Nuclear Disarmament in South Africa

Historic Events and the Lessons for the Middle East

R.F. ‘Pik’ Botha, Dave Steward, and Waldo Stumpf
With a Special Statement by FW de Klerk

Abstract

The South African disarmament example is historically unique. In the late 1980s and early 1990s, Pretoria dismantled its nuclear deterrent as well as its biological and chemical weapon programs and its efforts to develop ballistic missiles and space launch systems. The proceedings covered the full spectrum of armaments which are also central to the establishment of a zone free of weapons of mass destruction (WMD) and their delivery vehicles (DVs) in the Middle East. Countries in the Middle East find themselves confronted with a host of difficulties, many of which are structurally similar to those faced by South Africa prior to its WMD rollback. Examining the reasons and motives as well as the technical verification procedures, which allowed for this historic decision to be taken and to be implemented successfully, may prove an important building block for future cases of disarmament in the field of nuclear weapons and other weapons of mass destruction. Demands in the Middle East regularly focus on the necessity of dismantling (potential) nuclear weapon arsenals, while disregarding suspected biological and chemical weapon programs. Through integrating both into the dialogues of disarmament may significantly reduce the opposition to such processes to take shape on the ground. It is, therefore, the distinct aim of this Policy Brief to identify various ‘lessons learned’ from the political and technical factors involved in the process of abandoning the South African WMD programs.

Three overarching factors can be identified which contributed towards the dismantlement of the South African WMD arsenals. These were firstly, the democratization process within the country itself and, secondly, significant regional and global events that eased South Africa’s security situation on the regional and international level. The unilateral process of nuclear dismantlement – which is seen by many as a model for other countries – was kept secret. Inspections by the International Atomic Energy Agency (IAEA) started only afterwards and finally confirmed the complete dismantlement of the nuclear weapon program (‘backwards verification’).

South Africa occupies a unique position in history in being the only state that has ever unilaterally and voluntarily discarded its WMD as well as its missile programs. We hope that other states follow our example to take this decision voluntarily without having any obligation to do so, for the sake of making the earth and the world a safer place and avoid conflict in the future.

South Africa has been the first and, so far, only country to build nuclear devices and then voluntarily dismantle them. In the 1980s, six gun-type nuclear devices were produced for underground testing, while a seventh remained unfinished. Less than a decade later, Pretoria abandoned its nuclear deterrent program, joined the Nuclear Non-Proliferation Treaty (NPT) as a non-nuclear weapon state, and allowed for comprehensive international inspections of its former nuclear deterrent program. Since its abandoning it, South Africa has emerged as a ‘champion’ of global nuclear non-proliferation and took a leading role in the establishment of the African nuclear weapon free zone based on the Pelindaba Treaty.

The WMD Rollback: A Model for the Middle East?

The nuclear rollback – apart from its contribution to the country’s peaceful democratic transition in 1994 – was one of the crowning achievements of the departing FW de Klerk government. Following the revelation of the program in 1993, South African Foreign Minister Pik Botha stated his hope that other nuclear-capable countries would “follow our example to take this decision voluntarily without having any obligation to do so, for the sake of making the earth and the world a safer place and avoid conflict in the future.”

During a meeting with South African President Jacob Zuma in April 2010 American President Barack Obama also lauded the country’s voluntary decision as historically unique, acclaiming that it should serve as a model for other states or regions. The uniqueness of the South African case is further constituted by the fact that, beyond the nuclear capability, it also gave up its biological and chemical weapon programs as well as efforts to develop ballistic missiles and space launch vehicles (SLVs). Hence, the proceedings in South Africa covered the full spectrum of armaments which are central to the establishment of a zone free of weapons of mass destruction (WMD) and their delivery vehicles (DVs) in the Middle East.

Structure of This Policy Brief

First, we outline the regional and global context within which South Africa decided to develop a WMD arsenal. After briefly taking stock of the actual nuclear and missile capabilities, we turn to the political rationales behind these historic decision to dismantle them. In a further step, the technical aspects of armaments which are also central to the establishment of a zone free of weapons of mass destruction (WMD) and their delivery vehicles (DVs) in the Middle East. The uniqueness of the South African case is historically unique, acclaiming that it should serve as a model for other states or regions.
of the verification of South Africa’s covert nuclear program (‘backwards verification’) are outlined. Finally, we identify ‘lessons learned’ and assess the transfer potential for other states or regions to enter a process leading to equally positive results, be it in the area of nuclear and other weapons of mass destruction or their delivery vehicles.

This analysis should not be framed as a strict blueprint for other cases of disarmament, since each individual case follows its own patterns of reasoning as well as political and technical difficulties or even dilemmas. What happened in South Africa in the late 1980s and early 1990s has in many ways been a unique development which, nevertheless and at the same time, implies the potential of transferring ideas, concepts, and constructive approaches to WMD/DVs disarmament. This is especially informing since demands in the Middle East regularly focus on the necessity of dismantling (potential) nuclear weapon arsenals, while disregarding suspected biological and chemical weapon programs as well as delivery vehicles.

The Decision to Go Nuclear – Reasons behind South Africa’s Nuclearization

The reasons behind South Africa’s decision to develop WMD and missile capabilities were multi-faceted. The following chapter analyzes the regional and global context against which the South African government found itself forced to go nuclear.

The Regional Context: South Africa and Regional Liberation Struggles

Despite often being neglected in Western accounts of history, southern Africa was greatly affected by the Cold War. The region bore witness to several devastating proxy wars which attracted interventions from both superpowers as well as from various regional and extra-regional states. In southern Africa, the nature of domestic processes during the 1960s to early 1980s was dominated by decolonization, while the residual strength of white settler regimes gave anti-colonial struggles a particular intensity. Proxy wars and anti-colonial struggles intertwined, since the Soviet Union, China, and Cuba supported liberation movements that embarked on armed struggles in various countries in South Africa’s direct neighborhood – particularly those in Mozambique and Angola.

These regional developments created an especially pronounced security threat for the Apartheid government and its rule in South Africa. These menaces came to a height with the power vacuum which developed as a consequence of the independence of Mozambique and Angola and the following withdrawal of Portuguese troops in 1975. A transitional government was installed in Angola under which the major three former resistance groups – the Peoples’ Movement for the Liberation of Angola (MPLA), the National Union for the Total Independence of Angola (UNITA), and the National Front for the Liberation of Angola – were to receive equal shares of power and responsibility. Power-distribution conflicts, nevertheless, led to the eruption of civil war. After Cuba intervened with military forces on behalf of the communist MPLA, South African assistance was requested by UNITA to counterbalance the communist influence and to restrict Cuban advances.

