



## Workshop Report

### *Assessment of the Current Landscape of Peaceful Uses and Nuclear Security: Challenges and Opportunities*

VCDNP Workshop: 24 November 2020

#### 1. Executive Summary

Given the challenges facing the world today, more can and should be done to tap into the potential of nuclear technologies and their power and non-power applications to find sustainable solutions to global problems, such as climate change and development. The International Atomic Energy Agency (IAEA) plays an essential role in assisting countries who need these technologies the most to apply them appropriately and sustainably. It also supports countries in implementing security measures that not only protect people and the environment from potential radiological incidents, but also solidify public confidence in and continue support for the use of peaceful nuclear technology and applications (hereafter “peaceful uses”).

The landscape of the IAEA and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is marked by attempts to maintain a balance between non-proliferation, nuclear safety and security measures on the one hand, and access to peaceful applications of nuclear technologies on the other. The lack of meaningful progress on disarmament has caused increased concern among the majority of NPT non-nuclear-weapon States (NNWS) that they are shouldering the bulk of the burden on non-proliferation while their access to peaceful uses is being hindered.

In the context of the IAEA, nuclear security has emerged as a separate and, in the opinion of many Member States, a competing priority to peaceful uses. There are a variety of reasons for this, which include competition between Member States for scarce resources, which is seen by many as a zero-sum game, as well as concerns regarding the effect nuclear security measures could have on access to peaceful uses. Some developing countries also feel overwhelmed by nuclear security measures that do not match their national risk profile and level of nuclear activities.

The Vienna Center for Disarmament and Non-Proliferation (VCDNP) organised a workshop for government representatives of IAEA Member States to consider the challenges to and opportunities for accelerating and enlarging the contribution of nuclear technologies and their applications for peace, health and prosperity throughout the world. The panel of experts comprised senior representatives of the Canadian and Brazilian governments, a senior IAEA expert on peaceful uses and two nuclear security experts from Europe and the United States. Eighty-one diplomats and experts participated in the workshop, which was held under the Chatham House Rule.

Some of the salient themes emerging from the panel discussion were:

- changing international perceptions of peaceful uses;
- increasing funding for the IAEA’s support to Member States;
- promoting a common vision for peaceful uses and nuclear security; and
- maintaining a balance between peaceful uses, nuclear security and non-proliferation.

## 2. Panel Presentations

### *2.1 Changing International Perceptions of Peaceful Uses*

The panel agreed that, despite the proven positive contributions of nuclear technologies for peaceful applications the benefits remain unknown to the wider public, in particular to the development community. Nuclear technology is largely associated with nuclear weapons and accidents at nuclear power plants. Reframing peaceful uses within the context of sustainable development, climate goals and peace building, could contribute significantly to changing these perceptions and promoting the benefits of peaceful uses. The COVID-19 pandemic and climate change present opportunities to peaceful uses as part of the solution to these global challenges. In the current international climate, there is a growing willingness to look at nuclear technology from a new perspective. The challenge for the nuclear community is to demonstrate and effectively communicate how the application of nuclear technologies contributes to the benefit of humanity.

The panellists identified the following pathways for the promotion of peaceful uses:

- Highlighting nuclear power as a reliable, low-carbon source of electricity that contributes to sustainable development.
- Stressing that peaceful applications can help humanity move towards peace by contributing to e.g. ending poverty.
- Promoting the IAEA's ZODIAC (Zoonotic Disease Integrated Action) initiative and PACT (Programme of Action for Cancer Therapy) to raise the visibility of peaceful uses at the international level and change public perception about nuclear technology and the role of the IAEA as more than a nuclear watchdog.
- Promoting and implementing security, safety and safeguards, to increase public acceptance and confidence in the use of nuclear technology.

### *2.2 Increasing Funding for the IAEA's Support to Member States*

The need to ensure that the IAEA has adequate resources to fund its nuclear security and peaceful uses activities was a common theme among panellists, especially in view of the impact that the COVID-19 pandemic is having on the budgets of its Member States. Unlocking non-traditional funding sources for peaceful uses, such as Official Development Assistance (ODA), has been identified by the IAEA Director General, Rafael Marino Grossi, as an opportunity to bolster the IAEA's resource base. Panellists spoke about this and noted that whilst there is potential to augment the IAEA budget in this way, peaceful uses would also have to be integrated into development efforts. This would require more awareness of the benefits of peaceful uses in the development cooperation community and a diversification of IAEA partnerships within that community. To meet ODA requirements, the way in which the Technical Cooperation (TC) programme is managed would have to change. Alternatively, the Peaceful Uses Initiative (PUI) could serve as a vehicle for ODA funded projects.

