

# **Nuclear Proliferation in the 21st Century: Will Multilateral Diplomacy Work?**

Danish Institute for International Studies (DIIS)  
Copenhagen 25<sup>th</sup>-26<sup>th</sup> August 2005

## **Combating the Nuclear Proliferation Syndrome**

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### **Introduction**

When speaking about nuclear non-proliferation and verification, one cannot ignore the disappointing outcome of the 2005 NPT Review Conference. However, the disagreements of States Parties at the political level do not impact on the role of the IAEA in nuclear safeguards verification. Effective IAEA safeguards remain the key technical element of the nuclear non-proliferation regime and deserve the continuing support of the international community.

### **Meaning of “closed society”**

Considering the title of this Session which is “Devising a Verification Formula for Closed Societies”, the first question is: what is meant by the term “closed society”? A common understanding of the term is a society, or State, which is run in such a way that the preservation of the society as a whole is placed above the rights of the members of the society. There are a number of reasons why a society may be “closed”, for example because of the perceived or alleged need to maintain collective security, preserve the society’s identity with respect to its religion or ethnicity, or to ensure that the ruling establishment maintains control of the government. Among the characteristics of such a society may be a large degree of centralized control over the media, restriction of publications of work done by scientists in the country, lack of transparency over government programmes and spending, restriction of travel of foreigners into and within the territories, and controlled contacts of its citizens with individuals and entities outside of the society. These characteristics obviously can pose a challenge to the Agency’s ability to apply effective safeguards.

### **Safeguards-relevant characteristics of closed societies**

Verification of the completeness and correctness of a State’s declarations relies upon the analysis of the consistency of all relevant information on the State’s nuclear programme, including declarations by the State, results of in-field verification activities, and open and other sources of information. In a closed society, limitations to the Agency’s access to information and locations are, in general, greater than elsewhere. The State could restrict its declarations and information provided to the Agency to that which is strictly required under its safeguards agreements, in some cases withholding the cooperation necessary for the Agency to gain a thorough understanding of the State’s nuclear programme. In some countries

there are instances where inspectors are not able to travel freely, speak with relevant scientists, engineers and managers, and have restrictions placed e.g. on recording meetings and taking pictures and surveillance images out of the country for analysis at headquarters. These restrictions make it more difficult for the Agency to discover potential indicators of undeclared activities, and to resolve outstanding questions or inconsistencies in a timely manner.

### **Verifying the absence of a nuclear weapons programme in any type of society**

But are these characteristics, which provide an additional challenge to the Agency's verification activities, unique to closed societies? What if a State with a so-called "open society" decided to pursue a nuclear weapons programme? Isn't it likely that activities that would support nuclear weapons development would be conducted in a "closed" structure that would not be transparent nor easily accessible to the Agency?

If a State were to engage in activities related to nuclear weapons development, some aspects of such development might be conducted under the guise of a domestic nuclear energy programme. However, it is likely that other related activities that are not specifically associated with an energy programme would be conducted by the military or some other specialized structure under the close control of a few of the ruling elite, probably without the knowledge of the parliament and most government ministers.

Therefore, there cannot be a double standard with regard to a verification formula that would be applied on the basis of whether a society is considered -by whom? - to be open or closed. It is more important to consider the characteristics of States, with either open or closed societies, with regard to the transparency of their nuclear programmes and their degree of cooperation with the IAEA.

### **The need for a State's transparency and cooperation**

Lack of transparency and cooperation can be thought of as characteristics that impede the effective and efficient implementation of safeguards. For example, when the Agency finds a potential indicator of undeclared activities, transparency can be viewed as the extent to which the State actively assists the Agency in clarifying the situation. A State lacking transparency might limit or delay the Agency's access to information and/or set conditions that impede verification activities. These tactics can potentially provide the State with sufficient time and means to conceal past or current undeclared nuclear activities.

Thus, from a safeguards point of view, the extent to which State authorities are transparent and cooperate with the Agency is essential. The Board of Governors of the IAEA might consider asking the Secretariat to report more fully on the level of States' cooperation, particularly in the cases where the cooperation of State authorities is not forthcoming and does not allow the Agency to resolve questions and inconsistencies in a timely manner. Only if the Board is fully aware of such issues can Member States evaluate the degree of assurances that they might derive from the Secretariat's safeguards activities.

