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# From Rio to Helsinki?
## Advantages and Shortcomings of the ABACC Concept and Its Possible Application in the Middle East

Irma Argüello and Emiliano J. Buis

**Abstract**

*Recent discussions around the establishment of a zone free of weapons of mass destruction (WMD) and their delivery vehicles (DVs) in the Middle East have been encompassed by several proposals intended to design an efficient institutional framework that could be easily accepted by all states in the region. This Policy Brief provides a specific analysis of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) in order to suggest possible applications of the model to new contexts. Although seldom examined in its own evolution, the ABACC rapprochement model has been frequently read as a virtuous example of how nuclear rivalry can be turned into cooperation to ensure regional nuclear non-proliferation with a common technological benefit for both parties involved. Regarding this positive example of regional arms control and verification, this Policy Brief addresses similarities and differences with the current situation in the Middle East from a practical perspective.*

*To this end, an interpretative matrix including multiple local variables and analytical dimensions that need to be considered when endorsing the transfer of the Argentine-Brazilian verification regime to other parts of the globe is offered. The key aspects include: a conflict- and actor-related dimension, a territorial, scientific-technological as well as legal dimension, plus other regional equilibriums (economical, cultural, religious dimensions). The reading of such a matrix allows the authors to argue that, if certain conditions are met, the ABACC concept may provide a complete framework for 'neighbor-to-neighbor' safeguards and mutual control at a regional level that negotiators can rely on when fostering new paths for the Helsinki Conference on the establishment of a WMD/DVs Free Zone.* ■

The impossibility of holding a conference in Helsinki in 2012 in order to place the roots and set the basis for a zone free of weapons of mass destruction (WMD) and their delivery vehicles (DVs) in the Middle East – as stated in the Final Document of the 2010 Nuclear Non-Proliferation Treaty (NPT) Review Conference – has fortunately not prevented official and informal political as well as academic consultations. As previous Policy Briefs show extensively, many discussions have been dealing with the necessary institutional framework and have tried to resort to existing examples of verification regimes – both at a global and regional level – in order to advance arguments that could be locally accepted on the path towards the negotiation of this new zone.

Following this line of discussions, the goal of this Policy Brief is to examine the advantages and shortcomings of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) as a possible source of inspiration from another regional context. In particular, a historical account of this bilateral experience, as well as a multidimensional analysis of its foundations, is presented here in order to address similarities and differences with the current situation in the Middle East from a practical perspective.

## The Historical Context for the Argentine-Brazilian Nuclear Cooperation Framework

Historically, South America has experienced alternating periods of strong cooperation between states and occasional mistrust leading to controversies. The latter conflicts have usually been the result of poorly resolved border disputes dating from the time of the independence process.

After their independence, Argentina and Brazil – countries that had inherited the historical tensions between their respective metropolis, Spain and Portugal – gradually affirmed their positions as regional powers. In the 19th century the Southern Cone of the continent was a place of political struggle for hegemony, focusing on the Plata basin. This antagonism evolved and, by the mid-1960s, resulted in a tense environment, heightened by the presence of military governments in both states (1966-1973, 1976-1983 in Argentina and 1964-1985 in Brazil), as well as by the particular atmosphere represented by global bipolarity during the Cold War.

In this context of competition and suspicion, Argentina reached an important development of nuclear technology.[1] This propelled the implementation of Brazil's own nuclear program.[2] The main characteristics of the 1970s and 1980s in the Southern Cone were significant nuclear investments, a considerable nuclear rivalry, a high capability achieved on nuclear developments, and the wish to claim at any time total autonomy on nuclear weapon decisions. The whole situation, together with the reluctance to ratify the NPT, caused a generalized mistrust by the international community towards both states.

