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Regional Confidence Building in 1995:  
South Asia, the Middle East,  
and Latin America

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*Pragmatic steps toward ideal objectives*



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## Project on Confidence-Building Measures for Regional Security

Confidence-building measures (CBMs) helped to reduce tensions and promote European security during the Cold War. The theory and practice of confidence building—such as giving prior notification of military exercises or establishing “hotlines”—are now being developed in other conflict-prone regions. The Stimson Center's project has focused primarily on South Asia, the Middle East, and the Southern Cone of Latin America. New programming is being developed for China.

The project has five main elements:

- Washington meetings for foreign diplomats and military attachés, participants from executive and legislative branches, representatives of non-governmental organizations, and journalists to discuss how CBMs might help to solve regional security problems;
- CBM workshops within regions of interest, with local co-sponsorship, that reach key target audiences: military officers, government officials, journalists, and academics. Workshops have been held in South Asia, the Middle East, and the Southern Cone;
- commissioned papers to stimulate thinking and problem-solving approaches within regions of interest. Commissioned work is underway in South Asia, China, the Middle East, and the Southern Cone;
- publications for distribution to interested diplomats, government officials, military officers, journalists, and academics; and
- a Visiting Fellows program for talented individuals from India, Pakistan, and China, who are invited to Washington to conduct research and to become immersed in the theory and practice of CBMs.

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## List of Abbreviations

ABACC	Brazilian–Argentine Agency for the Accounting and Control of Nuclear Materials
ACRS	Arms Control and Regional Security (Working Group)
ASEAN	Association of Southeast Asian Nations
BJP	Bharatiya Janata Party
CAMS	Conflict-Avoidance Measures
CBMS	Confidence-Building Measures
CETAMA	French Commission for the Establishment of Analytical Methods
CNEA	Argentine National Nuclear Authority
CSBMs	Confidence- and Security-Building Measures
CSCE	Conference on Security and Cooperation in Europe
IAEA	International Atomic Energy Agency
IMF	International Monetary Fund
INCSEA	Incidents at Sea Agreement
INF	Intermediate-Range Nuclear Forces (Treaty)
ISI	Inter-Services Intelligence Agency (Pakistan)
LAC	Line of Actual Control
MAC	Mixed Armistice Commission
Mercosur	Common Market of the South
NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organization
NPT	Nuclear Non-Proliferation Treaty
OAS	Organization of American States
OPANAL	Agency for the Prohibition of Nuclear Weapons in Latin America
OPEC	Organization of Petroleum Exporting Countries
OSCE	Organization for Security and Cooperation in Europe
SAARC	South Asian Association for Regional Cooperation
SAR	Search and Rescue
SCCC	Joint System for Accounting and Control of Nuclear Materials
START	Strategic Arms Reduction Talks (Treaty)
UN	United Nations
UNDOF	United Nations Disengagement and Observer Force
UNEF	United Nations Emergency Force
USDOE	United States Department of Energy





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## Preface

Confidence-building measures (CBMs) performed well in 1995 in most regions of the globe, with the notable exception of South Asia. CBMs—which can be broadly defined as steps taken to reduce tensions, avert unintended escalation or war, and promote reconciliation—are most closely associated with the East–West negotiations that helped end the Cold War. This, however, is an excessively narrow view. Many regions are now quietly but actively engaged in the negotiation and implementation of CBMs, each region tailoring the process to suit its unique circumstances.

In almost all regions, however, states are likely to find that they share some common security concerns, such as the need to distinguish between real and unfounded threats to national security. In regions where military affairs are governed by excessive secrecy, greater transparency can help to change these ingrained habits while alleviating unwarranted concerns. In implementing transparency measures then, states of one region may usefully look to the experience of another.

In 1995, CBMs designed to manage Cold War tensions in Europe have helped provide for stability during a post-Cold War period of considerable uncertainty concerning Russia's future. In the same year, CBMs helped advance the Middle East peace process, especially at the multilateral level and despite the tragic assassination of Israeli Prime Minister Yitzhak Rabin. In the Asia–Pacific region, China has now endorsed CBMs and multilateral as well as bilateral approaches to security matters. The ASEAN Regional Forum is off to a good start in promoting discussion on security issues. India and China continued to work quietly and effectively in defusing their longstanding border dispute through the mechanisms of confidence building.

Closer to home, the Organization of American States (OAS) made great strides in promoting region-wide confidence building in 1995, voting to make permanent an OAS Committee on Hemispheric Security and approving the Declaration of Santiago, wherein states agreed to pursue a number of new regional confidence- and security-building measures. In the Southern Cone, Argentina and Brazil have moved successfully from declaratory measures stating their commitment to peaceful uses of nuclear energy, to effective implementation of an inspection and verification regime that closely monitors nuclear facilities in both countries.

In contrast, 1995 was a bad year for CBMs in South Asia. Pakistan has continued to close off channels of communication with India, declining to discuss better implementation of existing measures or the negotiation of new ones. Thus, the region is ripe for increased tensions resulting from the Kashmir dispute and new missile and nuclear-related programs.

As the experience of South Asia attests, CBMs cannot work in an unforgiving political climate. Likewise, CBMs will fail unless the involved parties view them as mechanisms to preserve or enhance national security. States must be convinced in very tangible ways that they are better off with CBMs than without them.

In some regions, confusion over CBM concepts lingers, increasing resistance among military establishments to their implementation. Many others have come to understand that CBMs are tools that help build trust and provide for greater clarity of information among states. They can encompass measures ranging from communication "hotlines" and prenotification of troop movements, to regularly scheduled information exchanges and military-to-military contacts. The immediate goal of CBMs, then, is *not* arms control or arms reduction, *per se*; rather, CBMs are a means toward the end of national and cooperative security. Indeed, in the Middle East—where CBMs helped move parties from escalation control and conflict avoidance to confidence building and peacemaking—arms were provided to former adversaries to help ease their security concerns. Thus, CBMs need not be viewed as a slippery slope to arms control, although it may be in the national security interest of some states to pursue this aim.

This collection of essays examines how CBMs have fared in three very different regions—South Asia, the Middle East, and the Southern Cone of Latin America. These regions have implemented specific "tools" from the CBM toolbox with varying degrees of success. Each of these essays clarifies how prevailing political conditions can either facilitate or confound confidence-building efforts. Domestic factors play a paramount role in determining the success or failure of CBMs.

In India and Pakistan, tensions are at such a high level that national leaders currently find it difficult to implement properly previously agreed CBMs, let alone negotiate new measures. Pakistani Prime Minister Benazir Bhutto has refused to engage in a dialogue with India on CBMs, pointing to grievances over Indian practices in Kashmir. The wisdom of a strategy of non-communication during periods of considerable tension is extremely questionable. With this region facing the prospect of new missile deployments, accelerated production of weapons-grade fissionable material, and even the possibility of nuclear weapon testing, the Subcontinent appears in great need for the proper implementation of conflict avoidance and escalation control measures.

In the Middle East, on the other hand, high tensions have yielded to conditions that are conducive to confidence building. For many states, war fatigue and economic need have joined to make peace a commonly desired end-state, even amid fervid opposition to peacemaking. A quiet multilateral confidence-building process has helped to focus the attention of states on small steps that can be taken to facilitate long-term regional security. Support for this process is provided by the United States and Russia, who now cooperate and share roles as co-sponsors of the multilateral arms control and

regional security (ACRS) working group, as well as by Canada, the Netherlands, and Turkey, who act as mentors for specific areas of discussion.

In Latin America, the confidence-building process between Argentina and Brazil over domestic nuclear programs has very specific domestic and regional roots. The transition to democracy in both countries provided strong impetus to nuclear cooperation. In Brazil, a civilian president used transparency measures as a way of asserting civilian control over the military's nuclear program. The pull of economic integration also had a positive effect, coupled with the realization that economic resources could be more beneficially employed outside the costly nuclear field.

The inputs shaping the confidence-building process in each of these regions have been different. The richness of each regional experience, however, suggests that some utility may be derived from comparative evaluation. Some suitably adapted "borrowing" from region to region may even be in order.

Over time, for example, the multilateral arms control and regional security talks in the Middle East may provide useful instruction on how to forge confidence building on a *multilateral* level in other regions. Certain aspects of the Argentine–Brazilian experience in nuclear confidence building may prove helpful in shaping a nuclear weapons-free zone in the Middle East or South Asia, as some analysts have already begun to consider. And in South Asia, where progress toward confidence building has been frozen by political leaders, perhaps progress in other regions can serve as a useful goad.

The essays that follow are narrow in scope. They do not do justice to the wide range of important work being done in the regions covered, and many regions are not covered at all. In subsequent years, the Stimson Center hopes to repeat this exercise, producing increasingly extensive annual reviews of CBM negotiation and implementation across regions.

**Michael Krepon**  
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## South Asia: A Time of Trouble, A Time of Need<sup>1</sup>

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Relations between India and Pakistan are at a low ebb. Formal bilateral discussions on security matters have been stalled since early 1994 with Pakistani Prime Minister Benazir Bhutto's decision to suspend foreign secretary-level discussions on new conflict-avoidance or confidence-building measures (CAMS/CBMs). Government officials in Islamabad cite the need for improvement in India's treatment of Kashmir before discussions are resumed. Both governments are unhappy with the implementation of existing measures to reduce tensions and avoid unintended conflict; but, with bilateral channels of communication closed, the situation is unlikely to improve in the near-term.

Nor is there an agreed regional forum to discuss security concerns; India resists such a framework with a tenacity equal to Pakistan's reluctance to reopen bilateral channels of communication. The existing regional forum that might be employed for discussions of security issues—the South Asian Association for Regional Cooperation (SAARC)—is expressly excluded from doing so by its mandate. Meanwhile, the level of violence in Kashmir remains high, reinforcing hard-line positions in New Delhi and Islamabad.

Domestic politics in Pakistan has assumed a particularly fierce, unforgiving character. The opposition leader and former prime minister, Nawaz Sharif, has found it unacceptable for the incumbent to carry out the same exchanges on CBMs that he endorsed while in office. National politics within Pakistan appear trapped in a bitter contest between arch rivals. The struggle for power supersedes all; effective governance has become an afterthought.

Kashmir has long been the reason for conflict-avoidance measures on the Subcontinent. In the current intractable state of Pakistani politics, it is also the reason not to engage in official dialogue on such matters. For Prime Minister Bhutto to acknowledge Indian steps removing New Delhi's heavy hand in Kashmir and to reopen bilateral discussions would be to invite a political firestorm fanned by the opposition. Pakistani media coverage of the Kashmir issue has hardly laid the groundwork for a change in government policy. It will take formidable leadership to engineer such a change, as the city streets of Pakistan, like those in India, have long been mobilized to ignite tensions, not to relieve them.

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<sup>1</sup>This essay is drawn from the author's introductory chapter in *Crisis Prevention, Confidence Building, and Reconciliation in South Asia*, Michael Krepon and Amit Sevak, eds. (New York: St. Martin's Press, 1995).

Even with far-sighted and bold political leadership, Pakistan would be hard pressed to initiate gestures of reconciliation with India as long as Kashmir is on the boil. As the weaker party in the dispute, Islamabad has added reason to wait for New Delhi's example. India's Congress (I) Party leaders, however, seem deeply disinclined to initiate change in regional security policies. After all, there is no immediate or pressing reason to chart a new course, unlike the case for economic liberalization.

For New Delhi, the safest position on security matters is one that claims the moral high ground while allowing maximum freedom of maneuver. Thus the ardent embrace of global, nondiscriminatory solutions to security problems places the burden of action on others. Global change, however, is predicated on prior initiative at the personal, local, national, and regional level. By absenting itself until the end of this transformational process, India limits the constructive role it might otherwise play. Gandhi operated under a different philosophy, advising that "An ounce of practice is worth more than tons of preaching." But there are few Gandhis walking the earth today, and fewer still who aspire to high public office.

Indian Prime Minister P.V. Narasimha Rao is clearly cut from different cloth. He has demonstrated a surprising durability in office, but faces resurgent domestic opposition and a restive political base. Rao's natural tendency has been to respond to Pakistani grievances with studious indifference. Since any Congress (I) Party initiatives to soften Indo-Pakistani relations would surely become campaign ammunition for the opposition Bharatiya Janata Party (BJP), Rao's posture is well-grounded in domestic political realities. Provocations within Kashmir, Bombay, and elsewhere, which are universally presumed within India to be inspired by Pakistan's Inter-Services Intelligence Agency (ISI), have been met with armed might and police action. Rao's natural disinclination to take risks for normalized relations has no doubt been reinforced by the unlikely prospect of a favorable response to any such initiative by a besieged counterpart in Islamabad.

Thus, the prospects for small steps to minimize tensions, let alone to promote political reconciliation, are modest at best over the near-term. Indeed, the greater likelihood in the near-term is that Indo-Pakistani relations will continue to worsen, as exemplified by the closing in 1994 of the Indian consulate in Karachi and the Pakistani office in Bombay.

### **Tensions, Real and Scripted**

One of the paradoxes of conflict-avoidance and confidence-building measures is that precisely when they are most needed, they are most difficult to negotiate and implement properly. For these measures to be of greatest utility, they must be in place and working properly before tensions mount. Such conditions do not exist on the Subcontinent, where measures have been implemented begrudgingly, at best. Thus, there is no sound and reliable basis for India and Pakistan to defuse a surge in tension,

especially when the Indian and Pakistani prime ministers have a poor working relationship or are in a weakened position at home. Under these circumstances, whatever steps to be employed in the event of another crisis will have to be ad hoc and may require third party involvement. India and Pakistan deserve better than this.

One does not need to look far afield for the makings of another ratcheting up of tension. Pakistan's lack of strategic depth and highly vulnerable lines of communication mandate a forward posture and high state of readiness for its ground forces. This in turn mandates prudent defense countermeasures by India. With the fourth and eighth largest land armies in the world facing each other, and with both sides having firepower less than one kilometer apart along the Line of Actual Control (LAC), every large-scale training exercise near the border is necessarily a cause for concern.

The absence of bilateral and regional channels of communication on security matters, the uneven implementation of existing CBMs, the poor personal chemistry between the prime ministers, and the constraints imposed by domestic politics in both countries provide sufficient kindling for new fires on the Subcontinent. The kindling can be lit by sparks from acts of terror and subversion, continued unrest in Kashmir, and the introduction of new missile systems capable of carrying weapons of mass destruction.

## **A Conflict Scenario**

It does not take too much imagination to envision how fears, rumors, and provocations can conspire to increase tension significantly between India and Pakistan. Several scripts have already been written and enacted that could form the basis of another dramatic performance gaining international attention.

Act one might begin with an announcement that the Indian army is carrying out military exercises with armored units at the Mahajan training ground adjacent to the Rajasthan/Punjab border. But intelligence officers in Pakistan, notorious for their alarmism and troubled by the lack of proper advance notification, suspect that this may not be a routine training exercise. Some believe that New Delhi wishes to send Islamabad a message about continued interference in Kashmir. Their fears are reinforced by partial evidence suggesting unusual activities involving the use of railroads to support the "exercise."

As a precaution and to signal continued resoluteness in support of the Kashmiri struggle, Pakistani armored units assemble at the training area around Multan, only three hours away from the border. Indian intelligence, notorious for its excitability, believes that Pakistani units are equipped with ammunition and petrol far in excess of that required for a mere exercise.

Then, to be on the safe side, or, perhaps, to make for more realistic military exercises, the Indian army commander practices tank crossings of the Indira Gandhi Canal. This, in turn, reinforces fears in Pakistani General Headquarters that the exercise masks hostile intent. To be on the safe side, Pakistani units are placed on a higher state of readiness, and, to relieve pressure from the apparent Indian buildup on the border, the ISI or "non-governmental groups" step-up support for those seeking the separation of Kashmir from the Indian Union. Camps conspicuously reappear in Azad Kashmir to train freedom fighters. It is not clear whether the government in Islamabad is aware of, let alone in control of, the reestablishment of these camps.

These activities, in turn, generate formal protests and stern rhetoric from Indian government officials about the risks entailed by heightened support for terrorist activities across the LAC. Opposition leaders demand air strikes against the camps and, at long last, an end to paramilitary operations against Indian territory.

By this time, our script is well into the third act. In response to hot rhetoric from New Delhi, the Pakistani prime minister travels to Muzaffarabad, declaring Pakistan's unending support for the beleaguered Muslim population of Kashmir, to which government officials in New Delhi join opposition leaders in publicly surmising that it might be time to teach Islamabad a lesson about the dangers of fomenting secessionist movements.

With street demonstrations throughout Pakistan led by opposition leaders now a daily occurrence, the prime minister declares that Pakistan will never cower before Indian threats and that the country is able and willing to respond at whatever level necessary to defend national honor. India responds by moving Prithvi missiles from recessed to overt deployments, actions reported under banner headlines in the Indian press.

At this point, the Pakistani media blares unconfirmed reports, believed to be reliable in some intelligence circles, that India has brandished nuclear weapons against Pakistan. The government responds by deploying Hatf missiles and by moving strike aircraft to forward operating bases. There are also unconfirmed reports that M-11 missiles have been moved from secured storage into the field. In Washington, key members of Congress call for the imposition of sanctions on Pakistan for having violated the Missile Technology Control Regime. The US embassy in Islamabad is stormed and partially damaged by angry mobs.

Pakistani missile deployments and the movement of strike aircraft to satellite bases generate wild reports in the Indian press about hostile preparations for a nuclear attack. Opposition leaders and eminent commentators call for pre-emptive action. The United Nations secretary general offers to play a mediating role, but is rejected by India. The United States offers its services, but is rejected by Pakistan. Acts four and five are left to the imagination of the reader.



Granted, the aforementioned scenario is unduly alarmist, even though it is drawn in part from the 1986–87 Brasstacks exercise and the 1990 crisis. Large-scale military exercises along the Indo-Pakistani border, like those placing both countries on the brink during Brasstacks, hopefully are a thing of the past. Most important, New Delhi and Islamabad do not want to have a fourth war, and leaders in both capitals can be expected to try to avoid one—just as they did during the 1990 crisis.

Nonetheless, this troubling script is worth pondering in a region prone to mishaps. Sometimes the momentum of events during crises controls leaders, rather than the other way around. Simple prudence requires that attention be paid to worst cases. The smoldering resentments of two generations on the Subcontinent have not been doused. Many in both India and Pakistan are eager to pour kerosene on them. The geography of conflict within the region will not change, which places the Indian and Pakistani armies at close quarters, while Kashmir remains an open sore. In these circumstances, no harm can come from taking steps to make highly damaging scenarios increasingly remote. Indeed, there is much to gain for both India and Pakistan in doing so.

### **The Instability of Nuclear Deterrence**

Some strategic analysts and retired senior military officers in India and Pakistan argue that offsetting nuclear capabilities will provide needed stability to South Asia. In this view, it is better to rely on overt nuclear deterrence than on mere shadow play. A few Western analysts have also adopted this view, noting that offsetting nuclear capabilities kept the Cold War from becoming hot and might serve a similar purpose on the Subcontinent.

It is odd that South Asian strategists who have long rejected the imposition of alien Western constructs should warmly embrace the concept of nuclear deterrence developed at the RAND Corporation and other redoubts of US "Cold Warriors." In truth, the Cold War history of nuclear deterrence was far from stable. Instead, it is replete with close calls and near misses. A few of the horror stories or crises that nearly developed have been revealed—especially those surrounding the Cuban missile crisis—and more will come to light as US and Soviet archives are opened. The principal culprits usually have been technical snafus, weak command and control procedures, and faulty intelligence assessments.

The first decade of overt, offsetting nuclear capabilities between the United States and the Soviet Union—and between the Soviet Union and China—were particularly hair-raising. This should come as no surprise, since nuclear equations are most unsettled and tension-producing at the outset of any such pairing. Invariably, tense relations immediately become more tense when the destructive power of nuclear weapons is added to the equation.

Over several decades, offsetting nuclear capabilities can theoretically provide the basis for normalized relations. This did not occur, however, in the US–Soviet case, where new developments related to nuclear weapons repeatedly set back the process of normalization. Long after the point when nuclear deterrence should have helped ameliorate fears, the domestic politics of the United States and the Soviet Union were dominated by paranoia, fueled in part by new variations of overkill.

Even during the 1970s and 1980s, both countries continued to experience brushes with nuclear disaster, despite highly evolved command and control procedures. Far-sighted political leadership, not nuclear deterrence, broke the back of the Cold War. True normalization came with the odd juxtaposition of Mikhail Gorbachev and Ronald Reagan, leaders who utterly rejected traditional Cold War valuations of nuclear weapons. Then, of course, an entirely new set of nuclear dangers emerged, centered on the safe and secure dismantling of bloated stockpiles.

It will take time and considerable research for the full picture of these near-nuclear disasters to be revealed. Such cautionary tales need to be exposed to move discussions about nuclear deterrence away from presumed cultural biases. The message of nuclear danger from Western analysts should not be construed as patronizing; at issue is not whether the "volatile" brown man is more prone to self-immolating behavior than the "rational" white man. White men nearly blew themselves up time and again, despite the "stabilizing" presence of nuclear weapons.

Surely, India and Pakistan will not engage in arms racing of deplorable Cold War proportions. Even engaging in nuclear deployments at a small scale, however, invites multiple dangers. If serious tensions exist between states, they will clearly not be ameliorated by nuclear weapons, regardless of the race, color, or creed of their possessors. The central paradox of offsetting nuclear deployments is that while they may prevent war, they will also increase tensions in any crisis.

The recent history of South Asia—with two nerve-racking crises during a period when there may have been "offsetting" nuclear weapon capabilities—provides scant testament to the stabilizing role of nuclear deterrence. To be sure, one can take comfort that the crises in 1986–87 and 1990 did not lead to wars and that crisis escalation was contained. Still, no responsible political or military leader in South Asia can be sanguine about this recent track record. To the contrary, recent history cries out for stronger CBMS.

### **Confidence Building: Barriers and Prospects**

The principal reasons why CBMS have not taken root in South Asia relate directly to the hard issues in dispute between India and Pakistan and the ill-will they have engendered—especially Kashmir. There are more subtle reasons, as well, that make such

measures even harder to achieve. CBMs, for example, operate on a premise directly contrary to the predominant culture of adversarial politics found between India and Pakistan. In this bitter domain, any step that benefits an adversary must necessarily be bad for the home side. It is remarkable how deeply rooted this "zero-sum" perspective has become for two nations that just two generations ago were united under a central government.

Another reason why CBMs have not been accepted is that they are viewed as a foreign import. CBMs appear to be an outgrowth of the Cold War, as they were most deeply developed and successful in ameliorating conflict in Europe between NATO and Warsaw Pact countries. As a result, they are naturally suspect. The India-Pakistan military exercise and airspace agreements were negotiated after the 1990 crisis at the urging of the United States. These conflict-avoidance measures appear to have been accepted not so much for their intrinsic merit, but because they would do little harm while satisfying well-meaning outsiders and aid donors.

These "cultural" impediments to proper CBM implementation make difficult problems like the Kashmir dispute even harder to resolve. In Europe, the Middle East, and Latin America, the letter and spirit of agreements are usually honored. In South Asia, there is no cordial spirit to existing agreements, and the letter is often broken as well. Existing measures have become another means of expression for adversarial politics.

In contrast, US and Soviet military officers took pride in maintaining highly professional and proper implementation of CBMs—even when political relations were abysmal. Once during the Reagan administration, after a US military officer was shot in East Germany by a Soviet sentry, Secretary of Defense Caspar Weinberger wished to cancel a regularly scheduled meeting between US and Soviet naval officers implementing the Incidents at Sea Agreement. He was overruled, much to the satisfaction of military leaders opposed to politicizing their CBM channels of contact. Israeli and Egyptian CBM implementation was similarly correct during their "cold peace."

South Asia follows a far different pattern. Interviews with active-duty military officers in India and Pakistan responsible for the implementation of existing CBMs invariably produce comparable complaints: reasons are found not to provide prior notification of military exercises, and the air space agreement is regularly violated. When asked why he did not raise concerns over compliance, one Director General of Military Operations—the transmission channel for CBM notifications—replied that to do so would provide more satisfaction to his opposite number than to himself. Demanding proper implementation of CBMs between India and Pakistan is viewed by many military officials as a belittling and fruitless exercise.

Unless there is a greater sense of ownership for existing CBMs and some relief from the culture of adversarial politics, South Asia will continue to lag well behind other

regions that have normalized long-adversarial relations. Change is possible with the recognition that, despite all of their heartfelt grievances, India and Pakistan have a strong mutual interest in avoiding war and unintended escalation. The dispute over Kashmir makes such work more difficult to carry out, but more necessary as well.

Creative ways must be found to surmount domestic political constraints in India and Pakistan in order to re-establish channels of communication on security issues. For both countries, to do so requires reconsideration of positions that serve short-term political purposes, but at the expense of long-term national security gains. Significant progress in reducing tensions is unlikely unless Islamabad reassesses its firm opposition to the resumption of bilateral discussions with India and unless New Delhi reassesses its steadfast resistance to regional talks.

This is not a time for India and Pakistan to exchange military bands or to conduct joint mountaineering expeditions. It is a time, however, to strengthen measures to avoid unwanted conflict and unintended escalation. Fundamental issues of national security need to be placed above partisan politics. If Pakistan's generals take a renewed interest in conflict-avoidance measures, bilateral channels of communication can be reopened. India can help in this process by signaling its intention to propose an agenda for discussion that clearly serves the security interests of both states, while repeating its willingness to discuss the Kashmir issue.

It would be easier to reopen bilateral channels if New Delhi could see the value of regional security discussions. India is concerned that a regional forum will become an unwanted source of outside pressure. In actuality, Pakistan has greater reason than India to fear isolation at this time, given Islamabad's uncertain course and India's much improved ties with China and the United States. A regional forum must therefore operate by consensus to alleviate the concerns of any individual state over outside pressure.

China's economic growth and military potential are not simply India's concern. Consequently, a discussion of regional security issues in which China is constructively engaged can be important for all states in the region, especially when Beijing is undergoing a transition in leadership. Moreover, those in Pakistan who feel estranged from the United States may increase the possibility of erratic behavior in Islamabad. A regional dialogue can therefore be important to engage Pakistan in constructive ties with its neighbors. Far from being a threat to India's security, a regional security forum that engages both of India's neighbors of greatest concern could bring substantial gains. Since the deliberations could also clearly advance India's desire to discuss global issues, New Delhi might usefully reconsider its position.

Bilateral and regional channels could work in tandem to advance conflict-avoidance and confidence-building measures in South Asia. India and Pakistan would be wise to take these measures more seriously, not as a favor to the United States, Germany,

*Michael Krepon*

or Japan, but as a favor to themselves. The leadership of both countries will have to take greater responsibility for existing measures to ensure their proper implementation in deed and in spirit. Both India and Pakistan might also benefit from considering new measures that serve mutual national security interests, despite lingering grievances. For progress to be realized, the Subcontinent must be blessed with political leadership equal to the region's promise and problems.



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## Conflict Avoidance and Confidence Building in the Middle East

*Jill R. Junnola*

The current phase of the Middle East peace process which began in the Fall of 1991 presents a new opportunity for confidence building in the region. The "Madrid" peace process that emerged from the Gulf war provided momentum to resolve the Arab-Israeli conflict and build greater regional security in the Middle East. This phase of the process was actively nurtured by the shuttle diplomacy of then-Secretary of State James Baker and sustained by Secretary of State Warren Christopher and Special Envoy Dennis Ross. It was designed to proceed on two "tracks," one bilateral and the other multilateral. The bilateral track focuses on forging peace between Israel and each of her Arab neighbors, including, after some delay, the Palestinians. The multilateral track seeks to build broader regional cooperation and security by concentrating efforts in five functional working groups, including one on arms control and regional security.<sup>1</sup> Progress on the multilateral track is intended to follow rather than lead bilateral negotiations.

With regard to the Middle East peace process, many in the region argue that confidence-building measures (CBMs) by themselves, without progress on broader political issues, are not particularly useful. Others argue that CBMs "... should be—as the case in Europe—an integral part of the political process to reduce tensions and deescalate conflicts in the Middle East."<sup>2</sup> This essay endorses the latter view. First, prior discussions can enable parties to implement CBMs when political breakthroughs are achieved; and second, CBMs can also *contribute* to political breakthroughs and help build political support for a long-term peacemaking process. For example, the stability of the 1974 Disengagement Agreement between Israel and Syria has in one sense become a CBM in its own right: It demonstrates to Israelis that "Syria is capable of fulfilling and maintaining an agreement" and that it is not unconditionally hostile.<sup>3</sup> "Red Line" agreements between

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<sup>1</sup>Other working groups focus on economic cooperation, refugees, water, and the environment. For an account of progress made and topics discussed in all five working groups, including the one on arms control and regional security, through mid-1994, see Joel Peters, *Building Bridges: The Arab-Israeli Multilateral Talks* (London: Royal Institute of International Affairs, Middle East Programme, 1994).

