SOUTH AFRICA'S NUCLEAR DIPLOMACY, 1990-2010: SECURING A NICHE ROLE THROUGH NORM CONSTRUCTION AND STATE IDENTITY

by

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DECLARATION

I declare that the thesis, which I hereby submit for the degree D Phil (International Relations) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

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Jo-Ansie Karina van Wyk

30 January 2013

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Strabo, a Greek geographer and philosopher, maintained that geography is destiny (quoted in Dawson 2005: 362). This holds true for me. I grew up approximately 60 km west of Vaalputs, South Africa's National Radioactive Waste Disposal Facility. I became aware of its existence much later in life and this awareness gradually resulted in an academic interest in environmental, hydro- and space politics and more specifically an interest in the influence of nuclear science on international relations and diplomacy.

My academic interest in nuclear politics and nuclear diplomacy was cultivated in 1995 when I was awarded the British Foreign and Commonwealth Office's (FCO) *New South African Security Policy Fellowship* which allowed me to spend time at the Department of War Studies, King's College London. There I attended the lectures of Dr Martin Navias on nuclear strategy which left me in awe of the power of the "ghost inside the atom".[1]

Discussions with Dr Kate Dewes, a Member of the United Nations (UN) Secretary-General Ban Ki-moon's Advisory Board on Disarmament Matters, in July 2008 whilst attending the University of Otago's annual *Foreign Policy School* in Otago, New Zealand, further consolidated my academic interest in nuclear issues.

Undeniably, the "ghost inside the atom" has been one of the major *dramatis personae* of the 20th century and continues its presence well into the 21st century. Therefore, I am grateful to have been able to study this phenomenon and its relation to South Africa. I am also grateful to a number of individuals and institutions for enabling me to complete this study.

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[1] This phrase is taken from South African anthropologist and singer-songwriter, Johnny Clegg's lyric "I call your name" which appeared on Johnny Clegg and Savuka's 1988 album *Shadow Man*.

contemporary affairs has inspired me since childhood. Similarly, I am thankful for the interest and support of my sister and brother-in-law, Maryke and Alastair Fordyce of Christchurch, New Zealand, and my brother Stephanus and his wife Joy-Linda van Wyk of Grabouw, South Africa.

Finally, my most profound gratitude goes to you, Karlien, to whom this thesis is dedicated. You have been my constant companion, my faithful friend and my patient partner on this journey. Your love and support has been life-changing. There is no way I can ever thank you for all of this.

Cursum perficio. Ex gratia, soli Deo gloria.

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Jo-Ansie van Wyk
Pretoria
30 January 2013

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List of Abbreviations and Acronyms

^{99}Mo	Molybdenum-99
AAM	Anti-Apartheid Movement
ABMT	Anti-Ballistic Missile Treaty
AEB	Atomic Energy Board of South Africa
AEC	Atomic Energy Corporation of South Africa
AFCONE	African Commission on Nuclear Energy
AFRA	African Regional Cooperation Agreement for Research, Development, and Training Related to Nuclear Science and Technology
AG	Australia Group
ANC	African National Congress
ANWFZ	African Nuclear Weapon Free Zone
ARMSCOR	Armaments Development and Production Corporation of South Africa
AU	African Union
AUPSC	African Union Peace and Security Council
AWB	Afrikaner Weerstandsbeweging
BIOT	British Indian Ocean Territory
BTWC	Biological and Toxin Weapons Convention
CANE	Coalition Against Nuclear Energy
CD	Conference on Disarmament
CEO	Chief Executive Officer
CIS	Commonwealth of Independent States
COP	Conference of State Parties
CPF	Country Programme Framework
CPPNM	Convention on the Physical Protection of Nuclear Material
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organisation
CWC	Chemical Weapons Convention
DFA	Department of Foreign Affairs (South Africa)
DIRCO	Department of International Relations and Cooperation (South Africa)
DME	Department of Minerals and Energy (South Africa)
DOE	Department of Energy (South Africa)

DRC	Democratic Republic of the Congo
DST	Department of Science and Technology (South Africa)
€	Euro
EMG	Environmental Monitoring Group
EU	European Union
FCO	Foreign and Commonwealth Office
FMT	Fissile Material Cut-Off Treaty
FNRBA	Forum of Nuclear Regulatory Bodies in Africa
FNWS	Former Nuclear Weapons State
G-77	Group of 77
GC	General Conference
GCIS	Government Communication and Information System (South Africa)
GIF	Generation IV International Forum
GNPI	Global Nuclear Power Infrastructure
GNU	Government of National Unity (South Africa)
HCOC	The Hague Code of Conduct against Ballistic Missile Proliferation
HE	His Excellency
HEU	Highly-Enriched Uranium
IAEA	International Atomic Energy Agency
IBSA	India-Brazil-South Africa Dialogue Forum
IEC	International Enrichment Centre
IGO	Inter-Governmental Organisation
INFC	International Nuclear Fuel Centre
IR	International Relations
IRBM	Intermediate-Range Ballistic Missile
IRP	Integrated Resources Plan
ITDB	International Atomic Energy Agency Illicit Traffic Database
LEU	Low-Enriched Uranium
LTBT	Limited Test Ban Treaty
Mo-99	Molybdenum-99
MP	Member of Parliament
MPI	Middle Powers Initiative
MTCR	Missile Technology Control Regime
MW	Megawatt

NAC	New Agenda Coalition
NAM	Non-Aligned Movement
NECSA	Nuclear Energy Corporation of South Africa
NERS	Network of Regulators of Countries with Small Nuclear Programmes
NETC	Nuclear Energy Technical Committee (South Africa)
NGO	Non-Governmental Organisation
NNEECC	National Nuclear Energy Executive Coordination Committee (South Africa)
NNR	National Nuclear Regulator (South Africa)
NNWS	Non-Nuclear Weapons State
NP	National Party (South Africa)
NPA	National Prosecuting Authority (South Africa)
NPC	South African Council for the Non-Proliferation of Weapons of Mass Destruction
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NSG	Nuclear Suppliers Group
NSS	Nuclear Security Summit
NTI	Nuclear Threat Initiative
NTP	Nuclear Technology Products Radioisotopes (Property) Limited
NWS	Nuclear Weapons State
NWFZ	Nuclear Weapons Free Zone
NWFZT	Nuclear Weapons Free Zone Treaty
NUFCOR	Nuclear Fuels Corporation of South Africa
OAU	Organisation of African Unity
OECD	Organisation for Economic Cooperation and Development
OTB	Overberg Toetsbaan
P5	Five Permanent Members of the United Nations Security Council
PAC	Pan Africanist Congress of Azania
PBMR	Pebble Bed Modular Nuclear Reactor
PIV	Physical Inventory Verification
PREPCOM	Preparatory Commission of the International Atomic Energy Agency
PREPCOM	Preparatory Committee of the Treaty on the Non-Proliferation of Nuclear Weapons
PPNN	Programme for the Promotion of Nuclear Non-Proliferation

PSI	Proliferation Security Initiative
PWR	Pressurised Water Reactor
R/ZAR	South African Rand
REC	Review and Extension Conference
REVCON	Review Conference
RSA	Republic of South Africa
SADC	Southern African Development Community
SAFARI-1	South African Fundamental Atomic Research Installation-1
SANDF	South African National Defence Force
SAPS	South African Police Service
SIPRI	Stockholm International Peace Research Institute
SORT	Strategic Offensive Reductions Treaty
START	Strategic Arms Reduction Treaty
TACC	Technical Assistance and Cooperation Committee of the IAEA
UAV	Unmanned Air Vehicle System
U-235	Uranium 235
UK	United Kingdom
UN	United Nations
UNGA	United Nations General Assembly
UNMOVIC	United Nations Monitoring, Verification and Inspection Commission
UNSC	United Nations Security Council
UNSCEAR	United Nations Scientific Committee on the Effects of Atomic Radiation
US	United States of America
US$	United States Dollar
USSR	Union of Soviet Socialist Republics
WA	Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies
WANO	World Association of Nuclear Operators
WMD	Weapon of Mass Destruction
ZC	Zangger Committee

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SUMMARY

SOUTH AFRICA'S NUCLEAR DIPLOMACY, 1990-2010: SECURING A NICHE ROLE THROUGH NORM CONSTRUCTION AND STATE IDENTITY

by

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Supervisor: Professor Anton du Plessis

The main thesis of this study is that since 1990 South Africa has conducted its nuclear diplomacy by constructing certain norms and its identity in a particular way to serve its national interests. A constructivist analysis of South Africa's nuclear diplomacy concerning the nuclear non-proliferation export control regimes; the International Atomic Energy Agency (IAEA); the Pelindaba Treaty; and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) suggests that South Africa's application of three typical middle power diplomatic strategies, namely confrontation, cooperation and parallelism have enabled the country to secure a niche role for itself that has provided the country with some material and non-material rewards.

South Africa's membership of some of the major nuclear export control regimes reflects its socialisation of the norms of non-proliferation, disarmament, and the peaceful uses of nuclear energy. South Africa has incorporated aspects of this regime in its nuclear export trade policies and national nuclear-related institutions. Despite this, the South African government's efforts were undermined by a series of contentious nuclear proliferation-related incidents, most notably the involvement of South Africans in the AQ Khan network.

South Africa was a founder member of the IAEA in 1957. Despite this early role in norm construction, South Africa's relations with the IAEA deteriorated as international opposition to its apartheid policies escalated. Defying international isolation, the country embarked on a nuclear weapons programme that produced six atomic devices. South Africa returned to its designated seat for Africa on the IAEA Board of Governors in 1995. A vocal opponent of the discriminatory nature of the

IAEA Statute and supporter of all countries' right to the peaceful uses of nuclear energy, South Africa's influence in the Agency expanded. Despite this, the country's candidate for the position of IAEA Director General was not elected.

Africa's position on nuclear non-proliferation originated in the 1960s. Once South Africa's domestic policies became known and suspicions of its nuclear weapons programme grew, the Organisation for African Unity (OAU) turned its focus to condemnation of South Africa. As a result of the political transition in South Africa; its ratification of the NPT; and the IAEA's verification process, South Africa joined Africa to establish the African nuclear weapons free zone in terms of the Pelindaba Treaty. As a result the country was elected to chair and host the AFCONE.

Despite its historical opposition to the NPT, the country ratified the Treaty in 1991 and has constructed its niche role in the NPT regime through its problem-solving and bridge building roles at various NPT conferences.

Therefore, this study concludes that South Africa's post-1990 nuclear diplomacy has maintained a normative foundation; employed various diplomatic strategies; and was conducted in compliance with the set objectives of the country's foreign policy. In this, the analysis of the nuclear diplomacy of a state such as South Africa, which discontinued its nuclear weapons programme, provided insights into nuclear diplomacy in general and the nuclear diplomacy of states similar to the South African situation.

CHAPTER ONE

INTRODUCTION

1.   Introduction

Towards the end of 1989, President FW de Klerk established a committee to oversee the dismantling and destruction of South Africa's "nuclear devices" (De Klerk 1993).[2] In early 1990, the De Klerk government decided that:

> all the nuclear devices should be dismantled and destroyed; all the nuclear material in Armscor's [Armaments Development and Production Corporation of South Africa] possession be recast and returned to the AEC [Atomic Energy Corporation of South Africa] where it should be stored according to internationally accepted measures; Armscor's facilities should be decontaminated and be used only for non-nuclear commercial purposes; after which South Africa should accede to the Non-Proliferation Treaty, thereby submitting all its nuclear materials and facilities to international safeguards (De Klerk 1993).[3]

An immediate task of the South African government after the 1989 decision to terminate the nuclear weapons programme was to decommission several nuclear weapons facilities in preparation for inspections by the International Atomic Energy Agency (IAEA) whilst maintaining the safety and security of the country's nuclear weapons equipment and stocks of highly-enriched uranium (HEU). More importantly, South Africa had to convince the international community of the sincerity of its intentions regarding nuclear non-proliferation. Apart from these developments, South Africa was also in the early phases of its political transition to democratic rule.

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[2] De Klerk (1993) referred to the dismantling and destruction of "nuclear devices" and not to atomic or nuclear bombs. Waldo Stumpf (1995a) of the Atomic Energy Corporation of South Africa (AEC), who had been involved in the development of South Africa's nuclear weapons capability also referred to 'devices' (and not bombs) but also mentions "South Africa's nuclear deterrent". In fact, Stumpf (1995a) confirmed that South Africa produced six "fission gun-type devices".
[3] In the so-called "Completeness Report" by the Director General of the International Atomic Energy Agency (IAEA) to the Agency's General Conference (GC) on 9 September 1993, the Agency referred to the "destruction of equipment used in the development and making of the nuclear weapons" and to the "termination of the programme" (IAEA 1993a: 27) (see Chapter 4).

On 24 March 1993, President de Klerk announced the extent of South Africa's nuclear weapons programme to the South African Parliament.[4] The decision set in motion not only speculation about the 'voluntary' nature of South Africa's intention to dismantle its nuclear weapons programme, but also the public announcement of the scope of this nuclear weapons programme. Barely a month later 26 South African parties established the Multi-party Negotiating Forum which subsequently adopted the constitutional principles that formed the foundation of the South African Interim Constitution and initiated the Transitional Executive Council (TEC) to prepare the country for its first inclusive democratic elections in April 1994. This resulted in the establishment of a Government of National Unity (GNU) under the leadership of Nelson Mandela, the President of the African National Congress (ANC) (Sisk 1995: 225-243). These developments resulted in the termination of sanctions and embargoes against South Africa; ended the country's global isolation and resulted in changes in its nuclear-related relations.

South Africa is one of few countries to have terminated its nuclear weapons programme - others being Brazil and Libya. Apart from including the dismantling of its nuclear weapons programme, the post-1990 period has been most dynamic in terms of South Africa's international relations and diplomacy. During this period it established numerous bilateral relations; acceded to the *Treaty on the Non-Proliferation of Nuclear Weapons* (hereafter the NPT) in 1991; and joined or re-joined several nuclear-related organisations, including the IAEA, the *Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies* (hereafter Wassenaar Arrangement or WA), the Nuclear Suppliers Group (NSG), the Zangger Committee (ZC), the Network of Regulators of Countries with Small Nuclear Programmes (NERS), the African Nuclear Regulators' Group and the Generation IV International Forum (GIF) (DFA 2009a).[5]

Apart from adopting a human rights-based foreign policy, South Africa reiterated that a "primary goal" of its foreign policy is to "reinforce and promote it as a responsible producer, possessor and trader of defence-related products and advanced technologies in the nuclear, biological, chemical and missile fields" (DFA 2009a).

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[4] Hereafter this is referred to as De Klerk's 1993 announcement or the 1993 announcement.
[5] Hereafter the full titles of treaties and other international agreements are indicated in italics, whereas their abbreviations, acronyms or shortened titles are in normal font.