The South African government itself was extremely worried ‘where the Cuban troops would stop’ and whether they would violate South Africa’s territorial integrity or the one of South West Africa – today’s Namibia – which was at that time under Pretoria’s rule. The government perceived the intention of the Warsaw Pact countries to extend their influence southwards, with the possibility of using the Cuban presence to achieve this objective. The number of Cuban troops in Angola rose steadily, reaching 30,000 by the mid-1980s and eventually peaking at 50,000 by early 1989. Until as late as the end of 1987, the deployed South African soldiers had been involved in large-scale battles with Cuban and Soviet-led forces. The threat of the Cuban presence was multiplied due to the fact that they were merely perceived as Soviet proxies.

These developments were especially threatening to the Apartheid regime which perceived a concrete possibility of similar liberation struggles to break out within South Africa. This concern was heightened with nearly half of the National Executive Committee of the African National Congress (ANC) having been members of the South African Communist Party (SACP). This was the case most notably, with the ANC’s armed wing Umkhonto we Sizwe (MK), which was effectively under the control of the SACP. The government was further aware that the SACP proposed a two-phased revolution: first, a national liberation phase that would include all forces opposed to Apartheid during which the ANC would be the
vanguard party; and, second, a ‘democratic’ liberation phase that would culminate, under the leadership of the SACP, in the establishment of a ‘people’s democracy’ which would be equal to the establishment of a totalitarian communist regime. The perception among the South African leadership was that this had happened in a number of neighboring states. The deterrence of the military influence of the Soviet bloc was hence also a vital component in the maintenance of domestic stability.

The potential destabilization of the regime further triggered historically-grown fears which also inhibited possible moves towards democratization. The central theme of the history and dominant concern of politics of the Afrikaner nation throughout the first sixty years of the 20th century had been the right to self-determination having had to defend this right twice against Great Britain. The Afrikaners feared that along with their political and economic privileges, this very ability for self-determination would be eliminated in a one-man, one-vote dispensation in South Africa. Symbolic of this fear, a serious schism broke out within the ruling National Party in 1969 with a right-wing faction breaking away as the Reconstituted National Party. For the years to come, this faction embedded itself in forming a severe stumbling block in the way of progress in reform.

Parallel to such forces, the realization grew within the South African policy-making circles that democratization necessarily presented the way ahead. In this manner, a meeting in early 1977 between American President Jimmy Carter and R.F. Botha, who was Ambassador to the U.S. and proceeded to South Africa to assume his appointment as Minister of Foreign Affairs, confirmed the South African appreciation of the necessity to eradicate the Apartheid system. However, it also communicated the fear of the South African government that such change, if implemented the wrong way, could lead to civil war.

The Global Context: The Amplification of Security Concerns and the Conflation of Domestic and Foreign Politics

Internationally, the white South African government was increasingly isolated politically and placed under several sanction regimes during the 1970s and 1980s. The most prominent origin of international objection to the government was the demand for an end
In sum, fears of regional instability, the expansion of communism, and threats to South Africa’s territorial integrity, coupled with international isolation, condemnation, and sanctions, consolidated the perception that a nuclear capacity was the only option available for a functioning deterrence strategy against external menaces.«

The continued administration of South West Africa by Pretoria was a further issue of international criticism. Contestation over this administration led to constant armed struggles with Namibian liberation fighters and had, by 1983, motivated the deployment of South African troops. While a contentious proceeding questioning the legality of the continued administration was rejected in 1966, the International Court of Justice published an advisory opinion in 1971. Perceived by the South Africans as politically inspired, it held that South Africa was illegally occupying Namibia. Although this advisory opinion had no legally binding force, it reflected the political opposition the Apartheid regime in Pretoria was facing internationally.

International objections to South African politics influenced the country on several layers. Primarily, they amplified pre-existing security fears by creating the perception among the government that South Africa could not count on international support should its territorial integrity be threatened. Pretoria’s fears related to the regional expansion of communist influence in southern Africa were given very little recognition by the Western powers. Their overwhelming inclination was to get South Africa and Apartheid off the international agenda.

Beyond this, the conflation of international opposition and pressure aiming at the South African domestic politics of Apartheid on the one hand and its nuclear politics on the other, significantly disabled the international community to exert distinct influence on the nuclear program. The conviction by the South African government that international hostility to the regime was primarily based on objections regarding its domestic Apartheid system rather than its nuclear program was cemented with the country’s barring from the 1979 General Conference of the International Atomic Energy Agency (IAEA). The relevant resolution urged Pretoria to join the NPT and to subject its nuclear activities to international safeguards. The absence of any such treatment towards India, also not a signatory to the NPT, following its nuclear test in 1974 further supported this understanding. The contrast was especially immediate as the conference was indeed hosted by India.

The focus on full democratization along with the neglect of the South African government’s security fears on the regional and domestic level further led to a lack of recognition of the political concessions which were made by the Apartheid government from 1978 onwards. This caused additional disillusionment on the part of the government and led to the perception that there was little it could do – short of surrendering power to the ANC – that would satisfy its international critics. Although it had repealed more than 100 Apartheid laws by 1986, each new reform simply redoubled the demands for further concessions – concessions that most white South Africans increasingly equated with the total surrender of their core interests. The leadership in Pretoria hence found itself ‘riding the tiger’ of growing black anger and increasing international isolation. The world – and most black South Africans were shouting at white South Africans ‘to dismount’ – but it was difficult for them to see how they could do so without ‘being devoured.’

The pioneering work of the Department of Foreign Affairs in establishing informal contacts and dialogue with several leaders of Africa was being undermined by the lack of convincible political change in the country and the ongoing pursuit of Apartheid. Hence, a conflation, or at the very least, coupling of objections and measures targeting domestic and nuclear politics occurred to a substantial degree. As a consequence, it was understood that fundamental changes at the security level and even accession to the NPT would not lead to any tangible advantages without fundamental modifications of domestic politics. This lack of international appreciation of the government’s security fears as well as the connection between the domestic and international perception of threats seriously reduced its ability to create incentives or open ways to the government to resolve these tensions.