Having an Additional Protocol in force is one means for a State to demonstrate transparency with regard to its nuclear programme. However, it should be noted that an Additional Protocol does not provide the Agency with unlimited access to information and locations. A State with undeclared nuclear activities could pursue such activities at undeclared locations, and, as demonstrated for instance in the case of Libya, it may be very difficult for the Agency to discover indications of their existence.

## **Importance of broad-ranging analysis**

The IAEA's mandate is to verify that no nuclear material is diverted to "nuclear weapons or other nuclear explosive devices." Although the IAEA's authority to implement safeguards is focused on nuclear material, it has become increasingly important for the Agency to gather and analyze a wide range of information. Even if the IAEA's authority to follow up on such information is limited, the IAEA would be remiss to ignore information in open sources which could provide possible indications of the diversion of nuclear material or the existence of undeclared nuclear activities that could be potentially associated with the development of an undeclared nuclear weapons programme.

It is interesting, for example, to note that besides the five NPT nuclear weapon States and the three non-NPT States, open sources seem to indicate that only 3 States (DPRK, Iran and Saudi Arabia) have ballistic missiles with ranges over 1,000 km and likely capable of carrying a nuclear weapon.

In addition to the procurement or development of specific delivery means, activities that could indicate the possible existence of a nuclear weapons programme include, for example:

- Studies on and tests of the effect of shock waves on non-nuclear materials;
- Development of high explosives for high precision application such as shaped charges;
- Theoretical studies of the effect of nuclear explosions;
- Developing or procuring neutron sources that could also be used as initiators in nuclear weapons; or
- Procurement of specific dual use equipment.

Although a State's involvement in any (or many) of these areas might serve as a potential "indicator", it is unlikely that the IAEA would ever be in a position to demonstrate whether or not such activities are or were in support of a clandestine weapons programme. For example, without Libya's admission that it was developing a nuclear weapons programme, it is doubtful that the IAEA could have proven that its undeclared nuclear activities were part of such a programme and it would have been impossible for the Agency to find the nuclear weapons design documents had Libya not decided to present them to the Agency.

These "indicators" cannot be ignored. They are, however, never brought to the attention of the IAEA Board of Governors for the reason that they are beyond the mandate of the IAEA under any safeguards agreement. The Board may however wish to consider the usefulness of requesting the Secretariat, from time to time, to provide special reports on such "indicators" that could be directly or indirectly related to nuclear weapons programme in Non-Nuclear Weapons States.

## **Analysis of information on covert networks and sources of supply**

When clandestinely developing its nuclear programme, a State will most likely rely on "discreet" means of procuring and developing the needed equipment and technology if these are not domestically available. The recent cases of Libya and Iran revealed the existence of extensive covert networks for the supply of sensitive nuclear technology and related equipment, as well as nuclear and non-nuclear materials. Another concern is that such networks could be used by sub-national groups to procure sensitive nuclear material and equipment. This clearly demonstrates the need to act rapidly to identify and if possible

dismantle these supply routes and sources. The IAEA has recently established a unit to investigate and identify such covert trade networks, but depends to a very large extent on the information provided by Member State e.g. on export denials and relevant procurement activities. It is therefore important that States strengthen their export control mechanisms over proliferation sensitive items and material, and cooperate more fully with other States and with the IAEA in these investigations.

### **Measures needed in the case of non-compliance**

When a State is found to have deliberately been in non-compliance with its safeguards agreements (or in breach of its obligation to comply with its safeguards agreements, which is synonymous) and does not show full transparency and cooperation for resolving questions and/or inconsistencies with regard to its nuclear programme (both passed and present), the Agency may temporarily need expanded verification authority. This expanded authority, which would be in addition to that granted to the Agency under Comprehensive Safeguards Agreement and Additional Protocol, may be necessary, in these circumstances, to provide, in a timely manner, an adequate level of assurance that there are no undeclared nuclear material and activities in that State, and that no previously undeclared nuclear, or other, activities have been undertaken to support a nuclear weapons programme.

In such a case, the Agency's Board of Governors could adopt a resolution calling upon that State to provide, on a voluntary basis, Agency inspectors and experts with further short notice access to locations and information (including interviewing any relevant person), and to allow Agency inspectors to use their own equipment, as they deem necessary for fulfilling their mandate. Such broader access rights should be extended to the Agency until such a time that it has been assessed that the State's declarations are correct and complete.