The Government's argument was that South Africa, in this way, "promotes the benefits which non-proliferation, disarmament and arms control hold for international peace and security, particularly to countries in Africa and the Non-Aligned Movement (NAM)" (DFA 2009a).

Accordingly, a year into the GNU, South Africa entered into one of its first major nuclear-related diplomatic engagements. Its participation in and deadlock-breaking diplomatic efforts during the 1995 Review and Extension Conference (REC) of the NPT have subsequently been hailed as a diplomatic success "winning it some credibility in the west, while not damaging relations with non-aligned states" (Masiza & Landsberg 1996: 31). At subsequent NPT conferences, South Africa achieved similar results (Taylor 2006). The evolution of South Africa's brand of nuclear diplomacy has been more significant. Characterised by a combination of normative innovation, norm maintenance, coalition building, confrontation, independence, partnerships and parallelism, South Africa's nuclear diplomacy has developed into a diplomatic niche role for the country.

Notwithstanding these successes, several nuclear-related issues have remained a concern, unresolved or took a long time to resolve. Despite several appeals by the IAEA, the protracted process of converting the country's nuclear research reactor - the South African Fundamental Atomic Research Installation (SAFARI-1) - from operating with weapons grade HEU to operating with low-enriched uranium (LEU) was only completed by mid-2009. Issues pertaining to the safety of radioactive waste and the security of nuclear installations such as Pelindaba, the headquarters of the Nuclear Energy Corporation of South Africa (NECSA), have repeatedly been raised. The admission by Pakistan's leading nuclear official, Abdul Qadeer Khan (hereafter AQ Khan or Khan), of the involvement of South African citizens in a global nuclear black market was a cause of considerable diplomatic embarrassment and compromised the country's non-proliferation image (IISS 2007). Despite the sentencing of two individuals involved, several other individuals (*i.e.* South Africa and non-South African citizens) were not brought to book (NPA 2007 & 2008).

Globally, concerns about the proliferation of nuclear weapons continue in the wake of the Cold War as nuclear weapons states (NWS) and so-called threshold states

diverge on aspects of the NPT.[6] Furthermore, concerns about nuclear terrorism remain on the agenda of the United Nations Security Council (UNSC) in terms of the UNSC Resolution 1540 (2004) on the non-proliferation of weapons of mass destruction (WMDs) (UNSC 2004; IISS 2009: 1-2). In addition to this, there is the parallel initiative of the United States (US), namely the Nuclear Security Summits (NSS) of April 2010 in Washington (US) and of March 2012 in Seoul (South Korea).

South Africa has not been shielded from these developments and has had to adapt its nuclear diplomacy and domestic legislation to maintain and enhance its status as an advocate and supporter of nuclear non-proliferation. Its nuclear diplomacy with so-called nuclear rogue states such as Iran, Iraq, Pakistan and India has also raised some diplomatic concerns among the traditional NWS who questioned South Africa's nuclear intentions.

Irrespective of its non-proliferation stance, the South African government remains committed to an ambitious nuclear agenda. Whilst maintaining its status as a member of a unique nuclear non-proliferation club, it has set its sights on the construction of a pebble bed modular nuclear reactor (PBMR) (subsequently terminated in 2010); on enriching and recycling uranium; and on improving its share in the global medical isotope market. In February 2003, a few weeks prior to the US-led "Coalition of the Willing" invasion of Iraq, South African President Thabo Mbeki announced the impending departure of a team of South African disarmament experts to Iraq following Iraqi President Saddam Hussein's acceptance of South Africa's offer to send an envoy to the country to "share with their government, scientists, engineers, technicians and people of Iraq its experience relevant to the mission of the UN and Iraq to eradicate weapons of mass destruction, under international supervision" (*BuaNews* 24 February 2003). Mbeki maintained that this intervention would "help to ensure the necessary proper cooperation between the United Nations inspectors and Iraq, so that the issue of weapons of mass destruction is addressed satisfactorily, without resorting to war" (*BuaNews* 24 February 2003).

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[6] This study uses the definition of a NWS as defined in Article IX of the NPT, namely a state which has "manufactured and exploded a nuclear weapon or other nuclear explosive device" before 1 January 1967. This study defines a non-nuclear weapons state (NNWS) as a state that do not have a nuclear explosive capability.

The South African government also expressed its intention to develop its nuclear industry in its *National Nuclear Energy Policy* (2008) and in its *Ten Year Plan for Science and Technology* (2007) (DME 2008; DST 2007). In 2008, the Minister for Minerals and Energy stated that the *National Nuclear Energy Policy* "represents the Government's vision for the development of an extensive nuclear energy programme" in order to develop a national nuclear architectural capability to "supply nuclear equipment and nuclear reactors" as well as the "ability to design, manufacture, and market, commercialise, sell and export nuclear energy systems and services" (DME 2008: 4 & 24).

Against the background of the aforesaid, this study is situated in the broader context of International Relations (IR), more specifically in the context of nuclear diplomacy. The development and use of nuclear weapons and other forms of WMDs have dominated the study of international relations since the end of the Second World War and, more specifically, since the end of the Cold War. One of the major strategies employed by the superpowers during the Cold War, in addition to nuclear deterrence, was nuclear diplomacy in an effort to achieve a Kantian "perpetual peace" in a global stand-off. Writing at the onset of the Cold War, former US diplomat and IR and diplomacy scholar, Henry Kissinger (1956: 351), stated that "in an international order composed of sovereign states, the principle sanction is the possession of superior force". By the end of the Cold War, "superior force" was increasingly also defined in non-material terms or, as Joseph Nye (2002: 8-12) calls it, "soft power".

The end of the Cold War also initiated a period of reflection by IR scholars. Accusations of realism and its theoretical variants' inability to foresee the collapse of the Soviet Union and the end of the Cold War initiated theoretical rivalries among proponents of various IR theories. One of the major consequences of this was the emergence of constructivism as an alternative approach to IR. Refined by Alexander Wendt (1992, 1994, 1995 & 1999) but pioneered by Nicholas Onuf (1989, 1998 & 2002) and Friedrich Kratochwil (1989) constructivists propose that states construct their reality and identity to achieve their national interests. For constructivists, this construction or change can be explained in terms of the diffusion of models, practices and norms. Accordingly, since norms evolve over time, norm development

can be explained in terms of the internationalisation and institutionalisation, or the life-cycle of norms (Barnett 2008: 168-169).

Since 1990, South African leaders, diplomats and government-employed nuclear scientists have repeatedly reiterated the government's stance on nuclear non-proliferation. Diplomatically, the country's adaptive ability to construct or reconstruct its nuclear-related identity, interests, role and norms has stood it in good stead. Notwithstanding this, very little is known in scholarly terms about the country's nuclear diplomacy. Even less scholarly work has appeared on South Africa's nuclear-related economic diplomacy. Therefore, the primary aim of this study is to analyse post-1990 South Africa's nuclear diplomacy. The study, therefore, contributes to the understanding of South Africa's nuclear diplomacy, particularly as it relates to the dismantling of its weapons and to the country's ability to play an active diplomatic role in terms of nuclear non-proliferation.

South Africa's influence on nuclear diplomacy has been acknowledged by scholars, diplomats and heads of states and governments (Geldenhuys 2006a). A question to consider is: Why, despite possessing enough enriched uranium, technology, skills, and clients, does the country not reverse the decision to terminate the South African nuclear weapons programme? In response, it is contended that the following propositions offer some explanation. Firstly, South Africa has constructed its norms, identity, role and interests in such a way to increase its diplomatic influence, authority, non-material power and economic incentives. Secondly, South Africa has constructed a unique brand of niche diplomacy, involving a number of diplomatic practices, to gain material and non-material rewards such as status, prestige and trade opportunities. It is furthermore argued that, informed by its foreign policy and diplomatic practice, South Africa employs the following strategies in its niche diplomacy, including:

- Confrontation: It attempts to direct the terms of the current debate away from realism; irrespective of some form of ideological confrontation with the major NWS such as the United States (US), the United Kingdom (UK) and France.
- Parallelism: It attempts to cultivate a form of "realism lite" or enlightenment through parallel action alongside the one superpower and its coalition partners.

- Partnership: It engages in active partnership with the dominant power on a realistic footing (Henrikson 2005: 74).

Therefore, against the background of the aforesaid, the next section offers a review of some of the literature on South Africa's post-1990 nuclear diplomacy.

2. Literature survey

Although scholarship on South Africa's nuclear weapons programme and its post-apartheid foreign policy has proliferated (see for example De Villiers, Jardine and Reiss 1993; Masiza 1993; Stumpf 1995a & 1995b; O'Meara 1996; Fig 1998; Van Vuuren 2003; Sanders 2006; and Venter 2008) much less scholarship has been devoted to post-apartheid South Africa's nuclear diplomacy. Several themes and trends are evident in the existing scholarship on post-apartheid South Africa's nuclear diplomacy. Firstly, authors have predominantly focused on the period immediately after 1994 until 1999, namely the Mandela presidency's nuclear diplomacy (Motumi 1995; Muller 1996; Masiza & Landsberg 1996; Masiza 1998; Shelton 2000a, 2000b & 2006; Long & Grillot 2000; Harris, Hatang & Liberman 2004; Taylor 2006; Fig 2005 & 2009). This trend coincides with a general trend in post-1994 analyses of South Africa's foreign policy where the idealism of the Mandela era is referred to in the context of the prodigal's return as a middle, African and regional power, and a bridge builder *par excellence* (Barber 2004).

Secondly, there is a considerable lack of literature explaining South Africa's nuclear diplomacy prior to the Mandela era, that is, from 1990 to 1994 under the presidency of FW de Klerk. Regarding the latter, Barber (2004: 67-68) is a notable exception with his reference to the nuclear diplomacy of the De Klerk presidency between 1990 and 1994. Moreover President Mbeki, as President Mandela's successor, has contributed to an acceleration of South Africa's nuclear diplomacy. During Mbeki's presidential term (1999-2008) South Africa's normative commitment to nuclear non-proliferation was supplemented with normative innovation and norm internalisation. This period also saw increased South African support for Iran's nuclear programme; South Africa's participation in inspections of Iraq's nuclear facilities in March 2003; and increased South African exports of nuclear-related products. More importantly, the nuclear ambitions of the South African government became increasingly public.

In 1999, for example, the South African government became one of the investors in the Pebble Bed Modular Reactor (Property) Limited, a company with local and international investors.

The Mbeki era also laid the foundation of post-1990 South Africa's nuclear diplomacy with the rest of the African continent. South Africa acceded to the *African Nuclear Weapon Free Zone Treaty* (hereafter the Pelindaba Treaty or the Treaty of Pelindaba) which entered into force in July 2009.[7] In contrast to this illustration of the country's commitment to nuclear non-proliferation during the tenure of President Mbeki was South Africans' involvement in the nuclear proliferation network of AQ Khan. Essentially, current literature pays little attention to these post-Mandela nuclear-related developments.

Thirdly, the application of IR theories to analyse South Africa's post-apartheid nuclear diplomacy is scant with Masiza and Landsberg (1996) and Taylor (2006) being notable exceptions. Multilateralism (Masiza & Landsberg 1996) and middle powership (Taylor 2006) have been applied to analyse South Africa's nuclear diplomacy, but only in the context of the NPT and not in respect of any other international nuclear forum. This coincides with a general trend pertaining to the theoretical poverty noticeable in most post-1990 foreign policy analyses of South Africa and the country's diplomatic conduct.

In the context of multilateralism, a limited number of studies on South Africa's nuclear diplomacy with the rest of the African continent exist. African efforts, including South Africa's role in these efforts, to declare the continent a denuclearised zone have been analysed by, amongst others, former South African diplomat David Fischer (1993 & 1995); South African academic Marie Muller (1996); and former South African diplomats Jean du Preez (Parrish & Du Preez 2005; Stott, Du Rand & Du Preez 2010; Du Preez & Maettig 2010), Thomas Markram (2004) and Pieter

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[7] Considerable differences, even in official AU and UN documents, in the spelling of the formal title of the Treaty occur. See, in this regard, UNSC (1996), AUPSC (2006) and AU (2010) that uses *African Nuclear-Weapons-Free Zone Treaty* and *African Nuclear-Weapon-Free Zone Treaty*. For the purposes of this study, the spelling *African Nuclear Weapon Free Zone Treaty* is used throughout.

Goosen (1995).[8] In addition to this, Nigerian academic Adebayo Oyebade (1998) and Nigerian diplomat Oluyemi Adeniji (2002) have also addressed the issue.

In the fourth place, few of the above-mentioned studies link domestic and foreign policy issues. Whereas South Africa's civil society was locally and internationally active prior to 1994, the intensity of its activity has waned since 1994, especially regarding foreign policy issues (Nel & Van der Westhuizen 2004), and national and international nuclear issues. Historically, South Africa did not have an active domestic anti-nuclear civil society movement. However, prior to 1990 an active pro-ANC anti-nuclear civil society movement operated outside the country; especially in the UK and at the UN under the leadership of Abdul Minty, who later became South Africa's diplomatic representative at the IAEA.[9] Reddy's (1994) edited collection of Minty's statements and speeches are testament to this.

Since 1990, some international and national anti-nuclear civil society movements operate in South Africa. Notable examples are Greenpeace International; the Coalition against Nuclear Energy (CANE); and the Environmental Monitoring Group (EMG). These and other organisations have made submissions to Parliamentary Portfolio Committees on Energy, Foreign Affairs, and Environmental Affairs on South Africa's nuclear diplomacy. The most notable and only post-1990 South African civil society engagement on nuclear issues has been the *Conference on Nuclear Policy for a Democratic South Africa* held in Cape Town from 11 to 13 February 1994, and which was organised by the EMG and the ANC (EMG & Western Cape ANC Science and Technology Group 1994). This linkage of domestic sources of foreign policy and diplomatic practice is of particular relevance as it has been repeatedly indicated by the ANC-led government since 1994 as a prime focus of post-apartheid South Africa's foreign policy.

A fifth aspect is that only Auf der Heyde (2000) has analysed the development of the country's post-apartheid nuclear policy. His analysis focuses on the energy-related

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[8] These former South African diplomats joined the IAEA, the Preparatory Commission of the Comprehensive Test Ban Treaty Organisation (CTBTO) and the UN after they left the South African diplomatic corps.
[9] A founder-member of the Anti-Apartheid Movement (AAM) in London, Abdul Minty later became the Director of the World Campaign against Military and Nuclear Collaboration with South Africa. He joined the South African Department of Foreign Affairs (DFA) in 1994. He is the South African Governor on the IAEA Board since 1995.

aspects in policy developments and excludes nuclear diplomacy. However, Fig (2010) refers to some elements of South Africa's nuclear policy, but only in the context of the PBMR.

In the sixth instance, former South African diplomat Thomas Markram (2004) offers an assessment of South Africa's disarmament, non-proliferation and arms control policies between 1994 and 2004. Apart from some analysis, Markram makes a significant contribution in compiling speeches and documentation on South Africa's early post-1990 nuclear diplomacy. Given his background, he steers clear of controversy and offers an assessment with little theoretical substance.

