

# Exploiting synergies between nonproliferation verification regimes

## A Pragmatic Approach

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### Executive Summary

- The similarities between the major multilateral verification organisations and the potential for cost-savings and increased effectiveness of treaty monitoring create significant incentives for exploiting synergies between regimes.
- Institutional links already exist between many arms control, disarmament and nonproliferation regimes, as well as with other international organisations. Interaction is limited but occurs in a variety of ways.
- Proposals to create a pan-treaty verification organisation, or even cross-treaty verification mechanisms, have failed to advance very far. The political hurdles are perceived to be too high because of different memberships of the regimes, the confidentiality of verification information, the complexities of cost-sharing and bureaucratic hurdles.
- The best way to exploit synergies between organisations is a pragmatic, bottom-up approach. Cooperation between verification organisations should be governed by three principles: exploiting synergies must not endanger confidentiality, it must save money or improve the effectiveness of treaty monitoring, and it must preserve the institutional independence of verification bodies.
- Such a step-by-step, functional, pragmatic and low-key approach can enhance existing synergies and increase cooperation between the major multilateral verification systems in three areas: infrastructure and equipment, training of staff, and sharing of open source information.
- While expectations about exploiting synergies between verification regimes might be limited for the time being, the long-term prospects for exploiting synergies look bright.

## INTRODUCTION<sup>1</sup>

Exploiting synergies between nonproliferation and arms control and disarmament verification regimes seems an attractive proposition. The similarities and convergences between the three major multilateral verification organisations—the International Atomic Energy Agency (IAEA), the Organisation for the Prohibition of Chemical Weapons (OPCW) and the Comprehensive Nuclear Test Ban Treaty Organisation (CTBTO)—are large.<sup>2</sup> They all:

- gather and process information to help verify the compliance of states with their disarmament and nonproliferation commitments,
- conduct on-site inspections as an integral part of verification,
- in varying degrees evaluate information to enable states parties to arrive at informed compliance judgements,
- operate large international bureaucracies, with scientific capabilities, and
- have similar governance structures, such as a Board of Governors or Executive Council, and are ultimately answerable to a conference of states parties.

Given these similarities, the potential for cost-savings and increased effectiveness of treaty monitoring would, at face value, appear to create significant incentives for identifying synergies between regimes.

## THE CURRENT SITUATION

Institutional links already exist between many arms control, disarmament and nonproliferation regimes, as well as with other international organisations. Interaction occurs in a variety of ways, often on a daily basis. Consider the following examples.

In the safeguards area, there is close cooperation between the IAEA and regional systems (the European Atomic Energy Community (EURATOM) and the Argentina-Brazil Agency for Accounting and Control of Nuclear Material (ABACC)). The four regional nuclear weapon-free zones in Africa, Latin America, South East Asia and the South Pacific rely almost entirely on the IAEA for compliance monitoring. (There have been proposals for amalgamating all the Southern Hemisphere nuclear weapon-free zones into

one large zone, which would produce obvious verification synergies.)

The Provisional Technical Secretariat for the future CTBTO, meanwhile, is sharing data and weather models with the World Meteorological Organization (WMO). The CTBTO uses this information to model the dispersal of radionuclides which could be indicative of nuclear tests.<sup>3</sup>

In the conventional armaments area, the Organization for Security and Cooperation in Europe (OSCE) acts as the umbrella organisation for the implementation of several agreements, including the Vienna Document 1999 on confidence- and security-building measures (CSBMs) and the 1990 Conventional Forces in Europe (CFE) Treaty. The Secretariat is in charge of data exchanges under these agreements, while the Personal Representative of the Chairman-in-Office oversees the implementation of the Vienna Document CSBMs as well as the CSBM and arms control agreements that derive from the Dayton accords for the former Yugoslavia. The OSCE's Conflict Prevention Centre in Vienna manages the database and communications network for these activities.