In sum, the imminent security threats to the regime’s survival specifically as well as fears of regional instability, the expansion
of communism, and threats to its territorial integrity more widely, coupled with international isolation, condemnation, and sanctions, consolidated the perception that a nuclear capacity was the only option available for a functioning deterrence strategy against external menaces.

South Africa’s Weapons of Mass Destruction and Their Delivery Vehicles – Capabilities, Facts, and Figures

The following chapter takes stock of the actual nuclear and missile capabilities which South Africa developed.

The Nuclear Weapon Program

The official transformation of the nuclear activities from civilian research to having a deterrence character was undertaken in 1977, concomitant with the completion of the first ‘cold’ nuclear explosive device. The further elaboration of a three-stage deterrent strategy in 1978 substantiated this point. By 1979 a device containing impure about 80 percent highly enriched uranium (HEU) was produced for underground testing in order to demonstrate Pretoria’s nuclear weapon capability if need arose. It was only after 1982 that full scale devices with sufficiently pure 90 percent enriched U-235 were produced for underground testing.

A clear nuclear strategy only began to be developed in 1983. At that time, a working group at the Armaments Corporation of South Africa (ARMSCOR) developed a three-phase nuclear strategy that combined deterrence and diplomatic leverage. This doctrine was politically approved by President P.W. Botha in April 1987.

The different phases contained:

- The ‘low military threat’ stage: South Africa maintains ambiguity about its nuclear capability and would neither confirm nor deny it had a nuclear arsenal.
- The ‘covert disclosure’ phase: if Soviet or Soviet-backed forces threatened to invade South Africa’s territory or Namibia, the government in Pretoria would secretly inform the United States and other Western nations about its capabilities with the expectation that they would help to defuse the threats.
- The ‘overt disclosure’ stage: Pretoria would first publicly declare it had nuclear weapons or prove it by conducting an underground test.

The actual use of nuclear weapons was not planned. Under no circumstances would the South African government ever have authorized a nuclear explosive attack on any force in any country. This would have had disastrous consequences for Pretoria, tantamount to an act of madness and idiocy. President Botha was aware of and agreed with the commitment that Foreign Minister Botha had made to American President Ronald Reagan in 1981 that

<table>
<thead>
<tr>
<th>Box No. 1: Chronology of the Main Events of South Africa’s Nuclear Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1970</strong></td>
</tr>
<tr>
<td><strong>1971</strong></td>
</tr>
<tr>
<td><strong>1974</strong></td>
</tr>
<tr>
<td><strong>1976</strong></td>
</tr>
<tr>
<td><strong>1977</strong></td>
</tr>
<tr>
<td><strong>1978</strong></td>
</tr>
<tr>
<td><strong>1979</strong></td>
</tr>
<tr>
<td><strong>1981</strong></td>
</tr>
<tr>
<td><strong>1982</strong></td>
</tr>
<tr>
<td><strong>1985</strong></td>
</tr>
<tr>
<td><strong>1987-1989</strong></td>
</tr>
<tr>
<td><strong>1989</strong></td>
</tr>
<tr>
<td><strong>1990</strong></td>
</tr>
<tr>
<td><strong>1991</strong></td>
</tr>
<tr>
<td><strong>1993</strong></td>
</tr>
</tbody>
</table>

Three overarching factors can be identified which contributed towards the dismantlement of the South African nuclear and other WMD arsenals: the demoratization process, the easing of South Africa’s security situation on the regional and international level, and international pressure.

South Africa would not even test a nuclear explosive device without first consulting the American government.

The South African nuclear project totaled, before dismantlement, a number of six completed and one incomplete nuclear device. None of these were ever suited for delivery. While ARMSCOR engineers were developing theoretic designs for the future use of those devices as tactical weapons, such studies were not mandated by the Cabinet Committee overseeing the nuclear activities. During a meeting in September 1985, chaired by President P.W. Botha to review the entire program, he learnt for the first time of these re-design studies. His decision to immediately terminate the program was replaced with a phasing out of the program’s theoretical studies and a complete halt to any physical development work in this direction. He was concerned that any contemplated use of tactical nuclear weapons in the then-current situation would invite massive retaliation by the superpowers. Beyond this, there was never enough highly enriched uranium available for advancing or expanding the program at that time.

Ballistic Missiles and Space Launch Vehicles

South Africa had been developing rockets and missiles since the mid-1960s. Although the produced nuclear weapons were designed and manufactured for underground testing only, staff within ARMSCOR is said to have had plans to upgrade the nuclear devices for possible delivery by the Republic of South Africa (RSA) missile series. At that time, South Africa had little, if any, experience with relevant technologies. It lacked the industrial and scientific experience essential for domestic development and manufacture of long-range missiles and hence turned to Israel for cooperation in this area.

The ballistic missile program was as secret as the nuclear project. In 1978, ARMSCOR formed the Houwteq company with a staff of 1,600 headquartered in Pretoria that was responsible for guided missile development and manufacture. It produced the conventionally-tipped intermediate-range RSA-1 and RSA-2 ballistic missiles and undertook the development of long-range ballistic missiles with Israeli help. As a cover for and supplement to the ballistic missile activities, the ‘R5b’ space program was initiated, developing the three-stage RSA-3 space launch vehicle – based on Israeli Shavit technology. A missile of intercontinental-range, designated in some sources as RSA-4, which was intended to be a future delivery vehicle for the country’s nuclear capabilities, never went beyond design studies.

Direct evidence of long-range missile development was the establishment of a new test range. In March 1983, the South African government announced that the Saint Lucia test range would be closed, ostensibly because its proximity to Mozambique made secure tests of long-range weapons difficult. The cabinet in Pretoria subsequently approved construction of a new test site at Overberg, east of Cape Town.

The most important evidence, however, were the South African missile tests. On June 1, 1989, the first stage of the RSA-3 was tested at the Overberg range. On July 5, 1989, ARMSCOR announced that it had successfully launched a booster rocket, most likely comprising the first and second stage of the RSA-3. The missile flew 1,620 km southeast towards Prince Edward Island with an estimated payload of more than 500 kg. Reportedly, this flight test was followed by a third one on November 19, 1990. A fourth test was scheduled for the spring of 1991, but was cancelled.

Into an Era of Accountability: Reasons behind South Africa’s Abandoning of Nuclear Weapons and Their Delivery Vehicles

During a meeting in September 1989 of the select Cabinet Committee overseeing the nuclear program, the new South African President FW de Klerk presented his view for the future of the country by stating that “in my term of office we will take South Africa back into the international community as a responsible member of this community.” He emphasized two issues: we are going to release Mr. Mandela, un-ban the ANC, and lead the country to full democratic elections. We are going to dismantle the nuclear deterrent and accede to the NPT as a responsible member of the world community.