The recognition of the high economic costs involved in a nuclear race in the region, the solution of the Itaipú case (1979) as a diplomatic success, and the re-establishment of democracy in both countries, were all facts that eventually led to a possible way out of the nuclear rivalry. With the arrival of democratic governments and the consequent change in political leaderships (Argentina in 1983 and Brazil two years later), the myth of regional supremacy progressively lost momentum and gave way to a more realistic view of each nation's interests and possibilities. The

brand-new political environment eventually fostered the development of a cooperative framework on the basis of integration and confidence building. This led to a strict focus on peaceful uses of nuclear energy and to an increasing cooperation as a positive resolution of the rivalry,[3] although some experts explained that this common front was only encouraged as a joint effort to face the U.S. non-proliferation policy at the time.[4]

This period followed another one of increasing efforts focused on a restoration of mutual confidence.[5] Key milestones were the start up of the MERCOSUR (Southern Cone Common Market) together with Uruguay and Paraguay in 1985, and its official launch in 1991 with the Asuncion Treaty. Only a few months later, an Argentina-Brazil bilateral agreement was reached allowing the use of nuclear technology only for peaceful purposes and prohibiting all kinds of activities related to nuclear weapons. It also set up the Common System of Accounting and Control of Nuclear Materials (SCCC) and the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials to manage the system, and to put in practice the mutual verification process as well as the application of full-scope safeguards. In December 1991, the IAEA became a partner, and the original accord which became the Quadripartite Agreement entered into force in 1994.

As a result of these strategic decisions, the Argentina and Brazil rapprochement model is seen as a virtuous example of how nuclear rivalry can be turned into cooperation to ensure regional nuclear non-proliferation with a common technological benefit to the two parties involved. This Policy Brief will explore the positive aspects of the ABACC mechanism. Furthermore, an interpretative matrix is proposed to discuss the multiple local variables and analytical dimensions that need to be considered when endorsing the transfer of the Argentine-Brazilian verification regime to other parts of the globe. In more specific terms, a comparison between the historical background of the South American reality and the current context of the Middle East is proposed.

## The Advantages of the ABACC Model

The Common System of Accounting and Control installed and conducted by ABACC aims at monitoring compliance with the basic commitment to use nuclear material and facilities under its jurisdiction or control, exclusively for peaceful purposes. One of its main tools is that inspectors from one state can conduct inspections in the territory of the other one, which is called 'neighbor-to-neighbor control'.[6] The implementation of this control and verification mechanism – perhaps the most positive consequence of signing these agreements – could maintain a transparent atmosphere long enough to move beyond the pre-existing status of distrust. Taking into account the results, in general terms, so far the Argentine-Brazilian mutual nuclear control scheme, even perfectible, has been a virtuous process with positive results for both states and, by extension, for the global community in general.

In practical terms, the creation and functioning of the ABACC:

- reverted a complex past of rivalries and mistrust;
- increased confidence;
- provided mutual encouragement for the signature of the NPT (Argentina, 1995, and Brazil, 1998), and the Tlatelolco agreement establishing a WMD Free Zone (both countries in 1994);
- has facilitated the contact of professionals and the interchange of information;
- has correctly oriented human and financial efforts to projects relevant to each state; and
- has protected the autonomy of nuclear decisions within Article IV of the NPT.

The success of the ABACC is reflected in the number and scope of inspections since its creation.[7] In 2012, for example, both countries' inspectors performed a total of 123 verifications in the Argentine and Brazilian nuclear facilities.

Being mostly a successful case, the experience positively influenced other different dimensions of the bilateral relationship and expanded to the whole region, as shown by the Declaration of Ushuaia establishing the area of the Southern Common Market (MERCOSUR) as a WMD Free Zone in 1998. In February 2008, Argentine President Cristina Fernández de Kirchner and Brazilian President Luiz Inácio Lula da Silva signed a nuclear cooperation agreement, promoting potential joint projects, such as an "uranium enrichment enterprise" and a "model nuclear power reactor that would meet the needs of the electrical systems of both countries and, eventually, of the region."[8] On the same track, a 2013 bilateral agreement foresees the future construction of two nuclear research reactors in Argentina (RA10) and Brazil (RMB).[9] This suggests a new phase of collaboration in nuclear engineering between both countries.

The ABACC can therefore be seen as a good example for a regionally based policy process, with decisions going coordinately from both actors to the international level, rather than the opposite. The identification of common views and interests has provided a solid base for the development not only of national and bilateral nuclear policies, but also for the overall common international position of the counties involved. In this sense, the rapprochement paved the way for a full access to key international instruments such as the NPT and the Treaty of Tlatelolco. At the same time, it also contributed to justify the reluctance to accept certain international standards such as the IAEA's Model Additional Protocol. This has been rejected by both states with the argument that good-faith bilateral efforts between traditionally suspicious neighboring partners remain more efficient than global regimes which encompass biased interests in favor of Western developed countries.