<sup>2</sup>Abdel Monem Said Aly, "Arab Perspective on Arms Control," in *The Arab Israeli Search for Peace*, Steven Spiegel, ed. (Boulder, Colo.: Lynne Rienner Publishers, 1992), 157. Ariel Levite and Emily Landau make the same argument in their paper, "Confidence and Security Building Measures in the Middle East," *Journal of Strategic Studies* (forthcoming). They say that CSBMs (confidence- and security-building measures) "... have generally preceded a genuine political transformation of their relationship, thus serving as the forerunners of peace and arms control accords, not their product."

<sup>3</sup>Aryeh Shalev, *Israel and Syria: Peace and Security on the Golan* (Boulder, Colo.: Westview Press for the Jaffee Center for Strategic Studies, 1994), 43.

Syria and Israel in Lebanon, negotiated with the help of the United States in 1976, follow a similar pattern and have witnessed similar success.<sup>4</sup> One Israeli scholar has described the Red Line agreements as evidence of a "pragmatic element in Syria's approach toward Israel."<sup>5</sup>

CBMs can be applied in practical ways to both the multilateral and bilateral tracks. Declaratory CBMs can be a particularly useful tool in the context of ongoing negotiations and unfolding agreements, especially between Israelis and Palestinians where political signaling can help maintain momentum when violent incidents threaten to sidetrack the peace process. CBMs are also being negotiated in the multilateral arms control and regional security (ACRS) working group in an attempt to establish a dialogue on and infrastructure for cooperative security in the region. This essay will briefly examine the history of confidence-building efforts in the Middle East, assess trends in the region that may facilitate the current confidence-building process, and, finally, examine in detail the CBMs currently under discussion in the ACRS working group.

## Crucial Factors

Despite the long existence of a technical state of war between many of the Arab states and Israel, and contrary to the common perception of the Middle East as being rife with instability and tension, CBMs can and do work in the region. The measures in place have evolved over time from conflict-avoidance arrangements linked to post-war truces and disengagement agreements, incorporating force deployment limitations and cooperative aerial monitoring, to more ambitious confidence-building measures and peace accords. For the purposes of this essay, conflict-avoidance measures (CAMs) can be considered as "initial steps to avoid unwanted wars and unintended escalation."<sup>6</sup> CAMs can be distinguished from CBMs in that their implementation requires only extremely low levels of trust or faith among parties. Their primary focus thus tends to be on *separating* parties and providing a buffer between hostile forces, rather than on undertaking measures that require parties to engage in more demonstrable cooperative behavior, such as notifying each other of troop exercises in advance.

The evolution of post-war arrangements from CAMs to CBMs is not foreordained. These measures are successful only when states are committed to sustaining a long-term

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<sup>4</sup>Syria agreed not to dispatch its forces south of line stretching from Sidon in western Lebanon to Huna in the Southeast. Syria also agreed not to use its airforce against ground targets in Lebanon or to deploy ground to air missiles in Lebanon. *Ibid.*, 153.

<sup>5</sup>*Ibid.*, 43.

<sup>6</sup>See Michael Krepon (citing Peter Constable), "The Decade for Confidence Building," in *A Handbook of Confidence-building Measures for Regional Security*, 2d ed., Michael Krepon, ed. (Washington: The Henry L. Stimson Center, January 1995), 3.



process of cooperation and have sufficient incentives to do so. Where states still harbor the desire to maintain tension and launch surprise attacks, CAMs and CBMs will fail.<sup>7</sup>

An evaluation of the Middle East experience with conflict-avoidance and confidence-building measures, taking into account political conditions prevailing among countries at specific points of time, reveals a number of "ingredients" that may be necessary in order for such measures to function as intended.

### Common Interest in Avoiding War

First, as noted above, states must share a common interest in and commitment to lowering tensions and avoiding hostilities in order for conflict-avoidance and confidence-building measures to be effective. CAMs and CBMs cannot create this condition and are unlikely to survive in its absence. This point was made evident after the 1948 war, when it became apparent that provisions of the 1949 Armistice Agreements<sup>8</sup> had failed to discourage incidents among the states or to serve as a transition point to a permanent peace settlement in the region. Instead, because neither side—Arab or Israeli—had a sustained interest in avoiding further conflict, a brief period of relative tranquility was soon followed by a return to hostilities.

The Arab states came to view the armistice agreements as a means to maintain a "safe" state of belligerency against Israel. They could boycott Israel economically, close off shipping lanes to Israeli vessels, and launch incursions into Israeli territory without fear of full-fledged Israeli counterattacks, so long as Israel adhered to the provisions of the armistice agreements. Over time, however, as direct military clashes became more frequent, Israel came to regard ongoing Arab incursions into its territory as significant

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<sup>7</sup>The importance of internal support for security arrangements from involved parties is paramount. An externally derived CBM-regime is not likely to deter a nation if it really wants to maintain a high degree of tension, to launch a surprise attack, or, in the Israeli-Palestinian context, to refuse to implement an agreement. Even an airtight verification system is no substitute for political will. As one negotiator has phrased it, "cheating is a political problem, not a technical problem." See Paul Chrzanowski, Summary Report, Workshop on Arms Control and Security in the Middle East II, held in Delphi, Greece, January 3-7, 1994, IGCC Policy Paper #7 (San Diego, Calif.: Institute on Global Conflict and Cooperation, April 1994), 5.

<sup>8</sup>The 1949 Armistice Agreements between Israel and each of its Arab neighbors—Egypt, Syria, Jordan, and Lebanon—ended military actions and terminated, except between Egypt and Israel, "acts of hostility," among the warring states. The armistices established demilitarized zones (DMZs) under UN supervision and demarcation lines, which were not intended to be permanent political or territorial boundaries. Armistice provisions created the UN Treaty Supervision Organization (UNTSO) and four bilateral Mixed Armistice Commissions (MACs) to supervise the armistices, investigate incidents, and report to the Security Council. The MACs were composed of UN chairmen and observers as well as an equal mix of Arab and Israeli military representatives. See Fred Khouri, "UN Peace Efforts," in *The Elusive Peace in the Middle East*, Malcolm Kerr, ed. (Albany: SUNY Press, 1975), 30.

threats to Israeli national security. The armistice agreements, having failed to safeguard Israeli security, thus came to be discredited by Israelis and ceased to function as a constraint to offensive military actions. Incidents between Israel and Egypt and between Israel and Syria in the demilitarized zones intensified for many years, with Israel taking over most of the Syrian and all of the Egyptian DMZ, despite UN protests.<sup>9</sup>

A shared and sustained interest in avoiding future conflict was also absent among the parties after the Six-Day War in 1967. Israel was content to take refuge in its military superiority and stood ready to act aggressively to protect itself. As Malcolm Kerr states, "on the grounds that no Arab professions of readiness for peace could be trusted, a preference emerged in Israel for military advantage over any settlement such as might emerge from Resolution 242, the Jarring Mission, the Rogers Plan, etc."<sup>10</sup> The Arab states, after the passing of an initial period during which they may have been willing to make serious concessions for peace, later came to the conclusion that a return to war was the only way to redress their grievances.<sup>11</sup>

In contrast, after the October War of 1973, states of the region had strong incentives to avoid hostilities, and the conflict-avoidance measures that comprised the 1974 and 1975 Disengagement Agreements between Israel and its Arab neighbors proved to be quite effective. Israel's incentives to create tighter and more enduring post-war security arrangements after the 1973 war stemmed from the course of the war itself. Israel's heretofore unquestioned military superiority over its Arab neighbors had been challenged. As Carolyn Ziemke, of the Institute for Defense Analyses, notes, ". . . for the first time, the Israelis saw a net strategic advantage in seeking security on at least one

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<sup>9</sup>Ibid., 51; for a detailed discussion on the Israeli-Syrian MAC, see Shalev, *The Israel-Syria Armistice Regime: 1949-1955* (Boulder, Colo.: Westview Press for the Jaffee Center for Strategic Studies, 1993).

<sup>10</sup>Kerr, *The Elusive Peace in the Middle East*, 4.

<sup>11</sup>US policy analysts did not think the Arab states would use military force and were caught off guard in 1973, when Egypt and Syria launched an attack against Israel. William Quandt concludes that "Two basic conceptual biases led to the misperception of Egyptian-Syrian intentions. First, it was widely assumed that the 'military balance' was the key to whether there would be another war in the Middle East. This had been a basic element in American policy since 1967. However strongly the Arabs might feel about the need to regain their territory, they would not go to war if they faced certain defeat. . . . A deliberate, rationally planned war was simply implausible in the light of military realities. . . . Second, war seemed to make sense for the Arabs only if a political alternative for recovering their territory was precluded." At the time, a political alternative seemed imminent: Kissinger had in fact arranged for talks to begin in November of 1973. See Quandt, *Peace Process: American Diplomacy and the Arab-Israeli Conflict since 1967* (Washington: The Brookings Institution, 1993), 150. For a more detailed account of the origins of the 1967 war, see Malcolm Kerr, *The Arab Cold War: 1958-1967* (New York: Oxford University Press, 1967).

front by negotiating peace with its principal, and largest, military opponent: Egypt."<sup>12</sup> Moreover, Israel feared that growing US dependence on Arab oil "might force the United States to join Europe in progressively withdrawing support from Israel."<sup>13</sup>

Also, after 1973, the Arab states—Egypt in particular—could be satisfied with their military performance. As such, they could "afford to advance their case in a more relaxed, variable, imaginative, rational, moderate way, instead of clinging to a negative posture as their only recourse."<sup>14</sup> Relative to 1967, they were negotiating from a position of greater strength and confidence; consequently, they were more willing to see the end result upheld in post-war security arrangements.<sup>15</sup>

The experience of Israel and Syria demonstrates that conflict-avoidance measures can work despite an official state of war, as long as parties share an interest in avoiding war. Post-1973 conflict-avoidance measures between Israel and Syria have been remarkably effective. The Israel–Syria 1974 Disengagement Agreement established demilitarized zones, zones of limited deployment, and rules for each state's overflight of the area. UN forces stationed in the Golan Heights have carried out on-site inspections of Israeli and Syrian forces in the Golan Heights since 1974.<sup>16</sup>

The underlying conflict between Israel and Syria—sovereignty and security on the Golan—was not resolved by the 1974 agreement, but both parties wished to avoid

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<sup>12</sup>Carolyn Ziemke, "Confidence- and Security-Building in the Middle East: Past, Present and Future," unclassified, final draft paper for the Institute for Defense Analyses (Alexandria, VA: Institute for Defense Analyses, 1993), I-14.

<sup>13</sup>Kerr, *The Elusive Peace in the Middle East*, 9.

<sup>14</sup>*Ibid.*, 6.

<sup>15</sup>In the 1974 Disengagement Agreement, Egypt accepted limitations on its armed forces in areas east of the Suez, as well as a curtailment of its air defenses and the presence of UN forces west of the Suez canal. In the 1975 Disengagement Agreement, Egypt accepted the creation of a demilitarized zone, the installment of early warning and electronic sensing systems, and notification requirements for military movements. The United States helped install these transparency measures, which included inspections by UN forces and air reconnaissance by US aircraft. See Alan Platt, "Arms Control in the Middle East," in *The Arab-Israeli Search for Peace*, Steven Spiegel, ed. (Boulder, Colo.: Lynne Rienner, 1992), 148. For an account of disengagement negotiations, see Quandt, *Peace Process*, 197-203.

<sup>16</sup>See Platt, "Arms Control in the Middle East," 148; Specifically, both sides agreed to "refrain from all military actions against each other;" forward lines for both Israeli and Syrian forces were demarcated; and an area of separation, a demilitarized zone, was created, surrounded by an area of 20 square kilometers on each side in which forces and weapons were limited. See Shalev, *Israel and Syria: Peace and Security on the Golan*, 39. Current aerial photography arrangements are based on the 1974 agreement and allow each country to fly up to the forward line of its ground forces. From this vantage point, each country can cover the other for a distance of 40 to 45 kilometers. See Michael Krepon and Peter Constable, "The Role of Aerial Inspections in Confidence-Building and Peacemaking," in *Arms Control and Confidence Building in the Middle East*, Alan Platt, ed. (Washington: United States Institute of Peace Press, 1992), 43-64.

another round of conflict. Thus, the larger issue of disputed territory was placed on hold. As noted by an Israeli analyst, "since 1949, the experience of both sides is that violence may begin on a limited scale, but it ultimately evolves into a large-scale war . . . Since Syria is not prepared for a conflict on that scale, its current interest is to maintain quiet on the border, including the prevention of terrorist raids from its territory into the Israeli-held Golan Heights."<sup>17</sup> The Israeli–Syrian case also vividly illustrates the unique and invaluable qualities of conflict-avoidance measures: They can be used to reduce tensions on the military front, through the auspices of third parties, even with escalating rhetoric on the political front.

In 1979, both Egypt and Israel had strong incentives to make peace. These incentives outweighed the risks associated with peace and helped ensure that CBMs would be effective negotiating tools. Egypt, though ostracized by the Arab world for its treaty with Israel, regained the Sinai peninsula lost to Israel in the 1967 war. Israel, though it gave up territory, compensated for this loss by breaking the ranks of the Arab states and gaining peace on one front.<sup>18</sup> The economic payoff for peace was also quite significant for both countries; since the signing of the peace treaty, more than \$5 billion in US military and economic assistance per year has been allocated to Egypt and Israel.

### **Third-Party Role in Mediation and Negotiation**

Interlocutors must often act as either good faith mediators or influential power brokers to bridge wide gaps between hostile states. Though third parties may be biased against or partial toward one or the party to a conflict, the impact of such bias on the outcome of negotiations remains unclear.<sup>19</sup> Whether partial or neutral, third parties can

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<sup>17</sup>Shalev goes on to note that, even so, ". . . this passive, pragmatic policy clearly does not reflect Syria's basic goal, which is to bring about a change in the status quo, whether by force or by political pressure, without becoming involved in a war before it wishes to." *Israel and Syria: Peace and Security on the Golan*, 40–41.

<sup>18</sup>The withdrawal of Israeli forces and military bases from the Sinai, along with the dismantlement of Israeli settlements in the Sinai, were Egypt's two key demands in these negotiations.

<sup>19</sup>Studies have found biased mediators to be less acceptable than neutral mediators, with the latter exerting greater influence on parties to a conflict and, alternatively, have concluded that biased mediators have no effect on negotiations. Still others have concluded that third-party bias can positively impact negotiations, or that neutrality is crucial for a successful mediation. See Sharon Arad and Peter J. Carnevale, "Partisanship Effects in Judgments of Fairness and Trust in Third Parties in the Palestinian-Israeli Conflict," *Journal of Conflict Resolution*, vol. 38, no. 3 (September 1994): 423–24. One study that detected effects of third-party bias is that by G.L. Welton and D.G. Pruitt, "The Effects of Mediator Bias and Disputant Power over the Mediator on the Mediation Process," *Personality and Social Psychology Bulletin*, vol. 13: 123–33. For evidence of third-party bias having no effect, or being equally acceptable, see S. Touval and I.W. Zartman, eds., *International Mediation in Theory and Practice* (Boulder, Colo.: Westview Press, 1985); I.W. Zartman and S. Touval, "International Mediation: Conflict Resolution and Power Politics," *Journal of Social Issues*, vol. 41 (1985): 27–45; other pieces by S. Touval; and D.

help bring parties to the negotiating table, can impact the negotiating process, and can also reinforce the sanctity of cease-fires and demilitarized or thin-out zones established by fragile armistice agreements or post-war truces. In the Middle East, the United States and the United Nations have most often played this role.

Acknowledging the role a strong third party can play in bringing parties to the negotiating table, William B. Quandt notes that immediately following the Six-Day War, "with the parties to the conflict locked into mutually unacceptable positions, the chance for diplomatic movement seemed to depend on others, especially the United States."<sup>20</sup> While the United States, primarily concerned with Vietnam, China, and the Soviet Union, did not play a strong third-party role in mediating the Arab-Israeli conflict at this time, high level US involvement was key to securing the 1979 Treaty of Peace between Egypt and Israel, and has helped to sustain what remains of the Israeli-Syrian dialogue today. In order to play this role effectively, however, the third party must be perceived by the other parties to have the political power both to yield results at the negotiating table and to carry them out afterwards.<sup>21</sup>

Once at the negotiating table, third-party mediators can potentially influence states' agreement to specific concessions or measures. In much the same way governments today help insulate themselves from domestic criticism by claiming that unpopular austerity measures have been imposed upon them by the World Bank and IMF, parties to unpopular truces can place the blame on third parties to deflect domestic criticism. After the 1948 war, the United Nations actively mediated cease-fires, truces, and armistice

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Brookmire and F. Sistrunk, "The Effects of Perceived Ability and Impartiality of Mediators and Time Pressure on Negotiation," *Journal of Conflict Resolution*, vol. 24 (1980): 311-27. J.Z. Rubin and B. Brown, *The Social Psychology of Bargaining and Negotiations* (New York: Academic Press, 1975) and J.B. Stolberg, *Taking Charge: Managing Conflict* (Lexington, MA: Heath, 1987) have found third-party neutrality to be key to the success of mediation efforts.

<sup>20</sup>Quandt, *Peace Process*, 4.

<sup>21</sup>After the 1967 war, the United Nations, in the view of the Soviets and the regional players, did not have the power to bring about a settlement. See Ishaq I. Ghanayem and Alden H. Voth, *The Kissinger Legacy: American Middle East Policy* (New York: Praeger, 1984), 70-71. Moreover, the UN's track record in successfully upholding and mediating agreements was poor. The hasty withdrawal of UN Emergency Forces from the Sinai had only worsened its reputation, completely discrediting the institution in the eyes of Israel. According to Yashpol Tandon, "the Security Council had established a long tradition of inaction on the Middle East problem. Complaints by Israel against the El Fatah raids had in the past elicited draft resolutions in the Council urging Syria and Jordan to check the raids, but these were repeatedly vetoed by the Soviet Union. Israel's Samu raid against Jordan and the air battle against Syria had provoked resolutions of disapproval in the Council, but no action. At least as long as UNEF was in Egypt, it created an illusion that amid charges and countercharges of raids and reprisals the Arabs and Israel were basically at peace." See Tandon, "UNEF, the Secretary General, and International Diplomacy in the Third Arab-Israeli War," in *The Arab-Israeli Conflict*, vol. 2, Readings, John Norton Moore, ed. (Princeton: Princeton University Press, 1974), 610.

agreements between the parties, but it did not, according to some analysts, play a sufficiently strong or effective role in the immediate post-war period. In the view of Norman Pelcovits, "in effect, what the Arabs wanted from a third party, particularly the United Nations, was to be seen as imposing a settlement and thus absolving the Arab governments from charges of surrender and treason."<sup>22</sup>

### **Third-party Role in Implementation**

Third parties can help monitor agreements both on the ground and from the air. The presence of a third party in a demilitarized zone is helpful in that it can prevent incidents stemming from the supervision of accords if parties to the conflict genuinely wish to avoid any escalation in tensions on the ground. The United Nations Disengagement and Observer Force (UNDOF) on the Golan Heights has functioned well for precisely this reason, as neither Israel nor Syria wishes to upset the calm on the Golan.<sup>23</sup>

The case for a balanced third-party presence is made by the deployment of United Nations Emergency Forces (UNEF) after the 1956 Suez Canal crisis. By the terms of the November 1956 cease-fire, UNEF was organized and stationed along the west side of the Suez Canal and at the Gaza Strip and Sharm el-Sheikh. UNEF replaced British and French troops and provided a buffer between Egyptian and Israeli forces. This conflict-avoidance buffer, however, was only half as strong as it could have been: Israel refused to allow UNEF, or any foreign force, to deploy on the Israeli side of the border or on any territory occupied by Israel. This refusal proved to have serious consequences when, in events leading up to the 1967 war, Nasser ordered the withdrawal of UNEF from the Egyptian side of the border. This removed the only third-party buffer between Israeli and Egyptian forces. Had UNEF been allowed on the Israeli side of the border, its continued presence could have acted as a deterrent to Egyptian military actions.

Third parties have also conducted aerial overflights in the region to monitor states' compliance to treaty and agreement provisions, and, in so doing, have helped build confidence between them. At the request of both Israel and Syria, the United States has carried out aerial reconnaissance missions along the Israeli-Syrian border. Third party air reconnaissance missions were also a part of the 1974 Disengagement Agreement between Egypt and Israel, and were included in the 1979 Treaty of Peace as well.

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<sup>22</sup>Nathan Pelcovits, *The Long Armistice: UN peacekeeping and the Arab-Israeli conflict, 1948-1960* (Boulder, Colo.: Westview Press, 1993), 19.

<sup>23</sup>Shalev, *Israel and Syria: Peace and Security on the Golan*, 41.

## **Common Interpretation and Proper Implementation of Agreement**

For conflict-avoidance and confidence-building measures to succeed, parties to an agreement must share a common interpretation of the intent and terms of implementation of such measures. This condition was not present between Israel and the Arab states with respect to the 1949 armistice lines, which were not intended to be permanent political or territorial boundaries. Israel, however, hoped to attach political weight and permanence to the armistice lines, which would have expanded Israeli territory by about 30 percent.<sup>24</sup> To the Arabs, the 1949 armistice lines were truce lines without political consequences, designed to prohibit only overt hostile attacks.<sup>25</sup> Tensions stemming from these two fundamentally different interpretations of the agreements were further heightened by ambiguous language in the armistice agreements, which left several contentious issues subject to "later discussions." These ambiguities turned the armistice agreements into "arenas of conflict" rather than meeting grounds for resolution, as each party asserted its interpretation of purposely vague points.<sup>26</sup>

Common interpretation of agreements has been the case in the 1974 Disengagement Agreement between Israel and Syria, and also with the 1979 Treaty of Peace between Egypt and Israel. The provisions of both agreements have been implemented properly. Under the Camp David accords, the Sinai was divided into three zones on the Egyptian side, with limitations on infantry and battalions within the zones. Limitations were imposed on the Israeli zone as well, and the zones were supervised by early warning systems and multinational forces.<sup>27</sup> The Camp David accords also provided for a wide range of transparency and verification measures, including: air reconnaissance missions; manned and unmanned observation posts equipped with sensors and electronic detection devices; and on-site inspections, routine and challenge, conducted by national teams and carried out by a third party (the United States) at the request of Israel and Egypt.<sup>28</sup>

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<sup>24</sup>Pelcovits also writes that, in fact, "a central objective of the armistice negotiations [for Israel] was to solidify its hold on the newly gained territory." To achieve this end, Israeli Defense Forces spent the four months following the cease-fire clashing with Egypt to expand Israeli territory. Pelcovits, 15, 31.

<sup>25</sup>*Ibid.*, 19.

<sup>26</sup>*Ibid.*, 43.

<sup>27</sup>See Aly, "Arab Perspective on Arms Control," 152-53.

<sup>28</sup>See Platt, "Arms Control in the Middle East," 148.

While the 1979 peace between Egypt and Israel, has long been deemed a "cold peace," it did make key progress in building confidence between the two parties.<sup>29</sup> Most importantly, the terms of the peace significantly reduced the possibility of surprise attack by increasing the possibility that preparations for this attack would be noticed, and countered, by the other party.<sup>30</sup>

## **Joint Supervision**

The Mixed Armistice Commissions (MACs) established by the 1949 armistice agreements were composed of UN chairmen and observers as well as equal mix of Arab and Israeli military representatives. Such joint supervision can provide rare opportunity for constructive contact between otherwise hostile nationals, provided that the terms of the agreement and mechanisms for such supervision are clear, forthright, and precise. Joint Israeli–Egyptian supervision occurred again as an interim measure to monitor the 1979 peace treaty.

## **The Current Climate**

The Madrid peace process began in October 1991 in a new Middle East security environment. Already relieved of the threat of a two-front war, Israeli security was further advanced by the outcome of the Gulf war between Iraq and the allied forces, which left Iraq's war-making potential in ruins. The central concerns of Israel and its Arab neighbors turned to day-to-day security from terrorist activity, securing access to water sources, establishing borders, determining the status of the Israeli settlements in the West Bank, Gaza Strip, and Golan Heights, and the extent of Palestinian sovereignty. With direct military conflict unlikely, focused discussions on peacemaking and CBMs could begin. This process is currently underway in the multilateral ACRS talks, which are designed to proceed in tandem with the ongoing bilateral negotiations between parties.

## **Regional Trends Affecting Security**

The prospects for regional peace and security in the Middle East are perhaps as good as they have ever been, despite the fact that peace between Egypt and Israel seems to have grown colder as the relations of other Arab states with Israel have warmed. Most importantly, perhaps, the Israeli Government and Palestinian Authority are in the midst of what appear to be irreversible negotiations toward a permanent settlement. Jordan and

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<sup>29</sup>The "cold peace" between Egypt and Israel did not extend much beyond national leaderships to the level of the average person in the street. Though a tactical and military peace between the two countries was maintained, little in the way of economic cooperation or cultural exchanges ensued.

<sup>30</sup> Aly, 153.



Israel signed a peace treaty in July 1994. Moreover, in contrast to US–Soviet competition for influence in the region in the 1960s and 1970s, the United States and Russia now cooperate in their shared roles as co-sponsors in the ACRS talks, offering examples from their own experience in implementing CBMs for adaptation to the Middle East.

Periodically, there is even cause for cautious optimism on the Israeli–Syrian front. Significantly, top military officers from both sides met in late June 1995 to discuss the terms of an eventual Israeli withdrawal from the Golan Heights. Though the officers agreed on the need for creating a demilitarized zone and installing early warning systems on the Golan, they disagreed on the means to achieve these goals.<sup>31</sup> Most recently, after the assassination of the late Israeli Prime Minister Yitzhak Rabin, current Prime Minister Shimon Peres has renewed efforts to draw Syria into the peace process; the early response from President Asad has been positive.<sup>32</sup> Whether actions and commitments will follow on his expression of interest remains to be seen.

Despite movements toward peace, some observers of the region predict that any broad peace achieved in the region will be an tenuous one, "supported by a continued arms race." They do not, however, dismiss that peace as insignificant, nor do they belittle the importance of a peace process that focuses primarily on confidence-building measures and security arrangements, rather than on force reductions.<sup>33</sup> The peace between Egypt and Israel in 1979 was accompanied by large-scale US military and economic aid to both countries, and many predict that an eventual Syrian–Israeli peace will require a similar arrangement. Arms control issues aside, the immediate challenge for CBMs and arms control advocates in the ACRS talks is to take advantage of any regional trends or forces

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<sup>31</sup>Syria agreed to aerial surveillance measures, but rejected an arrangement that would have left Israeli observation posts on the Golan. There was also some disagreement on the size and shape of the demilitarized zone, with Israel arguing against a DMZ based on geographical parity, given the smaller size of Israel relative to Syria. See Thomas W. Lippman, "Israeli, Syrian Negotiators Agree on Need for DMZ," *Washington Post*, 30 June 1995; and Issam Hamza, "Syria Blames Israel for Stalled Security Talks," *Reuters*, 30 June 1995.

<sup>32</sup>President Clinton stated that, in a telephone conversation on 11 December 1995 with President Asad during Prime Minister Peres' visit to the United States, Asad said "...he was committed to do his best to move the peace process forward and to reach an early agreement between Syria and Israel." On 15 December 1995, after a six-month deadlock, Asad agreed to reenter negotiations with Israel; a first round of talks was scheduled for 27–29 December, and a second round for the first week of January 1996. Peres has predicted that an Israeli–Syrian "declaration of principles" could be ready in early 1996, and that a full Middle East peace settlement will be in place by the end of the century. See Serge Schmemmann, "Is Syria Ready to Deal With Israel?" *New York Times*, 18 December 1995, A8; and "Clinton and Peres Reaffirm Desire for Broad Peace in Mideast," *New York Times*, 12 December 1995, A12.

<sup>33</sup>Zeev Bonen, "The Impact of Technological Developments on the Strategic Balance in the Middle East," in *The Middle East Military Balance 1993–1994*, Shlomo Gazit, ed. (Boulder, Colo.: Westview Press for the Jaffee Center for Strategic Studies, 1994), 160. In remarks made at a CSIS conference on 13 June 1995, Anthony Cordesman, co-director of the Middle East project at the Center for Strategic and International Studies, also endorsed this view.

that may facilitate peacemaking in the region. These factors will be explored in greater detail below.

