of Conduct on the Safety and Security of Radioactive Sources

United Nations:

compliance with established requirements. The adoption of relevant IAEA treaties, conventions, the IAEA non-legally binding codes of conduct, and United Nations resolutions, sharing of best practices and resources is today's global nuclear norm. The full transparent implementation of these instruments is also a vital element in building public confidence that nuclear energy is used in a safe and secure manner.

Nuclear safety, security and safeguards rest on three independent blocks²: to prevent safety or security related nuclear accident or emergency; to respond and mitigate its consequences; and remediate sites after accidents, and to confirm that nuclear energy is used for peaceful purposes. These building blocks in turn require a strong safety and security conscious nuclear industry, responsible users of radioactive and nuclear materials, capable and effective nuclear regulators, and stakeholders who reinforce and ensure a robust institutional framework. In following the diligent and effective implementation and state's compliance of the legal instruments and standards, the IAEA together with the UN Security Council play a pivotal role through their regular reports on nuclear safety, security, and safeguards.

Beyond international conventions and efforts made to secure them as basic compliant standards, the ultimate responsibility for nuclear safety and security continues to rest with individual states. Nuclear safety and security issues continue to paint a mixed picture. While progress and attention has been made to better address vulnerabilities and threats, the 2016 Nuclear Threat Initiative Security Index concludes, inter alia, that the current global nuclear security system still lacks a common set of international standards and best practices. Furthermore, there remains no mechanism for holding states with lax security accountable.³

Currently, information on states' undertakings on nuclear safety, safeguards and security are scattered within various IAEA and other UN documents, including records of review meetings and the UN Security Council resolution 1540 committee⁴. Such information are not only unthreaded, thereby making it more

The International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT).

United Nations Security Council Resolution 1540.

² Communication dated 20 July 2016 from the Chairman of the International Nuclear Safety Group (INSAG), IAEA, GC(60)/INF/10, 23 September 2016.

https://www.iaea.org/About/Policy/GC/GC60/GC60InfDocuments/English/gc60inf-10_en.pdf

³ NTI Nuclear Security Index, Theft/Sabotage, Building a Framework for Assurance, Accountability and Action, Nuclear Threat Initiative, Third Edition, January 2016. http://2016.ntiindex.org/wp-content/uploads/2013/12/NTI_2016-Index_FINAL.pdf

⁴ Briefings by Chairs of subsidiary bodies of the Security Council, 4 May 2016.

http://www.un.org/en/ga/search/view_doc.asp?symbol=S/PV.7686

difficult to present a holistic picture, but data provided is also often lacking in public assessments on the effectiveness and efficiency of those measures.

In order to provide the international community with a full picture on the global status of nuclear safety, safeguards and security, the IAEA should be tasked to provide a biannual implementation report. Such a report would assess the effectiveness of states undertakings on the ground to ensure nuclear energy is used in a safe, secure and peaceful manner. The report should indicate where enhancements are required and suggest improvements taken by individual states or by the international community.

Such a transparent evaluation report should include an assessment of the adherence and implementation of all treaties, conventions, resolutions and codes of conduct for all states of the United Nations. The report should describe the size of the nuclear program including the use of radioisotopes and nuclear materials, and the independence and size of nuclear regulatory bodies. Much of the material useful for such assessment already exist in the IAEA and UN reports. States should also be encouraged to make national reports from the review meetings and the IAEA peer review reports or their summaries and recommended good practices publicly available. Mechanisms to have information on the implementation the Convention of on the Physical Protection of Nuclear Material (CPPNM) or the IAEA Codes of Conduct, which do not have such review meetings, available for a transparent assessment.