The draft agreement on a verification protocol for the Biological and Toxin Weapons Convention (BWC) foresaw the cooperation of the future Organisation for the Prohibition of Biological Weapons (OPBW) with a range of international organisations, including the World Health Organization (WHO), in order to 'derive the greatest possible synergy in, and benefits from' collaboration on disease surveillance and other peaceful uses.<sup>4</sup>

The UN Department for Disarmament Affairs services several arms control agreements, including the 1997 Ottawa Convention banning anti-personnel landmines, the Register of Conventional Arms and the Confidence-Building Measures for the BWC.

Staff of different verification organisations interact privately and informally. This cooperation takes place daily and enhances the functioning of several verification organisations.

<sup>3</sup> In return, the CTBTO will provide weather data from its monitoring stations to the WMO. The agreement between the two organisations is expected to come into force in 2003. See 'CTBTO agrees to provide weather data to the World Meteorological Organization', PTS Press Centre, 2 April 2002, [www.ctbto.org](http://www.ctbto.org).

<sup>4</sup> See BWC/AD HOC GROUP/CRP.8, 30 March 2001, Article 14: 'Scientific and Peaceful Exchange for Peaceful Purposes and Technical Cooperation', Part F: 'Co-operative Relationships with other International Organisations and among State Parties', p. 83.

Two international agreements explicitly encourage cooperation with other international organisations.<sup>5</sup>

Article II of the Comprehensive Nuclear Test Ban Treaty (CTBT) states that: 'The Organization, as an independent body, shall seek to utilize existing expertise and facilities, as appropriate, and to maximize cost efficiencies, through cooperative arrangements with other international organizations such as the International Atomic Energy Agency'.

The 1992 Open Skies accord, which entered into force on 1 January 2002, is intended to be used for verifying compliance with a variety of arms control and disarmament treaties.<sup>6</sup> Although initially applicable only to the territories of the states of Europe and North America, it will eventually be open to universal accession, perhaps leading ultimately to a worldwide open skies regime, with all its attendant synergies.

## THE CHALLENGES

However, proposals to create a pan-treaty verification organisation, or even cross-treaty verification mechanisms, have failed so far,<sup>7</sup> mainly because the political hurdles are perceived to be too high.<sup>8</sup> Since each regime has different memberships, there would be difficulties in applying verification to non-states parties. States may also veto cooperation with a treaty regime that they oppose. For example some IAEA members, like India and Pakistan, oppose the CTBT, which they

<sup>5</sup> The CWC does not specifically mention the possibility of cooperation with other organisations, simply stating that 'the Organization shall consider measures to avoid unnecessary duplication of bilateral or multilateral agreements on verification of chemical weapons storage and their destruction among States Parties'. CWC, Article IV.13.

<sup>6</sup> The agreement's Preamble notes the possibility of using Open Skies 'to improve openness and transparency, to facilitate the monitoring of compliance with existing or future arms control agreements and to strengthen the capacity for conflict prevention and crisis management in the framework of the Conference on Security and Co-operation in Europe and in other relevant international institutions'.

<sup>7</sup> This includes French proposals in 1973 and 1978 for an International Satellite Monitoring Agency (ISMA). During the CTBT negotiations, there was debate as to whether the IAEA should be charged with verifying the treaty. This proposal failed because it was clear that not all IAEA member states would, at least initially, become parties to the CTBT.

<sup>8</sup> These hurdles become even higher if the potential for cooperation between *all* arms control regimes is considered. Looking beyond the at least superficially similar treaties on nuclear, chemical and biological weapons, agreements often differ with regard to historical roots, negotiating bodies, legal standing, object, spirit and methods. See Serge Sur (ed.), *Verification of Current Disarmament and Arms Limitation Agreements: Ways, Means and Practices*, United Nations Institute for Disarmament Research (UNIDIR), Geneva 1991, pp. 25-28.

have not signed, and are thus likely to object to increased cooperation between the IAEA and the CTBTO. Since many political decisions in multilateral verification bodies require consensus, the establishment of formal cooperative arrangements is difficult to achieve.

Second, some of the information handled by verification organisations is confidential. State parties are likely to object to any cooperation that could result in the release of such information to non-states parties or to the verification organisations of other regimes. The history of verification shows that even the theoretical possibility of releasing confidential or proprietary information generates political opposition.