## The Risks of the ABACC Model

Alongside the beneficial consequences of a 'neighbor-to-neighbor' control approach, it is clear that some weaknesses may erode the bilateral and international credibility of this relevant achievement. As mentioned above, the decision not to sign the Model Additional Protocol to the application of IAEA safeguards – Argentina and Brazil are the only non-signatories within the Nuclear Suppliers Group (NSG) – has provoked some hesitation among the international community. For one, the ABACC agreement does not imply a 'strict' equivalence to 'a safeguards agreement with an Additional Protocol'. Thus, the NSG often stated that, while pursuing the same purpose, the protection mechanisms that each instrument creates are radically different, and therefore they also represent different degrees of effectiveness. Both Argentina and Brazil – particularly the latter – have stated that the level of assurance provided through the practice of mutual inspections should be sufficient to meet any international concern as to whether nuclear activities in either state are exclusively oriented towards peaceful purposes.

In its strengthened guidelines on sensitive exports – approved in 2011 – the NSG clarified that the distinction between the international comprehensive safeguards

mechanism and regional verification systems like the ABACC remains temporary and shall not be taken as permanent. The language used in the guidelines granted a temporary waiver to the ABACC when pointing out that suppliers should authorize enrichment and reprocessing exports only if the recipient has brought into force a comprehensive safeguards agreement and an additional protocol. Otherwise, "pending this, [the recipient] is implementing appropriate safeguards agreements in cooperation with the IAEA, including a regional accounting and control arrangement for nuclear materials, as approved by the IAEA Board of Governors."[10]

Whereas it is true perhaps that the ABACC may be more effective than just a safeguards agreement, it is frequently stated that its strength seems still to be lower than that of an Additional Protocol. This points at the fact that it gives the IAEA authority to establish additional reporting requirements and the right of access to different locations in a state, even where no nuclear material is declared to be located.[11]

In return, the IAEA has often pointed out that without an agreed Additional Protocol (AP) the agency is unable to ensure that all nuclear material is intended solely for peaceful activities, since it could not confirm that the state did or did not undertake undeclared activities. A detailed analysis of the 2008 Brazilian National Defense Strategy, whose main objectives are still in force, suggests that the signature of a 'traditional' AP is not likely to happen in the short term.[12] In fact, the document clearly states that Brazil will not endorse any further restrictions derived from the NPT, if nuclear weapon states do not show progress on their own disarmament. A second aspect to take into account has to do with the potential divergences of profiles and strategic goals between both countries. The obvious interest of Brazil to increase and consolidate its regional control by means of nuclear development cannot be disregarded.[13]

As planned, large-scale projects seem to lie beyond the country's technological capabilities, and are therefore likely to rely on the aid of more experienced nuclear partners prepared to transfer technology, as the Nation Defense Strategy states. But is Buenos Aires then the right partner for a balanced relation? Under present circumstances, Argentina seems to be a very convenient partner for Brazil, since it has know-how, is not competing for leadership, and seems to perceive the joint venture, despite its final scope, as a good opportunity to reactivate its decayed nuclear program.[14]

The agreement for the construction of two research reactors, exclusively based upon the know-how of the Argentine company INVAP, shows how well the cooperative framework could be beneficial for Brazil. But a fear of mistrust and a nationalist approach on defense and energy are clearly affecting their interaction.

In terms of nuclear ambitions, although it has been said repeatedly that all Brazilian nuclear development is related to low-enriched uranium, some in the expert community in Argentina raised concerns about the potential use of enrichment plants to become a threshold state. At this point, occasional statements by some Brazilian authorities, officials and experts – even though generally disregarded – have been of little help.[15] In the meantime, the Argentine government still needs to develop mid- and long-term plans to define the number of reactors to be built, as well as the type of technology and fuel. However the well-earned nuclear leadership the state has had in the region for a long time has faded due to successive political and economic crises.

