

The 'Landscape' of Nuclear Safeguards: a Comparative Analysis of the International and Regional Systems

Dr. Ilaria Anna Colussi

- Faculty of Law, Political Science and Criminology, Department of Political Science, European Studies Unit, University of Liège, Belgium -

INTRODUCTION

Nuclear proliferation poses a severe threat to the international community, and the role of the law in this area is crucial.

The notion of 'nuclear non-proliferation' is twofold:

- disarm or vertical non-proliferation: measures for reduction of the number of existing arsenals;
- horizontal non-proliferation: containment of the number of States and no State entities that do not have but are acquiring nuclear weapons, or developing the capability and materials for producing them (Sidel and Levy 2007).

Different sources of the law exist at the international and regional level for addressing the issue.

For the implementation of the principles and obligations embedded in the agreements, it is essential to set up a verification and safeguards system.

OBJECTIVES

Safeguards provisions are established at the international and regional level. Thus, the aim of this study to analyse, critically and comparatively, the different safeguards systems that have been legally adopted at the international and regional level so far.

METHODS

The legal analysis has been conducted following these phases:

- Collection of the existing legal texts as regards nuclear proliferation;
- Systematization according to their belonging to international or regional law;
- Legal analysis of the texts with a specific focus on safeguards provisions; and
- Comparison between texts; and
- Drawing of conclusions.

RESULTS

a) and b) Collection of existing legal texts and systematization according to their belonging to international or regional law

	INTERNATIONAL LAW	REGIONAL LAW
HORIZONTAL/ VERTICAL PROLIFERATION	Treaty of Non Proliferation of Nuclear Weapons	-bilateral or multilateral agreements that ban weapons of mass destruction in certain areas (Nuclear Free Weapons Zones Treaties) - Limited Test Ban Treaty - Seabed Treaty - Antarctic Treaty - Outer Space Treaty - Moon Agreement

c) Legal analysis of the texts with a specific focus on safeguards provisions

1. INTERNATIONAL LAW: The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the IAEA Safeguards System

The NPT is the result of a 'bargain' among Nuclear Weapon States (that agree to pursue negotiations on nuclear disarmament) and Non-Nuclear Weapon States (that undertake not to build or acquire nuclear weapons).

The International Atomic Energy Agency (IAEA) has been assigned the role of the nuclear 'watchdog' for the NPT. The sources for such safeguards system are:

- IAEA Statute;
- Comprehensive State Agreements (CSAs);
- Additional Protocols; and
- Integrate Safeguards System.

- IAEA Statute (Art. XII): the IAEA checks specialized equipment, inventories and facilities, requires the maintenance of records from States, and asks for reports.
- Comprehensive State Agreement: compulsory agreement between the States and the IAEA, on the basis of which the IAEA exercises its powers of verification upon 'declared' activities only;
- Additional Protocols (1997): not compulsorily, the States can adopt this protocol that allows the IAEA to verify not only that State declarations of nuclear material subject to safeguards are 'correct', but that they are also 'complete'. So, the IAEA could exercise its powers even upon undeclared activities, thus considering the State 'as a whole'.
- Integrated Safeguards system (2002): it is the integration of Additional Protocols and the revision of the existing safeguard system with additional measures. It has enhanced the IAEA's verification through the increase of unannounced inspections, and the use of remote sensing devices and automated systems for data evaluation.

2. REGIONAL LAW: SAFEGUARDS SYSTEMS WITHIN THE NUCLEAR-WEAPON-FREE-ZONE TREATIES (NWFZs)

NWFZ treaties constitute a regional system for the establishment of norms of nonproliferation in certain areas.

❖ *The Treaty on a Nuclear-Weapon-Free Zone in Central Asia (CANWFZ): Semipalatinsk Treaty*

The safeguard system is entirely assigned to the IAEA (art. 8).

The review of compliance with the Treaty is done through annual Consultative Meetings (art. 10). There is not specific body to oversee implementation and verification of the treaty.

❖ *The Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean: Tlatelolco Treaty*

The Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL) is an intergovernmental agency (art. 7), created to ensure that the obligations under Tlatelolco treaty are respected; convoke periodic meetings; supervise the respect of the Control System. OPANAL recognizes the IAEA as the only Agency capable of carrying on inspections.