Finally, few nuclear-related issues *per se* have been addressed. Notable exceptions include some analysis of export control regimes (Masiza 1998) and the NPT (Masiza & Landsberg 1996; Van der Westhuizen 1998; Geldenhuys 2006a; Taylor 2006; Shelton 2000a, 2000b & 2006). South Africa's relations with multilateral nuclear related organisations such as the IAEA and the UN is remarkably under-researched, with former South African diplomat-turned-IAEA-official David Fischer (1997) and Hecht (2006) the notable exceptions. Analyses of this and other related issues are critical for an understanding of the country's nuclear diplomacy.

Scant reference to some aspects of South Africa's nuclear diplomacy is made elsewhere. For example, Geldenhuys (2006a: 103) has briefly analysed South Africa's role as norm entrepreneur in terms of the NPT; the Pelindaba Treaty; the New Agenda Coalition (NAC); and the Middle Powers Initiative (MPI). In their study, Long and Grillot (2000) compared South Africa and the Ukraine's ideas and beliefs about nuclear weapons. Although dated, their analysis represents an emerging trend of an increase in constructivist analyses of nuclear diplomacy and nuclear security (Das 2009). Shelton (2006: 277-278) and Cawthra and Møller (2008: 139-141) described South Africa's role in non-proliferation against the background of the African continent and some African states' nuclear ambitions. However, the absence of more recent and comprehensive and theoretical analyses of the country's nuclear diplomacy is evident from the literature review.

Nuclear diplomacy can be described as niche diplomacy. First coined by Australia's former foreign minister, Gareth Evans, niche diplomacy is meant to refer to

specialisation. It also refers to "concentrating resources in specific areas best able to generate return worth having rather than trying to cover the field" (Evans in Henrikson 2005: 67). The ability to "generate return worth having" implies that a state wants to achieve non-material objectives with niche diplomacy which, in turn, can generate international prestige, status, material benefit, soft power and moral authority. For South Africa, these incentives are of particular importance to convince the international community of its commitment to continue with a non-weapons nuclear programme. To acquire and maintain a diplomatic niche requires recognition, and a secured position in a globally competitive arena requires publicity, including advocacy, positive branding, and the moral high ground. A major implication of a country's niche is that it has some kind of advantage over other countries. This advantage is either locational, traditional or consensual (Henrikson 2005: 70-72).

As will be argued, South Africa bases its nuclear diplomacy on normative innovation, independence, and consensus-seeking techniques. Moreover, the country has invested in the global socialisation of norms. Armstrong, Farrell and Lambert (2007: 97; 104-105) have described this socialisation process as construction, enactment and compliance, whereas Koh (1997: 2598-2599) has described it as interaction, interpretation and internalisation. Lastly, Finnemore and Sikkink (1998: 894-905) offer their life-cycle of norms to explain this process: norm emergence by norm entrepreneurs, norm cascade (acceptance) and norm internalisation.

Therefore, against the background of the above-mentioned review, the purpose of this study is to offer an original contribution in the analysis of South Africa's nuclear diplomacy since 1990 by building on some of the preliminary theoretical and analytical contributions made by Geldenhuys (2006a: 93-107) on South Africa's role as norm entrepreneur. The practical relevance of the study is that it contributes to scholarship on South Africa's post-1990 nuclear diplomacy, nuclear disarmament, and to scholarship on the concepts nuclear diplomacy and niche diplomacy, by applying a constructivist perspective.

3.   Formulation and demarcation of the research problem

The possession of nuclear weapons awards states and non-state actors with considerable power and influence. Yet, South Africa has decided to dismantle its

nuclear weapons and terminate its nuclear weapons programme. It is not the aim of this study to determine why it took that decision, but rather to clarify "the what" and "the why" of its nuclear diplomacy. The study concerns itself with one major question: Why and how South Africa, as a former nuclear weapons state and developing country, became so influential in terms of nuclear diplomacy? In response, the main thesis of this study is that since 1990 South Africa has conducted its nuclear diplomacy by constructing certain norms, and its identity, in a particular way to serve its national and international interests, and in the process - as a norm entrepreneur - aligning itself with internationally settled norms and advancing new and/or nascent nuclear norms.

South Africa's nuclear diplomacy has not only created a practical reality (no more nuclear weapons), but also a normative reality by bestowing upon the country a position and a role as a state that has relinquished its weapons programme to secure and maintain, as a norm entrepreneur, a certain moral high ground in international negotiations. Increasingly, there is a shift of emphasis away from Western states and Russia's nuclear power to those of developing countries. Of the top nine states with nuclear weapons inventories in 2009, for example, more than half are developing countries, including China, India, Pakistan, North Korea and Israel (Norris & Kristensen 2009: 87).[10] Israel has never declared its possession of nuclear weapons and is regarded as an undeclared nuclear weapons state although it is widely accepted that the country has nuclear weapons. China (with 11 nuclear power plants) and India (with 17) operate the largest number of nuclear power plants in the developing world (Schneider *et al.* 2009: 2).

Therefore, the objective of the study is to:
- position and clarify the concept of niche diplomacy in the broader context of foreign policy and diplomacy and to provide a theoretical framework for a constructivist analysis and explanation of a diplomatic niche role through norm construction and state identity;
- identify South Africa's niche diplomacy, specifically its norm construction and state identity based on four selected case studies; and

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[10] The choice of 2009 figures here is deliberate as it reflects some of the realities during the period under discussion. More recent figures, where applicable, will be presented in the thesis but the aim is to present figures that reflect the context of the period under discussion.

- Evaluate the research findings and make recommendations.

The research problem is demarcated with reference to the following considerations and limitations of the study. Firstly, the study's conceptual focus is limited to nuclear diplomacy as earlier defined. Secondly, for analytical purposes, the study is limited to four case studies representative of South Africa's construction and conduct of nuclear diplomacy. These are the nuclear non-proliferation export control regimes (especially in terms of the NSG, the ZA and the WA); South Africa's relations with the IAEA; South Africa and the African Nuclear Weapon Free Zone (ANWFZ) in terms of the Pelindaba Treaty; and the nuclear non-proliferation regime in terms of the NPT. These case studies represent South Africa's approach to the practice of nuclear diplomacy in a multilateral context which, in some instances, is supplemented by bilateral diplomacy. These case studies have also remained on and dominated the global nuclear agenda since 1990. Moreover, these cases represent the most dynamic areas of South Africa's nuclear diplomacy since 1990 as evidenced by the establishment of the ANWFZ in 2009 and South Africa's leading role in the establishment of continental nuclear institutions.

Thirdly, the study is limited to the South African government's nuclear diplomacy. It does not focus on the role of civil society. Therefore, the African and global campaign against South Africa's nuclear programme falls beyond the scope of this study. Similarly, the study does not focus on the diplomatic activities of the ANC in exile and the Anti-Apartheid Movement (AAM), amongst others, related to the creation of global awareness of South Africa's nuclear weapons programme (Thomas 1996; Reddy 1994; Purkitt & Burgess 2005: 183-184). In this respect, the study does not focus on the historical anti-nuclear position and activities of individuals, for example, the ANC anti-nuclear activists Abdul Minty, Denis Brutus and Kader Asmal. Abdul Minty, in particular, has become synonymous with the ANC's nuclear diplomacy during its period in exile (Reddy 1994). In this study, the ANC's post-1990 position is represented by Abdul Minty whose role in the country's nuclear diplomacy pre-dates the chronological scope of this study but who, as an ANC member and, since 1994, an ANC government appointee, represents continuity in respect of the ANC's nuclear diplomacy.

It also does not focus on the South African diplomatic and foreign policy institutional framework *per se* as in the case of, for example, Hughes (2004) and Van Nieuwkerk (2006: 37-49). However, some reference will be made to the institutional environment to illustrate particular aspects of South Africa's nuclear diplomacy.

Finally, the study is limited to the period 1990 to 2010. This period commences with the unbanning of the ANC in 1990 and culminated in the 2010 Review Conference (RevCon) of the NPT and the First Conference of Parties (COP) of the Pelindaba Treaty. Both events are illustrative of the development of South Africa's nuclear diplomacy since 1990. Where relevant, references will be made to developments prior to 1990 and after 2010. By limiting the study to the period from 1990 to 2010, it will not address the development of South Africa's nuclear weapons programme. Reference will only be made to some of South Africa's successes and failures pertaining to its nuclear diplomacy in the context of its early relations with the IAEA. In summary, the study is therefore demarcated in terms of its conceptual focus (nuclear diplomacy); theoretical approach and analytical framework (constructivism); and period of enquiry (1990 to 2010).

4.   Methodology

The theoretical approach of this study on South Africa's nuclear diplomacy is one of constructivism, which maintains that states construct or reconstruct their identities, normative behaviour, roles and interests according to their interests, and *vice versa* in a mutually constitutive manner (Zehfuss 2002; Reus-Smit 2005).

The study is qualitative in nature. Following an inductive method, the selected case studies are utilised to determine certain diplomatic styles and practices and use of instruments. To the extent that a narrative description of some of the main developments in South Africa's nuclear diplomacy from 1990 until 2010 will be presented, the study adds to the diplomatic history of South Africa.

The study is based on primary sources such as speeches, presentations and statements by South African presidents, diplomats, and nuclear scientists. These are supplemented by reports, policy statements and documents of the South African government, and by submissions and presentations to the Portfolio Committee on

Foreign Affairs, which has a constitutional obligation towards the country's international relations.

Empirical data on South Africa's voting at the IAEA and UN; import and export figures; diplomatic interactions; nuclear facilities; and nuclear-related industrial production is also used.

The aforesaid primary sources are supplemented by secondary sources that include South African and international media reports; academic literature including books and peer-reviewed journals; and analyses by South African and international non-governmental research institutions and think tanks.

5.   Structure of the research

This study comprises seven chapters. Chapter 1 provides a brief introduction to South Africa's nuclear diplomacy since 1990. It includes a literature review of the topic and presents the main research questions to be addressed. It includes an overview of the study's methodology, structure, limitations and expected contribution. As a theoretical framework, Chapter 2 (Nuclear diplomacy: a conceptual framework) serves a dual purpose. Firstly, it presents constructivism as the study's theoretical approach. The study follows Alexander Wendt (1992, 1994, 1995 & 1999) and Christian Reus-Smit's (2002 & 2005) approach to constructivism. Chapter 2 analyses and clarifies ontological and epistemological issues pertaining to constructivism; its origins; main tenets; and claims. Secondly, the chapter includes a conceptual analysis of nuclear diplomacy and positions it in the broader context of foreign policy, diplomacy and nuclear non-proliferation. Therefore, the chapter serves as a basis and framework to analyse and explain South Africa's efforts to secure a diplomatic niche through norm construction and state identity.

Whereas Chapters 1 and 2 present the theoretical and analytical framework of the study, Chapters 3 to 6 apply these frameworks to and analyse four selected case studies representative of South Africa's nuclear diplomacy. Cutting across these four selected case studies are South Africa's multilateral relations with the IAEA and the UN; and its bilateral relations with NWS, NNWS and FNWS (former nuclear weapons states); the role of South African decision-makers such as presidents FW de Klerk, Nelson Mandela, Thabo Mbeki, Kgalema Motlanthe and Jacob Zuma, and foreign

ministers such as Pik Botha, Alfred Nzo, Nkosazana Dlamini-Zuma and Maite Nkoane-Mashabane; and the country's domestic implementation of its international commitments through legislation, the establishment of institutions and the continuous regulation of nuclear issues.

The rationale behind the sequence of chapters is to present the chronological, rather than the thematic, development of South Africa's nuclear diplomacy. South Africa's first involvement in nuclear diplomacy began in the early 1940s and illustrates the country's initiation into the global nuclear export control regimes. By the 1950s, South Africa became a founder member of the IAEA. Despite its contribution to the nuclear non-proliferation norms at this stage, the country's policies resulted in increased global isolation to such an extent that, during the 1960s, African governments joined in the global condemnation of South Africa's domestic policies. In fact, African states took this condemnation further by declaring Africa a nuclear weapons free zone; a situation that could only be realised when South Africa's complete nuclear disarmament was confirmed by the IAEA. The final case study addressed here is South Africa's nuclear diplomacy in terms of the NPT. With its ratification of the NPT in 1991, South Africa came full circle in terms of its normative commitment to nuclear non-proliferation; nuclear disarmament; and the peaceful uses of nuclear energy.

Chapter 3 (South Africa and the nuclear export control regimes) analyses South Africa's involvement in multilateral nuclear export control regimes. Globally, trade in nuclear products, services and equipment annually amounts to billions of dollars. The global nuclear non-proliferation export regimes are controlled through various mechanisms such as the NSG, the WA and the ZC. Since 1990, South Africa has been a voluntary member of these groups, whose purpose it is to control nuclear proliferation for peaceful uses, as well as to control nuclear weapons manufacturing states.[11] Therefore, this chapter traces the origins of various nuclear non-proliferation export control regimes, as well as South Africa's membership of, involvement in and compliance with these regimes. It also explores the country's nuclear diplomacy with the various committees, groups and arrangements in terms of South Africa's

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[11] The study follows Article III of the *Statute of the IAEA* in referring to the "peaceful uses" rather than peaceful use of nuclear energy. Similarly it uses "peaceful purposes" rather than peaceful purpose of nuclear energy (IAEA 1957).

construction of the norm of nuclear non-proliferation, South Africa's identity, roles and interest *vis-à-vis* nuclear exports. The chapter also analyses developments in and the implications of South African involvement in the proliferation network of AQ Khan. The chapter concludes with an assessment of South Africa's diplomatic instruments and achievements.

The purpose of Chapter 4 (South Africa's diplomatic relations with the International Atomic Energy Agency) is to analyse South Africa's diplomacy with the IAEA. South Africa was a founder member of the IAEA in 1957. The country lost its designated seat on the IAEA Board of Governors (hereafter Board or IAEA Board) in 1977 due to global condemnation of its domestic policies. However, as this chapter outlines, subsequent to the country's accession to the NPT in 1991, the country signed various agreements with the IAEA which resulted in the IAEA's verification of the complete dismantling of the South African nuclear weapons programme in 1993. In addition to this the chapter also analyses the legal and diplomatic framework of South Africa's post-1990 relations with the IAEA. The chapter focuses on six case studies representing South Africa's relations with the IAEA since it resumed its seat on the Board. These case studies focus on the membership of the Board; the right of state to use nuclear energy for peaceful purposes; South Africa's effort to lead the Agency; the country's position on the IAEA nuclear fuel reserve; the impact of the AQ Khan network's activities in South Africa on the country's relations with the IAEA; and the conversion of the SAFARI-1 from using HEU to LEU. The chapter concludes with an assessment of South Africa's relations with the IAEA.

