

# VERIFICATION RESEARCH, TRAINING AND INFORMATION CENTRE

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## SUPPORTING MULTILATERAL DISARMAMENT VERIFICATION

### NPT Review Conference Presentation: Supply and Demand for Multilateral Verification of Disarmament

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#### Introduction to the project

Andreas Persbo

Dear friends and colleagues. Thank you for taking time out of your schedules today to come and listen to some of our thoughts on disarmament verification.

As many of you know, VERTIC was one of the principal founders of the so-called UK-Norway Initiative in the mid-2000s. We presented on our work at the last review conference in 2010. Some of you may have heard the initiative update on work conducted since then. VERTIC left the initiative in 2010 to pursue a different approach to disarmament verification.

Studies into disarmament verification tend to focus on one aspect of the issue or another. Those interested in the difficult question of verifying warhead dismantlement, for instance, tend to focus strongly on this, to the detriment of other areas. Those interested in material disposition tend to overlook or downplay dismantlement verification problems. Most tend to forget about the final application of safeguards on a disarmed state.

Our project started in 2011 and is now approaching the end of its second phase. It uses a broad definition of disarmament, going well beyond simple verification of nuclear warheads. It covers both political and technical aspects of the problem.

Our work has been going on largely in silence. We have not promoted it on our mailing lists, nor have we written many publications on it yet. But it involves more than 50 participants from five countries, two non-governmental and one intergovernmental organisation. These have come together twice a year in project meetings designed to shape and direct the work—these meetings are called conclaves to emphasise their private nature. It focuses on multilateral disarmament verification—so often assumed to be applied at the end of a disarmament venture—with a specific emphasis on the role of the International Atomic Energy Agency in the future effort.

Later this afternoon, you will hear Larry MacFaul talk about the outcome of a survey that we have conducted in Vienna. This work aimed to assess the appetite of members of the International Atomic Energy Agency to add nuclear disarmament verification to the IAEA's portfolio of tasks. I'm not going to pre-empt Larry's presentation, but we're confident that *at least* 71 per cent of member states would approve of this. We're equally confident that *at least* the same portion of member states would approve of the agency maintaining a role in verifying not just the disposition of weapons-origin nuclear materials, but



also the decommissioning or conversion of military enrichment and reprocessing facilities; the dismantlement of nuclear warheads; and the cessation of nuclear weaponisation research and development, and associated capabilities. These conclusions are drawn with 95 per cent confidence. Interestingly, while none of our survey respondents felt that a new multilateral agency for disarmament verification was required, opinion was split over how an IAEA role in this area should be explored in Vienna.

But as you will hear from Larry, while there is general support amongst the agency's members that the organisation *should* be involved in disarmament verification, there is less certainty as to *how* the organisation should be involved. There is even less certainty as to how the organisation should be funded to do so.

After Larry's presentation, I will then take the floor again to describe how we are working to empower the agency to supply these services—and others—to its member states in the future. We found, when we were implementing the UK-Norway Initiative, that secrecy is the paramount obstacle to effectively thinking about disarmament verification. This is not without cause: after all, few amongst us would want the secrets of nuclear weaponising to be readily accessible. It is, I would argue, in everyone's interest not to spread the knowledge of the bomb further than necessary. But how can you study something that you're not supposed to know anything about?

In the UK-Norway Initiative, we solved the problem through using surrogates. We used a surrogate weapon, with surrogate materials, in a surrogate facility. And we found that we could make a lot of progress that way. So we decided to take this one step further.

Computing power has grown at an astonishing rate in the last decade, and our powers of visualisation and analysis has grown with it. A few years ago, I visited Sandia in New Mexico and toured their verification exhibition. In one corner, the laboratory displayed a little scale model of a missile facility, complete with little men with hardhats and tiny little vehicles. Those were the tools that those whose shoes we're walking in tended to use. Today, we are able to hold the entire material inventories of a single state on one laptop. We're able to construct the most complex facilities in virtual reality. We're able to visit the creations of our mind through immersive visualisation tools such as Oculus Rift.

If you're not allowed to study nuclear disarmament, then find a surrogate. So we decided to build our own nuclear weapon states, complete with its own facilities, its own weapons programme, and with a rich history. This work is almost complete, and I will give you more detail in my later presentation. We even went so far as to building our own dismantlement facility, virtually of course. I'm grateful to Tamara Patton of the Vienna Centre for Disarmament and Non-Proliferation for her work on this.

It is our intention to work up verification solutions, and then apply them on our virtual state—our model as we prefer to call it. This work is intended to go live over the next few years, and we aim to complete it by producing a complete set of tried and tested procedures by the early 2020s, at the end of the IAEA Department of Safeguards long-term strategic plan.

