

**IAEA Regional Seminar on the Protocol Additional  
to Nuclear Safeguards Agreements  
Lima, Peru  
4 - 7 December 2001**

---

---

**SESSION 4: REGIONAL NUCLEAR NON-PROLIFERATION ARCHITECTURE:**

**II. A Regional Perspective  
Regional Safeguards in the New International Context**

Carlos Feu Alvim  
ABACC

**Introduction**

When ABACC was first established, four parts in the world were rated as high-risk for nuclear proliferation. In two of them - South American and South Africa - safeguards solutions have soothed fears of nuclear proliferation that were in some cases exaggerated. The other two regions where this issue was not resolved are today threatening world peace.

Our region is breaking fresh ground through a pact – the Treaty of Tlatelolco – that not only prohibits the use of nuclear energy for warlike purposes by the countries in the region, but also stipulates that countries with nuclear weapons agree not to use, store, or to deploy them in threat to the countries in the region. The Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL - *Organismo para a Proscrição de Armas Nucleares na América Latina e no Caribe*) plays an important role in the task of implementing this important Treaty. Our region is also a good example of compliance with control measures for other weapons of mass destruction.

Within the field of nuclear safeguards, the European Atomic Energy Community (EURATOM) and ABACC are the only organizations to apply regional safeguards. This activity is found mainly in countries that do not possess nuclear weapons, working closely with the International Atomic Energy Agency (IAEA). The safeguards strengthening measures that culminated with the adoption of the Additional Protocol require reflection on the role of the regional organization within this new context.

In the case of ABACC, and in many European countries, there is still the powerful figure of a strong national authority whose mission is tailored to the global safeguards application context. The Additional Protocol requires the countries to provide information that is available - if that – only at the national Government level. In principle, this strengthens the role of the national authorities. As the regional entity serves as an interface between these two authorities whose duties and responsibilities have been increased, it is quite natural that regional entities should query their roles, both internally and externally.

On the one hand, it seems that as the duties and responsibilities of the national authorities and international entities have been stepped up, there is no further need for the regional entity, as the system was

conceived to function without the presence of this type of institution.

On the other hand – which is our standpoint – the extended duties and responsibilities of the safeguards system as a whole usher in a broader sphere of action for a regional institution. Naturally, tasks must be redistributed as unnecessary repeat efforts should be avoided to an even greater extent. Furthermore, recent events that have drawn the world into this new war underscore the need to buttress nuclear safeguards at all levels. To an increasing extent, the global populace is demanding peace of mind over the solely peaceful uses of nuclear power, and it does not seem appropriate to retire any controls that have proven effective.

The conceptual outlines of the new integrated safeguards system currently being drawn up include the possibility of strengthening the role of the regional and national entities. This is because regional entities seem to be endowed with more international credibility than their national counterparts, with the regional model currently under consideration for application in other parts of the world, with some indications that it may become standard practice for even the developed countries.

### **Brief Overview of the Reasons for Setting Up Regional Entities**

A pioneer in safeguards applications worldwide, EURATOM was established to ensure proper nuclear accounting among countries with nuclear activities in common. With the establishment of the International Atomic Energy Agency (IAEA) this organization maintained its mission as a safeguards institution, working towards independent conclusions. In some countries, it took over many of the activities normally assigned to the national authorities.

A long and difficult path has been followed by EURATOM and the IAEA in order to reach what was called their New Partnership Approach - and which is not so new today. From then on, despite some discrepancies and disagreements, these two organizations have made noteworthy progress in the common application of safeguards. A fresh stage is currently under study for implementing quality control methods.

ABACC was established under the aegis of the Bilateral Agreement for the Exclusively Peaceful Use of Nuclear Energy that was signed by Brazil and Argentina in 1991 in Guadalajara, Mexico.

Some people viewed the initiative undertaken by these two countries as a way of avoiding the application of international safeguards in the region. This was never the intention of these two national Governments, which simultaneously began talks on bringing the Treaty of Tlatelolco into effect, as well as signing a broad-ranging safeguards covenant with the IAEA and ABACC: the Quadripartite Agreement.

Furthermore, the Bilateral Agreement was often viewed as a successor to the Nuclear Non-Proliferation Treaty (NPT) as the countries undertook commitments imposed by this agreement although without agreeing with what was rated as discriminatory in the NPT. In fact, the set of agreements signed may even be viewed as being more stringent than the NPT itself.