**War Fatigue.** First, put bluntly, states do not want another Arab–Israeli war. The region has not seen a major Arab–Israeli war since 1973, and presently, Israel is tired of war, and Syria, lacking an Arab ally willing to pose a second front against Israel, would have little to gain from going to war. Egypt and Jordan have signed peace treaties with Israel. In the Gulf, Iran is still recovering from its decade-long war with Iraq in the 1980s, while Iraq faces severe economic troubles at home as a result of two Gulf wars and UN sanctions. While instability certainly exists in the region, it exists more as a threat to domestic regime survival than as a potential source of war. Moreover, the strategic balance in the region discourages unilateral aggression. As one Israeli analyst has concluded, "Israel is superior in a full scale sophisticated conventional war. The Arab states are superior in terror attacks on the rear with ballistic missiles. Thus both sides are deterred from first use and from full use of their respective advantages. This makes a large scale war unlikely."<sup>34</sup>

**Economic Conditions.** Changing economic conditions in the Middle East, particularly in the oil-producing Gulf states, have the potential to impact positively the confidence-building process. Arab states have traditionally relied on armaments and enhanced military capabilities, as well as bilateral defense pacts, to protect against outside threats. Increasingly, however, financing arms purchases has become more difficult. In light of the decline in oil prices in the mid-1980s, the related fall in inter-Arab aid flows (from oil-rich to oil-poor states), the loss of concessionary arms deals after the collapse of the Soviet Union, the costs of the second Gulf war, and OPEC's inability to capture shares of the growing world demand for oil, maintaining the pace of arms expenditures has become an increasingly heavy economic burden.<sup>35</sup> Reflecting that burden, the trend

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<sup>34</sup>Ibid., 163.

<sup>35</sup>The IMF estimates that the Gulf crisis led to a four percent drop in GDP for the Middle East as a whole and a decline in the current account from a \$10 billion surplus to a \$43 billion deficit. Estimates of the total bill for damages, military costs, and economic dislocations range from \$500-600 billion to \$1500 billion. See Yahya Sadowski, *Scuds or Butter? The Political Economy of Arms Control in the Middle East* (Washington: The Brookings Institution, 1993), 19. Even the states of the Gulf peninsula are beginning to face the economic pressures the rest of the region has been struggling with for years. In issuing its 1995 budget, Saudi Arabia cut spending by six percent and forecast a \$4 billion deficit. Moreover, within the next few years, Saudi must pay off some \$50 billion in bills owed to contractors. (See Diana Abdallah, "Saudi economy healthier, but more challenges ahead," Reuters, 11 June 1995.) In Kuwait, the government faces a \$20 billion debt which has both domestic and foreign roots—government buy-outs of bad commercial loans in 1992 and Gulf war debts. In a June 1995 blueprint of a five-year economic plan, Kuwait's Planning Ministry suggests that an income tax be imposed on citizens and expatriates after the year 2000 and that charges for electricity, water, communication, and health services be raised within the next five years. (See William MacLean, "Kuwait debt plan imperils reform, economists say," Reuters, 14 June 1995.)

in the region since the late 1980s has been one of declining arms transfers.<sup>36</sup> To continue along this path, and to avoid forcing an unpopular choice between guns and butter that may infringe upon either a state's sense of security or its domestic stability, states in the region may find it beneficial to seek security through alternative means—that is, through a confidence- and security-building process. Such a process could, in the long-term, decrease the perceived need to direct limited economic resources toward arms purchases.

To some extent, the financial incentive toward reduced arms expenditures was reinforced by the larger Gulf war experience—mainly, Iraq's routing by US-led allied forces and the Gulf Arab states' dependence on US military support despite their own array of advanced weaponry. According to one scholar, Iraq's quick defeat at the hands of the technically and militarily superior US-led allied forces showed how "little security [Arab] petrodollars had purchased . . . In 72 hours, the armies that the Arabs had spent a generation building were proved obsolescent—adequate for riot control, perhaps, but not for modern warfare."<sup>37</sup> One lesson suggested by the Gulf war experience, if not learned, is that peace can yield greater security than a continued arms race.<sup>38</sup>

The long-term economic viability of states in the region may also require movement along a confidence-building, peacemaking process. In Syria—the last hold-out among the front-line states in making peace with Israel—"both regime and bourgeoisie realize economic health requires a peace settlement:"

With the collapse of the socialist bloc, the country needs incorporation into the world capitalist economy; especially with the decline of oil prices and the much reduced rent Asad can expect from the Arab petro-states, private

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<sup>36</sup>According to data collected in a 1993 Congressional Research Service report, the volume of arms to be transferred under agreements signed during the 1989-1992 period declined by one-third, from \$94.3 billion to \$86.9 billion, compared to arms transfers during the 1985-1988 period. Deliveries similarly declined, from \$86.9 billion for 1985-1988 to \$52.2 billion for 1989-1992. See Keith Krause, "Middle Eastern Arms Recipients in the Post-Cold War World," *Annals of the American Academy of Political and Social Science* (535): 84, citing Richard Grimmett, *Conventional Arms Transfers to the Third World*, Report 93-656F (Washington: Congressional Research Service, 1993), 57, 68. Figures cited by Yahya Sadowski corroborate this late 1980s trend, specifically among "front-line" states. He notes that the combined military expenditures of Egypt, Israel, Jordan, and Syria fell 8.2 percent between 1987-88 (from \$9.8 to \$9 billion). See Sadowski, *Scuds or Butter?* 8.

<sup>37</sup>Sadowski, *Scuds or Butter?* 31.

<sup>38</sup>The lesson by no means appears "learned." Kuwait appeared woefully ill-prepared to absorb purchases of new armaments from US, Russian, and British suppliers, scheduled to arrive in mid-1995. According to a Reuters report, personnel had not been adequately trained on the new equipment nor had the proper facilities been installed, largely because of budgetary pressures. As a result, "It might be years before the army can maintain or use the multi-billion dollar equipment properly." See William McLean, "Kuwaiti rearmament feels budget squeeze," Reuters, 19 February 1995.

investment (Arab, expatriate or Western) is crucial and a 'no war-no peace' situation, isolated from an Arab world at peace with Israel, does not provide a favorable investment climate.<sup>39</sup>

Though some in Syria fear the Israeli economic competition that would likely accompany any settlement, "most understand that a stable peace is needed for long-term investment."<sup>40</sup>

Although the costs of the Gulf war stressed the abilities of Middle Eastern states to fund arms purchases, it also underlined the threat states of the region pose to one another, and in this sense accelerated some states' rearmament efforts.<sup>41</sup> In fact, by underlining "the potential threat from other countries in the region," the Gulf war substantiated the claim made by some Israelis that the real problems of the Middle East do not stem from the Arab-Israeli conflict.<sup>42</sup> Continued arms expenditures in the region thus reflect states' ongoing threat perceptions.

In a long-term view, however, in the absence of oil windfalls, few states in the Middle East can afford to sustain their present level of military capability without exacting substantial economic and social costs from their populations. Armed at such levels, neither can these states afford to modernize their current force structure without cutting into non-military budgets. States are left to several options: (1) plunging deeper into debt to sustain spending levels; (2) cutting force size dramatically to fund smaller and more capable units; (3) taking no action and risking loss of military readiness and capability *vis-à-vis* neighbor states; (4)

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<sup>39</sup>Raymond A. Hinnebusch, "Syria: The Politics of Peace and Regime Survival," *Middle East Policy*, vol. 3, no. 4 (April 1995): 80. The article provides an excellent analysis of the current political and economic situation in Syria.

<sup>40</sup>*Ibid.*

<sup>41</sup>Keith Krause notes that "the Gulf war unleashed a flurry of arms transfer activity on the part of both suppliers and recipients in the Middle East" and that "public commentary was almost universal in characterizing this as a 'new arms race' in the Middle East" (Krause, 82). As noted above, however, the overall trend for the period was a decline in arms transfers. Hindered by economic constraints, several states with ambitious rearmament plans, including Saudi Arabia, found they had to scale those plans back. And while inter-Arab aid flows generated by the Gulf war enabled some states to rearm, the majority of Syria's attempts to use some of its \$2 billion Gulf war windfall to invest in arms purchases were not realized. For an account of the Syrian experience, see Yahya Sadowski, "Sandstorm with a Silver Lining?" *The Brookings Review* (Summer 1992): 7-11. Many Egyptian arms deals of the early 1990s have also been delayed or canceled, due to financial difficulties. See Krause, 87, citing Mark Kramer, "The Global Arms Trade after the Persian Gulf War," *Security Studies*, vol. 2, no. 2 (Winter 1992): 264. For a round-up of Middle East states' recent and planned arms purchases, see: Philip Finnegan, "Middle East States Continue Focus on Finances," *Defense News*, 11-17 December 1995, 10; Joe Stork, "The Middle East Arms Bazaar after the Gulf War," *Middle East Report*, no. 197 (November-December 1995): 14-19; and "Peace fails to deliver its promise," *Middle East Economic Digest* (MEED), Special Report, Defence, 17 March 1995: 9-18.

<sup>42</sup>Country Survey, Israel, *Jane's Defence Weekly*, 15 February 1992: 233.

investing in weapons of mass destruction; or (5) pursuing alternative paths to fulfilling security needs.<sup>43</sup> The fifth option presents a window of opportunity for the ACRS talks.

**Arms Sales.** External actors can also influence regional security trends, primarily through arms sales. These sales can have divergent effects.<sup>44</sup> In one respect, they can work in direct apposition to confidence-building efforts, raising levels of tension and mistrust in the region, and possibly increasing the likelihood of conflict.<sup>45</sup> Geoffrey Kemp stresses that, with respect to arms sales,

... what must be considered is the political-military environment into which the new weapons are introduced. If the environment is unstable, and adversaries have a predilection to resolve disputes by force, certain types of new weaponry will increase threat perceptions and provide a catalyst for war. However, if the

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<sup>43</sup>For options one through four, see Anthony Cordesman, "Current Trends in Arms Sales in the Middle East," in *Arms Control and the New Middle East Security Environment*, Shai Feldman and Ariel Levite, eds. (Boulder, Colo.: Westview Press for the Jaffee Center for Strategic Studies, 1994), 31. Yahya Sadowski makes the argument for the fifth option; in his view, "the necessity of restricting or reducing military budgets creates an unprecedented opportunity to promote arms control. Military budgets are under so much pressure that officers are often asked to trim not just fat but muscle. Since the only way to prevent such cuts from weakening a country's defenses is to match them with similar reductions among its adversaries, officers and other members of the political elite are increasingly receptive to arms control proposals. They have come to view arms control not as an alternative to military security, but as one of several strategies for obtaining it." Sadowski, *Scuds or Butter?* 79. Patrick Clawson, contrary to both Cordesman and Sadowski, argues that states in the Middle East can continue military spending at current levels. See Clawson, "Military Spending and Economic Development in the Middle East," in *Arms Control and the New Middle East Security Environment*, Shai Feldman and Ariel Levite, eds. (Boulder, Colo.: Westview Press for the Jaffee Center for Strategic Studies, 1994), 122-131.

<sup>44</sup>Some of the literature on the role of arms transfers in regional conflict includes: William H. Baugh and Michael J. Squires, "Arms Transfers and the Onset of War, Part II: Wars in Third World States, 1950-1965," *International Interactions*, vol. 10 (1983): 129-141; Geoffrey Kemp, "The Continuing Debate over US Arms Sales: Strategic Needs and the Quest for Arms Limitations," *Annals of the Academy of Political and Social Science*, vol. 535 (September 1994): 146-157; David Kiefer, "Interstate Wars in the Third World: A Markov Approach," *Journal of Conflict Management and Peace Science*, vol. 10 (1988): 21-36; David Kinsella, "Conflict in Context: Arms Transfers and Third World Rivalries during the Cold War," *American Journal of Political Science*, vol. 38, no. 3 (August 1994): 557-81; and Philip A. Shrodt, "Arms Transfers and International Behavior in the Arabian Sea Area," *International Interactions*, vol. 10 (1983): 101-127.

<sup>45</sup>David Kinsella, in a study on the effect of arms transfers on conflict in the Middle East, found that "both Soviet and US arms transfers to the Middle East have exacerbated the rivalry between the arms recipients" and that Soviet arms transfers in particular in the 1960s, 70s and 80s intensified conflict and prompted corresponding US sales to Israel. See Kinsella, "Arms Transfers and Third World Rivalries," 566, 571. Keith Krause stresses the importance of examining the different reasons why a state may purchase weapons (for prestige or regime security, for example), but he nonetheless argues that what matters most "from a regional security perspective" is the possibility that neighboring states may interpret its purchases as a threat. If purchases are interpreted as a threat, he argues, "Expensive and unnecessary arms races could be triggered, and the result might even be an armed conflict." Krause, 90.

political-military environment is more stable and the climate is one of reconciliation and peaceful dialogue, or, alternatively, if the likely casualties resulting from a new war are believed to be unacceptable to both adversaries, the impact of new weapons may be less dangerous and could even contribute to stability.<sup>46</sup>

Certain arms sales to the Middle East can be particularly explosive, because the many bilateral competitions between states can set off a chain reaction among multiple states when one country rearms.<sup>47</sup> Even sales of conventional weapons to US "friends" in the region, such as Israel, Saudi Arabia, and Kuwait, can heighten tensions and complicate US foreign policy goals in the region.<sup>48</sup>

Sales of certain types of weapons and weapon systems are more likely than others to elevate states' threat perceptions.<sup>49</sup> Restraint of deliveries on the part of suppliers of such weapons, even certain advanced conventional systems, may at times be necessary to reinforce,

<sup>46</sup>See Kemp, *The Control of the Middle East Arms Race* (Washington: Carnegie Endowment for International Peace, 1991), 101.

<sup>47</sup>Sadowski, *Scuds or Butter? 6*. As an example, Iran's purchase of submarines from the former Soviet Union in 1991 have raised concerns among Iran's neighbors in the Gulf and may serve to stimulate a Gulf naval arms race. See Peter Kemp, "Peace fails to deliver its promise," *MEED*: 9, 18. Additionally, Keith Krause notes the arms race spiral in the region that began with excessive US sales of weapons to pre-revolutionary Iran. These sales to the Shah were met by Iraqi buildups, which in turn may have prompted the increase in Israeli, Syrian, and Saudi demands for arms. See Krause, 90.

<sup>48</sup>Part of former President Nixon's policy toward the Middle East after the 1967 war was to monitor the military balance in the region and provide arms to "friendly states" as needed. Other scholars and policymakers also advocate arms sales to US "friends" in the region, but certain types of US arms sales to Arab Gulf countries can potentially exacerbate Arab-Iranian tensions in the Gulf, heightening Iran's sense of encirclement and insecurity. They can also complicate broader US foreign policy goals. US sales of high tech military equipment to Arab Gulf states make it difficult for the US to persuade other arms suppliers, such as Russia, to show restraint in weapons sales to Iran. Similarly, the US's ability to pressure the Chinese to scale back arms sales to Iran is compromised by its own sales of aircraft and other equipment to Taiwan. See Quandt, *Peace Process*, 86; Kenneth Watman, et al., *Controlling Conventional Arms Transfers: A New Approach with Application to the Persian Gulf* (Prepared for the Under Secretary of Defense for Policy), (Santa Monica, Calif.: RAND, 1994), 18; and Kemp, "The Continuing Debate Over US Arms Sales: Strategic Needs and the Quest for Arms Limitations," 156.

<sup>49</sup>The armed forces of the Middle East are generally considered to be deficient in the tasks of command, control, and communications. While individual units may be quite large or well-armed, they are often not integrated with supporting forces, and thus the whole is often weaker than its parts. Weapons that compensate for this deficiency—those which do not require integration with other forces or highly skilled operators—include such weapons as submarines, stealth aircraft, tactical ballistic or cruise missiles, air-to-air, air-to-ground, or ground-to-air munitions. Sales of these types of weapons to the Middle East can significantly increase a state's effectiveness in battle, thus lowering the costs associated with conflict. Conversely, limiting the spread of these weapons to states in the region can help keep all states at a more even playing level. Technology that enables states to produce weapons of mass destruction is also a prime candidate for supplier restraint. See Watman, et al., 11-13.

rather than sabotage, political leaders and their ongoing peacemaking efforts. In the current environment, restraint may be difficult. Reductions in the US defense budget, and ensuing unemployment problems in US defense industries, have created strong domestic pressures for increased arms exports. Likewise, economic conditions in Russia have exacerbated the pace of its arms sales.<sup>50</sup>

Arms sales and military aid to the states of the Middle East may at times be necessary to advance and meet the needs of the peace process. If states relinquish strategic territory or make other security concessions for peace, it may be necessary to "compensate" for such concessions through arms sales or intelligence support. Providing military assistance in this sense has become an accepted "third-party" role. The case of US assistance to Israel and Egypt after their 1979 peace is a prime example: Israel has received approximately \$1.8 billion in US military aid per year since 1979, and Egypt roughly \$1.3 billion.<sup>51</sup> In the latest round of peace talks, Israel is not likely to take risks on the Golan for peace with Syria without getting something in return, most likely continued arms transfers and military aid from the United States.

### **Managing Regional Threat Perceptions: The Challenge to CBMS**

The order of battle is a major determinant of threat perceptions in the Middle East. Threat perceptions are also shaped by several additional factors, some of which pose challenges for the design and application of CBMS. First is geography. The geographical boundaries of the Middle East for purposes of regional arms control have not been precisely defined, and this poses some difficulty to confidence-building or arms control agreements. If, for example, Turkey is considered to lay outside the "Middle East," Syria, which considers Turkey a threat, may find it difficult to accede to any regional agreement that places demands on Syrian forces, thus increasing Syria's vulnerability *vis-à-vis* Turkey. And although much progress has been made on border settlement in the Arabian peninsula, some shared boundaries of neighboring Middle East states remain in dispute. Before establishing guidelines for troop movements near borders, borders need to be defined. Furthermore, in some parts of the region the capitals are very close together, making CBMS implementation more difficult. The quicker an opposing force can reach a state's capital, the more intrusive and far-reaching CAMS and CBMS must be to alleviate concerns.

Second, CBMS are more difficult to apply in the Middle East because security concerns are multidimensional for many states in the region. The Arab states are generally presumed

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<sup>50</sup>See Bonen, "The Impact of Technological Developments on the Strategic Balance in the Middle East," 161; and Watman, et al., 3-4. There is a sense among some Gulf intellectuals that US arms are being forced upon them, and that Gulf leaders are under pressure to buy weapons they don't need or can't afford in order to retain their spot under the US security umbrella.

<sup>51</sup>Kemp, "Peace Fails to Deliver its Promise," 9.

to form one "side" of the conflict, (i.e., the "Arab" side of the Arab-Israeli conflict), when in reality individual Arab states fear one another, and/or Iran, in some cases more than they fear Israel. The traditional perception of Israel's Arab neighbors as universally hostile has tended to skew Israel's strategic doctrine, creating one that is "rooted in the quest for military superiority over any combination of Arab states that may be arrayed against Tel Aviv."<sup>52</sup> For their part, some Arab states continue to foster the false front of Arab brotherhood, helping to perpetuate skewed perceptions of strategic reality in the region. But an organized Arab alliance against Israel does not now exist and has been extremely difficult to orchestrate in the past.<sup>53</sup> Any large Arab "coalition" against Israel would be rife with a number of bilateral, inter-Arab rivalries. In order for constructive measures toward confidence building to begin, it must be conceded that Israeli security concerns based on a threat posed by an "Arab alliance" are exaggerated.<sup>54</sup>

For Israel to concede this point publicly, however, it must see tangible efforts by its Arab neighbors to implement CBMs and foster a "warm peace." Real steps in this direction would ease Israeli fears and augment its sense of security, making it more likely to adjust its concept of strategic parity downward, and, in turn, to give up "land for peace." For although most parties of the region are thoroughly engaged in the peace process, Arab demands for territorial and security concessions on the part of Israel come at a time when Israel still faces threats posed by brutal rejectionist forces in the Arab world, most significantly the radical Islamist groups Hamas and Hizbollah—which receive significant support from Syria and Iran.<sup>55</sup> Arab efforts to engage Israel in CBMs could help convince both the Israeli public and the Israeli leadership that Israel can "afford" to reassess its requirements for security.<sup>56</sup>

This will not be easy for Arab states, however, primarily because "Israel is not perceived as insecure by its Arab neighbors. It is seen instead as the predominant regional power by virtue of its military and economic strength, its intellectual and other human skills,

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<sup>52</sup>Sadowski, *Scuds or Butter?* 6.

<sup>53</sup>Most evident, Jordan has signed a peace treaty with Israel, and the two states have opened direct border crossings; Morocco opened low level diplomatic relations with Israel in September 1994, and Tunisia followed suit in October 1994; Egypt and Israel have been at peace since 1979; Egypt, Syria and Saudi Arabia, among other Arab states, joined forces with American troops against Iraq in the Gulf war; and members of the Gulf Cooperation Council (GCC) have eased their economic boycott of Israel, dropping the boycott against companies that do business with Israel.

<sup>54</sup>Some Israeli analysts have begun to reassess Israeli security concerns given recent changes in the international environment which render earlier concerns exaggerated. For an excellent analysis of regional and international trends and potential forthcoming changes in Israeli strategic doctrine, see Shai Feldman, "Israel's Changing Environment: Implications for Arms Control," in *Confidence Building and Verification: Prospects in the Middle East*, Shai Feldman, ed. (Boulder, Colo.: Westview Press for the Jaffee Center for Strategic Studies, 1994), 195-205.

<sup>55</sup>Levite and Landau, "Confidence- and Security-Building Measures in the Middle East," 27.

<sup>56</sup>*Ibid.*, 28.



and its linkages to the wider international community . . . ."<sup>57</sup> The nuclear asymmetry of the region, where Israel has an assumed nuclear capability that is unmatched by Arab states, plays a major role in shaping this view. Israel views its nuclear capability as a deterrent to the wide array of conventional, biological, and chemical weapon threats posed by Arab states. But, according to at least one analyst, "for Egypt and the other Arab states, the Israeli nuclear capability is perceived not as a deterrent but a compellant. It is considered a destabilizing factor in the Middle East and a call for continuing the race in mass destructive weapons."<sup>58</sup>

The region's asymmetrical nuclear status thus presents another hurdle to CBM negotiation and implementation. The Arab states, led by Egypt, wish to focus initial confidence-building steps in the nuclear field, pressuring Israel to acknowledge, open up, and roll back its nuclear program. Israel prefers instead to initiate confidence building on a more basic level, beginning with transparency measures in the conventional field, and to turn to the nuclear field last, after some level of confidence has been established among parties. The nuclear status of the region, and how to address it, have already emerged as points of conflict in the ACRS talks, described in greater detail below. In early December 1995, however, Israel and Egypt agreed to set aside discussion on Israel's nuclear program, paving the way for further progress in the multilateral talks. According to Israeli Prime Minister Shimon Peres, Egypt agreed to withdraw its demands for Israeli denuclearization until a comprehensive peace treaty, to include Syria and Lebanon, is signed in the region. In exchange, Israel agreed to sign a nuclear-free accord one year after reaching such a comprehensive peace.<sup>59</sup>

The nuclear and conventional asymmetries of the Middle East present an added but not insurmountable challenge to the application of CBMs. In fact, two scholars have found that in the global experience of CBMs, "relations between the parties to the CSBMs (confidence and security-building measures) have been typically characterized by critical asymmetries and structural imbalances."<sup>60</sup> More important determinants of the outcome of CBMs are the parties' commitment to upholding them and their sense that cooperation will yield more advantageous results than conflict. In a practical sense, lingering Arab resistance to CBMs and normalization of relations with Israel may also stem from the Arab states' fear that "premature normalization may weaken the pressure on Israel to make territorial concessions . . ." and thus diminish the leverage of Arab states in the future.<sup>61</sup>

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<sup>57</sup>Bob Bowker, "Conflict or Cooperation: the Arab-Israeli Peace Process," *Pacific Research*, vol. 7, no. 3 (August 1994): 4.

<sup>58</sup>Aly, "Arab Perspective on Arms Control," 153.

<sup>59</sup>The Egyptian Embassy in Washington, however, declined to confirm or deny that agreement had been reached. See "Israel, Egypt Agree on Nuclear Arms Plan," *Defense News*, 11-17 December 1995, 2.

<sup>60</sup>Aly, 20.

<sup>61</sup>Levite and Landau, 32.

## The Arms Control and Regional Security Talks

CBMs are being discussed and implemented in varying stages in the ongoing multilateral arms control and regional security (ACRS) talks, which began in January 1992. This working group is one of five established to proceed in tandem with bilateral peace talks in the region. Discussions in the ACRS working group are intended to complement but not substitute for bilateral talks, and to follow rather than lead bilateral security negotiations. The first ACRS meetings were conducted seminar style, as tutorial sessions on CBMs, and the bulk of the presentations came from the extra-regional parties who offered parallels from the European experience. It is important to note that while confidence-building measures have been employed rather extensively in the Middle East on a bilateral basis over the last several decades, the ACRS talks represent the first sustained *multilateral* effort to establish a confidence-building regime in the region.<sup>62</sup>

### Structure and Substance

Once most parties became familiar with the range of CBMs and arms control arrangements available to them, the ACRS talks were structured into four working groups to help address specific threat perceptions and to provide the appropriate fora for discussion of CBMs application to specific concerns.<sup>63</sup> Each working group was assigned a mentor: Turkey serves as mentor for "Exchange of Military Information and Pre-Notification of Certain Military Activities;" Canada as mentor for "Search and Rescue" and "Incidents at Sea;" the Netherlands as mentor for establishing a regional communications center. The United States and Russia sponsor declaratory CBMs and discussions on a host of conceptual issues related to security.

The first three working groups have since been collected in an "Operational Basket" to focus on communications, information exchanges, and maritime measures. The other working group has been redefined as a "Conceptual Basket" to concentrate on clarifying long-term objectives, facilitating declaratory measures on verification, establishing a conflict

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<sup>62</sup>Participating countries from the region include Egypt, Israel, and Jordan, as well as the Palestinians; Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and Yemen; and Algeria, Mauritania, Morocco and Tunisia.

<sup>63</sup>Specific factors affecting threat perceptions examined in the context of the ACRS talks include the following: the size of armed forces of neighboring states in terms of total and air/land/sea forces; the nature of these forces (e.g., conventional, nuclear, chemical, biological), and the risk of use of these forces; the quality of a neighboring state's arsenals (e.g., new purchases, advanced technology); lack of knowledge of the arsenals of other states; surprise attack capability of neighboring states; size of military budget of neighboring states; the regeneration capacity of forces in neighboring states; the military doctrine of neighboring states (and knowledge of this doctrine); the geographical deployment of neighboring states' armed forces/military infrastructures; the nature, level and location of military training activities of neighboring states; rating of ballistic risk emanating from neighbor states.

prevention center, defining the region geographically for purposes of arms control, and developing a Middle East Data Bank.<sup>64</sup> The multibasket approach, whereby substantive issues are considered in separate groupings, is borrowed from the Conference on Security and Cooperation in Europe (CSCE). This provided flexibility in the CSCE (now the OSCE, or Organization for Security and Cooperation in Europe), and it is hoped that the structure will provide similar support for the ACRS process.

Early ACRS sessions sought to build knowledge of CBMs among regional participants. As parties came to articulate their concerns, the nuclear asymmetry of the region proved to be a focal point, and a wide gap between Israeli and Egyptian priorities on arms control emerged. Israel proposed that the first steps towards arms control consist of transparency CBMs, like establishing a communications hotline, while Egypt suggested that all parties in the region first sign existing nuclear, chemical, and biological weapons treaties and allow international inspections. Israel maintained that CBMs were a prerequisite to any steps toward denuclearization.

A draft text of a statement on arms control and regional security was discussed when the ACRS Conceptual Basket met in Cairo in February 1994. This document notes the need for states of the region to build mutual confidence, their support for a nuclear weapons-free zone in the region, as well as their commitment to arms reductions. Though crafted in general terms, when finalized, it will be the first multilateral Arab-Israeli agreement establishing guidelines for inter-state relations in the Middle East. The draft text of this statement was further refined at subsequent meetings in 1994, but a dispute over acceptable language regarding the NPT prevented its acceptance at the ACRS plenaries in Qatar in May 1994 and Tunisia in December 1994.

Efforts were also made at the Conceptual Basket meeting in February 1994 to define the region geographically and to clarify security issues. Israel volunteered to prepare a paper delineating the Middle East region for purposes of arms control and regional security. Egypt offered to prepare a paper regarding start-up negotiations on arms control encompassing conventional, nuclear, chemical, and biological weapons, as well as ballistic missiles. These efforts were bolstered by additional papers commissioned at the plenary meeting in Qatar in May 1994. The co-sponsors agreed to take the lead in soliciting from regional parties papers that detail their long-term objectives, and future ACRS conceptual basket workshops may be devoted to the co-sponsors' analyses of these long-term objectives to help clarify the Middle East's security environment.

Verification issues under the rubric of the ACRS process are still in the preliminary "show and tell" stages. In October 1994, several parties visited a nuclear power plant in

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<sup>64</sup>Suha Umar, "Middle East Peace Process: The Multilateral Dimension," *Malta Review of Foreign Affairs* (June 1994): 11-17.

Europe, where verification techniques were demonstrated and experts from the IAEA and Euratom explained how regional verification measures can complement international efforts.

## Areas of Progress

Four areas of notable progress have been the establishment of a communications network and regional security centers among states party to the ACRS process, the agreement on an INCSEA text, and agreement on prenotification of troop and equipment movements.