Chapter 5 (South Africa and the African Nuclear Weapon Free Zone Treaty) traces the origins of nuclear weapons free zones as an expression of the norm of nuclear non-proliferation. In addition to this, it traces the evolution of the Pelindaba Treaty as the idea of an ANWFZ originated in the 1960s. Chapter 5 analyses South Africa's involvement in the Treaty process until it entered into force in July 2009. The chapter also analyses the country's nuclear diplomacy with the African Union (AU) and African states in terms of the First COP of the Pelindaba Treaty and the First Ordinary Session of the African Commission on Nuclear Energy (AFCONE or hereafter the Commission). The chapter concludes with an assessment of South

Africa's nuclear diplomacy with Africa, the country's state identity and its nuclear diplomatic challenges on the continent.

The purpose of Chapter 6 (South Africa and the Treaty on the Non-Proliferation of Nuclear Weapons) is to outline the background, purpose and content of the NPT as a multilateral treaty. It traces South Africa's involvement in the various NPT conferences - including the 1995 REC and the RevCons of 2000, 2005 and 2010 - since it acceded to the Treaty in 1991, that is, from the De Klerk presidency. South Africa's nuclear diplomacy pertaining to the NPT review processes is analysed in terms of South Africa's construction of unresolved issues, South Africa's identity, roles and interest *vis-à-vis* the Treaty, and the country's norm construction. The chapter concludes with an assessment of South Africa's diplomatic instruments and achievements in respect of the NPT.

As a concluding chapter, Chapter 7 (Evaluation and recommendations), provides an evaluation of the study's findings by revisiting the main research question and thesis of the study. It synthesises the main summaries of each chapter, draws conclusions from them and indicate key findings. At a meta-theoretical level, it also reflects on the ontological and epistemological contribution of the study. The implications of the study's conclusions are assessed and recommendations are offered for future research on South Africa's nuclear diplomacy.

6.   Conclusion

This chapter presented a brief overview of several nuclear-related developments in South Africa - since President De Klerk took office in 1989 and the ANC came to power in 1994 - that prompt and contextualise this research. The chapter indicated that very little scholarly research on these developments was conducted. The chapter also outlined the rationale for a study on South Africa's nuclear diplomacy. It outlined the study's theoretical approach and analytical framework, and identified four case studies to illustrate South Africa's niche role in nuclear diplomacy through the construction of norms and a particular state identity. Finally, it indicated the demarcation and structure of the study.

Accordingly, the next chapter presents a conceptual analysis of the core concept of this study, namely nuclear diplomacy. The concept "nuclear diplomacy" offers an

analytical instrument to explain South Africa's international behaviour (namely, securing a niche role through norm construction and state identity) regarding its ʺnuclear pastʺ and ʺnuclear futureʺ, and provides a point of departure for the development and application of a constructivist approach to identify and explain the norm construction and state identity that characterises South Africa's niche role through nuclear diplomacy.

CHAPTER TWO

NUCLEAR DIPLOMACY: A CONCEPTUAL FRAMEWORK

1.   Introduction

Once scientists split the atom and the true power of atomic energy became evident, an increasing number of states realised the strategic value of atomic energy in power politics, in conflict and to enhance their status and prestige. The Manhattan Project was one of the first government-sponsored projects on the development of atomic bombs and nuclear weapons. It ultimately resulted in the US dropping two atomic bombs on Japanese cities in August 1945. This ended the Second World War. This event effectively became "the first major operation of the cold diplomatic war" (Graybar 1986: 888). Since then "(t)he connection of science with war has grown gradually more and more intimate" (Russell 1976: 83), resulting in an arms race between the two Cold War superpowers, the US and the Union of Soviet Socialist Republics (USSR). This arms race resulted in a new form of diplomacy, namely nuclear diplomacy to conduct relations between the superpowers.

The technology and expertise to develop atomic bombs; nuclear weapons; and WMDs continue to have an attraction for some state and non-state actors. This attraction is evident in the continued efforts of more states to acquire nuclear capabilities for defence purposes or to use nuclear power for peaceful purposes such as power generation or in the field of nuclear medicine. In the wake of the Second World War, efforts to control the development, use and trade in nuclear technology and services soon became one of the defining features of international relations (Kissinger 1956: 351). Of more significance was the realisation, as early as the 1950s, that traditional diplomacy was no longer the best practice to address issues concerning nuclear stalemates and "atomic blackmail" (Kertesz 1959a & 1959b).[12] Consequently a particular brand or niche of diplomacy emerged, namely

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[12] "Atomic [or nuclear] blackmail" is when a state with a nuclear weapons capability threatens to use its nuclear weapons if its demands are not met, or when it wants to advance its national interests.

atomic diplomacy (Alperovitz 1965; Jones 1980; Graybar 1986) or nuclear diplomacy (Quester 1970; Bargman 1977).[13]

Between its onset in the 1950s and the collapse of the USSR, the Cold War produced several nuclear crises. These included the Cuban Missile Crisis, France's nuclear tests in the Pacific and unwillingness of some NWS to ratify the NPT. By 2010, at a global level, the major success of nuclear diplomacy was to avert the use of atomic bombs and weapons by warring parties. More importantly, nuclear diplomacy contributed to the entrenchment of the so-called "nuclear taboo" (the non-use of nuclear weapons) as a norm of international relations (Tannenwald 2005 & 2007). Once introduced, a particular weapon and its use become legitimate. However, this has not been the case with nuclear weapons, which have been severely delegitimised to such an extent that the "nuclear taboo" is "associated with a widespread revulsion toward nuclear weapons and broadly held inhibitions on their use" (Tannenwald 2005: 5). Notwithstanding this, a number of states such as the US, Russia and China continue to develop nuclear weapons and maintain stockpiles of nuclear weapons.

As this study focuses on South Africa's nuclear diplomacy since 1990, the country's nuclear diplomacy prior to 1990 is not discussed.[14] However, it is noted that the origins of South Africa's atomic and nuclear diplomacy date back to the period prior to the outbreak of the Second World War when the Prime Minister of the UK, Winston Churchill, requested the then South African Prime Minister, Jan Smuts, to conduct a geological survey of South Africa's uranium resources in order for the UK to secure uranium for its own nuclear programme. Donald Sole, a South African diplomat at the time, explained in his *memoirs* that the "genesis of South Africa's atomic energy policy" could be traced back to a meeting in May 1944 between South Africa's Prime Minister, General Jan Smuts, and the Danish nuclear scientists Niels Bohr (Fourie *et al.* 2010: 263; Fig 1998: 165). After the end of the Second World War, South Africa became a founding member of the multilateral IAEA created under the auspices of the UN. In 1948, South Africa established the Atomic Energy Board,

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[13] The concepts atomic diplomacy and nuclear diplomacy are defined later in this chapter and are, in their respective historical and academic contexts, used interchangeably in this study.
[14] South Africa's pre-1990 nuclear diplomacy is extensively analysed by De Villiers, Jardin and Reiss (1993); Albright (1994); O'Meara (1996); Van Vuuren (2003); Harris, Hatang and Liberman (2004); and Venter (2008).

the forerunner of the Atomic Energy Corporation (AEB 1968), presently known as NECSA. In 1957, South Africa's nuclear science and nuclear diplomacy developed under the aegis of the IAEA's "Atoms for Peace" programme. It was the result of the South African government's bilateral nuclear collaboration agreement with the US, the *US-South African Agreement for Co-operation.* The latter resulted in South Africa's acquisition of a nuclear research reactor and an assured a supply of HEU fuel for the reactor (Masiza 1993: 36).

By the 1970s, South Africa's international isolation and domestic instability increased due to the global condemnation of and domestic opposition to its policy of apartheid (Fig 1998: 166). As a result the country's nuclear diplomacy entered a new stage. This included UNSC sanctions against South Africa, its suspension from the IAEA Board of Governors and secret nuclear-related bilateral relations with declared NWS, including the US, the UK, France and Israel. International sanctions and embargoes against South Africa and increased isolation did not deter South Africa from enriching and exporting uranium (UN 1994) or to manufacture, according to President FW de Klerk (1993), six "nuclear devices".

By the end of the 1980s, the Cold War ended and with it, the USSR's involvement in African conflicts and support of national liberation movements on the continent. Consequently, efforts to find a lasting solution to the conflicts in Southern and South Africa increased. President De Klerk announced on 2 February 1990 that his government had unbanned the ANC and other liberation movements, and would release Nelson Mandela (on 12 February 1990) and other political prisoners. These events ushered in a new political and diplomatic era for the country. Of particular importance was De Klerk's announcement that South Africa would suspend its nuclear weapons programme which paved the way for the country's accession to the NPT in 1991 (NTI 2010a).

This study contends that South Africa, between 1990 and 2010, secured a niche role for itself in the form of nuclear diplomacy through norm construction and state identity. Therefore, the aim of this chapter is to present a conceptual framework to analyse the concept nuclear diplomacy by adopting a constructivist approach. In order to achieve this, the chapter is divided into three main areas. The first area concerns conceptual analysis as a methodological approach. The second area

includes the emergence, assumptions, characteristics and contribution of constructivism. The third area is that of diplomacy; nuclear diplomacy in particular. The chapter clarifies various aspects of diplomacy before proceeding to define and explain the nature and scope of nuclear diplomacy as a type of diplomacy. With particular reference to nuclear diplomacy, the chapter concludes with a classification of the concept niche diplomacy.

2. Conceptual analysis as a research method

Concepts are the building blocks of theory and they provide scientific explanations of events or phenomena. However, as Heywood (1999: 6) cautions, "(i)n politics ... the clarification of concepts is a particular *[sic]* difficult task". Two types of concepts can be distinguished, namely normative and descriptive concepts. The former is described as values, referring to ideals, which should or must be achieved. Value-laden concepts include, for example, concepts such as freedom, tolerance and equality. These concepts often advance or prescribe specific forms of conduct, instead of describing events or phenomena. In contrast, descriptive or positive concepts refer to 'facts' which have an objective or demonstrable existence; referring to what is (Heywood 1999: 7). Therefore, the utility of conceptual analysis as a method to the study of IR is that it provides greater clarity, which contributes to a shared understanding of the meaning and utility of a particular concept (Baldwin & Rose 2009: 780-781).

The rationale for conducting a conceptual analysis of nuclear diplomacy is prompted by the following considerations. Firstly, conceptual confusion exists regarding the definition of and aspects related to the concept of nuclear diplomacy. Apart from being loosely defined, the concept nuclear diplomacy is often used synonymously with other concepts such as atomic diplomacy, non-proliferation diplomacy, nuclear disarmament, nuclear arms control and nuclear deterrence.

Secondly, contemporary developments in the practice of diplomacy require greater conceptual clarity and a shared understanding in order to articulate and entrench new norms on nuclear weapons and energy. Thirdly, after the end of the Second World War, international relations were defined by the nuclear arms race between the superpowers (the US and USSR) who competed for nuclear power supremacy.

However, since the end of the Cold War, some middle powers and even small states are vying for nuclear capabilities to enhance their power, status and prestige and to meet domestic energy needs. This is a departure from the historically predominant US-USSR nuclear rivalry and poses challenges to diplomacy and state sovereignty.

In the fourth place, states are increasingly threatened by the aims and activities of non-state actors regarding, for example, the nuclear black market; even more so after the 11 September 2001 (hereafter 9/11) attacks on the US and the exposure of the AQ Khan proliferation network (IISS 2007). This has resulted, amongst others, in nuclear diplomacy which contributed to normative innovation concerning the concept and phenomenon of nuclear terrorism and to the subsequent adoption of the UNSC Resolution 1540 (2004) on the non-proliferation of WMDs (UNSC 2004).

Finally, an analysis of the nuclear diplomacy of a state such as South Africa, which discontinued its nuclear weapons programme and dismantled its nuclear weapons, can provide insight into nuclear diplomacy and a better understanding of current and future nuclear non-proliferation efforts.

This study therefore follows Baldwin and Rose's (2009: 782) approach to conceptual analysis and includes concept development, concept comparison, concept clarification, concept correction and concept identification. In this context and due to both the suitability and utility thereof, nuclear diplomacy is accordingly analysed from a constructivist perspective.

3. Constructivism: selected theoretical aspects

This section provides a brief overview of constructivism in order eventually to contextualise aspects, indicators, instruments and practices of nuclear diplomacy. The constructivist notion of the social nature of international interactions resonates well with diplomacy as a social activity between states. This notion is supported by the constructivist Christian Reus-Smit (in Randal 2008: 7, 101) who commented that diplomacy is "integrated with, and embedded in, other social practices" and that state sovereignty is "intersubjective, requiring recognition from others, shifting diplomacy further into the realm of social practice". Thus, the conduct of nuclear diplomacy can be deemed to be a social practice based, *inter alia,* on the reciprocal recognition and intersubjective understandings of states.

As one of the more recent and contested theoretical developments in IR, constructivism's rise in the wake of the nuclear arms race-dominated Cold War is ascribed to four factors (Reus-Smit 2005: 195-196; Kubálková, Onuf & Kowert 1998: x). Firstly, rationalists challenged critical theorists to move beyond theoretical critique to a substantive analysis of international relations. Secondly, the end of the Cold War undermined the explanatory power of neo-realism and neo-liberalism as neither could explain or predict the systemic transformations reshaping the world order. Thirdly, a new generation of scholars emerged in the 1990s that embraced the propositions of critical international theory but acknowledged the need for theoretical innovation. Finally, their frustration with the dominance of rationalist theories contributed to their embracing of constructivism. According to Reus-Smit (2005: 192, 203), the relationship between constructivism and rationalism is a source of discontent (see *Table 1*). For example, whereas constructivists emphasise interest formation, rationalists emphasise interest satisfaction.

Table 1: The main ontological assumptions of constructivism and rationalism

	Constructivism	**Rationalism**
Actors	Deeply social Identities are constituted by norms, ideas and values Norms shape identity and interests	Self-interested and rational egoists Identity and interests are autogenous
Interests and interest formation	Endogenous to social interaction Learnt through communication and reflection on role	Exogenous to social interaction Actors pursue interests strategically Interest satisfaction paramount
Society	Constitutive realm Knowledgeable and social actors Determines political agency	Strategic realm where rational pursuance of interests occurs

Reus-Smit (2005: 189-193)

With its focus on norms, identity and interests, constructivism is the inverse of realism. Unlike realism and neo-realism which focuses on the material and agency in world politics, constructivism focuses both on the material and immaterial or social aspects of international relations. Accordingly, this study follows Reus-Smit (2005: 188) by emphasising "the importance of the normative as well as material structures, on the role of identity in shaping political action and the mutually constitutive relationship between agents and structures".

Constructivism makes the epistemological claim that meaning and knowledge are socially constructed. Epistemologically, constructivism is not interested in how things are but rather how things became what they are. Therefore, proponents of constructivism share an epistemology which makes interpretation a crucial part of social sciences and emphasise contingent generalisations. The latter, according to Adler (2002: 101), "open(s) up our understanding of the social world".