Subsequently, both countries signed the Nuclear Non-Proliferation Treaty (NPT), Argentina first and then Brazil. This indicates that the Bilateral Agreement paved the way for the acceptance of the NPT by separating the issue of the application of safeguards (strategic and military) from the issue of discrimination among the countries (a diplomatic matter).

There was no transition stage for safeguards application, as the measures required under the Quadripartite Agreement and even the Bilateral Agreement were the same as those implemented under the pacts complying with the NPT, meaning that there were no changes in the application of the safeguards after

it came into effect.

Within the international community, and even within the two countries involved, some people felt that the Bilateral Agreement had fulfilled its mission once the NPT was signed. Naturally, this is not the view of our Governments – which have reiterated their support for the regional system in both words and acts – nor the ABACC Secretariat.

### **Strengthening Safeguards and the Role of the Regional Entities**

The new safeguards measures prompted by problem areas such as Iraq and North Korea – and to a certain extent by the disclosure of the dismantling of the weapons capacity of South Africa when a safeguards agreement was already in effect with the IAEA – shifted the safeguards approach, which became more concerned with undeclared facilities and materials.

While the original safeguards procedures were similar to those for nuclear inventory accounting and verification, in parallel to ensuring correct use of the facilities, the new safeguards procedures focus more on seeking evidence of clandestine nuclear activities. Initially, this includes the declared facilities, while at a later phase, they will cover any place in the country under inspection where information indicates undeclared activities.

Previously, the safeguards were concerned mainly with physical material inventory accounting and use, declared at facilities able to handle these materials. The purposes of verifying the use of nuclear materials and facilities were clearly defined, and were generally designed to detect the mass required to fabricate an artifact within the length of time needed to do so based on the material in question.

Now including qualitative aspects, these new safeguards strive to keep a step ahead of any attempt to manufacture an artifact, detecting the earliest hints of undeclared activities and even preparations not related to nuclear materials.

In order to comply with the new safeguards, it was necessary to reword the mandate of the IAEA in terms of its objectives and means. The objectives were altered through resolutions issued by its Board of Governors and approved by the General Conference. The Secretariat of the IAEA was obliged to check not only that declared material inventories were correct, but also that they were complete. With the implementation of the new measures beefing up these safeguards, the IAEA is now obliged to check for **undeclared nuclear materials and activities**. Furthermore, many different types of materials, equipment and facilities are now subject to some type of control.

Increased right of access, more information and third party usage rights were the tools assigned to the IAEA in order to achieve these objectives.

It was felt that the nuclear non-proliferation pacts signed by the countries endowed the IAEA with the power to extend its objectives. Opinions on these measures were split between those who felt that the IAEA already had a legal mandate, and those who felt that a new mandate was required to cover these matters, which would be provided by the Additional Protocol to be signed by the countries and/or the regional entities.

Discussions on the Protocol in the case of EURATOM and to a lesser extent ABACC prompted repercussions (and even some arguments) on the role of the regional organism within these new safeguards arrangements. In Europe, the problem is more complex due to the wide variety of safeguards approaches in

the different countries, whose nuclear activity levels also vary widely, ranging from almost nil through to major nuclear powers. In some cases EURATOM is also an operator, while a different solution was found at ABACC for the limited amounts of material that it owns. Furthermore, EURATOM was already taking care of materials prior to the starting point adopted by the IAEA (and ABACC).

The issue of the role of EURATOM in the Protocol is being resolved, and seems likely to differ in the various countries. In order to avoid delays in signature, the wording of the Protocol is somewhat ambiguous, deliberately leaving a wide variety of operational possibilities open for EURATOM.

In the draft Protocol agreed between ABACC and the countries, these “constructive ambiguities” have been maintained to some extent, left open for decision in the future and expanding the role of ABACC.

### **The Role of ABACC with these New Safeguards**

In my opinion, the role of ABACC warrants reflection within this new universe of integrated safeguards. As its name implies, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials was established under an agreement on the Exclusively Peaceful Use of Nuclear Energy, which in my view is the politically correct way of referring to nuclear non-proliferation.

As we see it, ABACC makes sense only if used as a mechanism for building up trust between the countries and with the international community. This trust is not achieved just through nuclear accounting mechanisms. On the other hand, neither should we think that the measures stipulated under the Safeguards Strengthening Program – long known as the 93+2 Program – are the only way of enhancing safeguards.

Looking at the ABACC field activities, it has already been agreed that we will concentrate on nuclear materials. The current difficulties encountered in tracing biological weapons leave us relieved that in the nuclear field we work with materials producing their own signals and not found in Nature, such as PU, U233 and enriched uranium. The low thresholds of new detection techniques boost this capacity even further, detecting nuclear materials more easily and pinpointing possible future undeclared activities.