Third, it may be difficult to assess and share the costs of joint activities. Funding is a contentious issue in all regimes. These difficulties may be multiplied if more than two verification organisations seek to cooperate, since they will usually be at different stages in their 'life cycle'. Some organisations, like the IAEA, have been held to zero real growth budgets for many years, while others like the CTBTO are experiencing, at least so far, a steady growth in financial resources.

Finally, international organisations themselves carefully guard their own political turf. Cooperation raises questions of political control: bureaucratic rivalries may be an unintended side-effect of such cooperation.

But these problems are not insurmountable, given the necessary political will. Cost-sharing between different international organisations should be simply a practical problem of finding the right formula. Likewise, establishing clear rules for sharing resources should not be a fundamental problem, but one of finding acceptable bureaucratic procedures, preferably out of the political limelight.

## PRINCIPLES FOR COOPERATION

A pragmatic approach, limiting interaction to specific areas of common interest, has the best chance of minimising political opposition. Such a 'bottom-up' approach should examine real overlaps in the practical work of each organisation and identify possibilities for mutual benefit. The application of three principles could help to minimise the misgivings of states parties:

1. Interactions should not endanger confidentiality.
2. Cooperation must have a real cost-saving potential and/or improve the effectiveness of treaty monitoring.
3. Institutional independence must be preserved.

The violation of any of these would likely be sufficient to kill the prospects for cooperation, but adherence to them over time is likely to build confidence and trust.

<sup>1</sup> An earlier version of this paper was presented at the International Atomic Energy Agency Symposium on International Safeguards: Verification and Nuclear Material Security, Vienna, 29 October-1 November 2001 (IAEA-SM-367/15/06).

<sup>2</sup> These characteristics are likely to be replicated by any future Organisation for the Prohibition of Biological Weapons (OPBW).

## POTENTIAL AREAS OF COOPERATION

Three areas seem to fulfil the requirements of the three principles outlined above: infrastructure and equipment sharing, joint staff training and amalgamation of open source information.

### Infrastructure and equipment

The joint use of infrastructure and equipment has obvious potential for cost savings. Verification organisations like the IAEA, which is operating by and large on the basis of zero-real growth budgets, remain under pressure to realise cost savings, some of which could be achieved by cooperating with other organisations. The most likely elements would be in the areas of facilities, transport, communications systems and verification equipment.

One of the arguments for co-locating the OPCW and a future OPBW in The Hague was that they could share such facilities. Yet not even organisations that are already co-located, such as the IAEA and CTBTO, realise all of the benefits. Ironically, the underfunding of organisations may be a bureaucratic disincentive for sharing resources: saving money through cooperation may increase rather than decrease states parties' demands for budget cuts.

In the nuclear field, the sharing of certified radionuclide laboratories might be explored. Both the IAEA and the CTBTO maintain such laboratories. The IAEA analyses samples taken from the field at its laboratory in Seibersdorf, close to Vienna. In addition, it maintains small on-site laboratories at large reprocessing facilities in the UK and Japan. The CTBTO will maintain a network of sixteen radionuclide laboratories worldwide. If appropriate provisions for the maintenance of confidentiality can be established there is potential for cooperation, since many of the analytical procedures and equipment involved in analysing samples from the network of radionuclide stations under the CTBT and samples from safeguard activities are similar. Using CTBTO-certified laboratories might become more attractive for the Agency if and when environmental sampling becomes more common, as envisaged under strengthened safeguards.

Another area of cooperation might be the sharing of logistical capabilities, especially for short-notice challenge on-site inspections (OSIs). These events are infrequent, yet their political importance makes it necessary that they be well prepared. Airlift and storage capabilities at airports could, for example, be shared. Again, co-location of organisations makes this easier: the IAEA and the CTBTO could use the same facilities at Vienna International Airport to store inspection equipment. The OPCW and future OPBW could do likewise at Schiphol Airport in Amsterdam.

Organisations could also share arrangements for standby aircraft in case commercial aircraft are unavailable, since it is unlikely that challenge OSIs, which will probably be extremely rare events, would be mounted simultaneously under different regimes.

