

## SPECIAL COMMENT

I am pleased to act as commentator for this issue of Disarmament Forum in which experts offer a rich perspective on the provisions of on-site inspection (OSI) regimes, the methods they employ and the experience they have gained in verifying compliance with arms control and non-proliferation agreements. This issue provides a means to view the systems that have evolved, to reflect on common denominators and points of difference, to examine experience in implementation and to set new reference points for future consideration.

OSI has been a component of International Atomic Energy Agency (IAEA) safeguards since the Agency was established in 1957. Initially, inspections were limited to materials, equipment or facilities that came under safeguards as a result of bilateral transactions. With the Treaty on the Non-Proliferation of Nuclear Weapons the concept of OSI was accepted internationally.

Since the mid-1980s, when “glasnost” in the former Soviet Union led to a greater acceptance of OSI, such inspections have acquired a more prominent role in bilateral and multilateral arms control and non-proliferation agreements. A watershed was the Intermediate-Range Nuclear Forces Treaty of 1987. Success in implementing its OSI provisions made the benefits of OSI clear to a wider world. Major arms control and non-proliferation agreements concluded since then have featured OSI as a main component of verification.

OSI is integral to the verification of compliance with treaties to combat proliferation of weapons of mass destruction. The major multilateral non-proliferation agreements concluded in the 1990s, the Chemical Weapons Convention (CWC) and the Comprehensive Nuclear-Test-Ban Treaty (CTBT), each embody OSI provisions. The CTBT provides for OSI as a corollary to seismic monitoring. The verification systems of the organizations established to implement the CWC and CTBT draw, inter alia, on IAEA experience and structures. I am pleased to head an organization which pioneered and provided a template for other global non-proliferation organizations.

OSI-relevant features common to non-proliferation agreements build on earlier models and precedents. A key characteristic is that the rights and obligations of the inspection authority and of the inspected party are carefully defined and codified. Parties, for example, are obliged to provide data pertaining to the numbers or quantities, specific characteristics and locations of the items or materials covered by the treaty. They also need to provide additional site-specific information to facilitate the inspection process. Agreements specify particular categories of inspection for specific purposes and prescribe, in some detail, the scope of activities to be permitted in each category. The inspectorate is limited to specifically designated personnel and the inspected party has a role in the designation process. Time frames are defined within which specific inspection activities are to be carried out; the functional privileges and immunities of the inspector are established on a clear, legal footing; there are rules to govern inspector conduct; and provisions for protecting the confidentiality

of information obtained. Opportunities are given for resolving any ambiguities and procedures set down for the resolution of disputes. All these features have been incorporated into the IAEA Safeguards System since its inception. They not only prescribe but circumscribe the boundaries of OSI: no verification system can be more stringent than the legal instrument(s) on which it is based.

There are a number of ways in which OSI as a feature of the verification systems represented in this issue can be compared or contrasted. One could focus on respective objectives and methodologies or on the relationship of OSI to other elements of each verification system. One could focus on experience with specific types of inspection — whether “base line” to confirm initial declarations of the items or materials to be verified; routine inspections (some at short notice) to establish continuing compliance with material obligations at sites; and inspections aimed at verifying declared changes from base-line or subsequent data and specific types of inspection, whether “special” or “challenge”, designed to investigate suspect sites. Another approach, which I have chosen here, is to view the OSI regimes in terms of the relationship between the inspector and inspected.

Viewed from that perspective, one category of OSI covered in this issue stems from the kind of bilateral agreement which has served as a means of retreating from the extensive military build-ups of the Cold War years. Inspections under these bilateral arrangements have entailed a high degree of cooperation, with each party being both the inspector and inspected party. They derive from a common wish to accomplish a given objective. Historically, this has been either the elimination of an entire class of weapons or deep cuts in other categories. The underlying presumption is that each party enters into the relevant commitments in good faith, but that specific OSI activities — whose intrusiveness and other special characteristics depend on the object or objects to be verified — are essential to check that the commitments made are actually being kept.

Another category of OSI — and one which features predominantly in this issue — is a characteristic of independent, multilateral verification by an international organization on behalf of the international community. This broad category reflects an underlying situation in which states recognize and commit themselves to a common, societal objective; bind themselves to accept certain material obligations in pursuit of that objective; and as part of that process, grant an impartial, professional and technically competent inspectorate access to their territory to verify compliance with commitments made. Any state subscribing to such an arrangement has two basic objectives: firstly, to obtain confidence that other parties to the arrangement are respecting their own commitments; secondly, to demonstrate its own compliance to the international community. Being able to derive confidence about the actions of others rests on the assumption that such confidence is soundly based: in other words, that the verification process is effective, impartial and applied without discrimination to all the parties to a given agreement. States also recognize that, from the international perspective, verification by technically competent inspectors whose loyalty is to an impartial, international organization can create a higher level of confidence than could be obtained through unilateral, bilateral or regional verification measures.

The cooperative aspects of OSI in a multilateral setting provide a valuable service function. Perceived compliance by states with verification-related obligations builds confidence and trust and can bring dividends in terms of their relations with other states. From the wider perspective, reluctance to agree to or cooperate with the verification process provides timely warning of possible non-compliance and enables response or enforcement mechanisms to be activated. The “up close and personal” aspect of OSI also brings benefits that no amount of sophisticated technology or instrumentation can alone provide: the on-site presence of a competent, trained inspector eases familiarity with facilities, plants and operating parameters and contributes to a picture of what is “normal”. This makes it easier to identify any unusual or ambiguous events and to seek clarification, from the outset, at a low threshold. Additionally, human observation and inspection can achieve

results that even technology at the cutting edge cannot. OSI contributes greatly to transparency, the key to a high degree of confidence in a state's activities.

It also has its limits. It is simply a tool of verification and of itself can neither give complete assurance of compliance nor predict future intentions. What it can do is to confirm that no clandestine or irregular activities appear to be taking place at a particular location at a particular point in time. Viewed more widely, however, one cannot extrapolate only from OSI that a state is in overall compliance with its obligations. Other elements, for example information analysis to obtain "the big picture" country-wide, are required in any attempt to do that. Neither can OSI exclude the possibility of non-compliance. This is clear from experience in Iraq and in the Democratic People's Republic of Korea.

Iraq demonstrated that threats to the nuclear non-proliferation regime could come — despite earlier suppositions to the contrary — from within its own ranks. Also well known is that the experience with Iraq highlighted the shortcomings and limitations of the nuclear safeguards system as then implemented, including aspects of its OSI. This and other relevant experience has led, as you will read in detail in one of the contributions to this issue, to a wholesale strengthening of the safeguards system, including new access and corollary rights for IAEA inspectors.

All of the OSI systems identified in this issue must continue to evolve. Environments for inspection change, inspection technologies evolve and the resources available for verification can vary according to states' priorities. Efforts now underway will, we hope, contribute further to peace and security. However, continuing vigilance is required with regard to the verification of compliance with non-proliferation pledges. Verification tools must continue to be appropriate to the tasks. In some cases — notably, in relation to biological weapons — effective verification needs to be put in place. A future Fissile Material Cut-off Treaty will freeze the production of nuclear material for nuclear weapons and pave the way for further nuclear arms reductions. OSI systems designed as part of the verification processes for such agreements will likely incorporate many of the features identified in this publication. OSI is now firmly on the map and universally accepted as a key element of ascertaining compliance and deterring non-compliance.

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