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B R I E F

Multilateral verification: Exploring new ideas

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Introduction

The immediate worldwide abolition of nuclear weapons is an aspiration of many governments. Others are, for the time being, content to seek deep reductions. The latter of these goals causes trepidation in those who fear that there is no permanent stability in a world where some states still hold low numbers of nuclear arms. Indeed, some argue that fewer nuclear weapons may enhance their role as a currency of power. Still others say that without them, the possibility of another all-consuming conventional war between the world’s great powers could again arise.

The counter-view to this suggests that the world without these weapons of mass destruction would be at least as stable as the present one. Others have suggested that a world without nuclear weapons is one in which a fundamental shift of world affairs would have first occurred: where countries generally would be more interconnected and more at peace with their rivals and neighbours.

Whatever position one takes in this debate, it is a generally-held view that hard and fast verification of nuclear disarmament is important, maybe even essential. Moreover, many argue that verification demands will increase as global nuclear arms levels fall. If nuclear disarmament efforts ever become the subject of multilateral negotiations, it is also very likely that a multilateral approach to verification will be called for.

Over the last year, VERTIC has been engaged in a new project that seeks to explore the next steps in arms control verification techniques for nuclear weapons. In March 2012, VERTIC, in partnership with the Institute for Security Studies, will convene a first meeting in South Africa to discuss ways forward in:

- further defining the key issues in nuclear disarmament verification;
- investigating the issues of confidence and trust, and how much of each is enough in verification;
- reviewing the currently-available measurement technologies and procedures for carrying out cooperative verification inspections; and
- establishing what type of international verification system could be developed over the next 10-20 years, and how a dedicated international inspectorate might look by 2023 or thereabouts.

The meeting will consist of experts from several nuclear and non-nuclear-weapon states, as well as representatives from intergovernmental organizations with an interest in nuclear arms control and disarmament verification. This core group of experts will hopefully continue to meet, supplemented by an increasing number of representatives from both nuclear and non-nuclear-weapon states as more defined work-streams emerge from the initial study.

The state of play

Of the nine states now possessing nuclear explosive devices, five are committed to disarmament under Article VI of the Nuclear Non-Proliferation Treaty (NPT). However, more than four decades after the introduction of that treaty, nuclear disarmament—meaning in this sense the *absence* of nuclear weapons—among these five states remains a long way off. The pace of nuclear reductions is also slow.

That is not to say that there has been no progress at all, however. Last year, for instance, saw the entry into force of the ‘New START’ treaty between the US and Russia, which requires both sides to reduce their number of deployed nuclear warheads to 1,550 within seven years.

Parties involved in negotiating nuclear arms accords are often keen that such agreements include suitably robust provisions for verification and monitoring. The New START treaty, for instance, contains an array of verification provisions, including on-site inspections, data exchanges, and notifications, and allowances for the use of states' own 'national technical means'.

Verification allows parties involved to gain assurance that what has been signed up to is being implemented as agreed, as well acting as a deterrent against cheating, and—ideally—as a means of building confidence and trust among the parties involved.

With bilateral accords, such as New START and its predecessor, START I, confidence and trust are largely confined to the two parties. By contrast, in treaties where multilateral involvement—such as through the direct engagement of the International Atomic Energy Agency—is or could be envisaged, the scope for confidence and trust-building extends far wider.

Within the context of nuclear disarmament, verification (whether bilateral or multilateral) entails a vast array of challenges, hurdles, and potential pitfalls in the areas of national security, health and safety, and proliferation. Several scenarios for multilateral disarmament verification can be envisaged:

- a process where verification involves only nuclear-weapon states;
- a process where both nuclear and non-nuclear weapon states participate in verification;
- a process where nuclear-weapon states participate in verification alone, but relay their findings to a larger pool of countries that includes non-nuclear-weapon states;
- a process where verification involves only non-nuclear-weapon states.

Involving non-nuclear-weapon states, either as participants in verification or as the recipients of information, would necessarily require steps to be taken to ensure that no proliferative information was revealed to them.

So far, there has been little work done on the involvement of NPT non-nuclear-weapon states in nuclear disarmament verification—with the notable exception of the UK-Norway Initiative, which began in 2007.

The UK-Norway Initiative

The UK-Norway Initiative was established to explore the role that non-nuclear-weapon states such as Norway could potentially play in the verification of nuclear warhead dismantlement.

As the first time that a nuclear-weapon state and a non-nuclear-weapon state have carried out such joint work, this was—and so far remains—a unique and groundbreaking collaborative endeavour. VERTIC facilitated the first meetings of this initiative, and thereafter held the role of independent observer to the initiative from 2007 to 2010.

The initiative itself proceeded along two research strands: one looking at 'managed access' procedures that would permit a certain level of non-nuclear-weapon state access to the dismantlement process; and, to complement managed access, one that studied the concept of an 'information barrier' device to determine the presence of a specific radioisotope while shielding sensitive data from inspectors.

The initiative, under which a mock dismantlement exercise was held in Norway in June 2009, showed that with the right kind of preparations it would be technically possible to involve non-nuclear-weapon state personnel in a verified warhead disman-

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lement process. This activity was then followed up by an access exercise held at the UK’s Atomic Weapons Establishment in late 2010. More recently, a workshop on nuclear disarmament verification was held in London in December 2011.