Other preparations for on-site inspections might also be an area where organisations should be able to share expertise and experience. Proper Standard Operating Procedures and Operational Manuals are required for the successful conduct of OSIs, especially short-notice or challenge OSIs. Many of these elements will be common to all regimes. Since the whole area of OSIs is relatively new and techniques and technologies are constantly evolving as a result of the communications revolution and miniaturisation of equipment, there would appear to be great possibilities for cooperation.

It might also be possible to pool the use of global communication infrastructures. The CTBTO Preparatory Commission (PrepCom) is currently establishing the most extensive global communications network for an arms control regime. It will provide secure links to Vienna from around the globe via satellite. At the same time, the IAEA is working on establishing secure links with its remote monitoring equipment around the world. Sharing communication systems could save considerable costs.<sup>9</sup>

Certain inspection equipment is generic and might not be in constant use by a single organisation. There may thus be potential for sharing equipment such as photographic and video cameras, tape recorders, protective clothing and communications equipment like satellite dishes, and the maintenance and upgrading costs for such equipment. Using joint resources might be especially attractive for the CTBTO as it will not have a standing inspectorate.

### Training of staff

Sharing personnel between different organisations will remain problematic. The main barrier is the confidentiality provisions of each respective treaty. But if confidentiality concerns can be solved, staff secondments or exchanges could increase mutual knowledge of each other's activities and keep organisations energised. Many verification organisations will, over the long haul, face the problem of retaining staff in positions that appear to offer few challenges because treaty compliance is routine and uneventful.

Verification could also be made more effective if organisations hold joint training courses on common aspects of their work. For example, certain aspects of

<sup>9</sup> At one stage it was envisaged that the CTBTO would use the World Meteorological Organization's communications system rather than build its own.

OSIs are conducted under similar rules. Joint training, with instructors from different backgrounds, could enrich training across the board.<sup>10</sup> The CTBT PrepCom's Working Group B on verification has recently invited IAEA and OPCW inspectors to share their experience in establishing an OSI regime. Joint table top exercises might also be useful.<sup>11</sup>

It might also be beneficial to have 'lessons learned' seminars on organisational change and growth. The IAEA, as the oldest multilateral verification organisation, has gone through several fundamental changes over the years. Nuclear safeguards are 'mature' compared to the CTBT and CWC verification arrangements which are still being established. Moreover, the IAEA's Secretariat has more room for independent action than the secretariats of the younger verification regimes, which it may not wish to jeopardize. But this relatively independent position is precisely why the IAEA may be best placed to take the lead when opportunities arise for exploiting synergies between its fellow verification organisations. The IAEA's current efforts to reform its verification system may, in fact, throw up some of the same organisational challenges facing younger regimes that are in the process of establishing themselves. The IAEA Statute indeed permits such cooperation by the Agency.<sup>12</sup>

On the other hand, younger organisations, like the CTBTO, are likely to develop new approaches from which older organisations might learn. Issues to be discussed at joint seminars could include personnel issues, long-term budgetary planning, verification organisation management, verification concepts and methodologies, database management and confidentiality procedures and techniques. Organisational review mechanisms might be another area of common interest. Verification organisations are increasingly using internal and external review mechanisms to improve their effectiveness and efficiency.<sup>13</sup>

<sup>10</sup> This was a core lesson drawn from VERTIC's workshop on OSIs across arms control and disarmament regimes held in London in March 2001. See [www.vertic.org/research/onsite\\_inspec\\_workshop.htm](http://www.vertic.org/research/onsite_inspec_workshop.htm).

<sup>11</sup> Generally, the kind of training and activities offered at the Cooperative Monitoring Center at Sandia National Laboratories in New Mexico, US, offer a good blueprint for joint activities. See [www.cmc.sandia.gov](http://www.cmc.sandia.gov).

<sup>12</sup> Article III.5 states for example that safeguards are to be applied at the 'request of the parties, to any bilateral or multilateral arrangement'. Article III.6 calls on the Agency to consult and collaborate with the UN and its organs on nuclear safety.