Constructivism makes the ontological claim that the social world is constructed. All strands of constructivism converge on an ontology that depicts the social world as mutually constituted intersubjective and meaningful structures and processes (Adler 2002: 100-101). Thus, material sources only acquire meaning through social interaction and shared knowledge. From this, he deduces a number of implications. These are that the social world consists of intersubjective understandings and knowledge, as well as material objects; that social facts are determined by human agreement, account for most of the subject matter of IR and depend on human consciousness and language; and that humans operate in the context of and reference to their collective understandings, rules and language. Finally, the mutual constitution of agents and structures are considered to be part of constructivism's ontology (Adler 2002: 100-101).

Constructivists distinguish and problematise the relationship between the levels of observation and action. Accordingly, Guzzini (2007: 25) deduces that constructivism is defined by stressing the "reflexive relationship between the social construction of knowledge and the construction of reality". Therefore, reality determines knowledge, and *vice versa*.

Wendt's (1999: 92) introduction of ideas as a "fourth factor" laid the foundations for an ideational view. For him, "ideas *constitute* those ostensibly 'material' causes in the first place" (Wendt, 1999: 94). He maintains that "the meaning of the distribution of power in international politics is constituted in important part by the distribution of interests, and that the content of interests are in turn constituted in important part by ideas" (Wendt 1999: 135). He also states that:

> the claim is *not* that ideas are more important than power and interest, or that they are autonomous from power and interest. Power and interest are just as important and determining as before. The claim is rather that power and interest have the effects they do in virtue of the ideas that make them up. Power and interest explanations *presuppose* ideas (Wendt 1999: 135).

Thus the power-interest-ideas nexus constitutes an important aspect of international relations. In fact, for constructivists, their core ideational element is intersubjective beliefs which include ideas, conceptions and assumptions shared among people. Ideas only matter once they are widely shared.

Tannenwald (in Jackson & Sørensen 2007: 166) similarly defines ideas as "mental constructs held by individuals, sets of distinctive beliefs, principles and attitudes that provide broad orientations for behaviour and policy". She identifies four types of ideas:

- Ideologies or shared belief systems such as Marxism, Liberalism and Fascism that are a systematic set of doctrines or beliefs reflecting a group, class, culture or state's social needs.
- Normative beliefs such as human rights which consist of values and attitudes that specify criteria for distinguishing right from wrong, just from unjust.
- Causal beliefs which focus on cause-effect and provide strategies for individuals on how to achieve their objectives.
- Policy prescriptions which are specific programmatic ideas that facilitate policy-making by specifying how to solve a particular policy issue (Tannenwald in Jackson & Sørensen 2007: 167).

Based on these ontological assumptions, several post-Cold War studies applied constructivism to explain the development of and changes in identities, interests,

ideas, norms and rules.[15] Thus, the emergence of constructivism has implications for IR. In particular and in the context of this study, it provides a theoretical approach to analyse South Africa's norm construction and state identity since the termination of its nuclear weapons programme.

In conclusion, constructivism has made the following ontological, epistemological and methodological contributions to IR and the study of diplomacy (Adler 2002: 100-104):

- It explains why states converge around specific norms and identities which in turn explain the origins of the interests of states (Finnemore 1996).

- It contributes to an understanding of change by explaining changes in terms of material and non-material aspects such as the emergence of new constitutive rules, the evolution of new structures, and the agent-structural origins of social processes (Ruggie 1998). Moreover, constructivists have generated empirical research on agency by focusing on social entrepreneurs, epistemic communities and transnational advocacy networks.

- It contributes to understandings of meaning through social communication.

- It highlights the importance of language and speech acts to social life (Kratochwil 1989). Language is not only a medium for the construction of intersubjective meanings, but is also a source of power.

- It emphasises the importance of the relationship between acting, communicating and rationality. By advancing the concept's practical or communicative rationality, constructivists explain actor actions and motives in terms of their consequences and appropriateness (Finnemore 1996).

- It re-focused attention on the main forms of power such as speech acts, hegemonic power and moral authority (Onuf 1998; Checkel 2000; Hall 1999).

- It contributes to an understanding of concepts such as norms and identity in order to understand an actor's international behaviour, diplomatic practices and change (Klotz 1995).

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[15] These included studies on global civil society (Chandler 2005); security communities (Adler & Barnett 1998); European integration (Christiansen 1997; Christiansen, Jørgensen & Wiener 1999); the European Union's (EU) international interactions (Rumelili 2004); state sovereignty (Biersteker & Weber 1996); security (McSweeney 1999); Kosovo (Frederking undated); language and international relations (Debrix 2003); multilevel governance (Aalberts 2002); Japan's responses to the 1991 Gulf War and the 2003 US-led invasion in Iraq (Catalinac 2007); and South Africa's post-1994 foreign policy (Van Wyk 2004).

- It contributes to an understanding of sovereignty and how state boundaries are socially constructed (Walker 1993; Bartelson 1995).
- It views institutions as "reified sets of inter-subjective constitutive and regulative rules" (Alder 2002: 104) that coordinate, pattern and channel behaviour, and establish new collective identities, shared interests and practices (Ruggie 1998).
- It results in research on epistemic communities, transnational advocacy networks and moral communities that contributed to an understanding of international governance (Keck & Sikkink 1998).

Having outlined the origins, assumptions, characteristics and contribution of constructivism, the next section provides a conceptual classification of and a framework for the analysis of diplomacy, in particular nuclear diplomacy as a specific type of diplomacy.

4.   The strands of constructivism

Notwithstanding some agreement among scholars on the ontology of constructivism (Reus-Smit 2005; Adler 2002; Omelicheva 2011), there is less agreement on the various forms, strands or varieties of constructivism which indicates the heterogeneity of the concept (Zehfuss 2001: 53-75; Jacobsen 2003: 39-60). In order to illustrate these differences, a selection of these classifications and typologies of constructivism are presented.

Referring to 'forms' of constructivism, Reus-Smit (2005: 199-201) distinguishes between systemic, unit-level and holistic constructivism. Systemic constructivism focuses on the interactions between unitary state actors only; ignores the dynamics of a state's domestic environment; and emphasises the interactions and relations between states in the international arena. Wendt (1992, 1994, 1995 & 1999) is regarded as the most important exponent of this form with his strong focus on identity as the underlying text of a state's interests. Unlike systemic constructivism, unit-level constructivism focuses on the domestic rather than the international environment. Its proponents, including Katzenstein (1996), focus on the relationship between the domestic legal and social norms, and identities and interests of a state. Holistic constructivism bridges the domestic-international divide created by systemic

and unit-level constructivism by focusing on all the factors that determine the identity and interests of a state. As such, holistic constructivists are mainly concerned with global change and its impact on a state's sovereignty. Amongst others, Ruggie (1998), Kratochwil (1989), and Koslowski and Kratochwil (1995) are the main proponents of this form and focus on the development of the normative and ideational structure of the contemporary international system and the social identities which emerge from it.

Adler (2002: 97) identifies "various strands" of constructivism, namely modernist, modernist linguistic, critical and radical constructivism. Identifying Adler and Barnett (1998), Checkel (2000), Finnemore (1996), Katzenstein (1996), Ruggie (1998) and Wendt (1999) as proponents of modernist constructivism, Adler (2002: 98) concludes that they focus on the "causal social mechanisms and constitutive social relations" in international relations. Elaborating on modernist constructivism, modernist linguistic constructivists such as Kratochwil (1989) and Onuf (1989) explain and understand social reality by identifying the processes and discourses whereby language such as speech acts and rules constitute social facts and social realities. Adler's (2002: 98) third 'strand', critical constructivism, espoused by Linklater (1998) and Cox (1986), is concerned with the mechanisms of knowledge and discourses which underpin social and political orders. Radical constructivists hold the view that material reality cannot be truly represented and focus on discourse, narratives and text. For example, a radical constructivist such as Der Derian (1990) maintains that no discourse, narrative or text is more valid than the other and that science thus becomes just another discourse.

Hopf (1998: 172) differentiates between two 'variants' of constructivism, namely conventional and critical constructivism. The former provides an alternative to mainstream IR theory by reconceptualising balance-of-threat theory, the security dilemma, neoliberal cooperation theory, and the notion of democratic peace. The latter, namely critical constructivism closely resembles critical theory.

Kolodziej (2005) distinguishes between light and heavy constructivism as the "principal factions" among constructivists. He includes Koslowski and Kratochwil (1995) in the former category since they concluded that change in the USSR occurred as a result of domestic changes (*i.e.* changes in the identity of Soviet

decision-makers) and not as a result of changes in the material capabilities of the superpowers as suggested by Wendt (1992, 1994, 1995 & 1999). Heavy constructivists, the so-called Miami Group which includes Nicholas Onuf (1989; 1998 & 2002) and Vedulka Kubálková (Kubálková, Onuf & Kowert 1998), maintain that actor behaviour cannot be generalised; that no specific rule or rules can exist for actor and agent behaviour beyond the construction of rules; and that actors are capable of redefining their identities as the unintended consequence of their behaviour (Kolodziej 2005: 284).

In her analysis of Russia's post Cold War interests and identity, Clunan (2009) identifies aspirational constructivism as a particular type of constructivism. This strand, similar to constructivism in general, maintains that social institutions and national identities emerge from the continued interaction between human agents and social structures. However, aspirational constructivism departs from other types of constructivism by benefitting from social psychology and proponents of social identity theorists. The latter maintains that identity requires "positive distinctiveness" or self-esteem to create an identity based on historical experiences to create their aspirations for the future (Clunan 2009: 1-3).

Yet another typology of constructivism is offered by Omelicheva (2011). Referring to 'variants' of constructivism, she distinguishes between sociological, feminist, interpretive and emancipatory constructivism. In addition to these, she distinguishes between transnational and societal constructivists. Whereas the former, espoused by Boekle, Rittberger and Wagner (2001), stresses the influence of international norms, institutions and other ideational structures, societal constructivists (or 'culturalists') like Hopf (2002) and Katzenstein (1996) emphasise the significance of domestic institutions, culture, and norms.

Omelicheva (2011) also refers to the distinction between so-called thick, critical or post-modernist, and thin or conventional constructivism. For a thick constructivist like Albert (2001) social reality is dependent on the processes associated with social construction where research plays an active part in the construction and reconstruction of reality and science. In contrast, Checkel (2000), Finnemore (1996), Finnemore and Sikkink (1998), Katzenstein (1996) and Wendt (1999), who espouse

thin constructivism, stress the intersubjective in text meanings constituting reality, identity and interests.

Against the aforesaid, this study positions itself in systemic constructivism in the Wendtian (1992, 1994, 1995 & 1999) tradition by focussing on identity as the underlying text of a state's interests. Notwithstanding this, the study departs somewhat from Wendt's constructivism by also following aspects of Clunan's (2009) aspirational constructivism that, amongst others, maintains that identity requires "positive distinctiveness" or self-esteem to create an identity based on historical experiences to create their aspirations for the future. This is relevant to South Africa's nuclear diplomacy by securing a niche role through norms construction and state identity since 1990 as a departure from the country's past nuclear diplomacy.

5.   Criticism made against Wendt's constructivism

Constructivists are by no means a homogenous group as the variety of approaches indicates. Although widely lauded for his contribution to constructivism, Wendt (1992, 1994, 1995 & 1999) has been widely criticised. His critics not only include neo-realists, Marxists and world system theorists but also fellow constructivists. In fact, Kolodziej (2005: 261, 283) refers to the growing "internal quarrels" among constructivists and that "many constructivists vigorously object that Wendt does not represent their positions". However, it is not the objective of this study to offer a comprehensive criticism of constructivism, in general, and Wendtian constructivism in particular. Notwithstanding this, note should be taken of the main criticism levelled against Wendt. The criticism is sub-divided into two main areas, namely that of ontology and epistemology by focusing on the main Wendtian themes of the state and the international system, change and identity.

Ontologically, Wendt (1999) claims that states are the main actors and units of analysis in IR theory, that the key structures in the state system are intersubjective instead of material, and that state identities and interests are constructed by these social structures and not exogenously given. Wendt (1999) justifies his emphasis of the state by maintaining that his theory is about the interstate system. In response, Reus-Smit (1999) and Adler (2013) criticise Wendt for failing to explain the

emergence and decline of international systems, and his inability to explain the change of international systems (Adler 2013).

Wendt's claim that the state is the principal unit of analysis is contested by the presence of powerful non-state actors such as non- and inter-governmental organisations in international politics. Accordingly, some constructivists like Adler (2013) argue that constructivism opens alternative avenues to explain international relations by focusing on actors other than states (Adler 2013). However, a scholar like Bhakar (in Adler 2013: 133) maintains that only individuals – and not states – can express agency. Similarly, Wight (2006), for example, maintains that, although states are ontologically real, they are structures rather than agents.

This ontological criticism has several implications for this study. In the first instance, in its practice of nuclear diplomacy post-1990 South Africa constructed its identity and interests in respect of its nuclear diplomacy and not as exogenously given. Secondly, it interacted with state and non-state actors such as the IAEA and the UN.

Wendt's (1999) epistemological claim that meaning and knowledge are socially constructed has been similarly criticised (Adler 2013). Whereas Wendt (1999) argues that causal theories answer the 'why' and sometimes the 'how' questions, constitutive theorists explain the features of objects by referring to the structures within which these objects exist (Adler 2013: 130). For example, according to Wendt, the factors that constituted the Cold War are not the same as the causes of the Cold War (Adler 2013: 130).

Wendt is criticised for his view of change and for failing to explain how norms are formed, how identities are shaped, and how interests are defined (Jervis 1998: 976). Apart from neo-realists, Marxists are also critical of Wendt's constructivism. Immanuel Wallerstein's world systems theory focuses on the material – unlike Wendt's non-material – structure of the international system and global capitalism which limits the social interaction Wendt maintains exists between actors (Jackson & Sørensen 2007: 175). Thus, although Wendt (1999) admits that identities can change, he does not clearly explain what exactly happens when these identities change. His claim that state identity exists *a priori,* reinforces his ignorance of

domestic processes of identity formation, and the interplay between domestic and international levels (Zehfuss 2002: 60-61).

Wendt's emphasis of the international system in shaping identity has also been criticised by his fellow constructivists. Finnermore (1996), for example, departed from Wendt's position on the centrality of the social interaction between states as a determinant of identity and interests and focused on the norms of international society and its effect on identity and interests. Hopf (in (Jackson & Sørensen 2007: 172) adds to this by arguing that in order to determine how a state's identity affects its interests, a state's interaction with other states as well as its interactions with its own society should be considered. With reference to domestic factors, Keck and Sikkink (1998), and Risse, Ropp and Sikkink (1999) demonstrate how domestic factors such as regime type and domestic actors such as non-governmental organisations determine state identity. Similarly, in his study on Japan, Katzenstein (1996) illustrates how domestic – rather than international – norms influence state identity and interests. Despite the centrality of identity to his ontology, it is unclear when identity matters for Wendt. In this regard, Zehfuss (2002: 62-63) observes that identity can easily be confused with behaviour as Wendt maintains that identity must be inferred from behaviour.