- **Communications network.** At the May 1994 meeting in Doha, participants agreed to establish a regional communications network, linked temporarily to the OSCE network at the Hague. This network is close to being operational.
- **Regional security center.** At the May 1994 meeting there was also broad support for continued discussion of a regional conflict prevention and security center and its possible connection to a regional communications network. At a later meeting in Jordan in November 1994, the parties agreed on the need to establish a conflict prevention center, as well as on the range of functions it should undertake. During subsequent meetings, parties decided that the region's main regional security center would be established in Amman, Jordan, with subregional security centers based in Tunis and Doha, Qatar.
- **INCSEA text.** There has been general progress and consensus on maritime CBMs, reflected in progress toward agreements on search and rescue (SAR) operations and incidents at sea (INCSEA). An INCSEA text and a framework for a SAR text were agreed upon by parties at the November session in Jordan and further developed at the December plenary meeting in Tunis. The INCSEA text was fully completed in Antalya in March 1995 and will likely be adopted at the tentatively scheduled March 1996 plenary session. The SAR text lists a number of measures parties need to undertake; subsequent meetings will be devoted to establishing specific ways and means to implement them.
- **Prenotification.** In December 1994, ACRS participants agreed to notify each other in advance of any plans to move more than 4,000 troops or 110 tanks. This landmark transparency measure was the result of a long-term process of discussion and negotiation. In the Spring of 1994, parties had discussed possible threshold numbers for military personnel, tanks, and brigades/regiments.<sup>65</sup> Participants also agreed (in

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<sup>65</sup>Threshold levels would apply for prenotification of certain military activities. States whose *total* number of armed forces falls *below* threshold levels for prenotification could possibly be held to individualized threshold levels, which would be based on the proportion of threshold levels to total armed forces adhered to by the larger militaries.

March 1994) that a realistic starting point would be to exchange numbers of military personnel, information on unclassified military publications, organizational charts of military establishments, the structure of defense forces and the Ministry of Defense, and curriculum vitae of senior military personnel—classic transparency and communications CBMs. More contentious areas to be addressed in the future include the exchange of information on military stockpiles and storage, the new acquisition of military equipment, the location of certain military forces, levels of military budgets, and overall military holdings.<sup>66</sup>

### Challenges to the Process

The nuclear asymmetry of the region remains a key challenge to multilateral confidence building in the Middle East. To a degree, parties to the ACRS process have proved willing to work around this contentious issue and have applied CBMs in other fields, such as communication and transparency, which may over time build trust, alleviate tension, and help narrow the gap between Israeli and Egyptian positions on how best to approach nuclear confidence building. For much of 1995, the nuclear standoff slowed down the process, delaying the convening of the ACRS plenary session (likely to occur in March 1996, rather than June 1995, as originally planned). The December 1995 compromise agreement between Israel and Egypt on the nuclear issue<sup>67</sup> certainly opens doors to further progress.

Other efforts made under the ACRS rubric have begun to address key, non-nuclear issues of regional security. Parties are working to define the region geographically, and to detail their own security concerns and objectives. ACRS participants have also made efforts to institutionalize multilateral approaches to security; they have established a communications network and have decided on locations for regional security centers.

### Engaging Non-Participants

A crucial long-term challenge on the multilateral level is engaging the parties that pose key security threats to the region in the ACRS process. In September 1992, Lebanon and Syria declined to attend the ACRS working group in Moscow due to what they viewed as insufficient progress in bilateral talks, and the Palestinians were not even invited. Though the Palestinians have since joined the ACRS process, Lebanon and Syria have thus far refused to

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<sup>66</sup>Umar, 16.

<sup>67</sup>According to Israeli Prime Minister Shimon Peres, on 7 December 1995, Egypt agreed to withdraw its demands for Israeli denuclearization until a comprehensive peace treaty (to include Syria and Lebanon) is signed in the region. In exchange, Israel agreed to sign a nuclear-free accord one year after reaching such a comprehensive peace. The Egyptian Embassy in Washington, however, declined to confirm or deny that agreement had been reached. See "Israel, Egypt Agree on Nuclear Arms Plan," *Defense News*, 11-17 December 1995, 2.

participate, though both states did take part in an experts' meeting of the multilateral working group on water issues in June 1995, which included Israeli participants.

As continued negotiations between Israel and the Palestinian Authority lead to successively broader phases of Palestinian self-government, perhaps approaching a self-governing Palestinian entity, it may become increasingly difficult for reticent states like Syria to boycott the process. Significantly, Syria has also refrained from interfering with the process. Syrian participation in the multilateral ACRS talks, however, would likely come on the heels of a bilateral peace agreement with Israel.

Until such an agreement, another key question facing the ACRS process is *how far* it can proceed without involving Syria. Incorporating states like Iraq, Iran, and Libya into the ACRS talks is an equally important task, and an even greater and longer term challenge. If cooperative action in the ACRS forum cannot address the main sources of conflict in the region, states will have less incentive to negotiate seriously.<sup>68</sup> Moreover, engaging states that pose the key security threats would help parties move away from old "Arab-Israeli" fears and allow them to begin to address broader and very real regional security concerns.

## Effecting Structural Changes

The ACRS talks have also been hindered by their linkage to progress in the bilateral negotiations. Given the current varying stages of progress in the bilateral talks, from none to little on the Syrian and Lebanese fronts to major steps and agreements with the Palestinians and Jordanians, the multilateral talks are licensed to "progress" at the slowest possible speed.

Other challenges to the process include: (1) addressing subregional security concerns in the Gulf and North Africa with the narrow Arab-Israeli focus of the process; (2) managing extra-regional involvement that might not be welcome; (3) arranging for greater public participation and preparing the public for future agreements; and (4) broadening the base of ACRS participants to ensure that foreign affairs specialists as well as military professionals are engaged in the process. The process would also benefit from a greater number of meetings convened in regional venues, as well as continuity in delegations, which would eliminate the need to "reinvent the wheel" in future meetings.<sup>69</sup>

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<sup>68</sup>Ariel Levite and Emily Landau state that a necessary pre-condition or incentive for parties to be actively involved in CBM negotiations is a mutual interest on the part of states to cooperate, along with the sense that without cooperative action, the causes of tension and "discomfort" in the region will not be removed. See Levite and Landau, "Confidence and Security Building Measures in the Middle East," 15.

<sup>69</sup>See Michael D. Yaffe, "An Overview of the Middle East Peace Process," in *Arms Control, Confidence-Building and Security Cooperation in the Mediterranean, North Africa and the Middle East* (edited papers from a June 1994 conference co-sponsored by the Mediterranean Academy of Diplomatic Studies and the Henry L. Stimson Center), Fred Tanner, ed. (Msida, Malta: Mediterranean Academy of Diplomatic Studies, University of Malta, December 1994): 93-100.

## Track Two Events

Given the state-to-state negotiation level of the ACRS talks, parties have stuck to formal, and at times inflexible, political stances, especially during early phases of negotiation on issues of great concern. For this reason, so called "track two" level meetings and conferences, unofficial gatherings designed to broaden regional support for the ACRS process and to provide alternative fora for discussion, can be particularly useful. Track two workshops convened by non-governmental organizations provide license for parties to move away from political posturing if they wish to begin discussing possibilities for compromise, as well as possible avenues for CBMs, without compromising official government positions. Track two workshops are a CBM in their own right, as they provide rare opportunity for informal contact between Arabs and Israelis.

In track two workshops and conferences, parties have debated a number of politically sensitive issues—the nuclear issue especially—and have discussed new areas for CBMs application in the Middle East. Workshops have focused on the nuclear issue, as well as the non-military and domestic sources of instability in the region, such as Islamic extremism, that affect the security perceptions of Middle East and North African states. The important non-military functions that maritime CBMs could perform in the areas of pollution control and clean-up, fisheries management, and in the promotion of maritime industrial technologies have also been discussed. Track two events also afford the opportunity for more detailed discussion of and training on specific types of CBMs, such as the technical inputs and infrastructure that might be required for monitoring purposes.

## Prospects for the Future

Though ACRS meetings have grown increasingly substantive since 1992, far-reaching or intrusive CBMs arrangements among parties are still difficult to negotiate. To date, parties have been engaged in a process of defining their positions and security concerns and have only begun to explore avenues for possible CBMs application. It is important to point out that the lengthy and, at times, seemingly interminable nature of negotiations is neither endemic to the Middle East nor a yardstick by which to measure the potential success of negotiations. In Europe, for example, "the first negotiated CBMs were preceded by two decades of small tests of trust [and] further refinements unfolded over an additional two decades."<sup>70</sup> Thus, a valuable lesson to be learned from the European experience is patience. In the interim, declaratory CBMs—if reinforced by deeds—can play a key role in sustaining parties' involvement in negotiations over a long period of time, while progress in implementing transparency

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<sup>70</sup>See Cathleen Fisher, "The Preconditions of Confidence-building: Lessons from the European Experience," in *A Handbook of Confidence-building Measures for Regional Security*, 2d ed., Michael Krepon, ed. (Washington: The Henry L. Stimson Center, 1995), 35.

measures and more concrete discussion of verification techniques can form the basis for final agreements.

The creation of an institutionalized, official channel of dialogue is a key confidence-building measure, in that it provides an arena in which Arabs and Israelis can interact and discuss security issues. The ACRS talks also offer a forum for Arab states to develop and articulate national perspectives on regional security. As in the CSCE process, regularly scheduled meetings and exchanges among the parties of the region have allowed the voices of smaller states to be heard; not burdened with the responsibility of representing all of the "Arab world," these smaller states may be less prone to hardline positions and may help forge new openings in relations with Israel.<sup>71</sup>

The financial commitments of third parties are likely to continue to be crucial to the Middle East confidence-building process, and third parties such as the United States—legislatures and international financial institutions permitting—have much to offer to the region in terms of economic incentives.<sup>72</sup> Because economic factors are key determinants driving the search for alternative security regimes, economic incentives proffered by third parties could complement the "push" force of economics with a "pull" force as well.

At the end of a long process of reconciliation lies the possible establishment of a cooperative security regime. Any such regime must be based on territorial settlements that have the support of aggrieved parties and are underpinned by non-threatening military postures. This long-term vision seems far off at present. Though at some point the focus will have to turn to the so-called "outer ring" states, (e.g., those that do not border Israel), to induce them to sign a peace treaty or non-aggression pact once a settlement is reached,<sup>73</sup> small steps have helped to advance peacemaking in the region—no modest achievement. These same steps have also provided a nascent infrastructure, such as regional security centers, laying the groundwork for a comprehensive peace in the region. Further steps, especially those that seek to resolve the region's nuclear status, will depend on the answers to key questions raised in this essay.

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<sup>71</sup>For example, Tunisia has also emerged as a strong voice in the ACRS talks, and, along with Morocco, has opened low level diplomatic relations with Israel. Among the Gulf states, Qatar, as host of the May ACRS site, was particularly vocal and to some extent moved outside the Saudi shadow.

<sup>72</sup>Upon signing a peace treaty with Israel, Jordan's \$700 million of debt to the United States was forgiven, and its \$90 million of debt to Great Britain was converted to grants. See "Business booms as peace dividend flows," MEED, 30 September 1994: 3.

<sup>73</sup>M.Z. Diab, "A Proposed Security Regime for an Arab-Israeli Settlement," in *The Arab-Israeli Search for Peace*, Steven Spiegel, ed. (Boulder, Colo.: Lynne Rienner Publishers, 1992), 169.



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## Confidence Building in Latin America: Nuclear Controls between Argentina and Brazil

*Lisa Owens*<sup>1</sup>

More than a decade of confidence building between Argentina and Brazil in the nuclear field led to the creation of the Brazilian–Argentine Agency for the Accounting and Control of Nuclear Materials (ABACC) in 1991. Armed with its monitoring capacity, ABACC takes bilateral confidence building beyond the declaratory stage into effective implementation. Moreover, ABACC can provide for international confidence in Argentina and Brazil, potentially playing a vital role in efforts to strengthen the international safeguards regime. In this context, as ABACC develops, it serves as a useful case study providing lessons for other regions which may choose to establish similar regional verification mechanisms.

In the 1990s, Argentina and Brazil took concrete steps to implement declaratory nuclear confidence-building measures (CBMs). These steps marked a significant shift in Argentine and Brazilian nuclear policy, as the two countries had pursued weapons-capable nuclear technologies and resisted international nuclear controls through the 1980s. During the period of 1992–94, these Southern Cone nations brought into force both the Tlatelolco Treaty, which establishes a nuclear weapons-free zone throughout Latin America and the Caribbean, and the Quadripartite Agreement, which provides for full-scope international safeguards of nuclear activities in Argentina and Brazil. Leading up to these two very important *multilateral* agreements was the establishment of the *bilateral* nuclear monitoring agency, ABACC.

This essay provides a short background of the events and motives leading to the establishment of ABACC. It will then focus on the institution of ABACC, examining its structure and operations, exploring its role as a CBM, and discussing ABACC's current needs and future challenges as an institution. Finally, the essay concludes by extracting lessons from both the Argentine–Brazilian nuclear confidence-building process and the experience of ABACC.

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## Background

The history of the bilateral process leading to the formalization of nuclear controls in a subregional inspectorate agency (ABACC) is well documented in the Latin American nonproliferation literature.<sup>2</sup> Nonetheless, in order to evaluate the significance of ABACC, it is important to identify a series of events that facilitated the broader atmosphere of confidence building and rapprochement between Argentina and Brazil. These events gradually directed Argentina and Brazil away from an environment of mutual suspicion in the nuclear area to one of cooperation in nuclear policy and technology. Greater trust and transparency ensued as a result.

What began in the late 1940s and early 1950s as individual Argentine and Brazilian nationalistic pursuits of nuclear mastery and technical prowess soon became an issue of regional hegemony as each country reacted to the progress of its neighbor's nuclear capabilities.

... Both nations view[ed] nuclear development as a potentially critical factor in their long-standing competition for regional pre-eminence and, at a minimum, an area in which neither [could] afford to fall behind.<sup>3</sup>

Each step toward obtaining nuclear technology in one country triggered further steps in the other.

Both countries established national nuclear research and policy institutions in the early 1950s and later that decade obtained research reactors from the United States. Both sought enrichment and reprocessing capabilities (which potentially could produce nuclear weapons-grade material) while avoiding international restrictions on their programs. Both rejected IAEA comprehensive safeguards, refused to renounce peaceful nuclear explosions, and rejected accession to Tlatelolco or the NPT. In this context, united by opposition to the

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<sup>2</sup>For more background on the Argentine-Brazilian process toward mutual nuclear cooperation and controls, please see: David Albright, Dominique McCoy, and Lisa Owens, "Confidence-building on Nuclear-Related Issues Between Argentina and Brazil: A Chronology," in *A Handbook of Confidence-Building Measures for Regional Security*, 2d ed., Michael Krepon, ed. (Washington: The Henry L. Stimson Center, January 1995), 43-49; Marcos Castrioto de Azambuja, "Nuclear Non-Proliferation and Confidence-building in the Southern Cone," *Disarmament* 16, no. 2 (1993): 123-133; Jose Goldemberg and Harold A. Feiveson, "Denuclearization in Argentina and Brazil," *Arms Control Today*, 24, no. 2 (March 1994): 10-14; John R. Redick, "Latin America's Emerging Non-Proliferation Consensus," *Arms Control Today*, 24, no. 2 (March 1994): 3-9; and John R. Redick, Julio C. Carasales, and Paulo S. Wrobel, "Nuclear Rapprochement: Argentina, Brazil, and the Nonproliferation Regime," *The Washington Quarterly*, 18, no. 1 (Winter 1995): 107-122.

<sup>3</sup>Leonard Spector, *Nuclear Proliferation Today*, A Carnegie Endowment Book (New York: Vintage Books, 1984), 196.

international community, Argentina and Brazil first began to work together on nuclear issues. For example, to protect their freedom to maintain and develop independent nuclear programs during Tlatelolco negotiations (1964–67), Argentina and Brazil jointly supported a more limited nuclear weapons-free zone agreement than that proposed by the majority of Latin American states.

In the early 1970s, Brazil became concerned over Argentina's progress in the nuclear field. Argentina had successfully extracted plutonium from spent fuel and begun operations at its first power plant. Brazil suspected that Argentina might be seeking nuclear weapons capability in order to bridge the gap between the two countries created by Brazil's economic boom and military expansion in the late 1960s and early 1970s. These suspicions seemed to have influenced the 1975 German–Brazilian nuclear arrangement, a multibillion dollar sales agreement which included provisions for enrichment and reprocessing projects. As a result of this agreement, Argentina began to pursue its own enrichment and reprocessing technology, again spurring Brazilian efforts to produce weapons-capable material.

Later that decade, however, first steps in building confidence bilaterally began. The 1979 agreement resolving the long standing River Plate Basin territorial dispute over the hydroelectric resources of the River Paraná eased security tensions between Argentina and Brazil, allowing for more trust in general and further cooperation in the nuclear field. In fact, a small nuclear fuel cycle agreement was made at that time.

The establishment of civilian governments in the 1980s facilitated deeper Argentine–Brazilian cooperative steps.<sup>4</sup> The 1982 Malvinas/Falkland Islands war between Argentina and Great Britain set the stage for Argentina's return to democratic government in 1983 and also reverberated in Brazil, accelerating its own shift to civilian rule. Civilian Presidents Raúl Alfonsín and José Sarney were able to further ease bilateral tensions, and they initiated a series of joint visits by the heads of state to unsafeguarded nuclear facilities in Argentina and Brazil in 1987–88. These initial cooperative advances set the stage for the formalization of nuclear confidence-building efforts. Consequently, Presidents Fernando Collor de Mello and Carlos Saúl Menem adopted the Declaration on Common Nuclear Policy at Foz do Iguaçu (1990) and signed the Argentine–Brazilian Bilateral Agreement on the Exclusively Peaceful Uses of Nuclear Energy (1991) which created, *inter alia*, a joint nuclear control system and an agency to apply the controls, namely, ABACC.

These nuclear control breakthroughs were not a result, primarily, of US foreign policy efforts in the region, according to Dr. John Redick of the University of Virginia, but due

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<sup>4</sup>For a detailed history of Argentine–Brazilian motives for bilateral nuclear cooperation, see Mónica Serrano, "Common Security and Nuclear Non-Proliferation, from Nuclear Competition to Nuclear Cooperation: The Case of Argentina and Brazil." Paper prepared for the conference, Nuclear Proliferation in the 1990s: Challenges and Opportunities, sponsored by the Woodrow Wilson Center, Washington, DC, December 1992.

instead to a number of key regional factors and motives.<sup>5</sup> First, nuclear cooperation and control were integrated into a larger context of bilateral relations. National economic development and regional economic integration were major objectives for both countries. The military regimes of the 1970s and early 1980s were aware that more power would come from economic development than "by traditional ways of acquiring international prestige."<sup>6</sup> Moreover, nuclear ambitions are expensive and both Argentina and Brazil realized that they could not afford a costly arms race. The "lost decade" of the 1980s—with its economic hardships, soaring inflation, and debt crisis—drove this point home to the two governments. Seeking economic solutions, Argentina and Brazil began to move toward integration. However, both found that in order to move forward together on economic issues, nuclear suspicions had to be overcome.<sup>7</sup> The integration process had naturally led to a degree of interdependence which could not take place in a context of insecurity.<sup>8</sup> Both countries were forced to confront, head-on, their own and their neighbor's nuclear program in the context of greater bilateral cooperation.

Ostensibly, the second motive for nuclear cooperation was common need. Once the hurdle of "conflict" or rivalry was overcome, Argentina and Brazil found themselves on common ground in the nuclear field. Argentina and Brazil's objectives for their nuclear programs, while previously in direct conflict in their applications, were driven by nearly identical motivations. Incentives to confront external pressures together were greater than motives to pursue individual or confrontational paths. Common technical needs also led to bilateral scientific discussions, societies, and cooperation which helped to set the stage for the Argentine-Brazilian nuclear cooperation agreements. Discussions and consultations among the scientific community brought the subject to public attention and produced government action. Additionally, nuclear technology had a high symbolic value, deeply affecting security

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<sup>5</sup>These motives include economic incentives, mutual security, internal political change, and a supportive international system. See John R. Redick, "South America: Prospects for Containing and Countering Conflict and the Proliferation of Weapons of Mass Destruction." Presentation at the Regional Arms Control Workshop Series: Latin America and South Africa, sponsored by SAIC and ACDA, Washington, DC, 21 June 1994.

<sup>6</sup>Georges Lamaziere and Roberto Jaguaribe, "Beyond Nuclear Confidence-Building: Brazilian-Argentine Nuclear Cooperation," *Disarmament* 15, no. 3 (1992): 105.

<sup>7</sup>For background on the economic integration process between Argentina and Brazil, please see Daniel Chudnovsky and Fernando Porta, "On Argentine-Brazilian Economic Integration," *Cepal Review*, United Nations Economic Commission for Latin America and the Caribbean, Santiago, Chile, no. 39 (December 1989): 116-134.

<sup>8</sup>Economic integration provided a forum for discussions on nuclear cooperation, and achievement of bilateral nuclear controls created a secure environment which facilitated bilateral economic integration efforts. For more on the security situation surrounding Mercosur, see Mónica Hirst, "Mercosur and the New Circumstances for its Integration," *Cepal Review*, United Nations Commission for Latin America and the Caribbean, Chile, no. 46 (April 1992): 139-149.

perceptions on regional and global levels. Cooperation on this level thus allowed both parties to feel as though they were achieving significant gains in bilateral security.

Third, the changing political systems of the countries contributed significantly to the process of nuclear rapprochement, despite the inception of nuclear cooperation during military regimes. "The decision by Argentina and Brazil to forgo the production of nuclear weapons is closely linked to the return of democratic rule in both countries after decades of military governments."<sup>9</sup> While the military regimes began with some technical cooperation and mostly declaratory CBMs, the democratic governments formalized nuclear controls in a way that was consistent with international norms. In fact, Brazilian President Collor de Mello revealed Brazil's secret nuclear program and approached Argentina for bilateral cooperation in order to gain control over covert nuclear activity in his own country. He had determined that the Brazilian nuclear program should be transparent and subject to civilian supervision and used bilateral transparency as a means of getting a handle on his own military's nuclear program.<sup>10</sup>

Fourth, external factors related to new global perceptions of the post-Cold War era influenced a move toward bilateral nuclear controls. Argentina and Brazil did not want to be perceived as "rogue" states, especially in the nuclear area. Both had a need for technology and economic development in the face of tightening international controls over nuclear technology trade, and both required full-scope safeguards in order to receive economic assistance. Moreover, advances in East–West arms control initiatives countered the perceived discrimination inherent in international nonproliferation policies. International disarmament measures such as the Intermediate-Range Nuclear Forces (INF) and Strategic Arms Reduction Talks (START) treaties, as well as the revelation of South Africa's nuclear weapons program, for example, were psychologically important to the Argentine–Brazilian acceptance of international nonproliferation norms.<sup>11</sup> Both countries found it advantageous to open up to the international community and offer assurances of their peaceful intentions in the nuclear field.

Increasingly, Argentina and Brazil viewed full-scope international safeguards as essential for gaining the confidence of the international community in order to acquire advanced technology and receive economic assistance. Therefore, the next step in the Argentine–Brazilian confidence-building process was to insert the International Atomic Energy Agency (IAEA) in order to provide international verification of Argentine–Brazilian nuclear control commitments. The Quadripartite Agreement, signed in December 1991 between Argentina, Brazil, ABACC, and the IAEA and in force beginning March 1994, provides

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<sup>9</sup>Jose Goldemberg and Harold A. Feiveson, "Denuclearization in Argentina and Brazil," *Arms Control Today* 24, no. 2 (March 1994): 12.

<sup>10</sup>Lamaziere and Jaguaribe, 111.

<sup>11</sup>Redick, "South America: Prospects for Containing and Countering Conflict."

for comprehensive safeguards as well as a mutually reinforcing combination of ABACC and IAEA monitoring activities (See Appendix B for text of the accord).

At first, the bilateral agreement in combination with the Quadripartite Agreement gave Argentina and Brazil a technical argument for *not* joining the NPT, since these regional arrangements provided international full-scope comprehensive safeguards of all Argentine and Brazilian nuclear materials and facilities.<sup>12</sup> However, the bilateral process and the establishment of mutual safeguards (in the agency of ABACC) also encouraged a gradual transition toward the acceptance of international norms once shunned by both governments as discriminatory. As announced in December 1993, Argentina has decided to accede to the NPT since it has already accepted full-scope international safeguards in its country. Brazil, however, continues to view the NPT regime as discriminatory and does not appear likely to join the NPT in the immediate future. Nonetheless, both nations have accepted the application of comprehensive verification activities by the IAEA in their respective nations.

### **ABACC: Structure and Operations**

The above story is the promise made by these two nations toward exclusively peaceful applications of nuclear energy. ABACC, by monitoring that promise, illustrates its practice. Article VI of the Bilateral Agreement of 1991 (commonly called the Guadalajara Treaty for the place in which it was signed) created ABACC for the purpose of administering and applying the Joint System for Accounting and Control of Nuclear Materials (SCCC), introduced in Article IV of the same agreement. The SCCC is essentially an inventory system that provides a framework for verifying "that the nuclear material used in all nuclear activities is not diverted to the purposes prohibited by the [bilateral] agreement."<sup>13</sup> Soon after the bilateral accords, ABACC became part of a multilateral safeguards agreement, commonly known as the Quadripartite Agreement, between Argentina, Brazil, the agency, and the IAEA. In this accord, the IAEA uses the SCCC as its foundation for safeguarding Argentine and Brazilian facilities. As such, ABACC has a vital bilateral verifying role within the Guadalajara Treaty and a similar, though *multilateral*, verifying role within the Quadripartite Agreement with the IAEA.<sup>14</sup>

ABACC is comprised of a governing or directive body, the Commission, and a Secretariat, its implementing body. The Commission includes four representatives, two each appointed by the governments of Argentina and Brazil. Currently, these representatives are

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<sup>12</sup>Fernando de Souza Barros, "Regional Safeguards against Proliferation: The ABACC Case," Mimeograph (Washington, DC, 14 June 1994), 2.

<sup>13</sup>The Guadalajara Treaty, 18 July 1991.

<sup>14</sup>See Annexes I and II for the texts of the bilateral and quadripartite agreements [IAEA INFCIRC/395 and /435]. The bilateral agreement details the guidelines of the SCCC and the establishment and functions of ABACC.

from the Argentine and Brazilian foreign ministries and their respective nuclear commissions, but, according to ABACC Secretary Feu Alvim, the Bilateral Agreement does not make this a rule.<sup>15</sup> It is responsible for monitoring the implementation of the SCCC and supervising the activities and functioning of the Secretariat. The Commission also informs the States Parties regarding ABACC's implementation of the SCCC and any discrepancies that may arise during verification activities.

At the head of the Secretariat, a Secretary and a Deputy Secretary alternate each year between a representative from Argentina and one from Brazil. The Secretariat staff consists of six Senior Professional Technical Officials, two Professional Administration Officials, and four Auxiliaries, as well as some 70 inspectors contracted from the national authorities of the States Parties. In all cases, Argentina and Brazil provide equal numbers of staff members. The responsibility of the Secretariat is to perform the implementation and administrative activities of the SCCC, as directed by the Commission; to designate inspectors (from the Commission's list based on the Parties' recommendations); to evaluate inspections and inspection reports; to inform the Commission "immediately" of any discrepancy which becomes apparent from evaluations; and to report regularly to the Commission on its activities and the implementation of the SCCC.<sup>16</sup>

ABACC contracts inspectors from Argentina and Brazil (35 from each country at present) to inspect the facilities of the other country. These inspectors are technicians, engineers, and scientists from the national nuclear authorities. Nominated by the national authorities, the list of these inspectors is reviewed by the Commission, whose final selections are sent to the Secretariat. The Secretariat then draws from this pool of inspectors as necessary. Each inspection team usually includes not only safeguards specialists, but also nuclear design and operation experts. Their job is to execute the inspections necessary to verify the accounting and control of nuclear materials in both countries in order to confirm that none is diverted from its exclusively peaceful use.<sup>17</sup>

Since 1992, ABACC has administered the Joint System for Accounting and Control of Nuclear Materials (SCCC) to nuclear facilities in both countries. Under SCCC guidelines, the national nuclear authorities of Argentina and Brazil make initial declarations of their nuclear inventories. ABACC then inputs that information into a databank. This databank information is updated periodically by further national authority reports of inventory variations. ABACC inspects each facility, initially to verify its design information and inventory and routinely

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<sup>15</sup>Fascimile correspondence with Feu Alvim, 23 October 1995.

<sup>16</sup>In case of discrepancies, the Secretariat informs the Commission, which then informs the government of the nation in which the discrepancy was discovered. The nation should then rectify the problem. Any further difficulties in resolving that discrepancy may be reported to the Organization of American States (OAS) or the United Nations Security Council. The Guadalajara Treaty, 18 July 1991.

<sup>17</sup>ABACC, *Annual Report* (Rio de Janeiro: Comunicacao Atual Ltda., 1993).