Three overarching factors can be identified which contributed towards the dismantlement of the South African nuclear and other WMD arsenals. These were firstly, the democratization process within the country itself and, secondly, some significant regional and global events that eased South Africa’s security situation on the regional and international level. Finally, international pressure
also played a limited role in abandoning the WMD programs.

**The Domestic Level – Processes Underlying Democratization**

The acceptance of a democratic constitution helped normalizing relations with the international community and the economically and industrially advanced states, and in turn, opened the way to Pretoria's NPT accession. It is hence relevant to explore some of the domestic elements and processes which contributed to South Africa's democratic constitutional settlement.

From the early 1980s onwards, a growing number within the political establishment came to realize that bringing about peace and stability in southern African, and ultimately to South Africa itself, would not be possible until Apartheid was eliminated and a new democratic order was established. In 1982, right-wingers split from the National Party and established the Conservative Party. With their departure, there was no longer any serious opposition within the National Party to the reforms that President P.W. Botha initiated. During this period, it had become apparent that continuing the Apartheid system held no prospect whatsoever of bringing about a just or workable solution for the country. Six months before the NPT was signed, de Klerk made his famous speech on February 2, 1990, in which he demonstrated his conviction that Apartheid had to be removed in its entirety to eradicate the social and political injustices. Only by reaching out to each other, unburdened by racism, could our country survive and move forward. Apartheid could not be transformed. It had to be removed in its entirety to eradicate the injustices and free the Whites from their incarceration. The challenge was perceived as doing so without plunging the country into chaos and devastation. A critically important factor was the acknowledgment by the ANC as well as the government that the continuation of violence as a means to retain or attain governmental power was no option at all.

Some of the most significant forces for political change were the underlying economic and social dynamics that had been at work in South Africa for decades. The face of the country changed dramatically during the generation that preceded the reforms of the 1990s. The true ‘agents of change’ were the evolutionary forces that were unleashed over decades by millions of ordinary black and white South Africans going about their daily lives; moving to the cities; and improving their living conditions by getting better jobs, participating in the free market as well as acquiring better educations. Between 1970 and 1989 there were dramatic shifts in social and economic relationships in South Africa. The racial distribution of personal income had stagnated between 1917 and 1970 with the share of the black population decreasing from 20.3 to 19.8 percent. However, between 1970 and 1991 the black share climbed to 37 percent while the white share had fallen below 50 percent with colored and Indian South Africans accounting for the remainder. In the field of education, by 1993, there were 120,823 black undergraduate students – compared with 116,631 white undergraduates at South African universities. The number of black university student increased from 33,956 in 1992 to 201,284 in 1994. Increasingly, they were also becoming indispensable in white-collar professions. Such quantitative shifts in the economic and educational area can, of course, not be understood as having achieved proportionality with relation to the respective population sizes. Nevertheless, they did signal a shift within the balance of societal influence. This partial economic integration could not be unmeshed.

These developments also entailed somehow greater racial integration on the day-to-day basis with young people of different racial backgrounds and the same qualifications having begun to work side by side in banks, shops, and factories. Further, the attitudes of the younger generation changed through being socialized under different contextual factors than their parents' generation. In this manner, many young Afrikaners graduated from university and travelled abroad – and were thus inevitably influenced by values and norms outside of their national context. Their attitudes were increasingly determined by the more individualistic and liberal lifestyles to which they were exposed at the cinema, literature and – after 1975 – on television which presented a view of black people that did not accord at all with established Afrikaner perceptions. The new generation of university-educated Afrikaners no longer shared the fiery nationalism of their parents and grandparents. By the early 1980s they were becoming increasingly uncomfortable with many aspects of Apartheid. By 1989 they were ripe for change – and in March 1992 they voted in favor of the continuation of the reform process.

These processes, in turn, had far-reaching effects on government policy. The pass laws

>>A growing number within the political establishment came to realize that bringing about peace and stability in southern African, and ultimately to South Africa itself, would not be possible until Apartheid was eliminated and a new democratic order was established.<<
were abolished by the reality of millions of people migrating to the cities, long before 1986 when they were officially scrapped from the law books by Parliament. The Group Areas Act which segregated black and white residential areas was abolished by the reality that thousands of black people had by the end of the 1980s moved into supposedly white areas. Discreet contacts between the ANC and the government – originally initiated through Nelson Mandela while he was still in prison – enabled both sides to explore possibilities for negotiated solutions. The conduct of both President de Klerk as well the ANC greatly aided to reduce white South African fears of the democratic transition. Full democratization was, however, only perceived possible with the disappearance of the perceived regional communist threat.17

In summary, the effects of democratization were two-fold. On the one hand, in foreseeing the inevitable end of the Apartheid system, de Klerk perceived nuclear weapons as a liability that jeopardized South Africa’s ability to integrate itself into the international community. Once de Klerk and his government committed themselves to democratic reform, they saw the elimination of the nuclear program and accession to the NPT as a means of removing any obstacles in the way of a free and open relationship with South Africa’s Western allies.

On the other hand, it became obvious for de Klerk that the nuclear program could turn into a liability in the domestic process of handing over political power. Although at no stage did the small number of nuclear devices play any role in the negotiations with the ANC, the United States and, in part, the South African government had concerns about any future ANC government inheriting nuclear and missile capabilities as well as fearing irrational use of these weapons or the proliferation of the technology to nuclear- and missile-hungry states. This has been particularly pronounced after the process of transition to democracy had been initiated in 1991, which “abruptly ended the U.S. Government’s benign tolerance of the space launcher program.”18 Further, a parallel remark was reported to have been made to one of Pik Botha’s officials during a closed meeting with his U.S counterparts. The advice towards South Africa was to accede to the NPT as soon as possible.