It should be noted that these broader access rights should not necessarily exclude military sites, since it would be likely for the military to be involved in nuclear activities associated with a weapons programme, should one exist. It is clear, however, that military sites may contain sensitive information that would not be relevant to the Agency's investigations. Therefore, it is expected that Agency activities on such sites might need to be conducted under "managed access" conditions that protect such information while allowing the Agency to reach its objectives.

The Board resolution could also call upon the Director General of the IAEA to report to the Board of Governors and, as appropriate, to the UNSC, if such access was denied by the State.

In this regard the UNSC could consider the merit of adopting a generic resolution, stating, independently of any specific case, that if a State is found by the IAEA to be in non-compliance with its comprehensive safeguards agreement, upon request by the Agency, the UNSC would automatically adopt a specific resolution under Chapter VII of the UN Charter requesting that State to grant to the Agency "access at all times to all places and data and to any person" as foreseen in Article XII.A.6 of the IAEA Statute<sup>1</sup>. These extended access rights

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<sup>1</sup> Article XII.A and its paragraph 6 state that "With respect to any Agency project, or other arrangement where the Agency is requested by the parties concerned to apply safeguards, the Agency shall have the following rights and responsibilities to the extent relevant to the project or arrangement:"... "To send into the territory of the recipient State or States, inspectors designated by the Agency after consultation with the State or States concerned, **who shall have access at all times to all places and data and to any person who by reason of his occupation deals with materials, equipment, or facilities which are required by this Statute to be safeguarded, as necessary** to account for source and special fissionable materials supplied and fissionable products and **to determine whether there is compliance with the undertaking** again use in furtherance of any military purpose..."

would be used to resolve outstanding issues, and would be terminated as soon as the Agency has been able to draw the conclusion that there are no undeclared nuclear material and activities in the State as a whole.

This mechanism would allow the IAEA safeguards system, in the specific circumstances described above, to provide the international community with more credible assurances regarding the peaceful use of all nuclear material in the State in a faster, more effective and more efficient manner. This step would also greatly help dispel a widespread misconception that referring a State found in non-compliance to the UNSC would almost automatically mean political and/or economic sanctions.

### **Leadership by example**

The NPT non-proliferation regime is founded on the principle that all parties to the NPT will respect and comply with their commitments. As was pointed out by many States during the 2005 NPT Review conference, all parties to the NPT, including nuclear weapon States, have obligations pursuant to that Treaty. Article VI of the Treaty states that “Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament and on a treaty on general and complete disarmament under strict and effective international control.” In that regard, the steps taken by the US and the Russian Federation to limit operationally deployed nuclear warheads is welcome, but are seen by many Member States as insufficient.

Nuclear Weapons States should diminish progressively their reliance on nuclear weapons and realize that stated plans for further development of their nuclear weapons signal to other States a disregard for their commitments under the NPT. Until the Nuclear Weapon States lead the world by example, it is hard to believe that States possibly seeking to develop a nuclear deterrence option for real or perceived security reasons could be convinced that better options do exist.

Although the NPT nuclear non-proliferation regime is under stress, international security depends upon it. To prevent erosion of the regime, NPT States should actively take the measures needed to demonstrate their compliance with their obligations and their commitment to both vertical and horizontal non-proliferation objectives.

### **Conclusion**

In conclusion, it is encouraging to know that there is broad recognition that the role and technical capability of the IAEA’s verification system is irreplaceable and must be further supported and strengthened.

That being said, much remains to be done. Although some Member States are fully cooperating with the Agency and provide valuable information as expected under Art. VIII of the IAEA Statute, other States are less forthcoming.

Some of the most important lessons learned are that, depending on the circumstances, the IAEA’s ability to discover undeclared nuclear related activities can be quite limited, and that it can be extremely difficult for the Agency to determine whether or not previously undeclared nuclear activities had been developed for exclusively peaceful applications.

It has become clear that in order for the international community to obtain the greatest safeguards assurances, it is vitally important that States fully cooperate with the IAEA and

provide adequate transparency with regard to their nuclear programmes. It is equally important that the Board be well informed on the extent to which States do so.

Although the Safeguards verification system of the IAEA has never been as effective as it is presently, it is doubtful that the world is safer today, from a nuclear proliferation perspective, than 10 years ago.

It will only be possible to make it safer in the years to come in a global environment where all States are deeply committed to fulfilling their non-proliferation undertakings, not only in words but also in deeds.

The IAEA has a unique role to play in deterring States from seeking nuclear weapons, but it depends on its Member States to provide the support and authority it needs to meet this goal effectively.

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