Involving the IAEA

While the involvement of non-nuclear-weapon states in multilateral—or even bilateral—disarmament verification processes undoubtedly entails risks that would not be present in a scenario only involving nuclear-weapon states, there are many potential positive benefits.

For one, there would be a wider pool of human and technological resources from which to draw, but more important may be the opportunity to turn nuclear disarmament into a global collaborative endeavour. Within acceptable limits, the reduced secrecy that would be inherent to the involvement of non-nuclear-weapon state parties in disarmament verification would help to foster a spirit of greater openness, which could, in turn, lead nuclear disarmament efforts in a positive direction.

Despite this, pursuing a multilateral approach to the challenges of nuclear disarmament verification will require bold and innovative thinking. VERTIC’s current project plans to break new ground and generate long-term engagement—by states and intergovernmental organisations alike—on this issue and realise at least some of the potential benefits of widening the range of actors involved.

Among the intergovernmental organisations of interest, there is a strong case to involve the International Atomic Energy Agency (IAEA) in future multilateral disarmament verification efforts. The IAEA Statute provides for the Agency’s right to apply

safeguards, at the request of parties, to ‘any bilateral or multilateral arrangement, or at the request of a state, to any of that state’s activities in the field of atomic energy.’

This broad mandate is then supplemented elsewhere in the Statute, where it is noted that the IAEA is to conduct its activities in accordance with the UN goals of promoting peace and international cooperation ‘and in conformity with policies of the United Nations furthering the establishment of safeguarded worldwide disarmament and in conformity with any international agreements entered into pursuant to such policies.’

The Agency’s mandate in the realm of nuclear disarmament was further strengthened by a key provision of the 1996 Pelindaba Treaty (which established an African nuclear weapon-free zone). After calling for all nuclear weapons within the bounds of the zone to be declared by any state possessing them, the Pelindaba Treaty provides: ‘To permit the International Atomic Energy Agency...to verify the processes of dismantling and destruction of [any declared] nuclear explosive devices, as well as the destruction or conversion of the facilities for their production.’

The IAEA had, at the time the Pelindaba Treaty was signed, already verified the dismantlement of South Africa’s small nuclear arsenal (although after dismantlement had happened) in the early 1990s.

On the research front, from 1996 until 2002 the IAEA was involved in the so-called ‘Trilateral Initiative’ alongside the US and Russia. This was an initiative designed to study the technical, legal, and financial issues associated with IAEA verification of excess weapons-origin and other weapons-usable fissile material and it,

too, conducted research into information barrier systems. Ultimately, nearly 200 meetings were conducted under the Trilateral Initiative before it was concluded in 2002. Its full findings have never been publicly released.

Today, along similar lines, the IAEA is investigating how best to fulfill its responsibility to implement verification measures under the US-Russian Plutonium Management and Disposition Agreement (PMDA), which calls for each country to dispose of 34 metric tons of excess weapons-grade plutonium.

In addition, one of the main strategic priorities announced by the IAEA Department of Safeguards at the IAEA's Safeguards Symposium in November 2010 was a need for the Agency to be ready to take on any other nuclear verification roles that it may be called upon to engage with in the future. Disarmament verification may well be one such role, and if the IAEA is to take on such responsibilities eventually, it will be better able to if the required foundations are laid in advance.

Progress to date

VERTIC's project, in focusing on the future role of multilateral organisations in disarmament verification, seeks to help facilitate the effective implementation of Action 19 of the 2010 NPT Review Conference Final Document. This action point noted the agreement of all NPT parties on the importance of 'supporting cooperation' amongst a range of actors aimed at 'increasing confidence, improving transparency and developing efficient verification capabilities related to nuclear disarmament.'

In all, VERTIC will hold three working meetings to study the issues associated with the involvement of inter-governmental organisations in nuclear disarmament verification.

The aim of these meetings is to explore potential routes for future technical cooperation on nuclear disarmament verification research. They will also seek to explore the various policy dimensions facilitating or challenging such cooperation.

VERTIC will also be conducting research into areas identified as priorities to inform and focus discussions. It is our aim that the research and analytical work conducted as part of this project will translate into useful activities and serious long-term engagement from IAEA member states. VERTIC intends to report periodically on progress under this project, with briefing papers such as this one as well as a project report, summarising achievements and making recommendations for next steps, in 2013.

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About this paper

This paper, by VERTIC Researcher David Cliff and Senior Researcher David Keir, outlines new ideas in the realm of multilateral nuclear disarmament verification. Since 2011, VERTIC has been engaged in a project that seeks to investigate next steps in nuclear disarmament verification, with an emphasis on the potential role of intergovernmental organisations. This paper argues that there is great promise for multilateralism in future verified nuclear disarmament, and furthermore that the benefits of multilateral engagement could encourage an increase in the pace of nuclear disarmament itself.

Building trust through verification

VERTIC is an independent, not-for-profit non-governmental organization. Our mission is to support the development, implementation and effectiveness of international agreements and related regional and national initiatives. We focus on agreements and initiatives in the areas of arms control, disarmament and the environment, with particular attention to issues of monitoring, review and verification. We conduct research and analysis and provide expert advice and information to governments and other stakeholders. We also provide support through capacity-building, training, legislative assistance and cooperation.

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