The Regional and Global Level: End of Proxy Wars and the Demise of Global Communism

Towards the end of the 1980’s some significant events occurred that started to ease the security situation surrounding South Africa. A first meeting between South African, Cuban, and Angolan representatives took place in Cairo on June 24, 1988. The Cairo meeting became the turning point in finding a peaceful resolution to a dispute and conflict which had afflicted Southern Africa for more than 40 years since the end of the Second World War. During an informal meeting with Jorge Risques Valdes, leader of the Cuban delegation, then-Foreign Minister R.F. Botha suggested a face-saving manner of ending the war in Namibia. While Cuba was to introduce another 15,000 troops to the country, South Africa was to only deploy another 1,000 soldiers. In this manner Castro would be able to withdraw claiming to have won the war, while the South African government would be able to undertake Namibian independence claiming to have expelled the Cuban forces.19

The Tripartite Agreement between South Africa, Cuba, and Angola was then signed on December 22, 1988 at the UN Headquarters.20 This resulted in the withdrawal of the 50,000 Cuban forces from Angola, the implementation of United Nations
Resolution 435 which had demanded, in 1978, for UN-supervised elections to take place as well as the independence of Namibia. These two processes regarding Angola and Namibia were intricately linked, since the occupation of Namibia was, beyond other factors, the agenda to form a buffer-zone between South Africa and Cuban forces in Angola.

The realization of UN Security Council Resolution 435 induced an immediate relaxation of security tensions throughout Southern Africa. Pretoria further fully appreciated that the decrease of tensions with Cuba and also those over Namibia was necessary to allow for negotiations with the ANC and the process of democratization to be initiated. Indeed, the solution to both problems preceded Nelson Mandela’s release from prison. The negotiations with the Angolans and the Cubans and the subsequent successful implementation of the Namibian UN independence plan during 1989 reassured the South African government that it could secure its core interests through negotiations with its opponents. The Nkomati Accords of 1984 further secured the eastern border with Mozambique. Lastly, the independence of Rhodesia – renamed Zimbabwe – brought to an end the violence on South Africa’s northern border.

The Department of Foreign Affairs participated in the negotiations which resulted in peaceful elections in 1980 following 15 years of war of independence. The relaxation of regional tensions during the mid-1980s found a pendant in the September 1985 relaxation of security tensions throughout Southern Africa. Pretoria further fully appreciated that the decrease of tensions with Cuba and also those over Namibia was necessary to allow for negotiations with the ANC and the process of democratization to be initiated. Indeed, the solution to both problems preceded Nelson Mandela’s release from prison. The negotiations with the Angolans and the Cubans and the subsequent successful implementation of the Namibian UN independence plan during 1989 reassured the South African government that it could secure its core interests through negotiations with its opponents. The Nkomati Accords of 1984 further secured the eastern border with Mozambique. Lastly, the independence of Rhodesia – renamed Zimbabwe – brought to an end the violence on South Africa’s northern border.

In 1974, the South African government decided to build a small number of nuclear bombs. It did so against the background of expanding Soviet influence in southern Africa and the collapse of the Portuguese empire in Africa in 1975. The build-up of Cuban forces in Angola from 1975 onwards reinforced the perception that a deterrent was necessary – as did South Africa’s growing international isolation and the fact that it could not rely on outside assistance, should it be attacked. Following the decision, South Africa produced six fairly simple atom bombs. The strategy was that, if the situation in southern Africa were ever to deteriorate seriously, a confidential indication of the deterrent capability would be given to one or more of the major powers in an attempt to persuade them to intervene. There was never any intention to use the devices – which were regarded purely as a deterrent.

By the time I became President in September 1989 it had become clear that the world – and South Africa – had changed fundamentally since we took the decision to acquire nuclear weapons. In December 1988, agreement was reached between Angola, Cuba, and the United States for the withdrawal of 50,000 Cuban troops from Angola. This was followed the next year by a cease-fire agreement in Angola. The withdrawal of Cuban forces opened the way to the implementation of the United Nations independence plan for Namibia – which until then had been ruled by South Africa in terms of a disputed League of Nations mandate. The successful independence of Namibia in March 1990 showed that positive outcomes could be achieved through negotiations – even with one’s bitterest enemies.

Finally, the destruction of the Berlin wall in November 1989 and the collapse of Soviet Communism created a completely new global strategic environment. History had opened a window of opportunity for us. I realized that there would never again be so a favorable opportunity for negotiations – so my colleagues and I did not hesitate: we jumped through the window as soon as we could. However, we did not want to take our leap of faith encumbered by the baggage of nuclear weapons. Under these circumstances, it no longer made any sense to retain our limited nuclear weapons capability – if, indeed, it had ever made sense to possess such weapons, in the first place – which I had always seriously doubted. Accordingly, soon after I became President we took the decision to dismantle our atom bombs. We signed the Nuclear Non-Proliferation Treaty on July 10, 1991, and concluded a Safeguards Agreement with the International Atomic Energy Agency on September 16, 1991.

I believe that we, in our own small way, have illustrated that long-term security can be far better assured by the abrogation of nuclear weapons than by their retention. The core of the threat that confronted us before 1989 did not lie in military weakness, but in the escalating conflict between various groupings of South Africans. The solution to the problem did not lie in acquiring greater military superiority but in reaching agreement on the fundamental issues that divided us.
Another – but critically important – factor for South Africa’s decision to abolish its WMD programs was the collapse of global communism in 1989. The end of the Cold War and the termination of super power rivalry also in Africa removed the government’s primary strategic concern that had arisen from the perceived intention of the Warsaw Pact to penetrate southern Africa. This caused the expectation of an end of proxy wars in the immediate regional neighborhood. These regional and global events coincided with the assumption of office of President FW de Klerk in September 1989, who immediately set into motion fundamental political reforms of South Africa’s domestic policies towards full democratization.

### International Pressure on South Africa

Another important factor in the abandoning of the WMD programs was international pressure. However, the South African decision towards disarmament cannot be traced directly to the economic impact of sanctions – their role can best be described as ambivalent. While international pressure certainly did have an impact on the government and did, in some instances, give an impetus to the dismantlement of the program and democratization, there is also evidence that the sanctions were actually a contributing factor in the Apartheid regime’s decision to build nuclear weapons in the first place due to the increased international isolation.

During the 1980s, the United Nations adopted an arms embargo and the Organization of the Petroleum Exporting Countries applied an oil embargo starting in 1973. International pressure resulting from South Africa’s Apartheid system intensified and led to a restrictive multilateral sanctions regime, especially in the 1980s. The effects of financial sanctions were reinforced from 1982 by denying South Africa access to the IMF facilities and the launching of divestment campaigns in the United States a few years later. The drying up of the sources of foreign capital had devastating consequences on the economy.