Not being capable of generating frictions, Argentina is perceived by Brazil as a pragmatic partner. Notwithstanding the caution expressed by some worried diplomats and scholars, Argentine authorities know that they cannot match the growth of its bigger neighbor.[16] Buenos Aires politically and scientifically intends to improve the intensity, quality, and scope of bilateral nuclear

***Irma Argüello*** *is Founder and CEO of the Nonproliferation for Global Security Foundation (NPSGlobal), Buenos Aires, a non-profit initiative oriented to help reduce risks derived from the proliferation and use of armaments. She worked as a scientist specializing in nuclear safety at the Laboratory of Radiochemical Processes (LPR Project) – National Atomic Energy Commission of Argentina. She is a member of the Latin American And Caribbean Leadership Network for Nuclear Disarmament and Non-proliferation (LALN), a Chatham House Associate Fellow, and a member of the Steering Committee of the Fissile Materials Working Group (FMWG).*

***Emiliano J. Buis*** *is a Professor and Researcher in International Law, Disarmament, and Non-proliferation at the NPSGlobal Foundation's Regional Postgraduate Course, at the University of Buenos Aires, and at the Central University in Azul (UNICEN). He is an Adjunct Permanent Researcher at the National Scientific and Technological Research Council (CONICET). He was a Legal Adviser on non-proliferation, disarmament and export control at the Direction of International Security, Nuclear and Space Affairs of the Argentine Ministry of Foreign Relations. He is a Global Fellow of the Carnegie Council for Ethics in International Affairs, New York.*

*»Whereas the international expert community has been generally focusing on the ABACC model, it is [...] more adequate to introduce what we call the ABACC concept, i.e. a notion which goes far beyond a pure nuclear verification process. Therefore, [...] we suggest the inclusion of all the possible ways in which a rapprochement process could be eventually set up in a zone affected by regional conflicts involving nuclear risks.«*

***Box: A Bilateral Timeline on Nuclear Affairs***

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|---|---|
| *1968* | *Argentina made the strategic choice of natural uranium and pressurized heavy water reactors (PHWR), and started its nuclear power plants program closing a contract with West Germany* |
| *1971* | *Brazil adopted the enriched uranium line and light water reactors, and got its first power plant, Angra I, from a cession agreement with the United States* |
| *1974* | *As a result of the Argentine nuclear program, the first power plant, Atucha I, outside Buenos Aires, began to operate* |
| *1975* | *Brazil signed a wide-scope agreement with West Germany, never fully accomplished, which included several reactors, development of uranium enrichment through jet-nozzle technology, and a cession of a finished reprocessing plant – for years this agreement became the basis of the official master plan of Brazilian nuclear development for peaceful uses* |
| *1977* | *Argentina launched its National Nuclear Plan with the goal of mastering the whole fuel cycle* |
| *1978* | *Argentina started an own development of a plutonium separation plant, the Laboratory of Radiochemical Processes (LPR Project), near Buenos Aires* |
| *1980* | *Agreement between Brazil and Argentina was reached on the peaceful uses of nuclear energy* |
| *1983* | *Argentina announced the production of enriched uranium in Pilcaniyeu, using the gas diffusion technology* |
| *1985* | *Declaration of Foz de Iguaçu on peaceful purposes of Argentine and Brazilian nuclear programs* |
| *1986* | *Declaration of Brasilia on the Launching of the First Round of Negotiations within the Global System of Trade Preferences among Developing Countries* |
| *1987* | *Brazil announced uranium enrichment by ultracentrifugation at the Navy Aramar Research Center while advancing with the idea of the nuclear propulsion reactor together with the development of a nuclear submarine* |
| *1987* | *Declaration of Viedma: Brazilian delegation visits Pilcaniyeu gas diffusion enrichment plant in Argentina* |
| *1988* | *Declaration of Ipero: Argentine delegation visits Aramar ultracentrifuge enrichment plant in Brazil* |
| *1990* | *Declaration of Buenos Aires* |
| *1990* | *Second Declaration of Foz de Iguaçu, where the foundations for a bilateral control are set* |
| *1991* | *The bilateral agreement is signed in July and entered into force in December. The Quadripartite Agreement is signed between Argentina, Brazil, the ABACC, and the IAEA* |
| *1994* | *Argentina and Brazil signed the Treaty of Tlatelolco, and the Quadripartite Agreement entered in force* |

cooperation. In spite of security concerns, prestige issues, and national reasons (which are identified as the three dimensions that explain the sometimes ambiguous relationship between Argentina and Brazil in this sphere), both countries consider cooperation to be the right option in a "complex and uneasy international security conjuncture."[17]

## Applicability of the ABACC Concept to Other Contexts: Middle East and Matrix to Understanding the Limitations of the 'Neighbor-to-Neighbor' Approach

It is essential to distinguish the wider ABACC concept from the above-mentioned ABACC model, a specific emergent from Argentina and Brazil and, in a more general scope, from the Latin American reality. Whereas the international expert community has been generally focusing on the ABACC model, it is our opinion that it should be more adequate to introduce what we call the ABACC concept, i.e. a notion which goes far beyond a pure nuclear verification process. Therefore, when referring to the ABACC concept, we suggest the inclusion of all the possible ways in which a rapprochement process could be eventually set up in a zone affected by regional conflicts involving nuclear risks on the basis of elements successfully applied in the Argentine-Brazilian experience, in conjunction with other innovative components that may become also necessary to build trust.