There is also no doubt that our inspectors **will not be used** to obtain information that is not openly available. Our process is intended to build up confidence. We know that any activities by our inspectors that might resemble spying would result in an atmosphere of mistrust between the countries, countering the principles of the Bilateral Agreement. This does not mean that ABACC cannot respond to requests from the countries together in order to settle any doubts that may arise in future and related to the exclusively peaceful use of nuclear energy.

Another effective way of building up trust is technical cooperation. The Brazilian and Argentine Governments recently signed a document setting up the Brazilian-Argentine Nuclear Energy Cooperation Agency (ABEN - *Agência Brasileiro-Argentina de Cooperação em Energia Nuclear*). As common nuclear projects may be established, probably with the participation of other countries, their transparency will enhance the trust between these two countries to an even greater extent, as well as with third parties.

### **The Future of Regional Organizations (including ABACC)**

Regional organizations have been putting down firm roots in many different areas; in our own region, the Mercosur Southern Cone Common Market is still under construction. Above all a good example of this integration, the success of ABACC can perhaps be repeated in other fields of activity that demand

permanent analysis of the overall situation rather than defending the interest of each country individually. It should be recalled that EURATOM was one of the seeds of the European Community (today the European Union); as an example, there have never been any doubts that about the peaceful use of EURODIF activities.

The entry into effect of the Protocol is encouraging other regions – not necessarily in conflict – to study the regional model. ABACC has received invitations to take part in discussions on this matter.

Another significant line of thought is that if this regional solution is good for our countries, it might also be valid for other countries in our region with significant nuclear activities. I feel that the inclusion of other countries in the regional system could well be rethought by our two nations.

The new safeguards tasks should be redistributed. The group analyzing the integrated safeguards of the IAEA is dealing seriously with the quality control mechanisms that the ABACC Secretariat and EURATOM have been urging, as a way of reducing duplicate safeguards efforts with the IAEA. For activities under the agreements in effect, these two agencies have achieved significant progress jointly with the IAEA, in terms of avoiding duplicate efforts. This drive should be expanded, taking advantage of the task distribution review required by this Protocol.

At the national level, some interfaces could well be upgraded. For instance, processing and forwarding accounting data is being automated. With regard to the IAEA, the intermediation of ABACC has already been streamlined, with no drop in the quality of the reviews and corrections.

The new safeguards are based on more information, better access and ongoing materials verification and accounting procedures.

Safeguards techniques are becoming increasingly important, supported by the national authorities and expanding the technical activities of ABACC. Through its technical groups, ABACC is tackling technology-based challenges with impressive success. Technical support from the countries should become even more important in future.

This regional entity is endowed with considerable comparative advantages in terms of access to information, understanding, and physical proximity. These comparative advantages are a powerful argument for allying regional controls with international measures as a way of strengthening safeguards.

In addition to all the matters already mentioned above, in my view ABACC should:

- Keep its knowledge of nuclear programs up to date;
- Focus its activities on matters related to nuclear materials;
- Play a more important role in traditional safeguards;
- Invest in quality control processes in order to enhance the credibility and extend the acceptance of its results;
- Launch this quality control process for some of its own activities;
- Gear up for activities related to the Protocol and review its mission within the new institutional context;
- Review the general procedures under the Common System for Accounting and Control of Nuclear Materials (SCCC) in order to adapt them to this new context.

## **Conclusion**

Faced with the new safeguards situation, the mission of ABACC must be defined by its two participants. The new safeguards replace some traditional measures by other mechanisms based on a better understanding of nuclear programs at the country level. If remaining static, the regional system would continue to apply measures that are no longer necessary. This would be a good time to develop regional procedures that comply with this new safeguards approach, although this does not mean that these procedures should be the same as those adopted at the international level.

The delegation of the activities formerly undertaken by the IAEA with the national authorities or regional entities is a vital requirement imposed by economic rationale, which should be guided by the costs of the additional measures. In principle, it would be easier to delegate some activities to the regional entities, which could shoulder them over the medium term.

The share-out of tasks between the international entity (IAEA), the regional entity (ABACC), and the national authorities is an issue that should be reviewed, based on the new information and procedures introduced in the Additional Protocol. The issue of delegating powers and competences is always a delicate matter from both the practical and legal standpoints. But although delicate, it cannot be avoided permanently, as this would undermine the rationality of the system.