The domestic costs of the international economic and political isolation started to accumulate from 1987 onwards. The United States, the Europeans, and the Commonwealth all intensified their financial and other sanctions against the Apartheid regime. They contributed to the stagnation in economic development, due to the scarcity of financial capital. Another factor was that the war with Namibia and Angola had left the country practically bankrupted while sanctions prohibited South African access to international financing institutions. This was captured by the well-known saying of the then-Minister of Finance, Barend du Plessis, that South Africa was ‘operating out of a briefcase with some cash in it but without a bank.’ The collapse of the Rand in 1985 worsened the situation and by the late 1980s the South African economic crisis had become acute.

In terms of effecting policy compliance, sanctions and international pressure had mixed results. In this manner, the 1977 discovery of the Vastrap site for underground nuclear testing and concomitant preparations for fully contained nuclear explosions led to intense diplomatic pressure by the United States and the almost immediate abandonment of the site. Despite this compliance, the country was sanctioned politically by being denied its designated seat on the IAEA Board of Governors as the most advanced nuclear country in Africa in 1977, a seat which was instead allocated to Egypt.

Beyond this, the Nuclear Non-Proliferation Act adopted by the U.S. Congress in 1978 prohibited the transfer of American nuclear technology to non-NPT countries. Applied retroactively, the Act clashed with contractual obligations and caused substantial diplomatic tensions between the two states and ultimately the loss of influence from the United States towards South Africa. These tensions were only eased following a discussion between U.S. President Reagan and South African Foreign Minister Pik Botha in 1981. During this meeting R.F. Botha principally confirmed the support for Security Council Resolution 435 and the implementation of elections in Namibia. He further raised the issue of fuel elements for the Koeberg reactor – which had not been cleared for the agenda prior to the meeting. While Mr. Haig, Secretary of State, strongly opposed this request, President Reagan asked explicitly about South African nuclear capabilities and intentions. While then-Foreign Minister Botha acknowledged the South African capacity to produce a nuclear device, he simultaneously made a commitment that no explosive test would be executed without prior consultation of the American government. He further stated that the opaqueness surrounding the nuclear program was perceived a necessary deterrent to potential expansion of Soviet influence in southern Africa. Indeed, a meeting between R.F. Botha and Jorge Risquet in 2010 confirmed this deterring effect with regard to the former Cuban position. The meeting succeeded to persuade President Reagan to lift the impediments on the production and delivery by France of the low-enriched uranium fuel elements required by the planned Koeberg nuclear power station.

Domestically, sanctions were often counter-productive through increasing opposition to foreign interference. According to a survey carried out in 1986, the great majority of white South Africans were opposed to making concessions because of sanctions due to their perception that these measures would force them ‘to give up everything’. At that time only 30 percent of whites were prepared to contemplate the prospect of direct negotiations with the ANC – despite the serious political and economic crisis that the country experienced between 1984 and 1985. They limited economic growth which was a major contributing factor towards democratization. Beyond this, the early stages of the nuclear program were also “product of the drive towards industrialization, [...] self-sufficiency and developing a skills-base at the high end of the innovation ladder.” Sanctions significantly enhanced the creation of a significant domestic military-industrial complex which ultimately created structural incentives towards its own continued existence.

As mentioned previously, several strategic disadvantages distinctly limited the ability of sanctions to influence South Africa’s security political considerations. It was only after the relaxation of security threats and the decision to dismantle the nuclear program that American pressure regained leverage and bore results. Such factors lead former Foreign Minister R. F. Botha to judge that South Africa found itself subject to increasing economic sanctions which, had they succeeded, could have so crippled the country that negotiations toward a democratic future could have become impossible to initiate.

### The ‘Backwards Verification’ of the Nuclear Program

On February 26, 1990, President FW de Klerk ordered the destruction of the six completed nuclear devices and the seventh partially completed device. However, the process of dismantlement was kept secret even when South Africa acceded to the NPT as a non-nuclear weapon state in July 1991. Foreign Minister Botha signed
the accession to the NPT on behalf of the South African government on July 10, 1991, in Pretoria in the presence of the British Foreign Minister Douglas Hurd, who said that he was delighted that South Africa had taken this step. Only on March 24, 1993, de Klerk informed parliament of the nature and extent of the country’s military nuclear capabilities and their abandonment. IAEA inspections between April and August 1993 confirmed the complete dismantlement of the nuclear weapon program.

**Unilateral Measures towards Nuclear Dismantlement**

A steering committee was appointed by President de Klerk to unilaterally undertake the dismantlement of the military nuclear program, including devices produced as well as relevant facilities. This committee consisted of senior officials from the AEC, ARMSCOR, and the South African Defence Force under the chairmanship of Prof. Waldo Stumpf. Prior to the initiation of this process, extensive operational procedures had further been established to guide the process and facilitate external verification in the following. An independent auditor, reporting directly to de Klerk, Prof. Wynand Mouton, was appointed to review the entire dismantlement process. Later, the IAEA verification team was given full access to him and his auditing records after the public acknowledgement of the nuclear program in March 1993. The highly enriched uranium from the nuclear devices had been melted, recast, and then returned to the Atomic Energy Corporation for safe-keeping before signature of the comprehensive Safeguards Agreement with the IAEA. All nuclear materials handling equipment was further returned to the AEC and buildings decontaminated. The dismantling was completed in June 1991 and the last HEU was returned to the AEC on September 6, 1991. With its completion, the technical documentation relating to the nuclear weapon program and proliferation-sensitive materials were finally destroyed, while all material handover documentation was retained for the later verification processes.

**The IAEA ‘Backwards Verification’ Process**

South Africa submitted on October 30 an initial report stating quantitative data on all types of nuclear material as well as on all nuclear facilities. This was done on the basis of the complete records which were kept of the dismantling process and recovered nuclear material. As part of the guidelines laid out prior to the process of physical dismantlement, great care was taken by the South African team to ensure completeness of all records. This included especially the signing off by responsible officials of material transfers with counter-signatures by the auditor. For the IAEA it was therefore possible – on the basis of the data contained in the initial report and subsequent inventory changes – to establish an itemized list of each facility’s nuclear material inventory.