### A Regional Concept for the Middle East?

With this idea in mind, a case study on the Middle East is interesting to analyze the ways in which the ABACC concept could be applied in a radically different context where common nuclear policies ought to be promoted. The creation of a WMD/DVs Free Zone in the Middle East has been under heavy discussion for the last four decades. Back in 1974, a resolution by the UN General Assembly referred to the need to establish a nuclear weapon free zone (NWFZ) after a proposal made by Iran and Egypt. For many years the IAEA General Conference has been issuing an annual statement promoting the application of full-scope safeguards on all nuclear facilities in the region "as a necessary step for the establishment of the NWFZ."[18] In 1995, the NPT Review and Extension Conference called upon states to set "an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems." Nevertheless, several obstacles have resulted in serious practical difficulties: whereas Arab states consider that the establishment of such a zone could help the maintenance of peaceful relations (favoring disarmament over peace), Israel intends to subject the zone to the previous compliance with international obligations by its neighboring states in the region (favoring peace over disarmament).

After the agreement of some practical steps to further negotiations in the 2010 NPT Review Conference, a facilitator was designated, the Finnish Ambassador Jaakko Laajava, and the government of Finland was appointed in order to host an international conference in December 2012. However, new conditions in the Middle East forced to postpone this conference; the decision has

generated a strong protest by Egypt and has interrupted frank diplomatic channels to pursue the objective of freeing the region of nuclear, biological, and chemical weapons plus their delivery vehicles. Recently, three informal meetings have taken place in Glion, Switzerland.

Undoubtedly, one of the most problematic features for this WMD/DVs Free Zone in the Middle East has to do with verification, but it is not the only one. It is true that the UN General Assembly Resolution of 1975 had stated that such a zone "should provide for effective verification of compliance with the commitments made by the parties to the Treaty" and that this aspect is of the outmost importance in order for the WMD/DVs Free Zone to succeed. Several proposals have been suggested by diplomats and experts,[19] but states still do not seem to agree on the way in which this verification should be done: some of them have talked about the adoption of local mutual measures; others are willing to create a regional organization capable of ensuring compliance among all parties.

At the crossroad between incompatible views, the first steps to set up the zone seem complicated. It has been recently suggested for the Middle East to establish a set of near-term measures aimed at fostering productive negotiations that could encourage an international dialogue again.[20] According to this perspective, then, only by means of state interaction on a local scale the project of creating a WMD/DVs Free Zone will be successful. Here is where the experience in South America with the Argentina-Brazil rapprochement could be an effective way out. The Argentine-Brazilian nuclear interaction shows the importance of the so-called 'neighbor-to-neighbor control', but it goes far beyond. Experts tend to agree that "[…] although the controls and rules exercised by the current nonproliferation regime can help delay the acquisition of nuclear capabilities, the most effective nuclear nonproliferation strategy is to reduce the underlying incentives for states to acquire such weapons. In such a strategy, the role of regional neighbors is likely to prove crucial."[21]

In this context, even though considered farfetched, the possibility of developing a system like ABACC in the Middle East has received much thought.[22] In order to examine this possibility in more depth, it is necessary to take into consideration the differences and similarities of the successful story of Argentina-Brazil rapprochement.

## A Multidimensional Approach: The ABACC Concept

It is our opinion that a multidimensional approach is required to evaluate the applicability of the ABACC concept to other conflictive situations involving nuclear dangers. In order to deal with all practical aspects of this approach, several key elements should be assessed before exporting the efficiency of the ABACC model to a regional context. It seems obvious that a detailed global reading of the political, social, cultural, and legal circumstances shows that some elements present in the Argentine-Brazilian landscape are absent in the Middle East, where there is a situation of armed conflict (domestic or international) and religious differences.