The following barriers to accessing ODA funding were identified by panellists:

- The nuclear field is not well understood by communities managing large ODA budgets and there is an instinctive dismissal of funding for nuclear related activities in some of these communities.
- ODA processes do not lend themselves to funding smaller, short-term projects under the IAEA's Technical Cooperation (TC) programme.
- The level of accountability required by ODA, regardless of the size of the contribution to a project, surpasses the accountability requirements for projects under the TC programme.

Recommendations to overcoming these barriers include:

- Member States and the IAEA must raise awareness in the development community about the benefits of peaceful uses.
- The IAEA should increase its understanding of ODA requirements and standards.
- The IAEA must diversify its partnerships with relevant international organisations that lead in the development sector to establish itself as an actor in that sector.
- Extrabudgetary funds, such as the PUI, allow the flexibility required for ODA funding of peaceful uses projects and should be utilised to facilitate cross-sector cooperation.
- Member States may also develop large-scale regional projects to increase the impact of peaceful uses in related development areas and to attract support from the development community. The PUI could also be used as a vehicle for funding such projects.

### *2.3 Promoting a Common Vision for Peaceful Uses and Nuclear Security*

The panellists considered the importance of promoting a common vision that stresses the need to protect communities while ensuring development needs are met. They agreed that competing narratives regarding nuclear security and peaceful uses are not constructive. Public opinion is fickle when it comes to nuclear technology and trust is not a given. Therefore, nuclear security, like safety, should be viewed as an insurance policy to better sustain peaceful uses. In order to change the perception that nuclear security and peaceful uses are competing priorities, the narrative needs to change.

Recommendations for achieving a common vision include:

- The IAEA, Member States and non-governmental organisations (NGOs) must better illustrate the safe, secure and sustainable application of nuclear technologies.
- The nuclear security community needs to learn to understand the needs and sensitivities of the end-users of these technologies. As one panellist observed “We must work hand and glove with our partners.”
- The nuclear security community needs to move away from selling “scare tactics” to serve its mission, and instead listen and address the needs of end-users.
- More dialogue between the Group of 77 and the Western European and Others Group across capitals and diplomatic missions is required to improve mutual understanding between Member States. A better understanding of the States’ priorities and the challenges faced in the peaceful application of nuclear technologies will contribute to building consensus on peaceful uses and nuclear security.

### *2.4 Maintaining a Balance Between Peaceful Uses, Nuclear Security and Non-Proliferation*

The risk that nuclear security and non-proliferation measures could limit developing countries’ access to peaceful uses was considered. One of the panellists pointed out that a nuclear incident or accident could prove to be the constraining factor to accessing peaceful uses in the future, and therefore all countries must adhere to the highest possible standards of safety and security. Another panellist contended that the security community’s determination to continually improve nuclear security measures was a vulnerability. Instead of finding new ways to strengthen nuclear security, the focus should be on optimising the existing nuclear security framework established under the auspices of the IAEA.

The role of disarmament in contributing to the balance of responsibilities between the NWS and developing countries was highlighted. One of the panellists argued that progress on disarmament will help to resolve some of the underlying distrust that prevails in this field. As long as nuclear weapons exist, it is inevitable that doubt and distrust will exist, affecting cooperation on peaceful uses.

How could Member States support the expansion of safe, secure and sustainable peaceful uses?

Panellists discussed the following options:

- Enhance trust in the well-developed international framework for nuclear security that has been developed over the last 20 years and invest in making the system more transparent and predictable for the end-user.
- While regulatory frameworks enable the safe and secure application of nuclear technologies, consider adopting an approach that does not promote a one-size fits all policy but rather takes into account the level of nuclear related activities in a country and supports regional solutions to developing regulatory competencies.
- Consider using existing tools to build trust, such as regular IAEA peer review missions, to make measurable progress on nuclear security.
- Actively promote the nuclear security architecture and promote the universalisation of various instruments such as the amended Convention on the Physical Protection of Nuclear Material.
- Work together as a community to find solutions when nuclear security requirements prevent access to peaceful uses.
- Alternative technologies provide useful examples of innovative approaches to nuclear security. Create more opportunities to share stories and best practices on implementing alternative technology approaches, for example in replacing high activity radioactive sources in hospitals, to enhance security and improve access to peaceful nuclear technology.
- Peaceful nuclear technologies are evolving with features that should make them more secure, such as advanced nuclear power reactors and advanced uses of sealed radioactive sources. These features should be welcomed by the nuclear community as making nuclear technology for power and non-power applications more accessible. The developers of small modular reactors (SMRs) should engage with the IAEA and the intended end-users, especially those in developing countries, to ensure that the technology lives up to its promise of being more secure and easier to safeguard.
- The nuclear community should expand its partnerships and promote more collaboration with industry and across sectors.
- Increase engagement on security-by-design with industry upfront.
- Consistent commitments by the NWS to disarmament would go a long way to resolving some of the underlying distrust that prevails in the nuclear field.
- Find constructive avenues to continue the debate on the balance between peaceful uses, nuclear security and non-proliferation.