<sup>13</sup> The CTBTO seems to be leading the way here. Its International Data Centre and the International Monitoring System have recently been evaluated by Independent Review Teams. See Oliver Meier, 'The CTBT Verification System: Entering Rough Waters?', *VERTIC Briefing Paper 01/04*, The

### Sharing open source information

While verification organisations will never be permitted to freely share confidential information, all increasingly rely on open source information which might be shared. Sharing such information, especially in an unprocessed form, has the potential for cost savings and true synergism. There will, for instance, be substantial overlaps with regard to the sources of open source information, including:

- newspapers,
- specialised journals,
- government bulletins,
- external databases, such as those on trade and on scientific and technical matters,
- internet sources, and
- commercial satellite imagery.

Examples of databases are those operated by the Monterey Institute of International Studies and the European Non-proliferation Information Management and Analysis Centre being set up at ISPRA, Italy.<sup>14</sup> Ultimately one could envisage an on-line joint verification data bank based on open source material that was open to all verification organisations and all states parties.

The use of open source information acquired in a more directed manner is potentially more difficult, since the target country might be too obvious. It may be possible to infer from particular commercial satellite imagery, for instance, what the targets of monitoring efforts were.

### LOOKING AHEAD

Expectations about what might be achieved in cooperation between verification organisations should be modest. There is no doubt that cooperation will be 'politicised' by one or more states parties if they see this as politically opportune. It is therefore important to be able to make a clear-cut case for exploiting specific synergies between organisations. Interaction based on a pragmatic, 'bottom up' approach will be easier to defend against critics than grand schemes for high-level, strategic cooperation. Based on experience gained through limited cooperation, interaction could

Verification Research, Training and Information Centre, London, September 2001.

<sup>14</sup> The Center for Nonproliferation Studies at the Monterey Institute of International Studies (MIIS) in Monterey, California, maintains 5 databases which are being used by the IAEA. The databases, which are available commercially, consist of current and archived data on the global proliferation of weapons of mass destruction and their delivery systems, based on open source information compiled from over 340 source publications. See [cns.miis.edu/dbinfo/about.htm](http://cns.miis.edu/dbinfo/about.htm)

then be expanded. If small-scale interactions are successful, there could be a positive feedback loop.

Looking far ahead, there may be grounds for hope that in the long run, verification functions can be merged:

- As regimes move towards universality, differences in membership will shrink.
- As verification becomes more routine and commonplace, there may be fewer anxieties about international organisations cooperating.
- As the disarmament functions of the Nuclear Non-Proliferation Treaty, CWC and BWC are more convincingly achieved, their nonproliferation aspects will become more important and tend towards control of dual-use materials and technology. Since many of the techniques involved in monitoring the spread of various dual-use technologies are similar, the roles of the regimes will likely converge further.<sup>15</sup>
- The question of synergies will arise in a concrete way if and when negotiations on a Fissile Material Control Treaty (FMCT) commence. The IAEA has been suggested as a natural candidate for verifying such an agreement. But it will need to mount a convincing case for 'merging' its safeguards system with FMCT verification in the face of any opposition. It would help if the Agency had already engaged in some synergistic undertakings elsewhere.
- Finally, at some point the bilateral US/Russian nuclear disarmament process will be multilateralised to include the other states with nuclear weapons; this begs the question of whether non-nuclear weapon states will become involved in verifying complete nuclear disarmament and whether this will require a new global organisation, or an extension of the IAEA's role. A global verification organisation would of course be the ultimate synergiser.

A step-by-step, functional, pragmatic and low-key approach would appear to be the best way to enhance existing synergies and increase cooperation between the major multilateral verification systems. In this way confidence can be built and lessons learned which may open up the possibility for more extensive and rewarding cooperative endeavours. Long-term trends may be increasingly favourable to far-reaching synergisation.

<sup>15</sup> The CWC and the BWC were always intended to be complementary and do actually overlap in their scope.



VERTIC is the Verification Research, Training and Information Centre, an independent, non-profit making, non-governmental organisation. Its mission is to promote effective and efficient verification as a means of ensuring confidence in the implementation of international agreements and intra-national agreements with international involvement. VERTIC aims to achieve its mission through research, training, dissemination of information, and interaction with the relevant political, diplomatic, technical, scientific and non-governmental communities.

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