In order to deal with the breaches and differences that may exist between regions, the comprehensive background should be assessed and all complex elements need to be considered. To this end, we have developed an interpretative matrix – as a framework of key dimensions of analysis – aimed at revealing the feasibility to transfer the ABACC concept to other contexts.[23] Our suggested matrix relies on the following six analytical dimensions:

- *Conflict-related dimension:* It is associated to the degree of severity or intensity of the opposition and rivalry between the parties, as well as its length and consequences. It includes not only an objective pattern that can identify the amount of violence or its extension in time, but also subjective perceptions on the characteristics of the antagonism considered relevant to each actor. The conflict between the parties can have (real or not) ethnic, religious, economical or political motivations, and it can be rooted in a long-away past, or be only a recent resentment.
- *Actor-related dimension:* This aspect is linked to the assessment of actors involved in the region (both as actors and/or as third parties), the political system of each party (democracy, theocracy, totalitarian regime), as well as to the subjective aspect of the interests and perceptions of each one of them (radical differences or similarities, tradition of bilateral understanding and negotiations, etc.). This subjective aspect includes bottom-up decisions and patterns (interests in mutual cooperation of the parties themselves) and top-down pressure (interests of external powers in the region in general and/or in the development of the conflict in particular).
- *Territorial dimension:* This dimension has to do with the geographical scope of the rivalry, and the territorial importance of the parties involved, since space control is a key element to understanding the regional logics of state behavior and self-perception.
- *Scientific-technological dimension:* It is connected to the biological, chemical, and/or nuclear weapon development of the parties involved as well as of their delivery systems. The balance or inequality of technical development between the states is an important factor to determine the nature of the opposition and can be a fundamental constraint to mutual cooperation. The national possession of sensitive materials to produce weapons is also an aspect that needs to be taken into account.
- *Legal dimension:* This aspect is focused on the juridical framework such as the existence of international conventions or universal/regional customary rules that may affect the parties to the conflict. This framework creates obligations that states ought to comply with. Apart from the existence of legal rules, this dimension should also deal with the level of compliance or respect of international treaties by each party to the conflict.
- *Other regional equilibriums (economical, cultural, religious dimensions):* Depending on the type of conflict, aspects concerning social-rooted perspectives and community-based ways of dealing with rivalry may also play an important role.

## Transfer Potential

A short analysis of how this matrix could be applied to the Argentina-Brazil cooperative framework can shed light on a possible further applicability of the model. As preliminary findings, a summary of the main aspects that should be taken into consideration is provided here.

In terms of the *conflict-related dimension*, the ABACC was created in the historical context of a peaceful (but distrust-inspired) relationship between Argentina and Brazil. The two countries have kept a long tradition of peace and tolerance, but also of a certain mutual distance since the middle of the 19th century, with neither mutual security threats, nor territorial conflicts, nor involvement on third party disputes. Even with diverse size, and national and cultural identities, including different languages, none of those issues have been sources of serious divergences. Both countries have developed highly educated

leading classes and scientific-technical elites, which aspired many years ago at mastering on advanced technology, including nuclear, and particularly at closing the nuclear fuel cycle. Applied to this case, the outcome of our pattern of analysis would show for the first three dimensions, a low level of perceived threats, and a benign and tolerated diversity. This can be translated as no root causes for regional conflicts. Nevertheless, a manifest mutual nuclear rivalry and mistrust grew during the 1970s and 1980s, mostly fuelled by governing military elites, striving for supremacy over the Latin American region.

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Tensions in the Middle East, on the contrary, do not remain in the mere potentiality of war, but often take on the character of domestic or international armed conflicts. Besides, such conflicts obey to different and varied motivations. Among them, religious causes are particularly relevant considering the extreme fierceness related to the misunderstandings of Jewish and Muslim cultures, or within Islam itself. Thus the fact that the main parties to the conflict are Israel and the Arab countries – which have different intentions and perceptions on their mutual existence – implies a particular reality that cannot be ignored in the discussion of a possible cooperation. From a political point of view, the demise of authoritarian regimes in Middle East Islamic states such as Iraq (Saddam Hussein) and Libya (Muammar Gaddafi) has removed some of the motivations for the pursuit of WMD. However, there have been some heavy concerns: the Syrian biological and chemical capabilities under Bashar al Assad have generated discussions among politicians, diplomats, and scholars alike. But these tensions have eased to a degree since Syria has joined the Chemical Weapons Convention in October 2013 and has since worked in cooperation with international partners to destroying production facilities and its chemical arsenal.[24] Some other countries experienced a political and diplomatic adjustment. On February 21, 2013, the IAEA released a report showing continued expansion in Iranian uranium enrichment capabilities. The IAEA continued to be denied access to the Parchin military installation, whose activity – monitored only through satellite imagery – could be an indicator of nuclear weapons development. However, the assertive rhetoric of former President Mahmoud Ahmadinejad that Iran had the capabilities to build nuclear weapons has ceased. Current President Hassan Rouhani's statements that Iran is only aiming at a nuclear peaceful development indicate a more moderate approach.[25]