Given Wendt's (1992) rejection of neo-realism, it is expected that some of his fiercest critics are neo-realists. Wendt's assertion that a state's identity and thus its interests are constructed in its interaction with other states and through intersubjective understanding is rejected by neo-realists. Proponents of the latter position assert that a state's identity and interests are given before it interacts with other actors. Wendt, therefore, places too much emphasis on international norms as states often disregard them by invading other states and declaring war. Moreover, neo-realists question the constructivist claim that peaceful relations between states can be established and maintained based simply on their social interaction. States, neo-realists argue, operate in an international system which is anarchical and hierarchical where each state has to fend for itself in its search for security in an uncertain environment. Uncertainty is increased by deception. States do not, as constructivists maintain, always engage in sincere social interactions with other states (Jackson & Sørensen 2007: 168, 172-173).

This epistemological criticism against Wendt has implications for this study. Wendt failed to explain how norms are formed, how identities are shaped, and how interests are defined. In this respect, this study departs from Wendt. Drawing on social identity theory, Clunan (2009) identifies the three main sources of identity and interests as self-esteem, aspirations and ideas. For her, a state's identities and interests rest on two pillars, namely its political purpose and its international status. A state's political purpose includes beliefs about the appropriate political and economic governance of the state. In other words, it includes ideas about "what values, principles, traits, and symbols characterize the country and what values and principles should govern relations between countries. It also involves ideas about what the country's national mission is" (Clunan 2009: 29-30). National identity's second pillar, international status, refers to the rank and positioning of a state in an "imagined international hierarchy" of political, military, social, and economic power which involves evaluations of the material power possessed by a state itself, and all other parties (Clunan 2009: 29-30). The value of political purpose is that it informs the state about the in-groups to which it should belong. These in-groups are defined by material attributes such as power, wealth, political and economic governance, culture and tradition. A state's political purpose, therefore, also indicates whether it is a status-seeker or a status-maintainer (Clunan 2009: 32).

Rationalists in the realist tradition hold that all states have to fulfil a number of tasks such as providing security and improving welfare which constitute their national interest. Material factors such as geography, military strength and economic strength determine how (through conflict or cooperation) a state pursues its national interest based on its identity (Clunan 2009: 4-5).

One other cause for a change in state identity can occur when a state has arrived at a particular critical historical juncture (Clunan 2009: 19). A good example of such a critical historical juncture is the USSR at the end of the Cold War that resulted in the disintegration of the USSR and the formation of the Russian Federation. In a case such as this a new syncretic identity, involving historical and new identities, is often established.

Clunan (2009: 34-35) identifies three identity management strategies that the state can employ, namely mobility, competition and creativity. Mobility (leaving one group

to join another group) includes assimilation. In the latter case, one group dissolves into another and takes on the identity of the second group to acquire membership of a more satisfactory group. Competition involves social action to change prevailing conditions or a situation and social competition over status and prestige. Creativity aims to redefine or change the attractiveness of existing attributes of an actor.

Despite his focus on the state, Wendt neglects to focus on diplomacy (which is a main theme of this study) as an instrument available to a state to interact with other actors. Diplomacy, as a settled norm in international relations, can thus be described as one of the structures to which Wendt refers. It can also be described as one of the intersubjective understandings between states. Wendt is, however, silent on the origins, practice and actions of diplomacy, and how and why it changes over time. Therefore, Wendt's (1994) "black box" on identity should be opened up in order to understand the domestic and international dynamics that underlie a state's identity and interests, and its conduct of diplomacy. In fact, this has already commenced as constructivist scholars increasingly pay attention to the domestic determinants of change (Reus-Smit 1999; Clunan 2009) and to the domestic impact of international norms (Checkel 2000; Risse, Ropp & Sikkink 1999).

For Wendt, interaction between actors and their intersubjective understanding results in routinised practices whereby social facts are created. Once a practice is internalised it underpins social facts and constitutes identity and interests. Routinised practices create stability and, for its part, stability reinforces an agent's identity and interests. Flockhart (2012: 89) similarly distinguishes between practice and action where the former refers to automatic activities that are 'embedded' in daily routines contributing to stability instead of change. Accordingly, practice-based diplomacy involves routinised activities that contribute to predictability and stability. Therefore, the power of diplomacy is that it is a social practice that reproduces and inculcates intersubjective practices that constitute social structures and agents. Diplomacy as an action refers to intentional behaviour related to a specific objective with the intention of solving a problem or introducing new ideas which often constitute the initial step to change a particular practice (Flockhart 2012: 88).

6. Diplomacy: selected theoretical aspects

Constructivists regard a state as a sovereign actor in a social relationship with other actors. These social relationships are guided by sets of rules, norms, practices and institutions, one of which is diplomacy. However, diplomacy is also one of the instruments employed to achieve foreign policy objectives which originates in a government's domestic policy objectives; amplifying the domestic/foreign policy nexus manifest in a state's conduct of its diplomacy.

6.1 Defining diplomacy

Notoriously difficult to define, diplomacy has been described as the "conduct of relations between sovereign states through the medium of officials based at home and abroad" (Berridge & James 2003: 69); as "an institution...orientated towards problem-solving and negotiations rather than violence and coercion" (Brown 2005: 93); as a "major ingredient of power" with the purpose of "enabling states to secure the objectives of their foreign policies without resort to force, propaganda or law" (Berridge 2005: 1); and as something which "is concerned with the management of relations between states and between states and other actors" (thus also involving non-state actors) (Barston 2006: 1).

In addition to these definitions, International Law also provides meaning to diplomacy. By 2011, the *Vienna Convention on Diplomatic Relations* (1961), which entered into force in 1964, enjoyed nearly universal support (UN Treaty Collection 2011). The Convention describes the functions of diplomacy as representation, the protection of nationals and state interests, negotiation, gathering information and reporting, the promotion of relations between states, and the development of economic, cultural and scientific relations (UN 1961).

As an instrument to conduct foreign policy, maintain channels of communication and negotiate agreements, diplomacy is a normative concept which acknowledges mutually constituted norms such as state sovereignty, the pacific settlement of disputes and state representation (Du Plessis 2006: 125; 2008: 96). Firstly, the relationship between diplomacy and foreign policy (see *Figure 1*) can be explained in the context of linear escalation or progression, ranging from political (diplomacy) to military (use of force) instruments in accordance with international norms on the

pacific settlements of disputes and the use of force in terms of Chapters VI and VII of the UN Charter (see *Figure 1A*). Secondly, the relationship between diplomatic and military instruments of foreign policy can be explained in terms of the utility of each instrument (see *Figure 1B*). Each of these instruments is versatile, ranging from influence to coercion, depending on the context of a particular situation.

Figure 1: Diplomacy as an instrument of foreign policy
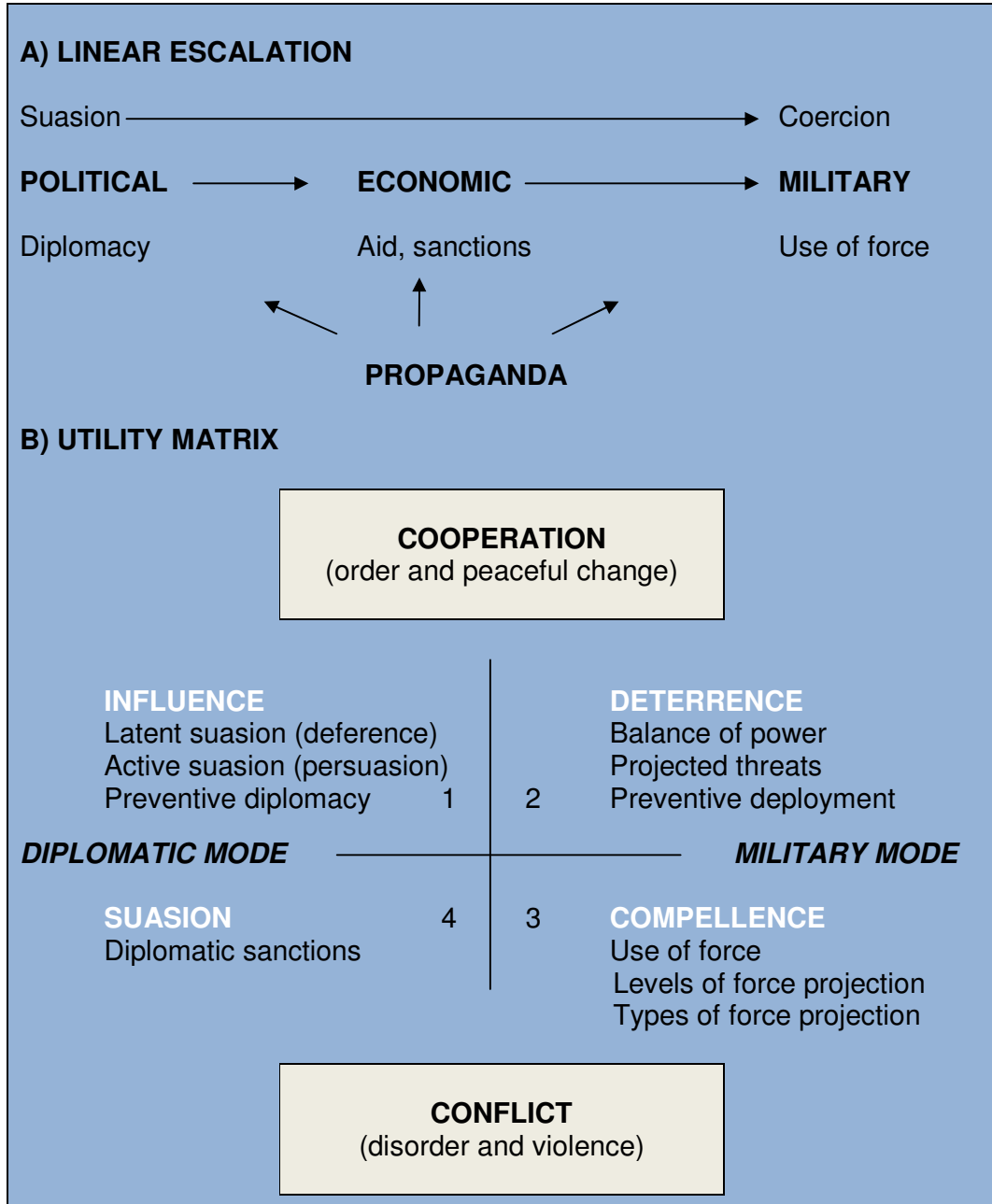
Du Plessis (2006: 136; 2008: 96 as adapted)

6.2   Typology of diplomacy

In order to achieve its foreign policy objectives, a state and its designated officials employ various types of diplomacy (as a particular instrument of foreign policy). These types include various channels, including direct telecommunications, bilateral and multilateral diplomacy, summitry and mediation (Berridge 2005: 91).
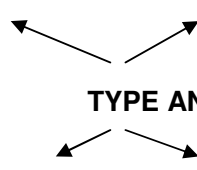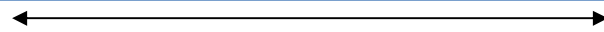
The classification and typology of diplomacy is based on three dimensions of diplomacy (see *Table 2*). Duration refers to the nature (continuous or non-continuous) of diplomacy by being permanent or temporary (*ad hoc*). Form refers to the number of actors involved, namely bilateral or multilateral. Level-type refers to the status of diplomatic representatives (Du Plessis 2006: 139).

6.3   Parameters of diplomacy

The parameters of diplomacy refer to "factors that provide a framework or basis for diplomacy and prescribe, regulate or limit diplomatic practice" (Du Plessis 2006: 142). Four parameters of diplomacy can be distinguished, namely the policy, institutional, legal and moral parameters. The policy parameter refers to decisions concerning the ends and means of diplomacy. The institutional parameter determines the locus and process of policy formulation that influence diplomacy, including bureaucratic institutions and infrastructure for policy implementation. The legal parameter refers to the provisions and prescriptions pertaining to the use of diplomacy in terms of International Law. The moral parameter includes international morality, ethical guidelines for international conduct and behaviour and norms relating to diplomatic practice, which links to some of Holsti's (2004: 178-210) observations on diplomacy. He explained the historical changes in diplomacy and diplomatic practice. Holsti also focused on changes pertaining to norms, institutions, ideas and practices pertaining to diplomacy in the twentieth century. Among these are increased specialisation, a proliferation of issues, technological innovation, the 'democratisation' of diplomacy and the rise of public diplomacy. For Barston (2006: 1), Holsti's observation refers to the "widening content of diplomacy" resulting in "changes in the substantive form of diplomacy" as reflected in specific types of diplomacy such as, for example, environmental diplomacy, knowledge diplomacy,

disaster and emergency diplomacy and nuclear diplomacy. The next section addresses nuclear diplomacy as a particular type of diplomacy.

Table 2:   Typology of diplomacy

	FORM	
	Bilateral	**Multilateral**
	Resident mission in receiving state Diplomatic, consular and specialized representation such as attachés	Resident missions at inter-governmental organisations (IGO) such as the UN, the European Union and the AU
	Inter-governmental (state – state / state - IGO / IGO – IGO)	
	TYPE AND LEVEL	
	Inter-governmental (state – state / state - IGO / IGO – IGO)	
	High level and ministerial visits (by heads of government and state, ministers) Ad hoc personal diplomacy (at ministerial and trans-governmental level not involving diplomats)	Serial summits (Summits of the AU heads of state and government) Ad hoc summits and/or conferences Parliamentary diplomacy (UN General Assembly) Conference diplomacy on specific issues such as climate change and racism
	Non-governmental (at least one actor is non-governmental)	
	Bilateral ← → Multilateral	
	Multitrack and two-track diplomacy involving non-governmental and transnational actors such as interest and pressure groups, multilateral corporations, non-governmental organisations, national liberation movements, terrorist groups)	

Du Plessis (2006: 140)

6.4   Norms and diplomacy

Diplomacy is one of the most enduring institutions and norms of international relations (Frost 1996: 104-112). Norms also play an important role in the conduct of diplomacy and their *raison d'être* is based on settled norms such as state sovereignty, equality and diplomatic immunity. A settled norm can be described as a norm that is "generally recognised and that any argument denying the norm requires special justification" (Frost 1996: 105). Another indicator of a settled norm is the way in which an act which is an infringement of it, is undertaken. According to Frost, acts contravening norms are often undertaken 'clandestinely'. A third indicator of a settled norm is the "concept of the norm" which is regarded as settled, and not the "conception of the concept" (Frost 1996: 105-106).

In the case of nuclear diplomacy, norms also play a role in the conduct of diplomacy. Several settled norms are associated with nuclear diplomacy, namely a state's right to develop a nuclear capability; the peaceful uses of nuclear energy; and the "nuclear taboo". These settled norms have been entrenched in government policies, various legal documents, and bilateral and multilateral agreements.