The second round of IAEA inspections between April and August 1993 did take advantage of this. Detailed testing of authenticity of operating records as well as those records of the dismantlement process was undertaken. Over the five-month period, IAEA experts carried out inspections at a number of facilities and locations that had been declared to have been involved in the former nuclear program. The objectives of these inspections were, among others, to:

- gain assurance that all nuclear material used in the nuclear weapon program had been returned to peaceful usage and had been placed under IAEA safeguards;
- assess that all non-nuclear weapons specific components of the devices had been destroyed;

**Box No. 3: Swords into Ploughshares**

The last public appearance overseas of R.F. ‘Pik’ Botha as Minister of Foreign Affairs took place at the headquarters of the International Atomic Energy Agency in Vienna on April 7, 1994, when he presented to Dr. Hans Blix, Director-General of the IAEA, a plough-share artistically fashioned from non-nuclear material from one of South Africa’s dismantled nuclear devices with the engraved words from Isaiah 2:4: “And they shall beat their swords into plough-shares and their spears into pruning hooks. Nation shall not lift up sword against nation, neither shall they learn war anymore." R.F. Botha later admitted that “few occasions in my life had given me greater satisfaction and joy.”
While the NPT at that time did not have a mandate to engage with a country’s past program before the point of accession, all such information was further disclosed to the second IAEA verification team.✓

Besides physical inspections, private interviews which the inspection team held with persons previously involved in the nuclear activities were a further significant dimension in the verification process. Unrestricted access to such persons was facilitated by the de Klerk government while no refusals to participate in such interviews occurred throughout the entire time-span of inspections. A political factor which greatly enhanced the technical ability of the IAEA to verify South African statements and for the country’s team to facilitate such verification was extensive cooperation and the unconditional access to all facilities of the nuclear program, which was granted by President de Klerk. These included during the initial stage also facilities not outlined by the national team. After visits to these by the accompanied verification team, mutual agreements to remove some of them from the list of future inspections were then later reached.

Beyond Obligations: South Africa’s Complete Openness

While, during the first round of inspections, any changes to equipment in which any declared material was handled or processed needed to be declared in accordance with the Safeguards Agreement, South Africa went beyond this obligation. The country voluntarily accepted additional assurances to the international community by adding IAEA seals to the vault in which the HEU from the former devices was stored. Smaller working quantities had to be withdrawn from this vault for isotope production and fuelling the Safari reactor. Such smaller quantities could then only be withdrawn in the presence of IAEA inspectors. While there was some internal criticism for ‘bending over too much’, this measure was in line with de Klerk’s instruction to achieve maximum international credibility in our cooperation with the IAEA and of significant importance to achieving this goal. Going even beyond this, while the first IAEA inspection team had no mandate to delve into South Africa’s past nuclear activity, President de Klerk gave approval to Prof. Waldo Stumpf for privately acknowledging the former deterrence program, should the inspectors ask directly, which they never did.

While the NPT at that time did not have a mandate to engage with a country’s past program before the point of accession, all such information was further disclosed to the second IAEA verification team. This is a necessary step in cases where substantial fuel cycle activity has been present. Experiences in North Korea have demonstrated that while the agency does, in principle, have the possibility to implement special inspections, these hold significant potential for conflict, while overall outcomes are less productive than under conditions of voluntary openness which necessitate a prior political decision to have been taken.

Despite the policy of complete transparency, severe difficulties did arise during the process of verification. These were caused on the one hand by the mere complexity and scope of the undertaking in which several thousands of operating records of the uranium enrichment plants, analysis of samples of stored materials, and mathematical modeling were necessary to confirm the correctness of the supplied inventory. On the other hand, this process of analyzing the plants’ functioning and restrictions of production covered a period of at least 20 years while a number of facilities followed unfamiliar indigenous designs. The detailed apprehension of these processes by the inspecting team hence had to be facilitated. As part of this process, a joint seminar was conducted during which the accountancy mechanisms of the IAEA were delineated, while the South African State System of Accounting and Control (SSAC) and operators offered to provide insight into the facilities and their operating procedures.

The verification process involved an analysis of production, imports, and usage of nuclear material in the relevant facilities. According to these aspects, the isotopic balance of the inventory was calculated and compared with its natural uranium origin. While the inventory shown has been correct, discrepancies were initially identified with regard to the highly enriched uranium produced
by the pilot enrichment plant (Y-Plant) as well as low enriched uranium produced by the semi-commercial plant (Z-Plant). An exhaustive examination of the records of the plants, including the total life-time electricity consumption and a day-to-day analysis of the feed rate, assay feed, product, and tail streams demonstrated that the declared amount of HEU was indeed correct. With regard to both the Y- and Z-Plants, the operations were modeled on a daily basis and for the entire period of their life-spans to identify restrictions of output at times as well as errors in record-keeping during the life-time of the nuclear weapon program. The accuracy of the originally submitted inventory was confirmed.

The Inter-personal Level and Frictions in the Cooperation with the IAEA

Despite the positive results yielded by the policy of complete openness, difficulties did develop especially during the initial stages of the verification process. A factor in this was some friction between the national and the IAEA team. Despite being entirely open and pro-active about the program, the South African team was being subjected to severe suspicion of not doing so. The perception was one of a temporal loss of sovereignty. However, South Africa accepted an initial period of suspicion and such frictions were further increased through the revelation of information by one of the superpowers which indicated that the South African team may have indeed withheld information. This was disputed by the IAEA inspectors who had been made aware of the so-called “Building 5100” which was an empty storage-building at that time.

In all instances of doubt, the trustworthiness of the national team was, however, confirmed and tensions were resolved during the course of the process. The experience demonstrated two issues. Firstly, that external pressure onto the state, which has already taken the political decision to allow for the verification of the dismantlement of its nuclear program, may be counter-productive by causing unnecessary friction and, under different circumstances, might even lead to a reversal of this decision. Secondly, the verification process itself proved to be characterized through trust-building measures and re-building relations with previous adversaries as a necessary step towards normalization. In this manner, verification may benefit from being conceptualized not as the effect of pre-existing trust, but also as confidence enhancing.

The Abandoning of the Ballistic Missile and Space Program

Following the historic decision in 1989 to dismantle the nuclear weapon program, the missile programs were allowed to continue. Following sustained international pressure, particularly from the United States, President de Klerk announced the end of state subsidies for the space launch vehicle project – due to questions about the commercial viability of the South African space industry. In 1992, Pretoria halted its missile collaboration with Israel, and in June 1993 the country agreed to refrain from manufacturing long-range ballistic missiles.