While promoting multilateral solutions sounds logical, making progress has been challenging due to cautious attitudes both within the walls of the Vienna International Centre, and in the missions on the outside. This will need to change.

In 2013, and then again in 2014, IAEA member states examined whether the IAEA should have a broader role in disarmament verification in its annual *safeguards resolution*. In both years, preambular language in this resolution draws attention to Article III.B.1 of the IAEA's Statute—which refers to the IAEA's role in supporting 'safeguarded worldwide disarmament'.

The most recent General Conference safeguards resolution, however, was the most significant yet. Then, a Brazilian proposition on behalf of itself and 20 other countries to have operative language inserted in the resolution's text, on the need for the agency to remain 'ready to assist' disarmament verification tasks, was upheld. With minimal debate, in a first-of-its-kind development, the General Conference resolution ultimately included an operative paragraph very close to the Brazilian original—reading that, the General Conference, *'Notes that the Agency must remain ready to assist, in accordance with its Statute, with verification tasks under nuclear disarmament or arms control agreements that it may be requested to carry out by the States parties to such agreements.'*

Indeed, the need to change our attitudes was evident five years ago. The 2010 Action Plan puts much emphasis on multilateralism. Consider action 16, which calls on member states to place all excess fissile material—that is plutonium and uranium no longer required for military purposes—under safeguards. Action 17 calls on member states to support the development of effective verification mechanisms towards this end. Many procedures for how this could be done was developed under the auspices of the so-called Trilateral Initiative more than a decade ago. The Plutonium Management and Disposition Agreement specifically highlights a role for the International Atomic Energy Agency in this effort. While little material has been transferred to safeguards as of yet, the conceptualisation of how to do this has continued. If you are interested in this you should have a look at 'IAEA verification of fissile material in support of nuclear disarmament', a publication recently published by Laura Rockwood and Tom Shea.

Action 19, of course, highlights 'the importance of supporting cooperation...[on] improving transparency and developing efficient verification capabilities related to nuclear disarmament.' On the warhead dismantlement side, the principal initiatives here are the so-called *US-UK Initiative* and, of course, the UK-Norway Initiative. More recently, the US State Department has set up an international joint venture on verification, but much remains to be seen as to where this effort goes.

Our own project has been trying to contribute to the implementation of actions 16, 17 and 19. We have mostly been focusing on enhancing the knowledge base in a select number of non-nuclear weapon states, increasing their capacity to join in the effort at a later date. This relates directly to Article VI of the NPT, which stipulates that it is the responsibility of *all states*—not only those that possess nuclear weapons—to pursue negotiations on effective measures relating to nuclear disarmament.

Personally, I hold the case for multilateralism in disarmament verification as self-evident, and if our survey extrapolations are right, so do many member states of the IAEA. However, I understand that some would still need to be convinced.

Involving the agency in disarmament verification at an early stage makes sound economic sense. The agency, despite its flaws, and despite what its antagonists may say, represents a natural centre of excellence in most things nuclear, and the *only* multilateral arms control organisation with more than 200 staff that deals with nuclear verification on a day-to-day basis. It would make little sense to establish a new

organisation, under a new Director General, with new staff, in a shiny new expensive headquarters somewhere, to carry out many of the same tasks the agency is carrying out today.

The agency is also the only forum where both de jure and de facto nuclear weapon states come together under one roof. They share that roof with many capable non-nuclear weapon states. Action 19 asks us to *support cooperation* on nuclear disarmament verification in the hope that broader involvement in formulating the rules of verification will lead to broader assurance once the rules are applied. What better place than Vienna to do this work?

Involving the non-nuclear weapon state community is extremely important. At the end of the day, disarmament means making *all* states non-nuclear, and placing *all* fissile materials under some system of international account. Everyone, thus, has an equal stake in formulating these rules early on. This happened when the Nuclear Non-Proliferation Treaty was negotiated in the 18-Nation Committee on Disarmament, and this should happen today and tomorrow too.

Engaging a broader set of states on the technical level will hopefully bring new, and more considered, ideas to the debate. We have found, throughout the course of this project, that it is relatively easy to find people prepared to work on *policies* relating to nuclear disarmament, but that the community that focuses on *practicalities* is small outside the nuclear weapon states.

Finally, should nuclear disarmament ever become multilateral, its implementation will, by definition, be a joint undertaking. Increasing capacity in the non-nuclear weapon states will help prepare for that day. And, of course, once capacity has been increased, it would need to be maintained. Our hope is that our project, eventually, will be able to do this.