Several constructivists have contributed to the revival of norms in IR. Klotz (1995) and Price (1995), for example, focused on anti-apartheid and sanctions against the apartheid regime in South Africa; on pressures by non-governmental organisations (NGOs) on governments to assist groups in other states fighting for human rights (Keck & Sikkink 1998); on norms and human rights (Risse, Ropp & Sikkink 1999); on international systems (Hall 1999); on law as a generator and distributor of norms, and speech acts (Frederking undated); and on development through poverty alleviation programmes (Finnemore 1996).

For constructivists, the utility of norms in the practice of diplomacy is wide-ranging. Firstly, norms are explanatory variables of diplomacy as norms. They are "inter-subjective beliefs about the social and material world that tell actors what they can and should do" in particular circumstances (Armstrong, Farrell & Lambert 2007: 97) or a "standard for appropriate behaviour for actors with a given identity" (Finnemore & Sikkink 1998: 891). Secondly, norms are regulative in that they order, prescribe and regulate diplomatic action and thereby enable meaningful diplomatic action. In

the third instance, norms are constitutive as they provide actors with an understanding of their mutual or individual interests, which can affect a state's diplomatic stance and/or behaviour on a particular nuclear-related issue (Katzenstein 1996). Slaughter *et al.* (in Armstrong, Farrell and Lambert 2007: 101) similarly maintain that norms play a "constitutive role" in the formation of an actor's identity and interests as the identity of an actor can affect its compliance (or not) with a particular norm.

International Law defines and validates state sovereignty and jurisdiction; to protect the key values shared by all states; and to foster interstate cooperation, *i.e.* diplomacy. It achieves these objectives by providing modes of legitimation, communication, reassurance and cooperation. International Law can be defined as a dynamic, normative and constitutive process involving transnational networks of governmental and non-governmental actors (Armstrong, Farrell & Lambert 2007; Reus-Smit 2004; Sharp 2009). This dynamic, normative and constitutive process includes three stages, namely interaction between transnational actors; the interpretation of an international norm by these actors; and the internalisation of that particular norm in the domestic legal system of states. Therefore, Koh (1997: 2598-2599) concludes that states obey International Law due to "internalised obedience" instead of "enforced compliance".

An actor's consistent compliance with International Law and adherence to settled norms contribute to its predictability, trustworthiness, credibility, status and prestige. Undermining International Law and settled norms often result in an actor's loss of credibility and bargaining strength. The voluntary observance of International Law and settled norms serves a state's long-term interests as it derives benefits from the stability and predictability of the international order (Joyner in Kegley & Raymond 2010: 262; Geldenhuys 1989). Therefore, the logic of nuclear diplomacy is to comply with settled norms on the use of nuclear power. An actor's norm compliance rests on a number of considerations. Firstly, norms express the dominant ideas of society. Non-compliance may result in detrimental sanctions and therefore actors comply in order to avoid such actions. Secondly, compliance with norms may be beneficial to an actor's interests (Armstrong, Farrell & Lambert 2007: 97).

Due to their focus on identity as a determinant of action or behaviour, constructivists are interested in nuclear diplomacy as a particular type of instrument of a state's foreign policy. As foreign policy can also be regarded as 'action', proponents of constructivism take interest in the logics of action, namely, the logic of appropriateness and the logic of consequence, to determine how to act to maximise their interests in line with their identity (Flockhart 2012: 85-86). The logic of consequences focuses on calculating which action will maximise the interests of the actor, whereas the logic of appropriateness contends that actions should be taken with reference to the defined rules and norms that will render the proposed action proper and legitimate behaviour.

Constructivists also concern themselves with change, especially with norm change. For constructivists, change can be explained in terms of diffusion (of models, practices and norms), and the internationalisation and institutionalisation of norms. As previously indicated, norms evolve over a period of time, and can be explained in terms of the internationalisation and institutionalisation of norms, or the life-cycle of norms (Barnett 2008: 168-169).

Furthermore, constructivists are also concerned with the political process whereby actors are socialised into norm construction, enactment and compliance (Armstrong, Farrell & Lambert 2007: 97, 104-105). This socialisation process is also described by Koh (1997: 2598-2599) as interaction, interpretation and internalisation. In addition, Finnemore and Sikkink (1998: 894-905) have identified three stages in the life-cycle of norms, namely norm emergence, norm cascade and norm internalisation (see *Figure 2*). The first stage entails the emergence of a norm through the initiative of norm entrepreneurs in governments, inter-governmental organisations (INGOs) and/or NGOs that call attention to a particular issue. The second stage involves the cascade of norms when norm entrepreneurs publicise the need for the entrenchment of a norm by socialising with governments and organisations. As a final stage, the internalisation of a norm occurs when an actor internalises a particular diplomatic norm through a social learning process, or socialisation. In this respect, Checkel (in Sjöstedt 2008: 12) distinguishes between instrumental internalisation when an actor behaves as expected and deepened internalisation when an actor accepts a particular norm and identity discourse.

The impact of norms is determined by three features of norms. These are the norm's specificity, namely how well the norm is defined by norm entrepreneurs and how it is intersubjectively conceptualised by divergent actors; the norm's durability, namely how long the norm has been in effect; and the norm's concordance, namely, how well a norm is diffused to different actors (Sjöstedt 2008: 11).

In the process of constructing norms, there is always some competition between beliefs and interests. Therefore, norm construction, enactment and change are political processes. Politics, according to Reus-Smit (in Armstrong, Farrell & Lambert 2007: 105), involves four forms of reason and action, namely idiographic, purposive, ethical and instrumental forms. Each form of reason and action expresses and replicates social identities, actor interests, mutual moral principles and preferred means of action. At a global level, all of these forms of reason and action are consolidated in International Law.

Figure 2: Three stages of the life-cycle of norms

Norm emergence
Persuasion by norm entrepeneurs in governments or NGOS who call attention to issues.

Norm cascade
Norm leaders attempt to socialise other states to become norm followers. Norm cascades through rest of states.

Norm internalisation
States automatically internalise norm.
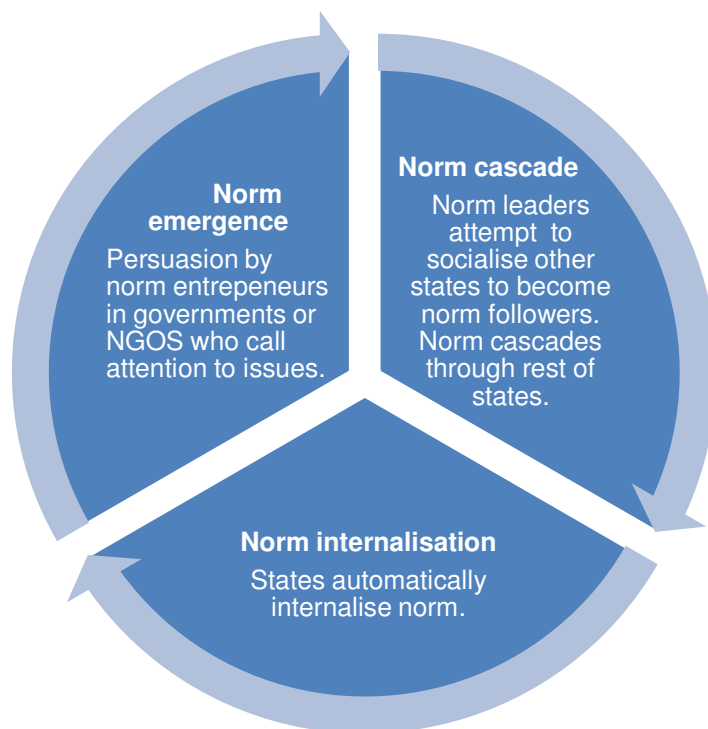
Finnemore & Sikkink (1998: 894-905)

Constructivists are also concerned with establishing the origins of interests. This resulted in constructivists' ontological attack on rationalist approaches to interests. Constructivists claim that:

> neither interests nor power exists independent of the social context in which actors are enmeshed. Interests and identity are constructed socially; they are plastic and may be redefined. International law may be understood as both a reflection of identities and as a social artefact that reinforces identities, interests, and power (Simmons & Steinberg 2006: xxxiv).

Thus, diplomacy is based on specific norms explaining, regulating and constituting state interests, identity and behaviour. In its practice of diplomacy, a state either complies with these norms, or not, depending on its interests and identity. However, the dynamic nature of diplomacy requires a state to regularly respond and adapt to emerging diplomatic issues in order to advance its interests. Often new diplomatic issues result in global change which manifest in the emergence of new norms through norm construction, enactment and compliance. The origin and evolution of nuclear diplomacy is one example of the impact of norms on diplomacy. However, a state's diplomatic practice is also determined by its identity and interests as the next section outlines.

6.5   Identity, interests and diplomacy

Wendt (1999: 231) reminds us that "identities refer to who or what actors *are*" whereas "interests refer to what actors *want*". For constructivists, a state has multiple identities, including a social and a corporate identity, which determine its interests and actions (Wendt 1992, 1994, 1995 & 1999; Finnemore 1996) and therefore the way it conducts diplomacy.

In this respect Wendt (1999: 224-233) identifies four types of state identity, namely personal or corporate identity; type identity; role identity; and collective identity. Personal or corporate identity is constituted by the 'self-organizing' structures that make an actor a "distinct entity"' and always has a material base. Type identity refers to actors who share one or more characteristics such as skills, values, attributes, knowledge and historical commonalities. Role identity exists only in relation to others, that is, it refers to the identity of the 'self' relative to the 'other'. Collective

identity is regarded as a combination of role and type identities in order to overcome collective action problems (such as the environment and global warming) defined by international or regional actors. It merges the previous types in order to establish a single identity.

For Wendt (1999: 230, 233), a state's identity "can take multiple forms simultaneously within the same actor". This means that actors often choose a particular social/corporate, type, role or collective identity in the light of their interests. Since "state interests are constructions", Wendt (1999: 234) maintains that national interests refer to the "reproduction requirements or security of state-society complexes", that is, to objective interests. Moreover, national interests are not merely regarded as "normative guidelines for action" but also "causal powers that predispose states" to act in a particular way.

Apart from his typology of state identity and reference to interests, Wendt (1990: 231-232) also distinguished between two main types of interests which have a bearing on this study, namely:

- Objective interests which refer to the needs or functional imperatives that an actor has to fulfil if its identity is to be reproduced, namely reproduction requirements.
- Subjective interests which refer to beliefs that actors "have about how to meet their identity needs", namely an actor's preferences.

George and Keohane (1980: 217-238) identify three national interests, namely, physical survival, autonomy and economic well-being, a frame of reference that Wendt (1999) also employs. To these he adds the fourth national interest of collective self-esteem which, according to him, refers to "a group's need to feel good about itself, for respect or status" (Wendt 1999: 235). Accordingly, a state's collective self-image can either be negative or positive, depending on historical relationships such as experiencing dominance or subjugation. Each of these state identities (personal or corporate identity, type identity, role identity and collective identity) has certain "production requirements", namely objective interests that determine beliefs about how to meet these subjective interests. National interest is therefore an objective interest, namely survival, autonomy, welfare and collective self-esteem,

geared towards a state's self-interest which can vary depending on an actor's construction of its identity and interests (Wendt 1999: 243).

How, then, do constructivists relate identity and interests to nuclear diplomacy? This question presents the study with an analytical, theoretical and conceptual *terra incognita.* An actor's conduct and practice of nuclear diplomacy can be defined as an expression of its identity and its interests. In Cold War nuclear diplomacy, some states defined their identity in terms of their possession of nuclear weapons and capabilities, whereas their interests referred to what the specific state wanted.

In the case of pre-1994 South Africa, the purpose of its nuclear diplomacy was to establish a nuclear capability to protect the South African government against a perceived global communist threat to its national interests (O' Meara 1996; Venter 2008). During this period, South Africa's corporate identity was constituted by the "self-organizing" structures that make an actor a "distinct entity". In terms of its nuclear capabilities South Africa was on par with NWS, whereas in terms of its identity type, the pre-1994 South African government regarded itself as a Western enclave which shared one or more characteristics with the West. South Africa's role identity was blatantly anti-communist, whereas its collective identity was shared with Western anti-communist states.

Based on these state identities, the pre-1994 South African government constructed its objective and subjective interests, which manifested in national interests such as state survival; the protection of its sovereignty; economic welfare; and political autonomy despite global opposition to the then government's policy of apartheid. Moreover, in Wendtian terms, pre-1994 South Africa's collective self-esteem was based on the needs of South Africans of European descent (Whites) to feel good about themselves; to be respected; to exercise their near Messianic Mission in Africa; and efforts to secure their survival through the development of nuclear weapons. Albright (1994) explained South Africa's pre-1994 nuclear identity, namely that South Africa's nuclear weapons emerged from a:

> technological 'can-do' mentality that coincided with South Africa's increasing international isolation in the 1970s and 1980s [due to its domestic policy of apartheid]. The emerging strategy was to bring Western governments to

South Africa's aid in the event of an overwhelming attack by Soviet-inspired military forces then in Southern Africa.

Thus, the case of South Africa provides an illustration of the relationship between norms; a state's interests and its identity as seen from a constructivist point of view; and how this influences nuclear diplomacy. Subsequent chapters will elaborate on this relationship.

7.   Nuclear diplomacy

Originating during the Cold War, the concepts nuclear diplomacy (used but not defined by Quester 1970) or atomic diplomacy (referred to by Jones 1980: 89-117) are often used synonymously with the concepts of arms control and disarmament. Nuclear diplomacy is also sometimes used synonymously with the concept of nuclear non-proliferation, which has been defined as the "prevention of the spread of [nuclear] weapons of mass destruction" (NTI 2010b: 15). To clarify these ambiguities, this section outlines the context, nature, scope, forms, meaning and use of nuclear diplomacy, followed by an analysis of nuclear diplomacy as a particular niche of diplomacy.

7.1   Context of nuclear diplomacy

The twentieth century's technological development has been unprecedented due to the scientific innovations and contributions of scientists such as Einstein, Oppenheimer and Bohr in the field of nuclear physics. The harnessing of atomic power and its subsequent political-strategic use against Japan to end the Second World War has had major implications. An example of the failure of diplomacy is the atomic annihilation of Hiroshima and Nagasaki in Japan in August 1945 by the US. These events signalled the first and only use of nuclear weapons in warfare. Since 1945 the non-use of nuclear weapons (the "nuclear taboo") has become one of the prevailing norms driving diplomacy during the Cold War to such an extent that a unique 'brand' of diplomacy, namely nuclear diplomacy, emerged to facilitate states' interaction pertaining to all aspects of nuclear energy.

Another major implication of the harnessing of atomic power and its use in 1945 against Japan is that not only did it terminate the Second World War, but it also

resulted in an arms race between the US and the USSR and smaller but ambitious powers such as the UK, France and China, and in the emergence of scholarship on the nature of the relationship between power, diplomacy and technology. In spite of their alliance during the Second World War, the US and the USSR soon embarked on a competitive nuclear arms race after the Second World War that dominated the international arena until the 1990s and beyond.