All ballistic missile work was stopped by mid-1993. In order to join the Missile Technology Control Regime (MTCR), the government had to allow American supervision of the destruction of key facilities applicable to both the long-range missile and the space launch program. The main companies involved in these activities – Houwteq, Somchem, and Kentron – were forced to eliminate key technologies. In this manner, prime contractor Houwteq had to dismantle its existing RSA missile components, such as solid rocket fuel motors and nozzles, as well as to retrieve blueprints and technical files from subcontractors. The destruction was verified by the South African Council for the Non-Proliferation of Weapons of Mass Destruction. Propellant manufacturer Somchem had to destroy its solid propellants and rocket casings, while the large casting pits in Somerset West were filled and destroyed by Somchem, at that stage a subsidiary of Denel. The solid fuel rocket motor test facility at Hangklip as well as the ultrasonic test facility at Somchem were also destroyed and the buildings removed. The Overberg test range was allowed to remain for use by potential foreign partners. Houwteq’s staff at Overberg grew to a peak of 500 in 1992, before the cancellations began. By 1997 the staff was reduced to 28, since efforts in marketing facility for commercial launchers had failed.

In 1993, South Africa adopted the Non-Proliferation of Weapons of Mass Destruction Act, regulating all goods and technology related to WMD and their delivery systems. This policy was confirmed at a cabinet meeting in August 1994 and a decision was taken to pursue membership of international non-proliferation regimes. Following the destruction of all equipment
for the building of SLVs and ballistic missiles, South Africa joined the MTCR on September 13, 1995. To further its contribution to the non-proliferation of missile technology, South Africa assented to the Hague Code of Conduct Against Ballistic Missile Proliferation on November 25, 2002.

Conclusions and ‘Lessons Learned’ for the Middle East

It is important to note that South Africa’s dismantlement of its nuclear, biological, and chemical as well as ballistic missile programs has been bound to specific circumstances. However, some major insights can be identified which may inform the agenda of future cases of WMD and missile disarmament.

First of all, it is important to understand why South Africa decided to develop its WMD capabilities. The reasons and rationales were multi-layered, including the imminent security threats to regime survival as well as fears of regional instability, the expansion of communism, and threats to its territorial integrity more widely, coupled with international isolation, condemnation, and sanctions. This environment consolidated the perception that a nuclear capacity was the only option available for a functioning deterrence strategy against external menaces.

We have also put an emphasis on analyzing why South Africa gave up its WMD arsenals. Three overarching factors have been identified which contributed towards the dismantlement of the South African nuclear and other WMD arsenals. These were firstly, the democratization process within the country itself and, secondly, significant regional and global events that started to ease the security situation around South Africa. In addition, also international pressure played a limited role in abandoning the WMD programs. But finally, it was also the courage of a couple of individuals like South African President de Klerk envisaging the future of their country as a responsible member of the global community.

The historic proceedings in South Africa covered the same full spectrum of armaments which are central to the establishment of a WMD/DVs Free Zone in the Middle East. What happened in South Africa in the late 1980s and early 1990s has been a unique development which, nevertheless, implies the potential of transferring ideas, concepts, and constructive approaches to nuclear disarmament. The following ‘lessons learned’ can be identified.

Endnotes

1. The authors would like to thank Mrs. Hannah Broecker for her important and helpful contribution with regard to the publication of this Policy Brief.


4. We will, however, limit our analysis to the nuclear program and the efforts to develop ballistic missiles – both with regard to the motives behind the projects and the reasons for their dismantlement.

5. See Policy Briefs Nos. 13 and 14 on the security concerns and motives behind the weapon programs of Israel, Egypt, Syria, Iran, and the countries of the Gulf Cooperation Council.


14. The overall design suggests that the RSA-2 was either a licensed copy of, or modeled closely along Israel’s Jericho-2 missile. It is believed that these missiles were intended for use on Cuban or Warsaw Pact troop concentrations should a massive attack be made from an adjacent country. See Encyclopedia Astronautica (2013) ‘Republic of South Africa Missiles’, Online, available at http://www.astronautix.com/lvs/rsa.htm (July 2, 2013).

15. In addition, South Africa never developed nuclear warheads for its ballistic missiles. Also, sophisticated delivery systems of aerosolized agents were not developed. See Helen E. Purkitt and Stephen F. Burgess (2005) South Africa’s Weapons of Mass Destruction, Bloomington, IN: Indiana University Press, p. 105.
Resolution of Security Concerns and Democratization

Within the South African case, the importance of the resolution of external security threats stand out, especially if the nuclear deterrent has been built in response to these. Steps towards disarmament cannot be induced without regional and, if relevant, extra-regional tensions and security threats, real or imagined, being addressed and resolved since they are intertwined with the arsenals themselves. This is particularly the case, since political will has been essential for disarmament as well as the verification process. While this can be supplemented through technical procedures, its function as a necessary foundation cannot be substituted. The existence of weapons and mutually perceived security threats in the Middle East are also intertwined and mutually informing each other, rendering it rather impossible for security menaces to be resolved entirely prior to dismantlement.

Democratization has been a crucial factor in the dismantlement experience of South Africa. The central lesson with a potential in the dismantlement experience of South Africa's Democratization has been a crucial factor resolved entirely prior to dismantlement. Mutually informing each other, rendering it...
Further Reading


Also included the permission to delve fully into the past aspects of the nuclear program. IAEA inspectors were supported in their understanding of indigenous facilities and processes to an extent which allowed them to remodel the operations of individual plants on a day to day basis. Meticulous record-keeping during the dismantlement process has been a crucially important factor for the procedures of ‘backwards’ verification which would have been significantly more difficult to facilitate otherwise. In this sense, total secrecy and complete openness can go hand in hand.

The WMD Rollback: South Africa’s Unique Position in History

South Africa occupies a unique position in the history in being the only state that has unilaterally and voluntarily discarded its nuclear, biological, and chemical weapons as well as its missile programs. Public debate over the merits of these decisions within South Africa’s past will probably carry on for a long time. We would not be too unhappy if South Africa were to share its unique position in disarmament history in the future.

About the Academic Peace Orchestra Middle East (APOME)

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

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

The views presented by the authors do not necessarily represent those of the project coordinator, editors, sponsors, or PRIF. © 2013 Academic Peace Orchestra Middle East. All rights reserved.

Layout: Anke Maria Meyer

The Academic Peace Orchestra Middle East wishes to thank its generous sponsors, the Foreign Ministry of Norway, the Swiss Federal Department of Foreign Affairs, the Friedrich Ebert Foundation, and the Protestant Church of Hesse and Nassau.