**Figure 1****How ABACC Works:**

- ABACC receives an initial inventory declaration of all nuclear material present in each country and any inventory changes from the National Authorities (NAS) of Brazil and Argentina.
  - The inventory is input into a data bank and the verification of such inventory is planned and performed.
  - ABACC convenes Brazilian inspectors to carry out inspections in Argentina and Argentine inspectors to inspect facilities in Brazil.
  - ABACC also receives information on the design of facilities. This information is provided by a Technical Questionnaire (TQ) of each facility.
  - ABACC studies the information in the information in the TQs and carries out inspections to verify the information.
  - Periodically, by way of reports, the NAS notify of any inventory variations that occur at each facility. These are input into the data bank.
  - After the verification of the initial inventory of each facility is concluded, ABACC plans and performs inspections to periodically verify the nuclear material. In this kind of verification, the inspectors use specific equipment and collect samples of nuclear material to be analyzed later at laboratories chosen by ABACC, outside the samples' country of origin.
  - Periodically, ABACC sends inspection results to the corresponding NAS.
  - On the basis of the information contained in the TQs and the results of the design verification inspection results, ABACC drafts Implementation Manuals (IMs) for each of the facilities. These drafts are negotiation with the respective NAS and the Operators. Once the IMs come into force, ABACC carries out the activities provided for therein on a routine basis.
- Note:** The IMs detail all accounting and control procedures to be used at the facility, set the frequency and types of inspections provided for and describe all the requirements to be met by the Operator in terms of the records, reports, and measurement of nuclear material.

Source: ABACC, *Annual Report 1993* (Rio de Janeiro: Comunicaçao Atual Ltda., 1993), 12.

thereafter to confirm the correctness of the SCCC reports. The inspection procedures for each facility are delineated in facility attachments. ABACC activities for each facility are detailed in Implementation Manuals which are derived from confirmed design information. Routine inspections check the flow of nuclear material through the fuel cycle to compare with the accountancy of that material. Other ABACC activities include periodic inspections, the application of seals to containers, the analysis of reports issued by the Operators, and the taking of material samples for laboratory analysis. See Figure 1 for further details.



Currently, ABACC has verified almost all (79 percent) design information completed for all nuclear facilities in Argentina and Brazil. In 1995, ABACC progressed to ad hoc inspections. From January to April 1995, ABACC inspectors performed 24 inspections including 3 design information verification, 2 initial inventory verification, and 19 ad hoc inspections.<sup>18</sup> It maintains centralized records of nuclear material accounts, receiving reports from the national authorities. Thus, ABACC is advancing to the early stages of routine verification work. Its inspectors continue to participate in training exercises and its technical expertise and equipment base continue to grow.<sup>19</sup>

ABACC, jointly with the IAEA and with the use of results from previous verification activities, verified the inventory of all nuclear material present at all 70 Argentine and Brazilian nuclear installations by May 1995.<sup>20</sup> Comparison of ABACC's nuclear material sample analyses (used to verify the type of material and its enrichment level at a facility) with those of the IAEA for the same facilities has shown ABACC's results to be accurate.<sup>21</sup>

### ABACC as a Confidence-Building Measure

ABACC is one of the best examples of a confidence-building measure in all of Latin America in that it solidifies the bilateral actions and declarations of both of its member states.<sup>22</sup> ABACC provides for transparency in two ways. First, Argentines and Brazilians (usually experts in the nuclear field) work together on a daily basis in the agency, and inspectors from each country visit the nuclear facilities of the other country. In this way, communication is established, information is shared. Second, the SCCC, upon which ABACC bases the application of its safeguards, is "immersed in the context of technical cooperation in the nuclear area between the two countries."<sup>23</sup> Exchanges and training (technical cooperation) take place regularly between the national facilities and ABACC and between the national laboratories and ABACC. As such, the range of nuclear activities taking place in each country, including the most sensitive, as well as the human resources involved in them are

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<sup>18</sup>ABACC News (Rio de Janeiro, Brazil: January/April 1995): 2-3.

<sup>19</sup>Ibid.

<sup>20</sup>ABACC statement to the IAEA General Conference, Thirty-ninth Regular Session, September 1995, 2.

<sup>21</sup>Carlos Feu Alvim, interview with author, 22 September 1995, Vienna, Austria.

<sup>22</sup>For a list of characteristics that tend to lead to successful CBMs, please see Jack Child, "Medidas de Confianza Mutua en América Central," in *Medidas de Confianza Mutua en América Latina*, Augusto Varas and Isaac Caro, eds. (Chile: FLACSO, February 1994), 47-48.

<sup>23</sup>Jorge A. Coll, Deputy Secretary of ABACC, "Sistemas Regionales: El SCCC y La ABACC." Paper presented at the Conference on Peaceful Uses of Nuclear Energy and Nonproliferation, Bariloche, Argentina, 19 April 1994, 7-8.

known by the other Party, which contributes to an increase in the efficiency of controls.<sup>24</sup> Much of ABACC's success results from its integration of Argentine and Brazilian technicians into the bilateral CBM process. As a technical agency, ABACC strives to achieve its own technical goals, not the political goals of either Argentina or Brazil. ABACC Secretary Carlos Feu Alvim describes the thinking at his agency as technical: it does not think like a country.<sup>25</sup>

By having inspectors from the national facilities of one country visit and apply safeguards to similar facilities of the other country, technicians and nuclear specialists perfect their inspection as well as their operations capabilities. Current ABACC Deputy Secretary Jorge A. Coll claims that this aspect of ABACC's safeguards implementation helps the monitoring process become increasingly efficient and cooperative:

An operations specialist that performs an inspection in the other country better understands the difficulties and inconveniences associated with the application of safeguards in this type of installation and, upon returning to his normal activities, seeks to perfect the safeguards elements in the same type of installation in his country . . . promoting a system of "revitalization" that perfects the application of the controls system.<sup>26</sup>

This also provides for the predictability factor that CBMs prescribe. When each country knows the nuclear capabilities of the other, uncertainties and suspicions are decreased. ABACC is also the manifestation of a decade of cooperation established on the principle of commonality—common needs in the field of technology, nuclear energy, relations with developed nations in the international arena, and security concerns. These common factors create a sense of balance between the two nations, one that lends itself to cooperation rather than competition.

As a confidence-building measure, ABACC provides verification of Argentina and Brazil's commitment to maintaining transparent and peaceful nuclear programs. During the dedication ceremony for ABACC Headquarters in Rio de Janeiro (December 1992), Argentine Foreign Minister Guido Di Tella emphasized the importance of the verification of agreements like the Guadalajara Treaty. According to Di Tella such bilateral accords "cannot be implemented unless there is an adequate supervision system." In this context, ABACC is the supervision system that takes declaratory CBMs a step further—to implementation.<sup>27</sup> The establishment and functioning of ABACC also makes the political statement that Argentina and

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<sup>24</sup>Jorge A. Coll, interview with author, facsimile, 27 July 1994.

<sup>25</sup>Feu Alvim, interview with author, 22 September 1995.

<sup>26</sup>Coll, "Sistemas Regionales: El SCCC y La ABACC," 7.

<sup>27</sup>"Pact to Control Nuclear Activities Implemented with Brazil" TELAM, Buenos Aires, 10 December 1992; as translated in *Proliferation Issues*, JPRS-TND-92-048, 23 December 1992.

Brazil are serious about their commitments, willing to invest the money and labor needed to form an effective inspection agency.

Bilaterally, nuclear CBMs are working. Technical cooperation and bilateral safeguards through ABACC have significantly improved bilateral trust.<sup>28</sup> For example, the Quadripartite Agreement allowed Argentina to support Brazil's recent contract with Russia for the purchase of sensitive technology for nuclear energy production. Because Brazil adheres to full-scope safeguards, the transaction did not violate international safeguards.<sup>29</sup>

At the regional level, the standard set by the establishment of ABACC supports and enhances the Latin American nonproliferation regime. In fact, it is conceivable that ABACC could expand to embrace other countries in the region, such as Chile. Feu Alvim believes in the possibility of incorporating either Mercosur nations or Tlatelolco nations into ABACC.<sup>30</sup> In the past, the Tlatelolco regime felt *threatened* by the progress of Argentine and Brazilian nuclear programs and their acquisition of uranium enrichment capabilities; however, recent efforts to put those capabilities under bilateral and international safeguards now *enhance* the regional regime. In fact, as a result of Argentina and Brazil's accession to this nuclear weapons-free zone treaty, Cuba signed the Tlatelolco Treaty in March 1995, thereby nearly completing the treaty's membership to include all Latin American and Caribbean nations. Cuba had previously stated that it would not accede to the treaty until all other nations (namely Argentina, Brazil, and Chile) had the treaty in force for their nations.

As Argentine and Brazilian cooperation in early Tlatelolco negotiations led to eventual bilateral rapprochement, subsequent bilateral progress eventually brought the Tlatelolco Treaty<sup>31</sup> into force for Argentina and Brazil. One of the goals stated in the Guadalajara Agreement of 1990 was accession to Tlatelolco, which has now been achieved. With accession, Argentina has expressed enthusiasm that its presence (along with that of Brazil and Chile) in OPANAL (Tlatelolco's Agency for the Prohibition of Nuclear Weapons in Latin America) would provide a new impulse to the Tlatelolco organization. Argentine Ambassador Rogelio Pflirter is eager to see Argentine participation contribute to OPANAL's growing influence in Latin America and promote nonproliferation ideals in the region.<sup>32</sup>

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<sup>28</sup>Thomaz Costa, "La Idea de Medidas de Confianza Mutua desde una Visión Brasileña," in *Medidas de Confianza Mutua en América Latina*, Augusto Varas and Isaac Caro, eds. (Chile: FLACSO, February 1994), 169.

<sup>29</sup>"Di Tella Supports Brazilian Nuclear Technology Acquisition," TELAM, Buenos Aires, 15 September 1994; as translated in FBIS-LAT-94-180, 16 September 1994, 46.

<sup>30</sup>Feu Alvim, interview with author, 22 September 1995.

<sup>31</sup>For general information about the Tlatelolco Treaty, please see *SIPRI Yearbook 1994: World Armaments and Disarmament* (Oxford, Great Britain: Oxford University Press, 1994), 670-671, 762.

<sup>32</sup>Daniel de la Pedraja, "Mexico y el Tratado de Tlatelolco." Paper presented at the Conference on Peaceful Uses of Nuclear Energy and Nonproliferation, Bariloche, Argentina, 19 April 1994, 4.

In order to coordinate bilateral with multilateral Latin American efforts, ABACC and OPANAL have initiated relations. In March 1993, OPANAL Secretary General Dr. Antonio Stempel Paris visited ABACC and spoke about the activities of his organization. In May 1993, the secretaries of the two agencies signed a cooperation agreement which, among other things, established routine consultations.<sup>33</sup> Additionally, ABACC participated as an observer in OPANAL's March 1995 general conference.

As a bilateral CBM, ABACC is a stepping stone toward establishing international confidence in Argentine and Brazilian peaceful nuclear intentions. The role of the IAEA under the Quadripartite Agreement acts as a second step, providing even stronger assurances to the international community. As the Argentine-Brazilian experience suggests, countries may find it easier to initiate confidence building first at a regional or bilateral level, rather than at an international level. Once established, bilateral or regional confidence building can help smooth the way to acceding to international confidence-building regimes. At this point, with solid bilateral and multilateral confidence-building regimes in place, the international community can be assured that Argentina and Brazil will most likely not engage in a nuclear arms race against one another.

ABACC is an institution that acts as a symbol of peaceful nuclear intentions. This institution makes withdrawal from bilateral or multilateral nuclear control commitments very costly for either party.<sup>34</sup> A withdrawal would provoke 1) international outrage, reverberating throughout the UN and the IAEA and blocking access to technology and financial assistance; 2) regional disapproval (as it would contradict the Tlatelolco culture) causing serious ramifications within the OAS; and 3) domestic criticism, especially from the foreign ministry, concerned scientists, and some members of parliament and the academic community. Withdrawal from nuclear control commitments is viewed by the global community as implying military intentions for a nation's nuclear program (as evidenced in the case of North Korea's withdrawal from the NPT).

This binational agency thus confirms the desire to end the proliferation of atomic weapons and creates confidence in relations between the two countries, and in the relations of the two countries with the international

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<sup>33</sup>ABACC, *Annual Report* (1993), 9.

<sup>34</sup>While ABACC will perform very real functions, its *raison d'être* is also political. That is, ABACC helps assure the domestic political acceptability of full-scope NPT-equivalent safeguards. The bilateral incentive for mutual transparency adds to ABACC's importance, with the ultimate result being an arrangement which may be stronger than the standard NPT agreement. John R. Redick, "Nuclear Confidence-Building in Latin America," in *Verification Report 1993, Yearbook on Arms Control and Environmental Agreements* (London: Verification Technology Information Centre, January 1993), 14.

community. It also seeks to further encourage the development of peaceful uses for nuclear energy.<sup>35</sup>

## Challenges to ABACC

The challenges that ABACC faces in implementing Argentine and Brazilian nuclear control commitments relate directly to the motives that once led Argentina and Brazil into a "nuclear arms" race: rivalry at the bilateral level and prestige within the international community.

### Managing Bilateral Rivalries

ABACC's task, and challenge, is to implement bilateral nuclear controls despite struggles for regional hegemony. To do this, it must first establish and then institutionalize routine implementation activities so that neither bilateral struggles nor domestic upheaval would destroy ABACC's monitoring activities. ABACC's success ultimately depends upon individual Argentine and Brazilian domestic political will and continued friendly Argentine–Brazilian relations.

Disparity and room for rivalry still exist between the two countries in connection with their foreign policy postures. Argentina has abandoned its identification with the non-aligned movement and fully aims to affiliate itself with the international policies of the industrialized nations, as evidenced by its intention to accede to the NPT. Brazil, on the other hand, has continued to identify with the non-aligned movement and other developing countries in an international context. During a November 1994 visit to Argentina, Brazil's President-elect Fernando Henrique Cardoso stated that he did not approve of Argentina's style of relations with the United States ". . . but recalled that Brazil is also interested in participating in developed country forums."<sup>36</sup> Consistent with its "non-aligned" stance, Brazil previously refused to sign the NPT, claiming it discriminatory; however, Cardoso stated in October 1994 that he would consider the possibility of adhering to the NPT.<sup>37</sup>

Another potential challenge to Argentine–Brazilian nuclear cooperation and the smooth functioning of ABACC is the privatization of Argentina's nuclear industry. As a result

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<sup>35</sup>"Agency for Nuclear Materials Control Established," *La Nación*, Buenos Aires, 26 December 1992, 6; as translated in *Proliferation Issues*, JPRS-TND-93-001-L, 22 January 1993.

<sup>36</sup>"Brazil's Cardoso on Integration, Ends Visit," TELAM, Buenos Aires, 3 November 1994; as translated in FBIS-LAT-94-215, 7 November 1994, 29.

<sup>37</sup>Maria Helena Tachinardi, "Foreign Minister Cited on Nonproliferation Treaty," *Gazeta Mercantil*, Sao Paulo, 2 November 1994, 3; as translated in FBIS-LAT-94-215, 7 November 1994, 29; and "Cardoso Views NPT, Ties with the U.S.," *Gazeta Mercantil*, 4 November 1994, 1,3; as translated in FBIS-LAT-94-217, 9 November 1994, 31-32.

of an August 1994 Presidential Decree declaring the privatization of the nuclear industry, Argentina's national nuclear authority, CNEA, has been broken into separate functional offices. A governmental regulatory agency (Ente Nacional Regulador Nuclear, or National Nuclear Regulating Agency) will inherit the nuclear control and accounting role of the CNEA as well as maintain relations with ABACC. A semi-private institution, Nucleoeléctrica Argentina, S.A. will take over Argentina's nuclear installations and supervise their privatization. ABACC is confident that this change will not alter its nuclear accounting and control system.<sup>38</sup> However, Brazil has expressed concern over the potential for structural imbalance within the ABACC system.

Speculation about Brazilian military capabilities in the nuclear field could provide further challenges to ABACC. The military continues to run Brazil's nuclear program, with the Navy sustaining the Aramar uranium enrichment plant (for submarine propulsion purposes).<sup>39</sup> The military could seek nuclear capabilities as a means of justifying its continued existence and funding in the face of economic hardships and possible budgetary constraints. However, the military is fragmented among the different forces and therefore would not likely be able to put forward a comprehensive, well-funded, high-technology nuclear weapons program.

Brazilian technology policy has historically been dominated by the directives of the military, an institution that does not generally operate on the principle of openness. While the potential problems created by military involvement in nuclear technology policy<sup>40</sup> are intimately tied to the question of civilian-military relations (a question beyond the scope of this paper), ABACC and the SCCC *do* fulfill a need for civilian monitoring of nuclear facilities. The scientific community in Brazil often expressed the opinion that unsafeguarded nuclear facilities on military sites needed civilian verification. A secret or "parallel" nuclear program is possible but unlikely, due to a lack of unified effort and to disincentives provided by the application of ABACC and IAEA safeguards.

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<sup>38</sup>Ana Claudia Ruffo, Institutional Relations of ABACC, interview by author, facsimile, 11 October 1994. This is of concern because ABACC originally based its implementation activities on the accounts and controls performed by the national authorities.

<sup>39</sup>While the Brazilian Navy's nuclear submarine program itself is not subject to safeguards, the uranium enrichment facilities at Aramar and its nuclear material serving the submarine program *are* safeguarded by ABACC and the IAEA under the Quadripartite Agreement. In fact, the IAEA conducted its first inspection of the Aramar site in July 1994. IAEA inspectors also collected uranium samples from the site to analyze the uranium enrichment level of the material against its declared enrichment limit of twenty percent. "IAEA Team to Inspect Angra-1 Nuclear Plant," Agência Estado (Sao Paulo, 7 July 1994); as translated in FBIS-LAT-94-132, 7 July 1994). Monthly inspections have been carried out by the IAEA at ARAMAR, according to Feu Alvim. (Interview with author, 22 September 1995).

<sup>40</sup>For more on this subject please see Ken Conca, "Technology, the Military and Democracy in Brazil," *Journal of Interamerican Studies and World Affairs* 34, no.1 (Spring 1992): 141-177.

Nonetheless, the Argentine–Brazilian rivalry has been, and may continue to be, softened in two areas: nuclear cooperation and economic integration. The bilateral confidence-building process described above illustrates the nuclear rapprochement of the two nations. Economic integration continues to be a priority for both countries. The Common Market of the South (Mercosur), including Uruguay and Paraguay in addition to Argentina and Brazil, entered into force on January 1, 1995, establishing a free-trade area.<sup>41</sup> Even before its entry into force, trade among Mercosur countries had been increasing as barriers to trade came down. Brazilian business investment in Argentina quintupled from 1992 to 1994, and Brazil has become Argentina's principal trading partner.<sup>42</sup>

Nonetheless, economic development in Argentina and Brazil has progressed at disparate rates, which could potentially complicate integration efforts or general bilateral relations. However, while Argentina has progressed more swiftly than Brazil, both confront similar poverty-related problems, such as severe inequalities in the distribution of wealth and periodic social unrest. These common problems could be confronted jointly. Moreover, Brazil may soon catch up to Argentine development progress if the economic reform program of President Cardoso—the Real Plan (named after the new 'real' currency in Brazil)—continues to show promise. Monthly inflation is decreasing steadily in Brazil as a result of the plan.

The election of Cardoso and the re-election of Menem in March 1995 promise better economic and political relations between Argentina and Brazil. In fact, Cardoso and Menem met in November 1994 to discuss bilateral relations, seeking to improve already positive bilateral ties. During an address to the Argentine Council for International Relations on economic cooperation between the two countries, Cardoso stated that:

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<sup>41</sup>In March 1991, the Treaty of Asunción was signed, establishing Mercosur. For more information on Mercosur, please see Hirst, "Mercosur and the New Circumstances for its Integration"; Foreign Policy Association, "Reconnecting with the World," in *Great Decisions 1994* (New York: Foreign Policy Association, 1994), 68-69; Luigi Manzetti, "The Political Economy of Mercosur," *Journal of Interamerican Studies and World Affairs* 35, no. 4 (Winter 1993/1994): 101-141; and Francisco Rojas Aravena, "El Cono Sur Latinoamericano y la Iniciativa para las Américas," *Estudios Internacionales* 26, no. 101 (January-March 1993): 98-122.

<sup>42</sup>"Brasil invade Argentina," *La Prensa*, Buenos Aires, 1 November 1994, sec.2, 4. Currently, the Joint Chiefs of Staff of each of the Mercosur countries meet regularly to discuss opportunities for military cooperation in the region. There has even been speculation that Mercosur may become an official forum for military cooperation—in which case, confidence in denuclearization would be incredibly important. ABACC's confidence-building role is vital in this context. Please see Hirst, "Mercosur and the New Circumstances for its Integration;" and Gleuber Vieira, "La Variable Estratégica en el Proceso de Constitución del Mercosur," *Seguridad Estratégica Regional*, no. 5 (March 1994): 8-13.

Fortunately, Argentines and Brazilians have now acknowledged, after decades of a lack of confidence, that we are similar, that we have similar expectations and ways of life, and we also have the same objectives.<sup>43</sup>

Cardoso made the trip out of personal interest to improve relations with Argentina. In response, Argentine Foreign Minister Guido Di Tella expressed his confidence that relations would improve. Among Argentines in general, Cardoso's trip was perceived as a demonstration of his interest in tightening bilateral ties and was well-received.<sup>44</sup> Similar positive, cooperative gestures at high levels in both governments help secure the future of ABACC.

## **Integrating Multilateral Demands**

While the bilateral mechanism is being established and the SCCC steadily applied in Argentina and Brazil, ABACC remains challenged by concurrent demands: first, to establish itself as an international CBM; and second, to coordinate its efforts with those of the IAEA under the Quadripartite Safeguards Agreement. Argentina and Brazil find ABACC's active participation in the Quadripartite Agreement to be imperative to bilateral and international relations. ABACC manifests the regional identity of Argentina and Brazil in the international realm, and both countries take considerable pride in it.<sup>45</sup>

ABACC maintains an intricate parallel construction, combining bilateral and multilateral activities. It has various audiences for whom it must continue to build trust in Argentina and Brazil's nuclear programs. Vital to the international confidence-building role of ABACC is the smooth functioning of the application of multilateral safeguards with the IAEA as provided for under the Quadripartite Agreement. The IAEA-ABACC relationship may become subject to turf battles or to problems of interpretation in the course of actually implementing the agreement, especially when it comes to the negotiation of facility arrangements and the interpretation of IAEA special inspections, as discussed below.

It is vital to strike a delicate balance between ABACC autonomy, which is crucial to promoting bilateral legitimacy, and IAEA involvement in verification, an equally critical stamp

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<sup>43</sup>"Brazil's Cardoso Continues Visit, Discusses Real Plan," TELAM, Buenos Aires, 3 November 1994; as translated in FBIS-LAT-94-214, 4 November 1994, 24.

<sup>44</sup>"Cardoso quiere lograr relaciones 'más positivas' con la Argentina," *El Cronista*, 3 November 1994, 14.

<sup>45</sup>The inclusion of ABACC in the Quadripartite Agreement safeguards activities as well as its potential for international confidence building relate to the prestige issue. Argentina and Brazil were not willing to accept international verification activities of their nuclear facilities without having Southern Cone participation in these activities. As such, ABACC is a source of regional pride for the two countries, perhaps replacing the acquisition of nuclear capabilities as a means of gaining respect from the international community.



of approval needed to produce international assurance.<sup>46</sup> The IAEA and ABACC began joint activities in June 1994. Currently, both agencies participate in all verification activities, as understanding the application of safeguards at Argentine and Brazilian facilities is the first step in coordinating their efforts. Such duplication should decrease as confidence between the two agencies grows. In fact, ABACC Secretary Feu Alvim opines that with more trust in the future, the IAEA should audit ABACC inspection efforts.<sup>47</sup> A fruitful relationship between IAEA and ABACC may provide cost savings to IAEA international safeguards. In order to get a comprehensive overview of Argentina's and Brazil's nuclear programs, the IAEA is now undertaking a "completeness exercise." The IAEA made one visit to Argentine and Brazilian facilities in early 1995 and a second visit in October 1995.<sup>48</sup>

To address the possibility of unnecessary turf battles and wasteful duplication, the Quadripartite Agreement, its Protocol and the General Part of the Subsidiary Arrangements provide guidelines coordinating activities among ABACC, the IAEA, and the States Parties. According to the rules laid down in these documents, ABACC and the IAEA should have the ability to arrive at independent conclusions (Protocol, Article 1), the two agencies should avoid unnecessary duplication, and their activities should be consistent with prudent management practices (Protocol, Article 1, Quadripartite, Article 2). In order to coordinate IAEA and ABACC activities, a Liaison Committee was established to review the performance of coordination arrangements in the Protocol and to examine inspection efforts and safeguards techniques. As well, a special chapter of the General Part of the Subsidiary Arrangement was established for coordination between the IAEA and ABACC.<sup>49</sup> Several coordination meetings have taken place since March 1994.

While the legal framework for IAEA-ABACC cooperation is clear within the Quadripartite Agreement and its related documents, specific implementation of the Quadripartite Agreement may raise contentions. First, the facility attachments—the detailed plan for the application of safeguards to each facility—are still in negotiation. These attachments will define ABACC and IAEA participation in verification activities at each nuclear installation. The ability to arrive at independent conclusions without unnecessarily duplicating activities will necessitate reaching a delicate balance between IAEA and ABACC activities, not without some debates over sovereignty, autonomy, industrial secrets, and IAEA responsibilities to the international community. If the relationship is not clearly defined, points that may be

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<sup>46</sup>According to ABACC's alternating Secretaries, Carlos Feu Alvim and Jorge A. Coll, ABACC's role in this context is to complement the IAEA's nonproliferation efforts, not compete with the IAEA; nonetheless, the Quadripartite Agreement assigns ABACC an active role in the implementation of safeguards in the States Parties. Coll, "Sistemas Regionales: El SCCC y La ABACC," 9.

<sup>47</sup>Feu Alvim, interview with author, 22 September 1995.

<sup>48</sup>Ibid.

<sup>49</sup>ABACC, *ABACC News* (Rio de Janeiro, Brazil: January/April 1994), 1.

immediately resolved by vague text may later be subject to interpretation disputes.<sup>50</sup> In this context, it is important for Argentina and Brazil to develop a unified and logical stance regarding their respective facilities, creating domestic, then bilateral, consensus regarding the role of ABACC and the involvement of the IAEA. Concurrently, the IAEA will have to remain flexible in the details of verification implementation roles.

Another challenge facing these facility attachment negotiations entails the difficulty of establishing an accounting and control system at facilities that have been functioning for years without an inventory system or safeguards. Negotiating the verification activities (to be defined in the facility attachments) for these facilities will be particularly touchy, as the unsafeguarded facilities are the most sensitive facilities in Argentina and Brazil (including, for example, Argentina's gaseous diffusion facility and Brazil's gas centrifuge unit). Therefore, the IAEA will be especially eager to come to accurate, independent conclusions, undoubtedly requiring ample access, and perhaps requiring more intrusive inspections, in order to provide the international community with sufficient assurances. The issue of industrial secrets and intellectual property could again be raised, as it was in the past by the Brazilian Congress, in reaction to possible IAEA requests for more access.

Aggravating the delicate relationship between the two agencies is the IAEA's own struggle for respect in the international community. In the wake of problems with Iraq and North Korea, the IAEA is seeking to improve its reputation within the international community. The IAEA is moving forward with measures to strengthen its nonproliferation verification activities, aiming to become more intrusive in its application of comprehensive safeguards. In this context, the IAEA will be unwilling to relinquish any of its normal duties under a full-scope safeguards agreement; on the contrary, the IAEA will seek to augment measures that will allow it to reach independent and reliable conclusions.

Also relating to the potential intrusiveness of the IAEA will be the IAEA's right to special inspections. The IAEA may manifest its statutory right to perform special inspections at undeclared facilities within the territory of the parties to the Quadripartite Agreement. However, the *interpretation* of this right may become a source of conflict.<sup>51</sup> The legal basis for these inspections is found in the IAEA statute (Article XII, A6) as well as Article 71 of the

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<sup>50</sup>The question of ABACC's role in the Quadripartite Agreement with relation to subsidiary arrangements and IAEA special inspections was heavily debated in Brazil's Chamber of Deputies when it addressed the ratification of the agreement itself. For accounts of these debates, please see Luiza Pastor, "Deputies Seek Further Debate on Nuclear Accords," *Gazeta Mercantil*, Sao Paulo, 25 June 1993, 6; as translated in FBIS-LAT-93-133, 14 July 1993; and Maria Helena Tachinardi, "Flores and Celso Amorim Urge Quick Approval of Nuclear Accord," *Gazeta Mercantil*, Sao Paulo, 12 August 1993, 6; as translated in FBIS-LAT-93-169, 2 September 1993.

<sup>51</sup>Pastor, 6.