❖ *The African Nuclear-Weapon-Free Zone Treaty: Pelindaba Treaty*

The African Commission on Nuclear Energy (AFCON, Annex III) monitors the compliance by the State Parties with their non-proliferation obligations; ensures nuclear and radiation safety and security; increases partnership and technical cooperation; and promotes peaceful use of nuclear science and technology. AFCON can request a special inspection to the IAEA, and send some members of its team to be part of the group of inspectors.

❖ *The Treaty on the South Pacific Nuclear-Weapon-Free Zone (SPNWFZ): Raratonga Treaty*

The treaty requires all parties to apply IAEA safeguards. There is a Consultative Committee of the Parties (Annex III), which is informed by the Director of South Pacific Bureau of Economic Co-operation (SPEC) about cases of non compliance and it can also conduct special inspections. The inspectors' conclusions will be reported to the South Pacific Forum.

❖ *The Treaty on the Southeast Asian Nuclear-Weapon-Free-Zone: Bangkok Treaty*

The treaty requires all parties to apply IAEA safeguards, and it has established a Commission for the Southeast Asia NWFZ (art. 8) to oversee the implementation of this treaty. The Commission takes measures for coping with the situation, and it can refer the issue to the IAEA.

3. OTHER DENUCLEARIZATION TREATIES

❖ *The Limited Test Ban Treaty*

It refers to denuclearization of atmosphere, outer space, under water, or any other environment. It does not contain any verification method. Each party may ensure verification through its national technical means.

❖ *The Seabed Treaty*

It is aimed at banning the emplacement of nuclear weapons on the ocean floor beyond a 12-mile (22.2 km) coastal zone.

It provides that each State Party shall verify the compliance (Article III). In case of doubt, inspections are conducted by States in cooperation. If doubts remain, the issue can be brought to the Security Council.

❖ *Antarctic Treaty*

The Antarctic is used for peaceful purposes only. Each Party can designate national inspectors, and has the duty to inform in advance of all expeditions, stations, military personnel and equipment sent to Antarctica.

❖ *Outer Space Treaty and Moon Agreement*

It prohibits nuclear weapons in orbit on the Earth or on the Moon or on any other celestial body. In the hypothesis of visit, the States shall give notice of the visit and provide precautions for safety reasons.

4. OTHER REGIONAL BODIES

❖ *EURATOM*

It regulates nuclear energy in the EU. There is not a specific body for compliance, but the European Commission has three main powers:

- Inspections to nuclear operators working in the Member States. If there is opposition to the inspection, the President of the EU Court of Justice (ECJ) has three days for deciding on the issue and ordering the compulsory inspection (art. 81);
- sanctions upon nuclear operators: a warning, the withdrawal of financial benefits, the total or partial withdrawal of source materials or special fissile materials (art. 83);
- directives to States as well, and if the State does not comply, the matter is referred to the ECJ (art. 82).

The nuclear operators have to declare their installations (art. 78) and keep the records of their activities (art. 79).

EURATOM and the IAEA has signed an agreement for cooperation (1973).

❖ *The Brazilian-Argentine Agency for Accounting for and Control of Nuclear Materials (ABAAC)*

It has to administer and apply the Common System for Accounting and Control of Nuclear Materials (SCCC) to all nuclear materials in the activities of Brazil and Argentina. ABAAC and the IAEA shall conduct independent but also mutual and joint inspections, and cooperate in the safeguards purposes (since 1994). IAEA has been authorised to apply full safeguards in Argentina and Brazil. If a country is found to be in non compliance, the IAEA refers the case to the UNSC.

DISCUSSIONS

d) Comparison between texts

- The IAEA is the central system of safeguards at international level, and it has proved to be quite effective through the years;
- Regional systems are equally important to implement IAEA;
- NWFZ treaties both contain norms about verification, and create specific regional authorities to complement the IAEA (except Semipalatinsk Treaty);
- Denuclearization Treaties contain norms about verification and compliance, but they rely on the intervention of States for verification, or entrust only the IAEA for verification purposes;
- other bodies at the regional level conduct their own inspections, but they also cooperate with the IAEA through specific agreements.

CONCLUSIONS

e) Drawing of conclusions

The architecture of nuclear non-proliferation entails different agreements, bodies, agencies and norms. For an effective non proliferation, the best option is to enforce collaboration between the different levels, and conceive them as complementary.

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