If we consider the *number of actors involved*, we find out that in South America there has not been any massive or large-scale conflict in the context of the creation of the ABACC (the last armed conflict involving Argentina and Brazil being the Triple Alliance War or War of Paraguay in the mid-19th century). Third parties have become interested in the Southern Cone not only because of its natural resources (specifically in the Amazonia) but also in the availability of fresh water underground reservoirs across the region (the Guarani Aquifer being the largest single body of groundwater in the world).

In the Middle East, conflicts are characterized by the intervention of both regular forces and armed groups or tribal militias, often with support of third states. Besides that, the geographical dimension shows the local importance of hydrocarbon resources, which usually leads to the intervention of different states and several international players, who may contribute to the preservation or cessation of hostilities. A religious element is also important from this territorial perspective, since the fighting against the occupation and for sovereignty over the exact same space can also be explained through the nature of what is considered to be sacred lands.

As far as the *territorial dimension* is concerned, it should be noticed that Brazil is the largest country in South America, encompassing around half of the continent's land area and population. Argentina is the second one both in territory and population, so their relationship sets the pace of economic and political dynamics of the whole subcontinent. The number of small and medium-sized countries in the Middle East (including Arab states and Israel) makes it more complicated to agree on the basis of a common ground system.

In terms of *scientific-technological development* and possession of material and infrastructure necessary for the development and maintenance of nuclear facilities, it is obvious that, despite a certain level of parity, Brazil has been showing some higher projections in the development of its nuclear industry and the plan towards nuclear-powered submarines. After certain doubts from the global community, improving its alliance with Argentina – a country that has less clear projects and a decayed nuclear program that needs to be re-invigorated, but has an excellent record of transparency in international fora – could help Brazil gain more trust.

In the Middle East, the alleged possession of nuclear weapons by Israel, deemed to be effective for self-defensive purposes, creates a deep regional misbalance in the nuclear area. Many Arab countries have either announced plans to explore atomic energy for peaceful uses or have signed nuclear cooperation agreements: Iran, Saudi Arabia, Algeria, Egypt, UAE, Jordan, Morocco, Tunisia, Turkey, Syria, Kuwait, Qatar, and Oman – Yemen and Libya having cancelled their nuclear programs. Since there have been no nuclear tests in the region (as it happened in Latin America), it might not be unreasonable to think of a first step as in the ratification and enforcement of the Comprehensive Nuclear-Test-Ban Treaty (CTBT), as has been suggested.[26]

The *legal framework* in the region places Argentina and Brazil in a similar standing: they have both signed and ratified the NPT, they are party to the same treaties on chemical and biological weapons and on disarmament, and under the current presidency of Cristina Fernández de Kirchner and Dilma Rousseff they are leading sub-regional integration processes such as MERCOSUR and the Union of South American Nations. As far as the non-proliferation regime is concerned, both states are active members to the Nuclear Suppliers Group. Argentina being a party to all multilateral export control regimes, such as the Missile Technology Control Regime, the Wassenaar Arrangement, and the Australia Group, it may provide Brazil with a cooperative scheme that could be efficient in order to gain confidence in front of other states taking part in these political mechanisms.

In the Middle East, prospects for joint projects are strongly limited due to the persistence of a regional inequality resulting from the fact that Israel is the only regional non-party to the NPT. What is more, Israel has not joined the Chemical and Biological Weapons Conventions. Therefore almost all Middle Eastern governments eventually stated that they would not adopt certain multilateral treaties prohibiting weapons of mass destruction until Israel also did so.[27]

## Conclusion and Recommendations

Considering the existent differences between the two regions, it seems that the possibility of applying prima facie a 'neighbor-to-neighbor' approach to the Middle East faces a number of obstacles.