### 3. Discussions on Challenges and Opportunities to Expanding Peaceful Uses to Contribute Meaningfully to Sustainable Development and Climate Goals

Following the recommendations made by panellists, the role of industry was discussed. The nuclear reactor vendor countries offer various services to Member States, including the supply of nuclear equipment and/or technology transfer, in-country capacity building, and training in educational institutions and nuclear facilities. Such support is provided either through bilateral agreements or through the IAEA, and always takes into account IAEA nuclear safety, security, and safeguards standards. Highlighting that industry in these countries is well-placed to contribute to addressing the challenges facing peaceful uses, the organisers noted that this topic will be expanded on in future workshops and events.

Panellists responded to concerns about the impact of the economic crisis on peaceful uses, framing the repercussions as providing opportunities rather than posing risks. Innovations like small modular reactors

and new uses for non-power applications can be part of the solution. The question is one of identifying how nuclear can be incorporated into wider solutions.

There was a question on how to engage with less traditional partners on peaceful uses in the development, agriculture and health sectors, and how to ensure that these partners are taking nuclear security, among other factors, into account when they work with project recipients. Concerted effort by policymakers and senior government experts on cross-sector engagement would be required, particularly in development fora. The nuclear community should take the initiative to engage with the development community. However, this should be done with a fair amount of humility and a preparedness to explain how nuclear could contribute to development. One panellist emphasised the importance of approaching non-traditional donors with ready-made projects like ZODIAC, whilst another maintained that, as one of the first steps, more effort should be made to convince donors that “nuclear” has a role to play in development.

The panellists were asked what could be done to link security challenges to the promotion of peaceful nuclear applications in the developing world. One panellist indicated the need to explain security challenges better and do so in a way that is relevant for countries most in need of the benefits that nuclear applications can provide. Engaging with these end-users on the practical and functional applications of security measures is also important. Another panellist noted that we need to find ways of reassuring people that nuclear security and peaceful uses are not a zero-sum game. In this regard, it was highlighted that, for some donors, sources of funding are likely to be different for the development-related activities than for security related activities.

The group discussed the need to trust the nuclear security framework that has already been established under the auspices of the IAEA, which includes a robust international security regime comprised of standards and guidelines. One panellist emphasised that increasing funding for nuclear security from the regular budget would enhance predictability. Speakers stressed that the IAEA’s nuclear security activities are too reliant on extra-budgetary funds, making it difficult for the IAEA’s division for nuclear security to plan its long-term activities without necessary funding assurance. Another panellist suggested that security measures could be made more predictable through an annual IAEA conducted peer review which could enhance trust and effectiveness within the overall system.

The group considered how to narrow the divide between States who feel disenfranchised and those States that are intent on improving nuclear security. Efforts to change the perception of conflict between nuclear security and the promotion of peaceful nuclear activities in developing countries was proposed. This could be accomplished by means of sustaining a dialogue and looking at security goals as part of a process and not a separate endeavour. Another recommendation was to consider how the IAEA could be strengthened to bridge both sides of the discussion. Creating more opportunities, like this workshop, also contributes to improving mutual understanding.

The importance of engaging in dialogue at every level to enhance understanding of nuclear security measures and the related threats, while also assuring that the system is not impeding access to peaceful uses was emphasised. It was noted that to resolve many of the often-politicised debates humility was needed, as well as the willingness of all diplomats and the nuclear security community to “listen to understand”. How the Agency could bridge both sides of the discussion in this regard was welcomed as a key area to explore further. Making progress on disarmament to resolve some of the underlying distrust that prevails in this field was also emphasised as an important step to reducing tensions and establishing more trust between Member States.