Quadripartite Agreement.<sup>52</sup> Special inspections carry with them the stigma of distrust, accusation, and intrusiveness. Such a request would no doubt raise protests domestically. Since some difficulties still exist in connection with the Quadripartite Agreement relating to special inspections, "a challenge by IAEA on the completeness of the disclosed sites under the Quadripartite Agreement should be considered as an open question of Quadripartite negotiations"<sup>53</sup> in order to avoid a situation like the one that has taken place in North Korea. Conflict over special inspections would put ABACC in a sticky situation, calling into question its own competence and loyalties. Depending which country the special inspections were imposed upon, tensions could ensue between Argentina and Brazil, or the two countries could join together in protest against the IAEA or the international community. Feu Alvim believes it would be easier for ABACC, rather than for the IAEA, to have access to information and solve the problem that could motivate a special inspection because of regional trust in ABACC. In this regard, it may also be more effective to have ABACC execute any intrusive measures in sensitive facilities.<sup>54</sup>

As well as diplomatic progress on multilateral matters, ABACC also requires some technical assistance in order to ensure that the agency continues to play an important confidence-building role bilaterally and to act as an important verification tool internationally. In order to reach its goal of conducting routine inspections of all Argentine and Brazilian nuclear facilities and to achieve its ambition of assuming most responsibilities exercised by the IAEA, ABACC must strengthen its technical and inspection capabilities, including the SCCC and related national and specific facility control systems. Moreover, ABACC must work to achieve prompt completion of accurate, effective facility attachments and close coordination with the IAEA. Advanced technology at ABACC, in line with IAEA techniques, will enhance the coordination efforts between the two agencies.

## Meeting Technical Challenges

Enhancing ABACC capabilities is a question of technology and training assistance. As a new verification agency ABACC needs to continue acquiring techniques for applying safeguards. The sooner ABACC has the full capability to inspect and perform regular verification activities at all Argentine and Brazilian nuclear facilities, the sooner confidence will be augmented regarding Argentine and Brazilian nuclear intentions. Specific examples of ABACC's technical needs are detailed below.

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<sup>52</sup>"The Agency may make special inspections: (a) in order to verify the information contained in special reports; or (b) if the Agency considers that information made available by ABACC, including explanations from ABACC and information obtained from routine inspections, is not adequate for the Agency to fulfill its responsibilities under this agreement." The Quadripartite Agreement, December 1991.

<sup>53</sup>de Souza Barros, 2.

<sup>54</sup>Feu Alvim, interview with author, 22 September 1995.

In response to specific ABACC technical needs, many members of the international community are contributing insights, training, technology, and equipment to ABACC. Although ABACC inspectors currently experience few hands-on inspections each year, several training seminars have taken place with the participation of experts from the United States, Japan, and the IAEA. For example, Argentina's CNEA organized a seminar in Buenos Aires in June–July 1993. ABACC Secretary Coll also cites technical and training assistance from France, Euratom,<sup>55</sup> and the IAEA, such as when ABACC officials made technical visits to Euratom and the IAEA in Spring 1993. In Vienna, ABACC technical officials met with their IAEA counterparts in anticipation of coordinating activities. At Euratom facilities and safeguards laboratories, ABACC officials gained insights from Euratom's years of experience. Also, the French Commission for the Establishment of Analytical Methods (CETAMA) sponsored the participation of one Argentine and one Brazilian laboratory in a program for the intercomparison of chemical analysis in safeguards systems.<sup>56</sup>

ABACC Secretary Feu Alvim expressed satisfaction with ABACC's cooperation activities with these organizations and countries. One US Department of Energy (USDOE) workshop in late 1994/early 1995 which simulated inspections was especially useful as it brought together ABACC's Argentine and Brazilian inspectors in one setting. This allowed for a fruitful exchange of information.

Cooperation agreements between USDOE and ABACC, and between USDOE and Argentina, were signed in April 1994, with meetings on those agreements beginning in July 1994. Another safeguards cooperation agreement was signed on September 19, 1995, with Brazil. US Department of Energy official Dr. Kenneth Sanders describes them as umbrella agreements for cooperation which support safeguards, complement IAEA activities, and provide technical training and physical protection guidance. ABACC is especially "keen" to cooperate. The agreement assists the inspectorate in two main areas: technical support and training.

Specifically, USDOE's agreement with ABACC provides for, among other things: 1) exchanging uranium samples (to use as baseline reference points in collecting and analyzing samples) for certification purposes; and 2) training inspectors to measure nuclear materials accurately. The ABACC–USDOE agreement also includes ABACC participation in a CNEA (Argentina)–USDOE program for the application of safeguards at enrichment facilities. Argentines and Brazilians have also participated in training sessions sponsored by USDOE at

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<sup>55</sup>Euratom is the verification institution for all European nuclear activities. It also participates in a multilateral safeguards agreement (IAEA INFCIRC/193) with the IAEA. This agreement served as a model for the Quadripartite Agreement.

<sup>56</sup>ABACC, *Annual Report* (1993), 8-10.

US laboratories. Although USDOE efforts are not in direct coordination with the IAEA, they implicitly aid the IAEA as USDOE works informally with the IAEA on these issues.<sup>57</sup>

### The Lessons of ABACC

ABACC is an excellent example of a bilateral relationship moving from declaratory CBMs to their implementation; as such, it is an invaluable model from which important lessons may be derived. First, the experience of ABACC shows how bilateral mechanisms can enhance international nonproliferation efforts. By reinforcing international safeguards, regional organisms such as ABACC contribute to the effectiveness of international nonproliferation regimes and create an added deterrent within the region. Thus, not only does ABACC create the security and confidence necessary to reduce nuclear ambitions by aiming at demand-side issues, it also helps to strengthen safeguards against the spread of nuclear weapons by providing supply-side barriers. A regionally-derived organization like ABACC also provides a nondiscriminatory means of strengthening the international nonproliferation regime. This point is especially significant in the context of IAEA endeavors to strengthen its safeguards. If regional confidence building, such as that manifested in ABACC, were to be established in trouble spots, the IAEA would receive further assistance and assurances in its verification efforts. In the future, this could reduce its international safeguards budget.

The bilateral process leading to the creation of ABACC was different from the process of confidence building exhibited in the Northern Hemisphere and in the East–West conflict. The bilateral rapprochement surpassed the common conception of CBMs, according to many Latin American scholars. Moreover, it was very successful and tailored to the subregion. Unlike the historical East–West experience, which led first to verification, then transparency, confidence building, and cooperation, the Argentine–Brazilian chronological sequence was: cooperation, transparency, confidence building, and verification.<sup>58</sup>

The Argentine–Brazilian confidence-building experience was also unique because nuclear confidence became an essential component of efforts to integrate the two economies. Thus, nuclear issues were integrated into a larger context of relations. The most influential motive behind the nuclear controls was economic, not security-related.<sup>59</sup> As noted above, Mercosur shows great promise and must be acknowledged as a favorable by-product of the nuclear confidence-building process. The recent gains that Brazil and Argentina have made in international trade are significant and highlight the economic motivations for nuclear rapprochement shared by Argentina and Brazil. Other developing nations strapped for cash that seek nuclear capabilities can potentially follow the same path.

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<sup>57</sup>Kenneth Sanders, interview with author, 14 July 1994, Washington, DC.

<sup>58</sup>Lamaziere, 104.

<sup>59</sup>*Ibid.*, 103.

The Argentine–Brazilian experience shows that when mutual needs can be confronted jointly in a region, the door is opened to further cooperation. Evaluating that experience, several guidelines for regional confidence building can be established:

- The Argentine–Brazilian nuclear arrangement was successful because it was tailored to the situation in the subregion and reinforced the broader effort to foster mutual confidence.
- Argentina and Brazil created their arrangement independently, with little outside pressure or influence on the process. This produced a sense of ownership in the arrangement, making it much more effective than if it were superficially imposed by an outside organization or regime. Such “outsiders” may act to provide assurance to the international community, but may do little to change the internal viewpoints or nuclear motivations of regional actors.
- External influence of advanced nations in the Argentine–Brazilian case was most effective as positive reinforcement. Punitive action against either of these states could have undercut delicate subregional confidence building.
- The Argentine–Brazilian bilateral verification mechanism has helped to combat nuclear proliferation on a global level because the nuclear controls applied by ABACC have brought two non-NPT states into conformity with international nuclear nonproliferation norms.

Certain characteristics of ABACC as an agency may also prove to be useful examples for other regional verification bodies. The aspects that tend to be advantageous to ABACC include:

- its compatibility with the international system;
- the incorporation of technicians, balanced between Argentines and Brazilians, in the monitoring process and CBMs implementation;
- conducting of mutual inspections;
- verification activities which occur in a context of technical cooperation, leading to transparency, as well as mutually beneficial progress on energy issues;
- technical training provided by outside, internationally-trusted experts; and
- its autonomy in the regional and bilateral context, which creates trust locally.

In the opinion of ABACC Deputy Secretary Coll, the development of an adequate level of technical excellence and the recognition of the seriousness of its work constitute the most important elements in securing the future of ABACC as a strong organization.<sup>60</sup>

## Conclusion

ABACC is the manifestation of promises made during the long confidence-building process that led to nuclear rapprochement between Argentina and Brazil, a process that had numerous positive effects on broader Argentine–Brazilian relations. In this connection, ABACC presents the wave of future confidence-building efforts—the transition from promise to practice. The combination of bilateral and multilateral activities will certainly be demanding for the agency, but full-scale activity will establish ABACC as a permanent institution both in the Southern Cone as well as in the international community. While ABACC cannot politically prevent changes in domestic political will, the longer it runs successfully, the more solid the nuclear control commitments of its member states become, and the more difficult those commitments are to escape.

ABACC fulfills a very important verification role that the IAEA has not previously been able to provide in the Southern Cone. In the context of international security, the establishment of ABACC is a vital intermediate measure at the regional level providing international-level safeguards functions.

Regional and global approaches to disarmament and arms limitation complement each other and both should be pursued simultaneously in order to promote regional and international peace and security. The regional approach to disarmament and arms limitation is one of the essential elements in global efforts to strengthen international peace and security.<sup>61</sup>

The experience of Argentina and Brazil illustrates this ideal. Locally created, ABACC has been effectively integrated (through the Quadripartite Agreement) into the international safeguards regime, serving simultaneously as both a regional and a global confidence-building measure.

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<sup>60</sup>Coll, interview with author, 27 July 1994.

<sup>61</sup>United Nations Disarmament Commission, 1993 Report to the UN General Assembly (April–May 1993) Annex II, part I.1-2.





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## Appendix A:

### Agreement between the Republic of Argentina and the Federative Republic of Brazil for the Exclusively Peaceful Use of Nuclear Energy<sup>1</sup>

The Government of the Republic of Argentina and the Government of the Federative Republic of Brazil, hereinafter referred to as "the Parties":

Noting the progress achieved in bilateral nuclear co-operation as a result of the joint work under the co-operative agreement on the peaceful uses of nuclear energy, signed in Buenos Aires on 20 May 1980;

Recalling the commitments assumed under the Joint Declarations on Nuclear Policy of Foz do Iguacu (1985), Brasilia (1986), Viedma (1987) and Iperó (1988), reaffirmed by the Joint Statement of Buenos Aires of 6 July 1990;

Considering the decisions adopted in the Argentine-Brazilian Declaration on Common Nuclear Policy of Foz do Iguacu of 28 November 1990;

Reaffirming their decision to deepen the process of integration between the two countries;

Recognizing the importance of the peaceful use of nuclear energy for the scientific, technological, economic and social development of their peoples;

Believing that the benefits of all applications of nuclear technology should be accessible for peaceful purposes to all States;

Reaffirming the principles of the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean;

Have agreed as follows:

#### BASIC UNDERTAKING

#### ARTICLE I

1. The Parties undertake to use the nuclear material and facilities under their jurisdiction or control exclusively for peaceful purposes.
2. The Parties also undertake to prohibit and prevent in their respective territories, and to abstain from carrying out, promoting or authorizing, directly or indirectly, or from participating in any way in:
  - (a) The testing, use, manufacture, production or acquisition by any means of any nuclear weapon; and
  - (b) The receipt, storage, installation, deployment or any other form of possession of any nuclear weapon.

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<sup>1</sup>International Atomic Energy Agency Information Circular, INFCIRC/395, 26 November 1991.

*Appendix A*

3. Bearing in mind that at present no technical distinction can be made between nuclear explosive devices for peaceful purposes and those for military purposes, the Parties also undertake to prohibit and prevent in their respective territories, and to abstain from carrying out, promoting or authorizing, directly or indirectly, or from participating in any way in, the testing, use, manufacture, production or acquisition by any means of any nuclear explosive device while the above-mentioned technical limitation exists.

## ARTICLE II

None of the provisions of the present Agreement shall affect the inalienable right of the Parties to carry out research on, produce and use nuclear energy for peaceful purposes, each Party maintaining its industrial, technological and commercial secrets, without discrimination and in conformity with Articles I, III and IV.

## ARTICLE III

None of the provisions of the present Agreement shall limit the right of the Parties to use nuclear energy for the propulsion of any type of vehicle, including submarines, since propulsion is a peaceful application of nuclear energy.

## ARTICLE IV

The Parties undertake to submit all the nuclear materials in all nuclear activities carried out in their territories or anywhere under their jurisdiction or control to the Common System of Accounting and Control of Nuclear Materials ("SCCC") established by Article V of the present Agreement.

## COMMON SYSTEM OF ACCOUNTING AND CONTROL OF NUCLEAR MATERIALS

## ARTICLE V

The Parties shall establish the Common System of Accounting and Control of Nuclear Materials (hereinafter referred to as "SCCC"), the objective of which shall be to verify, in accordance with the basic guidelines established in the Annex to the present Agreement, that the nuclear materials in all nuclear activities of the Parties are not diverted to the purposes prohibited by the present Agreement.

BRAZILIAN-ARGENTINE AGENCY FOR ACCOUNTING  
AND CONTROL OF NUCLEAR MATERIALS

## ARTICLE VI

The Parties shall establish the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (hereinafter referred to as the "ABACC"), which shall have legal personality enabling it to carry out the objective assigned to it under the present Agreement.

## OBJECTIVE OF THE ABACC

## ARTICLE VII

The objective of the ABACC shall be to administer and implement the SCCC in accordance with the provisions of the present Agreement.

## POWERS OF THE ABACC

## ARTICLE VIII

The powers of the ABACC shall be:

- (a) To agree with the Parties new General Procedures and Implementation Manuals and any modifications to the existing procedures and manuals that may be necessary;
- (b) To carry out the inspections and other procedures required for implementation of the SCCC;
- (c) To designate inspectors to carry out the inspections indicated in (b);
- (d) To evaluate the inspections carried out in implementation of the SCCC;
- (e) To engage the necessary services to ensure fulfillment of its objective;
- (f) To represent the Parties before third parties in connection with the implementation of the SCCC;
- (g) To take legal action.

#### ORGANS OF THE ABACC

##### ARTICLE IX

The organs of the ABACC shall be the Commission and the Secretariat.

#### COMPOSITION OF THE COMMISSION

##### ARTICLE X

The Commission shall consist of four members, two being designated by each Party. The Commission shall be established within 60 days of the entry into force of the present Agreement.

#### FUNCTIONS OF THE COMMISSION

##### ARTICLE XI

The functions of the Commission shall be:

- (a) To monitor the functioning of the SCCC;
- (b) To approve the General Procedures and Implementation Manuals referred to in Article VIII(a) after their negotiation by the Secretariat;
- (c) To procure the necessary resources for the establishment of the Secretariat;
- (d) To supervise the functioning of the Secretariat, preparing instructions and directives as appropriate in each case;
- (e) To appoint the professional staff of the Secretariat and to approve the appointment of auxiliary staff;
- (f) To prepare a list of duly qualified inspectors from among those proposed by the Parties to carry out the inspection tasks entrusted to them by the Secretariat;
- (g) To inform the Party concerned of any anomalies which may arise in the implementation of the SCCC; that Party shall then be obliged to take the necessary measures to rectify the situation;

*Appendix A*

- (h) To call upon the Parties to establish any ad hoc advisory groups which may be deemed necessary to improve the functioning of the SCCC;
- (i) To report to the Parties every year on the implementation of the SCCC;
- (j) To inform the Parties of the non-compliance by one of the Parties of the commitments made under the present Agreement;
- (k) To prepare rules of procedure for itself and regulations for the Secretariat.

## COMPOSITION OF THE SECRETARIAT

## ARTICLE XII

1. The Secretariat shall consist of the professional staff appointed by the Commission and of auxiliary staff - In the performance of their duties, the staff of the Secretariat shall be subject to the regulations approved and the directives formulated by the Commission.
2. The senior staff of the nationality of each Party shall take it in turns each year to act as Secretary of the ABACC, beginning with the nationality of the country in which the headquarters is not located.
3. The inspectors designated under Article VII(C) shall be responsible exclusively to the Secretariat while carrying out the duties assigned to them by the Secretariat in connection with the SCCC.

## FUNCTIONS OF THE SECRETARIAT

## ARTICLE XIII

The Secretariat shall have the following functions:

- (a) To implement the directives and instructions issued by the Commission;
- (b) In this context, to perform the necessary activities for implementation and administration of the SCCC;
- (c) To act, under the mandate of the Commission, as the representative of the ABACC in its relations with the Parties and with third parties;
- (d) To designate from among those included in the list referred to in Article XI(f) the inspectors who will carry out the inspection tasks necessary for the implementation of the SCCC, taking into account that the inspectors who are nationals of one of the Parties should carry out inspections at the facilities of the other Party, and to instruct them in the performance of their duties;
- (e) To receive the reports which the Inspectors will prepare on the results of their inspections;
- (f) To evaluate the inspections in accordance with the appropriate procedures;
- (g) To inform the Commission immediately of any discrepancy in the records of either of the Parties which emerges from the evaluation of the inspection results;
- (h) To prepare the ABACC's budget for approval by the Commission;

*Appendix A*

- (i) To report regularly to the Commission on its activities and, in particular, on the implementation of the SCCC.

## CONFIDENTIALITY OF THE INFORMATION

## ARTICLE XIV

1. The ABACC shall not be authorized to divulge industrial, commercial or any other information of a confidential nature on the facilities and characteristics of the nuclear programmes of the Parties without the express consent of the Parties.
2. The members of the Commission, the staff of the Secretariat, the inspectors and all persons involved in the implementation of the SCCC shall not reveal industrial, commercial or any other information of a confidential nature on the facilities and characteristics of the nuclear programmes of the Parties acquired in or as a result of the performance of their duties. This obligation shall continue even after they have ceased working for the ABACC or doing work related to the implementation of the SCCC.
3. The penalties for infringements of paragraph 2 of this Article shall be determined by the respective national legislations, each Party establishing the penalty for infringements committed by its nationals regardless of where they were committed.

## HEADQUARTERS OF THE ABACC

## ARTICLE XV

1. The headquarters of the ABACC shall be in the city of Rio de Janeiro.
2. The ABACC shall negotiate with the Federative Republic of Brazil the relevant headquarters agreement.

## FINANCIAL AND TECHNICAL SUPPORT

## ARTICLE XVI

1. The Parties shall provide in equal amounts the necessary funds for the functioning of the SCCC and the ABACC.
2. The Parties shall make their technical capabilities available to the ABACC in support of its activities. Persons allocated temporarily to these support tasks shall be bound by the commitment laid down in Article XIV.

## PRIVILEGES AND IMMUNITIES

## ARTICLE XVII

1. The ABACC shall enjoy legal personality and full legal capacity. Its privileges and immunities and those of its staff in Brazil shall be laid down in the headquarters agreement referred to in Article XV.
2. The privileges and immunities of the inspectors and other staff working on a temporary basis for the ABACC shall be determined in an Additional Protocol.

## INTERPRETATION AND APPLICATION

## ARTICLE XVIII

*Appendix A*

Any disputes relating to the interpretation and application of the present Agreement shall be settled by the Parties through diplomatic channels.

## BREACH OF THE AGREEMENT

## ARTICLE XIX

Any serious breach of the present Agreement by one of the Parties shall entitle the other Party to terminate the Agreement or to suspend its application as a whole or in part, notification thereof being made by that Party to the Secretariat of the United Nations and the Secretariat of the organization of American States.

## RATIFICATION AND ENTRY INTO FORCE

## ARTICLE XX

The present Agreement shall enter into force 30 days after the date of exchange of the respective instruments of ratification. Its text shall be transmitted by the Parties to the Secretariat of the United Nations and the Secretariat of the organization of American States for registration.

## AMENDMENTS

## ARTICLE XXI

The present Agreement may be amended by the Parties at any time by mutual consent. The entry into force of the amendments shall be in accordance

## DURATION

## ARTICLE XXII

The present Agreement shall be valid for an indefinite period. It may be terminated by either of the Parties by written notification to the other Party, notification thereof being made by the Party terminating the Agreement to the Secretariat of the United Nations and the Secretariat of the organization of American States. The termination shall become effective six months after the date of receipt of this notification.

Done in the city of \_\_\_\_\_ on the \_\_\_\_\_ day of the month of \_\_\_\_\_ 1991, in duplicate in the Spanish and Portuguese languages, both texts being equally authentic.

ANNEX

BASIC GUIDELINES FOR THE COMMON SYSTEM OF ACCOUNTING  
AND CONTROL OF NUCLEAR MATERIALS

ARTICLE I

1. The Common System of Accounting and Control of Nuclear Materials (the SCCC) is a set of procedures established by the Parties to detect, with a reasonable degree of certainty, whether the nuclear materials in all their nuclear activities have been diverted to uses not authorized under the terms of the present Agreement.
2. The SCCC consists of General Procedures and implementation Manuals for each category of installation.

ARTICLE II

The SCCC shall be based on a structure of nuclear material accounting areas and shall be applied as of one of the following initiating events:

- (a) The production of any nuclear material of suitable composition and purity for direct use in the manufacture of nuclear fuel or in isotopic enrichment, including the subsequent generations of nuclear material produced from such material;
- (b) The import of any nuclear material having the characteristics set forth in paragraph (a) above or any other nuclear materials produced in a subsequent stage of the nuclear fuel cycle.

ARTICLE III

The nuclear material shall cease to be subject to the SCCC when:

- (a) it has been moved outside the jurisdiction or control of the Parties; or
- (b) It has been transferred to a non-nuclear use or a nuclear use not relevant in terms of the SCCC;  
or
- (c) It has been used, diluted or transformed so that it cannot be used for any nuclear use relevant in terms of the SCCC or it is practically irrecoverable.

ARTICLE IV

The application of the SCCC to nuclear materials used for the nuclear propulsion of any type of vehicle, including submarines, or in other activities which, by their nature, require a special procedure shall have the following special characteristics:

- (a) The suspension of inspections, of access to operational accounting records and of notifications and reports required under the SCCC in relation to these nuclear materials for the duration of their use for the above-mentioned activities;
- (b) The reapplication to these nuclear materials of the procedures referred to in paragraph (a) when they cease to be used for those activities;

*Appendix A*

- (c) The recording by the ABACC of the total quantity and composition of such nuclear materials under the jurisdiction or control of one of the Parties and all transfers of these materials outside such jurisdiction or control.

## ARTICLE V

The suitable level of accounting and control of nuclear materials for each installation shall be determined according to the strategic value obtained from analysis of the following variables:

- (a) Category of the nuclear material, taking into account the relevance of its isotopic composition;
- (b) Conversion time;
- (c) Inventory/flow of the nuclear material;
- (d) Category of the installation;
- (e) Degree of importance of the installation in comparison with other existing installations;
- (f) Existence of containment and surveillance methods.

## ARTICLE VI

The SCCC, where appropriate, shall include such measures as:

- (a) A system of records or reports reflecting, for each nuclear material accounting area, the inventory of nuclear materials and changes in that inventory;
- (b) Provisions for the correct application of the accounting and control procedures and measures;
- (c) Measuring systems to determine the nuclear material inventories and their variations;
- (d) Evaluation of the accuracy and degree of approximation of the measurements and calculation of their uncertainty;
- (e) Procedures to identify, revise and evaluate shipper-receiver differences in the measurements;
- (f) Procedures for carrying out a physical inventory;
- (g) Procedures for determining and evaluating non-accounted material;
- (h) Implementation of containment and surveillance systems.



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## Appendix B:

### Agreement of 13 December 1991 between the Republic of Argentina, the Federative Republic of Brazil, the Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials and the International Atomic Energy Agency for the Application of Safeguards.<sup>1</sup>

WHEREAS the Republic of Argentina and the Federative Republic of Brazil (hereinafter referred to as "the States Parties") are parties to the Agreement on the Exclusively Peaceful Utilization of Nuclear Energy (hereinafter referred to as "the SCCC Agreement"),<sup>2</sup> which established the Common System of Accounting and Control of Nuclear Materials (hereinafter referred to as "the SCCC");

RECALLING the undertakings of the States Parties in the SCCC Agreement;

RECALLING that, pursuant to the SCCC Agreement, none of its provisions shall be interpreted as affecting the inalienable right of the parties thereto to carry out research on, produce and use nuclear energy for peaceful purposes without discrimination and in conformity with Articles I to IV of the SCCC Agreement;

WHEREAS the States Parties are members of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (hereinafter referred to as "ABACC"), to which the implementation of the SCCC has been entrusted;

WHEREAS the States Parties have decided to conclude with the International Atomic Energy Agency (hereinafter referred to as "the Agency") a joint safeguards agreement, with the SCCC as a basis for the agreement;

WHEREAS the States Parties have further voluntarily requested the Agency to apply its safeguards taking into account the SCCC;

WHEREAS it is the desire of the States Parties, ABACC and the Agency to avoid unnecessary duplication of activities;

WHEREAS the Agency is authorized, pursuant to Article III.A.5 of its Statute (hereinafter referred to as "the Statute"), to conclude safeguards agreements at the request of Member States;

NOW THEREFORE the States Parties, ABACC and the Agency have agreed as follows:

#### PART I

#### BASIC UNDERTAKINGS

#### Article 1

The States Parties undertake to accept safeguards, in accordance with the terms of this Agreement, on all nuclear material in all nuclear activities within their territories, under their jurisdiction or carried out under their control

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<sup>1</sup> The Agreement was approved by the Agency's Board of Governors on 7 December 1991 and signed in Vienna on 13 December 1991. The Agreement, and the Protocol which is an integral part thereof, entered into force pursuant to Article 25 on 4 March 1994. International Atomic Energy Agency Information Circular, INFCIRC/435, March 1994.

<sup>2</sup>Reproduced in document INFCIRC/395; see Appendix A.

*Appendix B*

anywhere, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices.

Article 2

- (a) The Agency shall have the right and the obligation to ensure that safeguards will be applied, in accordance with the terms of this Agreement, on all nuclear material in all nuclear activities within the territories of the States Parties, under their jurisdiction or carried out under their control anywhere, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices.
- (b) ABACC undertakes, in applying its safeguards on nuclear material in all nuclear activities within the territories of the States Parties, to co-operate with the Agency, in accordance with the terms of this Agreement, with a view to ascertaining that such nuclear material is not diverted to nuclear weapons or other nuclear explosive devices.
- (c) The Agency shall apply its safeguards in such a manner as to enable it to verify, in ascertaining that there has been no diversion of nuclear material to nuclear weapons or other nuclear explosive devices, findings of the SCCC. The Agency's verification shall include, inter alia, independent measurements and observations conducted by the Agency, in accordance with the procedures specified in this Agreement. The Agency, in its verification, shall take due account of the technical effectiveness of the SCCC.

Article 3

- (a) The States Parties, ABACC and the Agency shall co-operate to facilitate the implementation of the safeguards provided for in this Agreement.
- (b) ABACC and the Agency shall avoid unnecessary duplication of safeguards activities.

IMPLEMENTATION OF SAFEGUARDS

Article 4

The safeguards provided for in this Agreement shall be implemented in a manner designed:

- (a) to avoid hampering the economic and technological development of the States Parties or international co-operation in the field of nuclear activities, including international exchange of nuclear material;
- (b) to avoid undue interference in the States Parties' nuclear activities, and in particular in the operation of facilities;
- (c) to be consistent with prudent management practices required for the economic and safe conduct of nuclear activities; and
- (d) to enable the Agency to fulfill its obligations under this Agreement taking into account the requirement for the Agency to preserve technological secrets.

Article 5

- (a) The Agency shall take every precaution to protect any confidential information coming to its knowledge in the implementation of this Agreement.
- (b) (i) The Agency shall not publish or communicate to any State, organization or person any information obtained by it in connection with the implementation of this Agreement, except that specific information relating to the implementation thereof may be given to the Board of Governors of the Agency (hereinafter referred to as "the Board") and to such Agency staff members as require such knowledge by reason of their official duties in connection with safeguards, but only to the extent necessary for the Agency to fulfill its responsibilities in implementing this Agreement.

(ii) Summarized information on nuclear material subject to safeguards under this Agreement may be published upon decision of the Board if the States Parties directly concerned agree thereto.