***Endnotes***

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22. Already in Mustafa Kibaroğlu (1996) 'EURATOM & ABACC: Recipes for a Middle East NWFZ?', in Jan Prawitz and James F. Leonard (eds) A Zone Free of Weapons of Mass Destruction in the Middle East, Geneva: UNIDIR. Much more recently, in a speech commemorating ABACC's 20th anniversary (July 2011), the Brazilian Minister of Foreign Affairs, Antonio Patriota, recognized the importance of the ABACC and of the Quadripartite Agreement as relevant contributions to the strengthening of the pacific and pacifist vocation of South America and proposed a reflection on the Brazilian-Argentine example as a source of inspiration for other regions, such as the Middle East.
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### Further Reading

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Identifying the degree of difficulties as well as options to overcome them deserve a deeper analysis for which the above mentioned matrix methodology could be useful.

The multidimensional analysis we developed – even in the short version presented here – clearly shows two regional contexts that are hardly compatible. However, it should be noted that the situation at the start of nuclear cooperation processes is never perfect. In Latin America an NWFZ took forty-five years to succeed: we are necessarily facing long-scale processes that take time. Reduction of mistrust always involves a considerable degree of patience and a day-by-day approach.

Another advantage that comes out of the matrix, as drafted here, is related to the possibility of focusing on different layers and dimensions individually. Since consolidating a progressive evolution in terms of regional cooperation requires time, closing the narrower gaps first in the Middle East can guarantee some initial successful steps that may generate stronger confidence and prepare the room to start tackling, in a second turn, the more difficult steps.

The real and effective commitment of the actors involved (both locally and externally), the establishment of long-term policies supported by stable regimes (not only in the nuclear field), as well as a common legal basis and the support by the international community are necessary requisites for the reduction of tension in the region. Only under these conditions starting of new activities aimed at establishing a WMD/DVs Free Zone in the Middle East might be possible, with all the positive consequences this would entail, both for the benefit of the local population and the maintenance of the international peace and security. An expansive model, based on mutual trust, does not require everyone to be on board from the very beginning, but demands a high level of commitment that, in the right environment, states will start to show.

Finally, if the proper conditions are met, the ABACC concept may provide much more than a framework for 'neighbor-to-neighbor' safeguards and mutual control at a regional level. Most importantly, it can be taken as a living proof of how a bilateral narrative – well adapted to a specific scenario and a local reality – can develop into a successful way of overcoming historical differences by giving peace a chance. ■

### About the Academic Peace Orchestra Middle East (APOME)

*The Orchestra is the follow-up project of the "Multilateral Study Group on the Establishment of a Missile Free Zone in the Middle East". The Academic Peace Orchestra Middle East is a classical Track II initiative: it consists of some 100 experts – mainly from the Middle East/Gulf, one of the most conflict-ridden areas of the world. The Orchestra is meeting regularly in working groups (Chamber Orchestra Units) on specific topics in the context of a workshop cycle from 2011-2014. The main goal of this initiative is to shape the prospective Middle East Conference on the establishment of a zone free of weapons of mass destruction and their delivery vehicles agreed upon by the international community in May 2010.*

*For this reason, these experts develop ideas, concepts, and background information in a series of Policy Briefs which are the results of intense discussions within the Chamber Orchestra Units. In this framework, the broader normative Cooperative Security Concept will be further developed, embedded, and institutionalized in the region. At the same time, the Orchestra meetings serve as venues for confidence building among the experts. The networking activities of PRIF's Project Group are documented by the Atlas on Track II research activities in or about the Middle East/Gulf region.*


Editor/Project Coordinator: Adj. Prof. Dr. Bernd W. Kubbig
Co-Editors: Dorte Hühnert, BA,
and Christian Weidlich, MA.
Peace Research Institute Frankfurt,
Baseler Straße 27-31, D-60329 Frankfurt am Main,
Phone: +49-69-95910436, Fax: +49-69-558481,
E-Mail: kubbig@hsfk.de,
Internet: www.academicpeaceorchestra.com

PRIF Peace Research Institute Frankfurt — HSFK Leibniz-Institut Hessische Stiftung Friedens- und Konfliktforschung
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