#### Article 6

- (a) In implementing safeguards pursuant to this Agreement, full account shall be taken of technological developments in the field of safeguards, and every effort shall be made to ensure optimum cost-effectiveness and the application of the principle of safeguarding effectively the flow of nuclear material subject to safeguards under this Agreement by use of instruments and other techniques at certain strategic points to the extent that present or future technology permits.
- (b) In order to ensure optimum cost-effectiveness, use shall be made, for example, of such means as:
- (i) containment and surveillance as a means of defining material balance areas for accounting and control purposes;
  - (ii) statistical techniques and random sampling in evaluating the flow of nuclear material; and
  - (iii) concentration of verification procedures on those stages in the nuclear fuel cycle involving the production, processing, use or storage of nuclear material from which nuclear weapons or other nuclear explosive devices could readily be made, and minimization of verification procedures in respect of other nuclear material, on condition that this does not hamper the implementation of this Agreement.

#### PROVISION OF INFORMATION TO THE AGENCY

##### Article 7

- (a) In order to ensure the effective implementation of safeguards under this Agreement, ABACC shall, in accordance with the provisions set out in this Agreement, provide the Agency with information concerning nuclear material subject to safeguards under this Agreement and the features of facilities relevant to safeguarding such material.
- (b) (i) The Agency shall require only the minimum amount of information and data consistent with carrying out its responsibilities under this Agreement.
- (ii) Information pertaining to facilities shall be the minimum necessary for safeguarding nuclear material subject to safeguards under this Agreement.
- (c) If a State Party so requests, the Agency shall be prepared to examine directly on the premises either of that State Party or of ABACC, design information which the State Party regards as being of particular sensitivity. Such information need not be physically transmitted to the Agency provided that it remains readily available for further examination by the Agency on the premises either of that State Party or of ABACC.

#### AGENCY INSPECTORS

##### Article 8

- (a) (i) The Agency shall secure the consent of the States Parties through ABACC to the designation of Agency inspectors to the States Parties.
- (ii) If the States Parties through ABACC, either upon proposal of a designation or at any other time after a designation has been made, object to the designation, the Agency shall propose an alternative designation or designations.
- (iii) If, as a result of the repeated refusal of the States Parties through ABACC to accept the designation of Agency inspectors, inspections to be conducted under this Agreement would be impeded, such refusal shall be considered by the Board, upon referral by the Director General of the Agency (hereinafter referred to as "the Director General"), with a view to its taking appropriate action.

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- (b) ABACC and the States Parties shall take the necessary steps to ensure that Agency inspectors can effectively discharge their functions under this Agreement.
- (c) The visits and activities of Agency inspectors shall be so arranged as:
  - (i) to reduce to a minimum the possible inconvenience and disturbance to the States Parties and ABACC and to the nuclear activities inspected;
  - (ii) to ensure protection of any confidential information coming to the knowledge of Agency inspectors; and
  - (iii) to take into account ABACC activities to avoid unnecessary duplication of efforts.

STARTING POINT OF SAFEGUARDS

Article 9

- (a) When any material containing uranium or thorium which has not reached the stage of the nuclear fuel cycle described in paragraph (b) is imported into a State Party to this Agreement, that State Party shall inform the Agency of its quantity and composition, unless the material is imported for specifically non-nuclear purposes; and
- (b) When any nuclear material of a composition and purity suitable for fuel fabrication or for isotopic enrichment leaves the plant or the process stage in which it has been produced, or when such nuclear material, or any other nuclear material produced at a later stage in the nuclear fuel cycle, is imported into a State Party to this Agreement, the nuclear material shall become subject to the other safeguards procedures specified in this Agreement.

TERMINATION OF SAFEGUARDS

Article 10

- (a) Safeguards under this Agreement shall terminate on nuclear material upon determination by ABACC and the Agency that the material has been consumed, or has been diluted in such a way that it is no longer usable for any nuclear activity relevant from the point of view of safeguards, or has become practically irrecoverable.
- (b) Where nuclear material subject to safeguards under this Agreement is to be used in non-nuclear activities, such as the production of alloys or ceramics, ABACC shall agree with the Agency, before the material is so used, on the circumstances under which the safeguards under this Agreement on such material may be terminated.

EXEMPTION FROM SAFEGUARDS

Article 11

- (a) Nuclear material shall be exempted from safeguards in accordance with the provisions specified in Article 35 of this Agreement.
- (b) Where nuclear material subject to safeguards under this Agreement is to be used in non-nuclear activities which, in the opinion of either ABACC or the Agency, will not render the material practically irrecoverable, ABACC shall agree with the Agency, before the material is so used, on the circumstances under which such material may be exempted from safeguards.

TRANSFER OF NUCLEAR MATERIAL OUT OF THE STATES PARTIES

Article 12

- (a) ABACC shall give the Agency notification of transfers of nuclear material subject to safeguards under this Agreement out of the States Parties, in accordance with the provisions set out in this Agreement. Safeguards on nuclear material in the States Parties under this Agreement shall terminate when the recipient State has

*Appendix B*

assumed responsibility therefor, as provided for in Part II of this Agreement, The Agency shall maintain records indicating each transfer and the re-application of safeguards to the transferred nuclear material.

- (b) When any material containing uranium or thorium which has not reached the stage of the nuclear fuel cycle described in Article 9(b) is directly or indirectly exported by a State Party to this Agreement to any State not Party to this Agreement, the State Party shall inform the Agency of its quantity, composition and destination, unless the material is exported for specifically non-nuclear purposes.

## SPECIAL PROCEDURES

## Article 13

If a State Party intends to exercise its discretion to use nuclear material which is required to be safeguarded under this Agreement for nuclear propulsion or operation of any vehicle, including submarines and prototypes, or in such other non-proscribed nuclear activity as agreed between the State Party and the Agency, the following procedures shall apply:

- (a) that State Party shall inform the Agency, through ABACC, of the activity, and shall make it clear:
- (i) that the use of the nuclear material in such an activity will not be in conflict with any undertaking of the State Party under agreements concluded with the Agency in connection with Article XI of the Statute of the Agency or any other agreement concluded with the Agency in connection with INFCIRC/26 (and Add.1) or INFCIRC/66 (and Rev.1 or 2), as applicable; and
- (ii) that during the period of application of the special procedures the nuclear material will not be used for the production of nuclear weapons or other nuclear explosive devices;
- (b) the State Party and the Agency shall make an arrangement so that, these special procedures shall apply only while the nuclear material is used for nuclear propulsion or in the operation of any vehicle, including submarines and prototypes, or in such other non-proscribed nuclear activity as agreed between the State Party and the Agency, The arrangement shall identify, to the extent possible, the period or circumstances during which the special procedures shall be applied, In any event, the other procedures provided for in this Agreement shall apply again as soon as the nuclear material is reintroduced into a nuclear activity other than the above, The Agency shall be kept informed of the total quantity and composition of such material in that State Party and of any export of such material; and
- (c) each arrangement shall be concluded between the State Party concerned and the Agency as promptly as possible and shall relate only to such matters as temporal and procedural provisions and reporting arrangements, but shall not involve any approval or classified knowledge of such activity or relate to the use of the nuclear material therein.

## MEASURES IN RELATION TO VERIFICATION OF NON-DIVERSION

## Article 14

If the Board, upon report of the Director General, decides that an action by ABACC and/or a State Party is essential and urgent in order to ensure verification that nuclear material subject to safeguards under this Agreement is not diverted to nuclear weapons or other nuclear explosive devices, the Board may call upon ABACC and/or the State Party concerned to take the required action without delay, irrespective of whether procedures have been invoked pursuant to Article 22 of this Agreement for the settlement of a dispute.

## Article 15

If the Board, upon examination of relevant information reported to it by the Director General, finds that the Agency is not able to verify that there has been no diversion of nuclear material required to be subject to safeguards under this Agreement to nuclear weapons or other nuclear explosive devices, it may make the reports provided for in paragraph C of Article XII of the Statute and may also take, where applicable, the other measures provided for in that paragraph. In taking such action, the Board shall take account of the degree of assurance provided by the safeguards

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measures that have been applied and shall afford the State Party concerned every reasonable opportunity to furnish the Board with any necessary reassurance.

## PRIVILEGES AND IMMUNITIES

## Article 16

Each State Party shall apply to the Agency, including its property, funds and assets, and to its inspectors and other officials performing functions under this Agreement, the relevant provisions of the Agreement on the Privileges and Immunities of the International Atomic Energy Agency.<sup>3</sup>

## FINANCE

## Article 17

The States Parties, ABACC and the Agency will bear the expenses incurred by them in implementing their respective responsibilities under this Agreement. However, if the States Parties, or persons under their jurisdiction, or ABACC, incurs extraordinary expenses as a result of a specific request by the Agency, the Agency shall reimburse such expenses provided that it has agreed in advance to do so. In any case, the Agency shall bear the cost of any additional measuring or sampling which Agency inspectors may request.

## THIRD PARTY LIABILITY FOR NUCLEAR DAMAGE

## Article 18

Each State Party shall ensure that any protection against third party liability in respect of nuclear damage, including any insurance or other financial security, which may be available under its laws or regulations shall apply to the Agency and its officials for the purpose of the implementation of this Agreement, in the same way as that protection applies to residents of that State Party.

## INTERNATIONAL RESPONSIBILITY

## Article 19

Any claim by ABACC or a State Party against the Agency or by the Agency against ABACC or a State Party in respect of any damage resulting from the implementation of safeguards under this Agreement, other than damage arising out of a nuclear incident, shall be settled in accordance with international law.

INTERPRETATION AND APPLICATION OF THE AGREEMENT  
AND SETTLEMENT OF DISPUTES

## Article 20

At the request of the Agency, ABACC or a State Party or States Parties, there shall be consultations about any question arising out of the interpretation or application of this Agreement.

## Article 21

ABACC and the States Parties shall have the right to request that any question arising out of the interpretation or application of this Agreement be considered by the Board. The Board shall invite all Parties to the Agreement to participate in the discussion of any such question by the Board.

## Article 22

Any dispute arising out of the interpretation or application of this Agreement, except a dispute with regard to a finding by the Board under Article 15 or an action taken by the Board pursuant to such a finding, which is not settled by negotiation or another procedure agreed to by the State Party or States Parties concerned, ABACC and the Agency shall, at the request of any of them, be submitted to an arbitral tribunal composed of five arbitrators. The States Parties

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<sup>3</sup> Reproduced in document INFCIRC/9/Rev.2

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and ABACC shall designate two arbitrators and the Agency shall also designate two arbitrators, and the four arbitrators so designated shall elect a fifth, who shall be the Chairman. If, within thirty days of the request for arbitration, either the Agency or the States Parties and ABACC have not designated two arbitrators each, either the Agency or the States Parties and ABACC may request the President of the International Court of Justice to appoint these arbitrators. The same procedure shall apply if, within thirty days of the designation or appointment of the fourth arbitrator, the fifth arbitrator has not been elected. A majority of the members of the arbitral tribunal shall constitute a quorum, and all decisions shall require the concurrence of at least three arbitrators. The arbitral procedure shall be fixed by the tribunal. The decisions of the tribunal shall be binding on the States Parties, ABACC and the Agency.

SUSPENSION OF APPLICATION OF AGENCY SAFEGUARDS  
UNDER OTHER AGREEMENTS

Article 23

Upon the coming into force of this Agreement for a State Party, the application of Agency safeguards in that State Party under other safeguards agreements with the Agency not involving third parties will be suspended while this Agreement is in force. The Agency and the State Party concerned shall initiate consultations with the third party concerned with a view to suspending the application of safeguards in that State Party under safeguards agreements involving third parties. The State Party's undertaking in the agreements referred to above not to use items which are subject thereto in such a way as to further any military purpose shall continue to apply.

AMENDMENT OF THE AGREEMENT

Article 24

- (a) ABACC, the States Parties and the Agency shall, at the request of any one of them, consult on amendment to this Agreement.
- (b) All amendments shall require the agreement of ABACC, the States Parties and the Agency.
- (c) Amendments to this Agreement shall enter into force in the same conditions as the entry into force of the Agreement itself.
- (d) The Director General shall promptly inform all Member States of the Agency of any amendment to this Agreement.

ENTRY INTO FORCE AND DURATION

Article 25

This Agreement shall enter into force on the date upon which the Agency receives from ABACC and from the States Parties written notification that their respective requirements for entry into force have been met. The Director General shall promptly inform all Member States of the Agency of the entry into force of this Agreement.

Article 26

This Agreement shall remain in force as long as the States Parties are Parties to the SCCC Agreement.

PROTOCOL

Article 27

The Protocol attached to this Agreement shall be an integral part thereof. The term "Agreement" as used in this instrument means the Agreement and the Protocol together.

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## PART II

## INTRODUCTION

## Article 28

The purpose of this part of the Agreement is to specify the procedures to be applied in the implementation of the safeguards provisions of Part I.

## OBJECTIVE OF SAFEGUARDS

## Article 29

The objective of the safeguards procedures set forth in this Agreement is the timely detection of diversion of significant quantities of nuclear material from peaceful nuclear activities to the manufacture of nuclear weapons or of other nuclear explosive devices or for purposes unknown, and deterrence of such diversion by the risk of early detection.

## Article 30

For the purpose of achieving the objective set forth in Article 29, nuclear material accountancy shall be used as a safeguards measure of fundamental importance, with containment and surveillance as important complementary measures.

## Article 31

The technical conclusion of the Agency's verification activities shall be a statement, in respect of each material balance area, of the amount of material unaccounted for over a specific period, and giving the limits of accuracy of the amounts stated.

COMMON SYSTEM OF ACCOUNTING FOR  
AND CONTROL OF NUCLEAR MATERIAL

## Article 32

Pursuant to Article 2, the Agency, in carrying out its verification activities, shall make full use of the SCCC and shall avoid unnecessary duplication of ABACC's accounting and control activities.

## Article 33

ABACC's system of accounting for and control of nuclear material under this Agreement shall be based on a structure of material balance areas, and shall make provision, as appropriate and specified in the Subsidiary Arrangements, for the establishment of such measures as:

- (a) a measurement system for the determination of the quantities of nuclear material received, produced, shipped, lost or otherwise removed from inventory, and the quantities on inventory;
- (b) the evaluation of precision and accuracy of measurements and the estimation of measurement uncertainty;
- (c) procedures for identifying, reviewing and evaluating differences in shipper/receiver measurements;
- (d) procedures for taking a physical inventory;
- (e) procedures for the evaluation of accumulations of unmeasured inventory and unmeasured losses;
- (f) a system of records and reports showing, for each material balance area, the inventory of nuclear material and the changes in that inventory including receipts into and transfers out of the material balance area;
- (g) provisions to ensure that the accounting procedures and arrangements are being operated correctly; and
- (h) procedures for the provision of reports to the Agency in accordance with Articles 57 to 63 and 65 to 67,



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## TERMINATION OF SAFEGUARDS

## Article 34

- (a) Safeguards under this Agreement shall terminate on nuclear material under the conditions set forth in Article 10(a). Where the conditions of Article 10(a) are not met, but ABACC considers that the recovery of safeguarded nuclear material from residues is not for the time being practicable or desirable, ABACC and the Agency shall consult on the appropriate safeguards measures to be applied.
- (b) Safeguards under this Agreement shall terminate on nuclear material under the conditions set forth in Article 10(b) provided that ABACC and the Agency agree that such nuclear material is practicably irrecoverable.
- (c) Safeguards under this Agreement shall terminate on nuclear material transferred out of the States Parties, under the conditions set forth in Article 12(a) and the procedures specified in Articles 89 to 92.

## EXEMPTIONS FROM SAFEGUARDS

## Article 35

At the request of ABACC, the Agency shall exempt nuclear material from safeguards as follows:

- (a) special fissionable material, when it is used in gram quantities or less as a sensing component in instruments;
- (b) nuclear material, when it is used in non-nuclear activities in accordance with Article 11(b);
- (c) if the total quantity of nuclear material which has been exempted in each State Party in accordance with this sub-Article does not at any time exceed:
  - (i) one kilogram in total of special fissionable material, which may consist of one or more of the following:
    - (1) plutonium;
    - (2) uranium with an enrichment of 0.2 (20%) and above, taken account of by multiplying its weight by its enrichment; and
    - (3) uranium with an enrichment below 0.2 (20%) and above that of natural uranium, taken account of by multiplying its weight by five times the square of its enrichment;
  - (ii) ten metric tons in total of natural uranium;
  - (iii) twenty metric tons of depleted uranium with an enrichment of 0.005 (0.5%) or below; and
  - (iv) twenty metric tons of thorium; or
- (d) plutonium with an isotopic concentration of plutonium-238 exceeding 80%.

## Article 36

If exempted nuclear material is to be processed or stored together with nuclear material subject to safeguards under this Agreement provision shall be made for the re-application of safeguards thereto.

## SUBSIDIARY ARRANGEMENTS

## Article 37

Taking into account the SCCC, ABACC, the State Party concerned and the Agency shall make Subsidiary Arrangements which shall specify in detail, to the extent necessary to permit the Agency to fulfill its responsibilities under this Agreement in an effective and efficient manner, how the procedures laid down in this Agreement are to be

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applied. By agreement between ABACC, the State Party concerned and the Agency, the Subsidiary Arrangements may, without amendment of this Agreement, be extended or changed or, in respect of a particular facility, terminated.

## Article 38

The Subsidiary Arrangements shall enter into force at the same time as, or as soon as possible after, the entry into force of this Agreement, ABACC, the States Parties and the Agency shall make every effort to achieve their entry into force within one hundred and eighty days of the entry into force of this Agreement; an extension of that period shall require agreement between ABACC, the States Parties and the Agency, The State Party concerned through ABACC shall provide the Agency promptly with the information required for completing the Subsidiary Arrangements. Upon the entry into force of this Agreement, the Agency shall have the right to apply the procedures laid down therein in respect of the nuclear material listed in the inventory provided for in Article 39 even if the Subsidiary Arrangements have not yet entered into force.

## INVENTORY

## Article 39

On the basis of the initial report referred to in Article 60, the Agency shall establish unified inventories of all nuclear material in each State Party subject to safeguards under this Agreement, irrespective of its origin, and shall maintain these inventories on the basis of subsequent reports and of the results of its verification activities. Copies of the inventories shall be made available to ABACC at intervals to be agreed.

## DESIGN INFORMATION

General Provisions

## Article 40

Pursuant to Article 7, design information in respect of existing facilities shall be provided to the Agency by the State Party concerned through ABACC during the discussion of the Subsidiary Arrangements. The time limits for the provision of design information in respect of the new facilities shall be specified in the Subsidiary Arrangements and such information shall be provided as early as possible before nuclear material is introduced into a new facility.

## Article 41

The design information to be provided to the Agency shall include, in respect of each facility, when applicable:

- (a) the identification of the facility, stating its general character, purpose, nominal capacity and geographic location, and the name and address to be used for routine business purposes;
- (b) a description of the general arrangement of the facility with reference, to the extent feasible, to the form, location and flow of nuclear material and to the general layout of important items of equipment which use, produce or process nuclear material;
- (c) a description of features of the facility relating to material accountancy, containment and surveillance; and
- (d) a description of the existing and proposed procedures at the facility for nuclear material accountancy and control, with special reference to material balance areas established by the operators measurements of flow and procedures for physical inventory taking.

## Article 42

Other information relevant to the application of safeguards under this Agreement shall also be provided to the Agency in respect of each facility if so specified in the Subsidiary Arrangements. ABACC shall provide the Agency with supplementary information on the health and safety procedures which the Agency shall observe and with which the Agency inspectors shall comply at the facility.

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## Article 43

The Agency shall be provided by the State Party concerned through ABACC with design information in respect of a modification relevant for safeguards purposes under this Agreement, for examination, and shall be informed of any change in the information provided to it under Article 42, sufficiently in advance for the safeguards procedures to be adjusted when necessary.

## Article 44

Purposes of examination of design information

The design information provided to the Agency shall be used for the following purposes:

- (a) to identify the features of facilities and nuclear material relevant to the application of safeguards to nuclear material in sufficient detail to facilitate verification;
- (b) to determine material balance areas to be used for accounting purposes and to select those strategic points which are key measurement points and which will be used to determine flow and inventory of nuclear material; in determining such material balance areas the following criteria, inter alia, shall be used:
  - (i) the size of the material balance area shall be related to the accuracy with which the material balance can be established;
  - (ii) in determining the material balance area advantage shall be taken of any opportunity to use containment and surveillance to help ensure the completeness of flow measurements and thereby to simplify the application of safeguards and to concentrate measurement efforts at key measurement points;
  - (iii) a special material balance area may be established at the request of the State Party concerned through ABACC around a process step involving technologically, industrially or commercially sensitive information; and
  - (iv) for installations of particular sensitivity, key measurement points may be selected in such a way as to enable the Agency to fulfill its obligations under this Agreement taking into account the requirement for the Agency to preserve technological secrets;
- (c) to establish the nominal timing and procedures for taking of physical inventory of nuclear material for accounting purposes under this Agreement;
- (d) to establish the records and reports requirements and records evaluation procedures;
- (e) to establish requirements and procedures for verification of the quantity and location of nuclear material; and
- (f) to select appropriate combinations of containment and surveillance methods and techniques and the strategic points at which they are to be applied.

The results of the examination of the design information, as agreed upon between ABACC and the Agency, shall be included in the Subsidiary Arrangements.

## Article 45

Re-examination of design information

Design information shall be re-examined in the light of changes in operating conditions, of developments in safeguards technology or of experience in the application of verification procedures, with a view to modifying the action taken pursuant to Article 44.

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## Article 46

Verification of design information

The Agency, in co-operation with ABACC and the State Party concerned, may send inspectors to facilities to verify the design information provided to the Agency pursuant to Articles 40 to 43, for the purposes stated in Article 44.

## INFORMATION IN RESPECT OF NUCLEAR MATERIAL OUTSIDE FACILITIES

## Article 47

The Agency shall be provided by the State Party concerned through ABACC with the following information when nuclear material is to be customarily used outside facilities, as applicable:

- (a) a general description of the use of the nuclear material, its geographic location, and the user's name and address for routine business purposes; and
- (b) a general description of the existing and proposed procedures for nuclear material accountancy and control.

The Agency shall be informed by ABACC, on a timely basis, of any change in the information provided to it under this Article.

## Article 48

The information provided to the Agency pursuant to Article 47 may be used, to the extent relevant, for the purposes set out in Article 44(b) to (f).

## RECORDS SYSTEM

General provisions

## Article 49

ABACC shall arrange that records are kept in respect of each material balance area. The records to be kept shall be described in the Subsidiary Arrangements,

## Article 50

ABACC shall make arrangements to facilitate the examination of records by inspectors, particularly if the records are not kept in Arabic, Chinese, English, French, Russian or Spanish.

## Article 51

Records shall be retained for at least five years.

## Article 52

Records shall consist, as appropriate, of:

- (a) accounting records of all nuclear material subject to safeguards under this Agreement; and
- (b) operating records for facilities containing such nuclear material.

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## Article 53

The system of measurements on which the records used for the preparation of reports are based shall either conform to the latest international standards or be equivalent in quality to such standards.

Accounting records

## Article 54

The accounting records shall set forth the following in respect of each material balance area:

- (a) all inventory changes, so as to permit a determination of the book inventory at any time;
- (b) all measurement results that are used for determination of the physical inventory; and
- (c) all adjustments and corrections that have been made in respect of Inventory changes, book inventories and physical inventories.

## Article 55

For all inventory changes and physical inventories the records shall show, in respect of each batch of nuclear material; material identification, batch data and source data. The records shall account for uranium, thorium and plutonium separately in each batch of nuclear material. For each inventory change, the date of the inventory change and, when appropriate, the originating material balance area and the receiving material balance area or the recipient, shall be indicated.

## Article 56

Operating records

The operating records shall set forth, as appropriate, in respect of each material balance area:

- (a) those operating data which are used to establish changes in the quantities and composition of nuclear material;
- (b) the data obtained from the calibration of tanks and instruments and from sampling and analyses, the procedures to control the quality of measurements and the derived estimates of random and systematic error;
- (c) a description of the sequence of the actions taken in preparing for, and in taking, a physical inventory, in order to ensure that it is correct and complete; and
- (d) a description of the actions taken in order to ascertain the cause and magnitude of any accidental or unmeasured loss that might occur.

## REPORTS SYSTEM

General provisions

## Article 57

ABACC shall provide the Agency with reports as detailed in Articles 58 to 63 and 65 to 67 in respect of nuclear material subject to safeguards under this Agreement.

## Article 58

Reports shall be made in English, French or Spanish, except as otherwise specified in the Subsidiary Arrangements.

*Appendix B***Article 59**

Reports shall be based on the records kept in accordance with Articles 49 to 56 and shall consist, as appropriate, of accounting reports and special reports.

Accounting reports**Article 60**

The Agency shall be provided by ABACC with an initial report on all nuclear material subject to safeguards under this Agreement. The initial report shall be dispatched by ABACC to the Agency within thirty days of the last day of the calendar month in which this Agreement enters into force, and shall reflect the situation in each State Party as of the last day of that month.

**Article 61**

ABACC shall provide the Agency with the following accounting reports for each material balance area:

- (a) inventory change reports showing all changes in the inventory of nuclear material. The reports shall be dispatched as soon as possible and, in any event, within thirty days after the end of the month in which the inventory changes occurred or were established; and
- (b) material balance reports showing the material balance based on a physical inventory of nuclear material actually present in the material balance area. The reports shall be dispatched as soon as possible and, in any event, within thirty days after the physical inventory has been taken.

The reports shall be based on data available as of the date of reporting and may be corrected at a later date, as required.

**Article 62**

Inventory change reports shall specify identification and batch data for each batch of nuclear material, the date of the inventory change and, as appropriate, the originating material balance area and the receiving material balance area or the recipient. These reports shall be accompanied by concise notes:

- (a) explaining the inventory changes, on the basis of the operating data contained in the operating records provided for under Article 56(a); and
- (b) describing, as specified in the Subsidiary Arrangements, the anticipated operational programme, particularly the taking of a physical inventory.

**Article 63**

ABACC shall report each inventory change, adjustment and correction, either periodically in a consolidated list or individually. Inventory changes shall be reported in terms of batches. As specified in the Subsidiary Arrangements, small changes in inventory of nuclear material, such as transfers of analytical samples, may be combined in one batch and reported as one inventory change.

**Article 64**

The Agency shall provide ABACC with semi-annual statements of book inventory of nuclear material subject to safeguards under this Agreement, for each material balance area, as based on the inventory change reports for the period covered by each such statement.

*Appendix B***Article 65**

Material balance reports shall include the following entries, unless otherwise agreed by ABACC and the Agency:

- (a) beginning physical inventory;
- (b) inventory changes (first increases, then decreases);
- (c) ending book inventory;
- (d) shipper/receiver differences;
- (e) adjusted ending book inventory;
- (f) ending physical inventory; and
- (g) material unaccounted for.

A statement of the physical inventory, listing all batches separately and specifying material identification and batch data for each batch, shall be attached to each material balance report.

**Article 66**  
Special reports

ABACC shall make special reports without delay:

- (a) if any unusual incident or circumstances lead ABACC to believe that there is or may have been loss of nuclear material that exceeds the limits specified for this purpose in the Subsidiary Arrangements; or
- (b) if the containment has unexpectedly changed from that specified in the Subsidiary Arrangements to the extent that unauthorized removal of nuclear material has become possible.

**Article 67**  
Amplification and clarification of reports

If the Agency so requests, ABACC shall provide it with amplifications or clarifications of any report, in so far as relevant for the purpose of safeguards under this Agreement.

**INSPECTIONS****Article 68**  
General Provisions

The Agency shall have the right to make inspections as provided for in this Agreement.

Purposes of inspections  
**Article 69**

The Agency may make ad hoc inspections in order to:

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- (a) verify the information contained in the initial report on the nuclear material subject to safeguards under this Agreement;
- (b) identify and verify changes in the situation which have occurred between the date of the initial report and the date of entry into force of the Subsidiary Arrangements in respect of a given facility and, in the event that Subsidiary Arrangements cease to be in force, in respect of a given facility; and
- (c) identify, and if possible verify the quantity and composition of, nuclear material subject to safeguards under this Agreement in accordance with Articles 91, 94 and 96 before its transfer out of, into or between States Parties.

**Article 70**

The Agency may make routine inspections in order to:

- (a) verify that reports are consistent with records;
- (b) verify the location, identity, quantity and composition of all nuclear material subject to safeguards under this Agreement; and
- (c) verify information on the possible causes of material unaccounted for, shipper/receiver differences and uncertainties in the book inventory.

**Article 71**

Subject to the procedures laid down in Article 75, the Agency may make special inspections:

- (a) in order to verify the information contained in special reports; or
- (b) if the Agency considers that information made available by ABACC, including explanations from ABACC and information obtained from routine inspections, is not adequate for the Agency to fulfill its responsibilities under this Agreement.

An inspection shall be deemed to be special when it is either additional to the routine inspection effort provided for in Articles 76 to 80 or involves access to information or locations in addition to the access specified in Article 74 for ad hoc and routine inspections, or both.

Scope of inspections**Article 72**

For the purposes specified in Articles 69 to 71, the Agency may:

- (a) examine the records kept pursuant to Articles 49 to 56;
- (b) make independent measurements of all nuclear material subject to safeguards under this Agreement;
- (c) verify the functioning and calibration of instruments and other measuring and control equipment;
- (d) apply and make use of surveillance and containment measures; and
- (e) use other objective methods which have been demonstrated to be technically feasible.



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## Article 73

Within the scope of Article 72, the Agency shall be enabled:

- (a) to observe that samples at key measurement points for material balance accountancy are taken in accordance with procedures which produce representative samples, to observe the treatment and analysis of the samples and to obtain duplicates of such samples;
- (b) to observe that the measurements of nuclear material at key measurement points for material balance accountancy are representative, and to observe the calibration of the instruments and equipment involved;
- (c) to make arrangements with ABACC and, to the extent necessary, with the State Party concerned that, if necessary:
  - (i) additional measurements are made and additional samples taken for the Agency's use;
  - (ii) the Agency's standard analytical samples are analysed;
  - (iii) appropriate absolute standards are used in calibrating instruments and other equipment; and
  - (iv) other calibrations are carried out;
- (d) to arrange to use its own equipment for independent measurement and surveillance and, if so agreed and specified in the Subsidiary Arrangements, to arrange to install such equipment;
- (e) to apply its seals and other identifying and tamper-indicating devices to containments, if so agreed and specified in the Subsidiary Arrangements; and
- (f) to make arrangements with ABACC or the State Party concerned for the shipping of samples taken for the Agency's use.

Access for inspections

## Article 74

- (a) For the purposes specified in Article 69(a) and (b) and until such time as the strategic points have been specified in the Subsidiary Arrangements, or in the event that the Subsidiary Arrangements cease to be in force, the Agency inspectors shall have access to any location where the initial report or any inspections carried out in connection with it indicate that nuclear material is present;
- (b) For the purposes specified in Article 69(c) the Agency inspectors shall have access to any location of which the Agency has been notified in accordance with Articles 90(d)(iii), 93(d)(iii) or 95;
- (c) For the purposes specified in Article 70, the Agency inspectors shall have access only to the strategic points specified in the Subsidiary Arrangements and to the records maintained pursuant to Articles 49 to 56; and
- (d) In the event of ABACC concluding that any unusual circumstances require extended limitations on access by the Agency, ABACC and the Agency shall promptly make arrangements with a view to enabling the Agency to discharge its safeguards responsibilities in the light of these limitations. The Director General shall report each such arrangement to the Board,

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## Article 75

In circumstances which may lead to special inspections for the purposes specified in Article 71, the State Party concerned, ABACC and the Agency shall consult forthwith. As a result of such consultations the Agency may:

- (a) make inspections in addition to the routine inspection effort provided for in Articles 76 to 80; and
- (b) obtain access, in agreement with the State Party concerned and ABACC, to information or locations in addition to those specified in Article 14. Any disagreement concerning the need for additional access shall be resolved in accordance with Articles 21 and 22; in case action by ABACC, a State Party or States Parties is essential and urgent, Article 14 shall apply.

Frequency and intensity of routine inspections

## Article 76

The Agency shall keep the number, intensity and duration of routine inspections, applying optimum timing, to the minimum consistent with the effective implementation of the safeguards procedures set forth in this Agreement, and shall make the optimum and most economical use of inspection resources available to it.

## Article 77

The Agency may carry out one routine inspection per year in respect of facilities and material balance areas outside facilities with a content or annual throughput, whichever is greater, of nuclear material not exceeding five effective kilograms.

## Article 78

The number, intensity, duration, timing and mode of routine inspections in respect of facilities with a content or annual throughput of nuclear material exceeding five effective kilograms shall be determined on the basis that, in the maximum or limiting case, the inspection regime shall be no more intensive than is necessary and sufficient to maintain continuity of knowledge of the flow and inventory of nuclear material, and the maximum routine inspection effort in respect of such facilities shall be determined as follows:

- (a) for reactors and sealed storage installations, the maximum total of routine inspection per year shall be determined by allowing one sixth of a man-year of inspection for each such facility;
- (b) for facilities, other than reactors or sealed storage installations, involving plutonium or uranium enriched to more than 5%, the maximum total of routine inspection per year shall be determined by allowing for each such facility  $30 \times P@E$  man-days of inspection per year, where E is the inventory or annual throughput of nuclear material, whichever is greater, expressed in effective kilograms. The maximum established for any such facility shall not, however, be less than 1.5 man-years of inspection; and
- (c) for facilities not covered by paragraphs (a) or (b), the maximum total of routine inspection per year shall be determined by allowing for each such facility one third of a man-year of inspection plus  $0.4 \times E$  man-days of inspection per year, where E is the inventory or annual throughput of nuclear material, whichever is greater, expressed in effective kilograms.

The Parties to this Agreement may agree to amend the figures for the maximum inspection effort specified in this Article, upon determination by the Board that such amendment is reasonable.

## Article 79

Subject to Articles 76 to 78, the criteria to be used for determining the actual number, intensity, duration, timing and mode of routine inspections in respect of any facility shall include:

- (a) the form of the nuclear material, in particular, whether the nuclear material is in bulk form or contained in a number of separate items, its chemical and isotopic composition and its accessibility;
- (b) the effectiveness of ABACC's safeguards, including the extent to which the operators of facilities are functionally independent of ABACC's safeguards; the extent to which the measures specified in Article 33 have been implemented by ABACC; the promptness of reports provided to the Agency; their consistency with the Agency's independent verification; and the amount and accuracy of the material unaccounted for, as verified by the Agency;
- (c) characteristics of the nuclear fuel cycles in the States Parties, in particular, the number and types of facilities containing nuclear material subject to safeguards, the characteristics of such facilities relevant to safeguards, notably the degree of containment; the extent to which the design of such facilities facilitates verification of the flow and inventory of nuclear material; and the extent to which information from different material balance areas can be correlated;
- (d) international interdependence, in particular, the extent to which nuclear material is received from or sent to other States for use or processing; any verification activities by the Agency in connection therewith; and the extent to which the nuclear activities in each State Party are interrelated with those of other States; and
- (e) technical developments in the field of safeguards, including the use of statistical techniques and random sampling in evaluating the flow of nuclear material.

## Article 80

ABACC and the Agency shall consult if ABACC or the State Party concerned considers that the inspection effort is being deployed with undue concentration on particular facilities.

Notice of inspections

## Article 81

The Agency shall give advance notice to ABACC and to the State Party concerned before arrival of Agency inspectors at facilities or material balance areas outside facilities, as follows:

- (a) for ad hoc inspections pursuant to Article 69(c), at least 24 hours; for those pursuant to Article 69(a) and (b) as well as the activities provided for in Article 46, at least one week;
- (b) for special inspections pursuant to Article 71, as promptly as possible after ABACC, the State Party concerned and the Agency have consulted, as provided for in Article 75, it being understood that notification of arrival normally will constitute part of the consultations; and
- (c) for routine inspections pursuant to Article 70, at least 24 hours in respect of the facilities referred to in Article 78(b) and sealed storage installations containing plutonium or uranium enriched to more than 5%, and one week in all other cases.

Such notice of inspections shall include the names of the Agency inspectors and shall indicate the facilities and the material balance areas outside facilities to be visited and the periods during which they will be visited. If the Agency

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inspectors are to arrive from outside the States Parties, the Agency shall also give advance notice of the place and time of their arrival in the States Parties.

Article 82

Notwithstanding the provisions of Article 81, the Agency may, as a supplementary measure, carry out without advance notification a portion of the routine inspections pursuant to Article 78 in accordance with the principle of random sampling. In performing any unannounced inspections, the Agency shall fully take into account any operational programme provided pursuant to Article 62(b). Moreover, whenever practicable, and on the basis of the operational programme, it shall periodically advise ABACC and the State Party concerned, through the procedures specified in the Subsidiary Arrangements, of its general programme of announced and unannounced inspections, specifying the general periods when inspections are foreseen. In carrying out any unannounced inspections, the Agency shall make every effort to minimize any practical difficulties for ABACC and the State Party concerned and for facility operators, bearing in mind the relevant provisions of Articles 42 and 87. Similarly, ABACC and the State Party concerned shall make every effort to facilitate the task of the Agency inspectors.

Designation of Agency inspectors

Article 83

The following procedures shall apply to the designation of Agency inspectors:

- (a) the Director General shall inform the States Parties, through ABACC, in writing of the name, qualifications, nationality, grade and such other particulars as may be relevant, of each Agency official he proposes for designation as an inspector for the States Parties;
- (b) the States Parties, through ABACC, shall inform the Director General within thirty days of the receipt of such a proposal whether they accept the proposal;
- (c) the Director General may designate each official who has been accepted by the States Parties, through ABACC, as one of the Agency inspectors for the States Parties, and shall inform the States Parties, through ABACC, of such designations; and
- (d) the Director General, acting in response to a request by the States Parties, through ABACC, or on his own initiative, shall immediately inform the States Parties, through ABACC, of the withdrawal of the designation of any official as an Agency inspector for the States Parties.

However, in respect of Agency inspectors needed for the activities provided for in Article 46 and to carry out ad hoc inspections pursuant to Article 69(a) and (b), the designation procedures shall be completed, if possible, within thirty days after the entry into force of this Agreement. If such designation appears impossible within this time limit, Agency inspectors for such purposes shall be designated on a temporary basis.

Article 84

The States Parties shall grant or renew as quickly as possible appropriate visas, where required, for each Agency inspector designated pursuant to Article 83.

Conduct and visits of Agency inspectors

Article 85

Agency inspectors, in exercising their functions under Articles 46 and 69 to 73, shall carry out their activities in a manner designed to avoid hampering or delaying the construction, commissioning or operation of facilities, or affecting their safety. In particular, Agency inspectors shall not operate any facility themselves or direct the staff of a

facility to carry out any operation. If Agency inspectors consider that, in pursuance of Articles 72 and 73, particular operations in a facility should be carried out by the operator, they shall make a request therefor.

#### Article 86

When Agency inspectors require services available in a State Party, including the use of equipment, in connection with the performance of inspections, ABACC and the State Party concerned shall facilitate the procurement of such services and the use of such equipment by Agency inspectors.

#### Article 87

ABACC and the State Party concerned shall have the right to have Agency inspectors accompanied during their inspections by its inspectors and representatives of that State Party, respectively, provided that Agency inspectors shall not thereby be delayed or otherwise impeded in the exercise of their functions.

### STATEMENTS ON THE AGENCY'S VERIFICATION ACTIVITIES

#### Article 88

The Agency shall inform ABACC of:

- (a) the results of its inspections, at intervals to be specified in the Subsidiary Arrangements; and
- (b) the conclusions it has drawn from its verification activities in the State Party concerned, in particular by means of statements in respect of each material balance area, which shall be made as soon as possible after a physical inventory has been taken and verified by the Agency and a material balance has been struck.

### TRANSFERS INTO, OUT OF AND BETWEEN THE STATES PARTIES

#### Article 89

##### General provisions

Nuclear material subject or required to be subject to safeguards under this Agreement which is transferred out of, into or between the States Parties shall, for purposes of this Agreement, be regarded as being the responsibility of ABACC and of the State Party concerned:

- (a) in the case of import into the States Parties from another State, from the time that such responsibility ceases to lie with the exporting State, and no later than the time at which the material reaches its destination;
- (b) in the case of export out of the States Parties to another State, up to the time at which the recipient State assumes such responsibility, and no later than the time at which the nuclear material reaches its destination; and
- (c) in the case of transfer between the States Parties, from the time of transfer of responsibility, and no later than the time at which the nuclear material reaches its destination.

The point at which the transfer of responsibility will take place shall be determined in accordance with suitable arrangements to be made by ABACC and the State Party or States Parties concerned and, in the case of transfers into or out of the States Parties, the State to which or from which the nuclear material is transferred. Neither ABACC, a State Party to this Agreement nor any other State shall be deemed to have such responsibility for nuclear material merely by reason of the fact that the nuclear material is in transit on or over the territory of a State, or that it is being transported on a ship under its flag or in its aircraft.

*Appendix B*Transfers out of the States Parties

## Article 90

- (a) ABACC shall notify the Agency of any intended transfer out of the States Parties of nuclear material subject to safeguards under this Agreement if the shipment exceeds one effective kilogram, or if, within a period of three months, several separate shipments are to be made to the same State, each of less than one effective kilogram but the total of which exceeds one effective kilogram.
- (b) Such notification shall be given to the Agency after the conclusion of the contractual arrangements leading to the transfer and normally at least two weeks before the nuclear material is to be prepared for shipping.
- (c) ABACC and the Agency may agree on different procedures for advance notification.
- (d) The notification shall specify:
  - (i) the identification and, if possible, the expected quantity and composition of the nuclear material to be transferred, and the material balance area from which it will come;
  - (ii) the State for which the nuclear material is destined;
  - (iii) the dates on and locations at which the nuclear material is to be prepared for shipping;
  - (iv) the approximate dates of dispatch and arrival of the nuclear material; and
  - (v) at what point of the transfer the recipient State will assume responsibility for the nuclear material for the purpose of this Agreement, and the probable date on which that point will be reached.

## Article 91

The notification referred to in Article 90 shall be such as to enable the Agency to make, if necessary, an ad hoc inspection to identify, and if possible verify the quantity and composition of, the nuclear material before it is transferred out of the States Parties and, if the Agency so wishes or ABACC so requests, to affix seals to the nuclear material when it has been prepared for shipping. However, the transfer of the nuclear material shall not be delayed in any way by any inspection or verification action taken or contemplated by the Agency pursuant to such notification.

## Article 92

Nuclear material subject to Agency safeguards in a State Party shall not be exported unless such material will be subject to safeguards in the recipient State and until the Agency has made appropriate arrangements to apply safeguards to such material.

Transfers into the States Parties

## Article 93

- (a) ABACC shall notify the Agency of any expected transfer into the States Parties of nuclear material required to be subject to safeguards under this Agreement if the shipment exceeds one effective kilogram, or if, within a period of three months, several separate shipments are to be received from the same State, each of less than one effective kilogram but the total of which exceeds one effective kilogram.
- (b) The Agency shall be notified as much in advance as possible of the expected arrival of the nuclear material, and in any case not later than the date on which the State Party assumes responsibility for the nuclear material.

- (c) ABACC and the Agency may agree on different procedures for advance notification.
- (d) The notification shall specify:
  - (i) the identification and, if possible, the expected quantity and composition of the nuclear material;
  - (ii) at what point of the transfer the State Party will assume responsibility for the nuclear material for the purpose of this Agreement, and the probable date on which that point will be reached; and
  - (iii) the expected date of arrival, the location where, and the date on which, the nuclear material is intended to be unpacked.

#### Article 94

The notification referred to in Article 93 shall be such as to enable the Agency to make, if necessary, an ad hoc inspection to identify, and if possible verify the quantity and composition of, the nuclear material at the time the consignment is unpacked. However, unpacking shall not be delayed by any action taken or contemplated by the Agency pursuant to such a notification.

#### Transfers between the States Parties

#### Article 95

The Subsidiary Arrangements shall specify the Agency's procedures for notification and verification of domestic transfers of nuclear material for transfers of nuclear material between the States Parties. While Subsidiary Arrangements are not in force, the Agency shall be notified as much in advance as possible of the transfer, but in any event, not less than two weeks before the transfer takes place.

#### Article 96

The notification referred to in Article 95 shall be such as to enable the Agency to make, if necessary, a routine or ad hoc inspection, as appropriate, to identify, and if possible verify the quantity and composition of, the nuclear material before it is transferred between the States Parties and, if the Agency so wishes or ABACC so requests, to affix seals to the nuclear material when it has been prepared for shipping.

#### Special reports

#### Article 97

ABACC shall make a special report as envisaged in Article 66 if any unusual incident or circumstances lead ABACC to believe that there is or may have been loss of nuclear material, including the occurrence of significant delay, during a transfer into, out of or between the States Parties.

#### DEFINITIONS

#### Article 98

For the purposes of this Agreement:

1. ABACC means the legal person created by the SCCC Agreement,
2. A. adjustment means an entry into an accounting record or a report showing a shipper/receiver difference or material unaccounted for.

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- B. annual throughput means, for the purposes of Articles 77 and 78, the amount of nuclear material transferred annually out of a facility working at nominal capacity.
- C. batch means a portion of nuclear material handled as a unit for accounting purposes at a key measurement point and for which the composition and quantity are defined by a single set of specifications or measurements. The nuclear material may be in bulk form or contained in a number of separate items.
- D. batch data means the total weight of each element of nuclear material and, in the case of plutonium and uranium, the isotopic composition when appropriate. The units of account shall be as follows:
- (a) grams of contained plutonium;
  - (b) grams of total uranium and grams of contained uranium-235 plus uranium-233 for uranium enriched in these isotopes; and
  - (c) kilograms of contained thorium, natural uranium or depleted uranium.

For reporting purposes the weights of individual items in the batch shall be added together before rounding to the nearest unit.

- E. book inventory of a material balance area means the algebraic sum of the most recent physical inventory of that material balance area and of all inventory changes that have occurred since that physical inventory was taken,
- F. correction means an entry into an accounting record or a report to rectify an identified mistake or to reflect an improved measurement of a quantity previously entered into the record or report. Each correction must identify the entry to which it pertains.
- G. effective kilogram means a special unit used in safeguarding nuclear material. The quantity in effective kilograms is obtained by taking:
- (a) for plutonium, its weight in kilograms;
  - (b) for uranium with an enrichment of 0.01 (1%) and above, its weight in kilograms multiplied by the square of its enrichment;
  - (c) for uranium with an enrichment below 0.01 (1%) and above 0.005 (0.5%), its weight in kilograms multiplied by 0.0001; and
  - (d) for depleted uranium with an enrichment of 0.005 (0.5%) or below, and for thorium, its weight in kilograms multiplied by 0.00005.
- H. enrichment means the ratio of the combined weight of the isotopes uranium-233 and uranium-235 to that of the total uranium in question.
- I. facility means:
- (a) a reactor, a critical facility, a conversion plant, a fabrication plant, a reprocessing plant, an isotope separation plant or a separate storage installation; or



(b) any location where nuclear material in amounts greater than one effective kilogram is customarily used.

J. inventory change means an increase or decrease, in terms of batches, of nuclear material in a material balance area; such a change shall involve one of the following:

(a) increases:

(i) import;

(ii) domestic receipt: receipts from other material balance areas, receipts from an activity referred to in Article 13, or receipts at the starting point of safeguards;

(iii) nuclear production: production of special fissionable material in a reactor; and

(iv) de-exemption: re-application of safeguards on nuclear material previously exempted therefrom on account of its use or quantity.

(b) decreases:

(i) export;

(ii) domestic shipment: shipments to other material balance areas or shipments for an activity referred to in Article 13;

(iii) nuclear loss: loss of nuclear material due to its transformation into other element(s) or isotope(s) as a result of nuclear reactions;

(iv) measured discard: nuclear material which has been measured, or estimated on the basis of measurements, and disposed of in such a way that it is not suitable for further nuclear use;

(v) retained waste: nuclear material generated from processing or from an operational accident, which is deemed to be unrecoverable for the time being but which is stored;

(vi) exemption: exemption of nuclear material from safeguards on account of its use or quantity; and

(vii) other loss: for example, accidental loss (that is, irretrievable and inadvertent loss of nuclear material as the result of an operational accident) or theft.

K. key measurement point means a location where nuclear material appears in such a form that it may be measured to determine material flow or inventory. Key measurement points thus include, but are not limited to, the inputs and outputs (including measured discards) and storages in material balance areas.

L. man-year of inspection means, for the purposes of Article 78, 300 man-days of inspection, a man-day being a day during which a single inspector has access to a facility at any time for a total of not more than eight hours.

M. material balance area means an area in or outside of a facility such that:

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(a) the quantity of nuclear material in each transfer into or out of each material balance area can be determined; and

(b) the physical inventory of nuclear material in each material balance area can be determined when necessary, in accordance with specified procedures;

in order that the material balance for Agency safeguards purposes can be established.

- N. material unaccounted for means the difference between book inventory and physical inventory.
- O. nuclear material means any source or any special fissionable material as defined in Article XX of the Statute. The term source material shall not be interpreted as applying to ore or ore residue. Any determination by the Board under Article XX of the Statute after the entry into force of this Agreement which adds to the materials considered to be source material or special fissionable material shall have effect under this Agreement only upon acceptance by ABACC and the States Parties.
- P. physical inventory means the sum of all the measured or derived estimates of batch quantities of nuclear material on hand at a given time within a material balance area, obtained in accordance with specified procedures.
- Q. shipper/receiver difference means the difference between the quantity of nuclear material in a batch as stated by the shipping material balance area and as measured at the receiving material balance area.
- R. significant quantity means the significant quantity of nuclear material as set by the Agency,
- S. source data means those data, recorded during measurement or calibration or used to derive empirical relationships, which identify nuclear material and provide batch data. Source data may include, for example, weight of compounds, conversion factors to determine weight of element, specific gravity, element concentration, isotopic ratios, relationship between volume and manometer readings and relationship between plutonium produced and power generated.
- T. strategic point means a location selected during examination of design information where, under normal conditions and when combined with the information from all strategic points taken together, the information necessary and sufficient for the implementation of safeguards measures is obtained and verified; a strategic point may include any location where key measurements related to material balance accountancy are made and where containment and surveillance measures are executed.

DONE at Vienna, on the thirteenth day of December 1991, in quadruplicate, in the English language.

For the REPUBLIC OF ARGENTINA:

(signed) Jorge Alberto Taiana  
Carlos Saul Menem

For the FEDERATIVE REPUBLIC OF BRAZIL:

(signed) Thereza Maria Machado Quintella  
Fernando Collor de Mello

For ABACC:

(signed) Jorge Antonio Coll

For the INTERNATIONAL ATOMIC ENERGY AGENCY:

(signed) Hans Blix

## PROTOCOL

### Article 1

This Protocol amplifies certain provisions of the Agreement and, in particular, specifies the arrangements for co-operation in the application of the safeguards provided for under the Agreement. In implementing these arrangements, the Parties to the Agreement shall be guided by the following principles:

- (a) the need for ABACC and the Agency each to reach its own independent conclusions;
- (b) the need to co-ordinate to the extent possible the activities of ABACC and the Agency for the optimum implementation of this Agreement, and in particular to avoid unnecessary duplication of ABACC's safeguards;
- (c) when performing their activities, ABACC and the Agency shall work jointly, wherever feasible, in accordance with compatible safeguards criteria of the two organizations; and
- (d) the need to enable the Agency to fulfill its obligations under this Agreement taking into account the requirement for the Agency to preserve technological secrets.

### Article 2

In the implementation of the Agreement, the Agency shall accord to the States Parties and to ABACC treatment not less favourable than the treatment it accords to States and regional systems of verification with a level of functional independence and technical effectiveness comparable to that of ABACC.

### Article 3

ABACC shall collect the information on facilities and on nuclear material outside facilities to be provided to the Agency under the Agreement on the basis of the Agency's design information questionnaire annexed to the Subsidiary Arrangements.

### Article 4

ABACC and the Agency shall each carry out the examination of design information provided for in Article 44(a) to (f) of the Agreement and shall include the results thereof in the Subsidiary Arrangements. The verification of design information provided for in Article 46 of the Agreement shall be carried out by the Agency in co-operation with ABACC.

### Article 5

In addition to the information referred to in Article 3 of this Protocol, ABACC shall also transmit information on the inspection methods which it proposes to use, including estimates of its inspection efforts for the routine inspection activities for facilities and material balance areas outside facilities.

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## Article 6

The preparation of the Subsidiary Arrangements shall be the joint responsibility of ABACC, the Agency and the State Party concerned.

## Article 7

ABACC shall collect reports from the States Parties based on records kept by the operators, keep centralized accounts on the basis of these reports and proceed with the technical and accounting control and analysis of the information received.

## Article 8

Upon completion of the tasks referred to in Article 7 of this Protocol ABACC shall, on a monthly basis, produce and provide the Agency with the inventory change reports within the time limits specified in the Subsidiary Arrangements.

## Article 9

Further, ABACC shall transmit to the Agency the material balance reports and physical inventory listings with the frequency and form specified in the Subsidiary Arrangements.

## Article 10

The form and format of reports referred to in Articles 8 and 9 of this Protocol, as agreed between ABACC and the Agency, shall be specified in the Subsidiary Arrangements and shall be compatible with those used in the general practice of the Agency.

## Article 11

The routine inspection activities of ABACC and of the Agency, including, to the extent feasible, the inspections referred to in Article 82 of the Agreement, shall be coordinated pursuant to the provisions of Articles 12 to 19 of this Protocol and to the Subsidiary Arrangements.

## Article 12

Subject to Articles 77 and 78 of the Agreement, account shall also be taken of the inspection activities carried out by ABACC in determining the actual number, intensity, duration, timing and mode of the Agency inspections in respect of each facility.

## Article 13

Inspection effort under the Agreement for each facility shall be determined by the use of the criteria set forth in Article 79 of the Agreement. Such inspection effort, expressed as agreed estimates of the actual inspection effort to be applied, shall be set out in the Subsidiary Arrangements, together with the descriptions of verification approaches and the scope of inspections to be carried out by ABACC and by the Agency. These estimates shall constitute, under normal operating conditions and under the conditions set out below, the actual inspection effort at each facility under the Agreement:

- (a) the continued validity of the information on the SCCC provided for in Article 33 of the Agreement, as specified in the Subsidiary Arrangements;

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- (b) the continued validity of the information provided to the Agency in accordance with Article 3 of this Protocol;
- (c) the continued provision by ABACC of the reports pursuant to Articles 62 and 63, 65 to 67 and 69 to 71 of the Agreement, as specified in the Subsidiary Arrangements;
- (d) the continued application of the co-ordination arrangements for inspections pursuant to Articles 11 to 19 of this Protocol, as specified in the Subsidiary Arrangements; and
- (e) the application by ABACC of its inspection effort with respect to the facility, as specified in the Subsidiary Arrangements, pursuant to this Article.

## Article 14

The general scheduling and planning of the inspections under the Agreement, including arrangements for the presence of ABACC and Agency inspectors during the performance of inspections under this Agreement, shall be established in co-operation between ABACC and the Agency, taking into account the scheduling of the Agency's other safeguards activities in the region.

## Article 15

The technical procedures in general for each type of facility and for individual facilities shall be compatible with those of the Agency and shall be specified in the Subsidiary Arrangements, in particular with respect to:

- (a) the determination of techniques for random selection of statistical samples;
- (b) the checking and identification of standards;
- (c) containment and surveillance measures; and
- (d) verification measures.

ABACC and the Agency shall consult and identify in advance the containment and surveillance measures and the verification measures to be applied in each individual facility until the time the Subsidiary Arrangements enter into force. Such measures shall similarly be compatible with those of the Agency.

## Article 16

ABACC shall transmit to the Agency its inspection reports for all ABACC inspections performed under the Agreement.

## Article 17

The samples of nuclear material for ABACC and the Agency shall be drawn from the same randomly selected items and shall be taken together, except when ABACC does not require samples.

## Article 18

The frequency of physical inventories to be taken by facility operators and to be verified for safeguards purposes shall be in accordance with the requirements of the relevant Facility Attachment.

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## Article 19

- (a) With a view to facilitating the application of the Agreement and of this Protocol, a Liaison Committee shall be established, composed of representatives of ABACC, of the States Parties and of the Agency.
- (b) The Committee shall meet at least once a year:
- (i) to review, in particular, the performance of the co-ordination arrangements provided for in this Protocol, including agreed estimates of inspection efforts;
  - (ii) to examine the development of safeguards methods and techniques; and
  - (iii) to consider any questions which have been referred to it by the Sub-Committee referred to in paragraph (c).
- (c) The Committee may appoint a Sub-Committee to meet periodically to discuss outstanding safeguards implementation issues arising from the application of safeguards under this Agreement. Any questions which cannot be settled by the Sub-Committee will be referred to the Liaison Committee.
- (d) Without prejudice to urgent actions which might be required under the Agreement, should problems arise in the application of Article 13 of this Protocol, in particular when the Agency considers that the conditions specified therein have not been met, the Committee or the Sub-Committee shall meet as soon as possible in order to assess the situation and to discuss the measures to be taken. If a problem cannot be settled, the Committee may make appropriate proposals to the Parties, in particular with the view to modifying the estimates of inspection efforts for routine inspection activities.

DONE at Vienna, on the thirteenth day of December 1991, in quadruplicate, in the English language.

For the REPUBLIC OF ARGENTINA:

(signed) Jorge Alberto Taiana  
Carlos Saul Menem

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For the INTERNATIONAL ATOMIC ENERGY AGENCY:

(signed) Hans Blix

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## Contributors

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