In the post-Cold War context, nuclear diplomacy remains as important as ever. States such as North Korea and Israel have not ratified the NPT and continue to destabilise geopolitical relations. Apart from this, an increasing number of states including Algeria and Nigeria, for example, have announced their intention to develop nuclear energy. Since 2000, Iran in particular has refused to comply with international norms on nuclear non-proliferation and nuclear dismantlement. Suspected of developing nuclear weapons, the country has maintained that, on the contrary, it is developing nuclear energy for peaceful purposes. These developments bring the possession and utility of a nuclear capability into question.

7.2   Nature and scope of nuclear diplomacy

The diplomatic utility of nuclear capabilities is that a state derives power, status, prestige and influence from them (Jones 1980: 90). Despite ideological divisions and competition between the two superpowers during the Cold War, cooperation on nuclear-related security issues such as nuclear weapons and capabilities, and the application of nuclear power occurred. Nonetheless, conflicts did emerge over the threat of the use of nuclear weapons including, for example, during the Cuban Missile Crisis of 1962 and on account of the superpowers' erection of nuclear bases in proxy states such as Cuba and West Germany. Throughout these times of conflict and cooperation, the superpowers engaged diplomatically on these issues, resulting in a new type of diplomacy or niche diplomacy, namely nuclear diplomacy. As a new type of diplomacy, nuclear diplomacy focuses specifically on nuclear arms control, nuclear non-proliferation and/or disarmament, which are related and overlapping concepts often used interchangeably (Dougherty & Pfaltzgraff 2001: 374).

The development of nuclear diplomacy is associated with four distinct concepts, namely nuclear deterrence; nuclear arms control; nuclear disarmament; and nuclear

non-proliferation. The "power to dissuade" or deter has become a major element of nuclear diplomacy since the publication, after the Second World War, of Bernard Brodie's *The absolute weapon* (1946). In a subsequent article in *Foreign Affairs,* Brodie (1948: 23-24) explained nuclear deterrence:

> The problem to which we now return is the problem of how to accomplish this act of persuasion in an atomic age, when the already precious objective of peace is made immeasurably more precious by the immeasurably enhanced horror of the alternative.

Brodie explained this "horror of the alternative" as the threat of the devastation of cities, nations and territories using nuclear weapons; a threat which became one of the main tenets of nuclear deterrence. Defined as the persuasion of an opponent that the cost of the use of a nuclear weapon outweighs the benefits of its use, nuclear deterrence can also be defined as the threat to an adversary to not take a particular course of action (Wilson 2008: 422). In *The anatomy of deterrence,* Brodie (1959) outlined the elements of nuclear deterrence, namely capability and credibility. In order for successful nuclear deterrence to occur, a state has to be able to respond to an attack or an impending attack (capability). Successful nuclear deterrence is also incumbent upon the fact that a state believes that it can be attacked (credibility).

Dominated by Realist scholars in the wake of the Second World War and during the Cold War, a main element of nuclear deterrence is that the purpose of nuclear weapons is not to wage war, but to prevent it. Moreover, to be effective, a nuclear deterrent capability cannot be kept secret as public knowledge of nuclear weapons capabilities can intimidate an adversary (Dougherty & Pfaltzgraff 2001: 351-354).

Kegley and Wittkopf (2001: 515-547), and Waltz (1990: 731-745), amongst others, explain nuclear deterrence as an example of nuclear diplomacy between the US and the USSR. Kegley and Wittkopf (2001: 515-547) explained US-USSR nuclear deterrence in several phases. The first phase, compellence (1945-1962), involved US nuclear weapons superiority over the USSR as well as its coercive diplomacy involving an act of war or a threat to the USSR especially during the Korean War. The second phase, mutual deterrence (1962-1983), saw the improvement of the USSR nuclear arsenal and its threats to the US during the Cuban Missile Crisis. Both

superpowers pursued extended deterrence to protect their territories as well as their allies. By the 1970s the superpowers reached a nuclear stalemate, or Mutually Assured Destruction (MAD). Proponents of MAD maintained that nuclear deterrence is achieved by a large nuclear arsenal, the capability to survive a nuclear attack and then delivering a second-strike retaliatory attack. Therefore, proponents of MAD support "deterrence through punishment" (Rourke 2003: 363). The nuclear arsenals of both superpowers laid the foundation for the first diplomatic negotiations on limiting their nuclear arsenals, namely the *Strategic Arms Limitation Talks* (SALT) in 1972 and 1979.

However, subsequent to the USSR invasion in Afghanistan in 1979, relations between the US and the USSR worsened and accelerated the nuclear arms race in the 1980s. Although MAD continued to dominate nuclear deterrence debates, another debate, namely Nuclear Utilization Theory (NUT) emerged. Proponents of NUT maintained that MAD is too much of a gamble and preferred "deterrence through damage denial" (Rourke 2003: 363) which involves the use of nuclear weapons in a 'limited' way (Kegley & Wittkopf 2001: 519).

The third phase of nuclear deterrence as nuclear diplomacy occurred between 1983 and 1993. This period marked a shift in the US nuclear posture from nuclear offense to nuclear defence with US President Ronald Reagan's announcement of the Strategic Defence Initiative (SDI) to place ballistic missiles in space. US-USSR nuclear diplomacy on this issue resulted in the *Strategic Arms Reduction Treaty* (START) of 1991, 1993 and 1997 (Waller 2002: 99-117).

The concept of arms control takes conflict as a given (Műller, Fischer & Kőtter 1994: 2) and has been defined as "agreements designed to regulate arms levels either by limiting their growth or by restricting how they may be used" (Kegley & Raymond 2010: 241). This presupposes the continued, but restrained and regulated, existence of national arms and military establishments (Lamb 1988:19) deemed adequate for security and the promotion of political objectives. Therefore, arms control seeks to:

> impose some kind of restraint, regulation, or other limitations on the qualitative design, quantitative production, method or location of deployment, protection, command and control, transfer to third parties, and planned, threatened, or

actual use of military forces and weapons (Dougherty & Pfaltzgraff 2001: 374-375).

Therefore, as an element of nuclear diplomacy, arms control differs from disarmament in that it involves the continued (but controlled and limited) existence and ownership of arms.

Disarmament, on the other hand, is the "reduction or elimination of weapons" (Kegley & Raymond 2010: 241); "a strategy to preserve peace" (Műller, Fischer & Kőtter 1994: 2); and the "prohibition against their future production" (Dougherty & Pfaltzgraff 2001: 374) as a "means of reducing the likelihood of war" (Lamb 1988:19). The mere existence of nuclear weapons causes instability and insecurity. Therefore, it is assumed that by reducing nuclear arms, conflict and insecurity can be minimised. With regard to nuclear weapons, both nuclear arms control and nuclear disarmament occur. But nuclear diplomacy is not only limited to arms control and disarmament. It is also concerned with the peaceful uses of nuclear energy for civilian and medical purposes, employed in terms of the structures and norms set out by the IAEA.

Whereas concepts such as nuclear deterrence and containment dominated Cold War nuclear diplomacy, the concept of nuclear non-proliferation dominates post-Cold War nuclear diplomacy (Dougherty & Pfaltzgraff 2001: 378). Sparked by fears over the nuclear capabilities of the independent former Soviet states after the collapse of the USSR and the emergence of the commercialisation of nuclear-related services and goods by private enterprises, nuclear diplomacy's focus shifted to the concept of non-proliferation, namely the prevention of the spread of nuclear weapons to additional states. Two types of proliferation are distinguished, namely vertical and horizontal proliferation. Vertical proliferation refers to the increase in nuclear stockpiles in existing NWS, defined by the NPT as "one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967", thus including China, France, the UK, the US, and the USSR (Russia) (UN 1968). Horizontal proliferation refers to the acquisition of nuclear stockpiles by new states or *de facto* NWS (Chakma 2004: 228), including India, North Korea, Pakistan and Israel.

By January 2010, nuclear weapons have proliferated vertically and horizontally (see *Table 3*). This proliferation, according to the Stockholm International Peace Research Institute (SIPRI) and the *Bulletin of the Atomic Scientists*, includes a total of more than 22 000 warheads in NWS and new NWS (Kile *et al.* 2010; Norris & Kristensen 2009: 86-95), compared to 20 000 in NWS in 1995 (Albright *et al.* 1995: 327). In 1995, the US operational inventory included 7 770 strategic and "several hundred" tactical warheads, compared to 8 527 strategic and 2 000 to 6 000 tactical warheads for the Commonwealth of Independent States (CIS), including Russia. The inventories of the UK, France and China included 250 to 300, 500, and approximately 300 respectively (Albright *et al*. 1995: 327). This is far less than the estimated 70 000 nuclear weapons which existed in NWS nuclear arsenals during the Cold War (Tannenwald 2007: 1).

Table 3: SIPRI's estimated global nuclear weapons inventories (2010)

State	2010
USSR/Russia	12 000
US	9 600
France	300
China	240
UK	225
Israel	80
Pakistan	70-90
India	60-80
North Korea	Unknown
TOTAL	22 600

Albright *et al*. (2010)

Despite these figures, the number of nuclear weapons has remained relatively stable since 1990. In addition, more states have voluntarily disarmed their nuclear weapons and joined the NPT such as the former USSR states of Belarus, Kazakhstan and the Ukraine who decided to transfer the Soviet-era nuclear weapons on their territory to

Russia; a process which was completed in 1996 (Spector 2002: 122). In 1990, 141 states were party to the NPT (UN 1990: 457). By the time the 1995 REC took place, 181 states were party to the NPT (UN 1995a: 248). At the 2010 NPT RevCon, which took place in New York in May 2010, 189 states were party to the NPT (UN 2011a). Only three states have not signed the NPT, namely India, Pakistan and Israel. Taiwan is not recognised as a sovereign state and North Korea withdrew in 2003.

Nuclear diplomacy includes arms control, disarmament, non-proliferation as well as nuclear deterrence. Accordingly, in this study, nuclear diplomacy is defined as the interaction among and between international actors (be they states, international organisations, individuals and transnational non-state organisations) on nuclear-related issues, actors and interests (be they material or non-material) to achieve objectives aligned with an actor's construction of its self- or national interests, its particular identity and the nuclear-related norms it initiates, innovates, maintains, and with which it is compliant or non-compliant. This definition includes a variety of actors and is not limited to states as the traditional and only actor in the nuclear field. Increasingly, non-state actors such as private corporations participate in scientific research and development, and trade in nuclear material, goods, equipment and services. Moreover, concerns have also been raised about the illicit trade in nuclear material, goods, equipment and services.

In 1995 the IAEA established the IAEA Illicit Traffic Database (ITDB) to gather information on "incidents of illicit trafficking and other unauthorized activities involving nuclear and radioactive materials" (IAEA 2007). From January 1993 to December 2006, a total of 275 incidents involving "unauthorized possession and related criminal activities" were recorded. These incidents included "illicit trafficking" elements such as illegal possession, movement, or attempts to illegally trade in these materials (IAEA 2007). Currently 96 states, including South Africa, participate in the ITDB. Thus, the practice of nuclear diplomacy is both bi- and multilateral.

7.3   Forms of nuclear diplomacy

In the context of nuclear diplomacy, the most notable case of long-term bilateral nuclear diplomacy is that practiced between the US and USSR which culminated in SALT in 1972 and 1979; START of 1991, 1993, 1997 and 2012; and the *Strategic*

Offensive Reductions Treaty (SORT) of 2002 (Waller 2002: 99-117). Other bilateral nuclear diplomatic efforts include, for example, nuclear-related cooperation agreements between the US and China; between the US and South Africa; and uranium trade between Brazil and Turkey.

The first examples of successful multilateral nuclear diplomacy are the *Limited Test Ban Treaty* (LTBT) of 1963 and the NPT of 1968 (Waller 2002: 103; Kegley & Raymond 2010: 241-242). The former prohibited nuclear testing anywhere on earth (except underground) and the latter "slowed down the expansion of the club for nuclear powers" (Hughes 1997: 141). Multilateral nuclear diplomacy is predominantly conducted under the auspices of multilateral organisations such as the UN; the IAEA; the Conference on Disarmament (CD); the Organization for the Prohibition of Chemical Weapons (OPCW); and the Preparatory Commission for the Comprehensive Test Ban Treaty Organisation (CTBTO).

Apart from multilateral conferences and summits, states also participate in multilateral nuclear diplomacy through their accession to and ratification or signing of international nuclear-related agreements. Another form of multilateral nuclear diplomacy involves the interactions between a single state (as the host) and a number of other states. President Barack Obama's nuclear summits in 2010 and 2012 are examples of this form of diplomacy. Upon the invitation of President Obama and on behalf of the US, 47 states met in Washington in April 2010 on matters relating to nuclear security and nuclear terrorism (Obama 2010). A similar follow-up meeting of the NSS took place in South Korea in 2012.

These forms of nuclear diplomacy have resulted in the establishment of new nuclear norms (such as the establishment of nuclear weapons free zones), nuclear export regimes, agreements and conventions on nuclear terrorism. So-called non-proliferation export control regimes include the NSG; the Australia Group (AG); the Missile Technology Control Regime (MTCR); The Hague Code of Conduct against Ballistic Missile Proliferation (HCOC); the WA; and the ZC (CNS 2011a).

Regionally, several non-proliferation organisations and regimes are in operation. In Europe, the European Union (EU); the Organisation of Security and Cooperation in Europe (OSCE); the European Atomic Energy Community (EURATOM); the Euro-

Atlantic Partnership Council (EAPC); the North Atlantic Cooperation Council (NACC); the North Atlantic Treaty Organization (NATO); the North Atlantic Assembly (NAA); the Nuclear Energy Agency (NEA); the CIS; the Science and Technology Center in Ukraine (STCU); and the International Science and Technology Center (ISTC) all serve as fora for nuclear diplomacy (CNS 2011a).

In Asia, the Arms Control and Regional Security in the Middle East (ACRS); the Association of Southeast Asian Nations (ASEAN); the Korean Peninsula Energy Development Organization (KEDO); the Permanent-5 Efforts for Mid-East Arms Transfer Restraint; the Six-Party Talks on North Korea; and the South Asian Association for Regional Cooperation (SAARC) are fora for the conduct of nuclear diplomacy. In Africa, the AU fulfils a similar function. In Latin America and the Caribbean, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC); the Organization of American States (OAS); the Organization for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL); and the Rio Group operate. Other global and regional non-proliferation organisations include the Group of Eight (G-8); the Global Initiative to Combat Nuclear Terrorism (GICNT); the Non-Aligned Movement (NAM); and the US-led Proliferation Security Initiative (PSI) (CNS 2011a).

Major multilateral nuclear non-proliferation treaties include the NPT; the CTBT; the *Treaty Banning Nuclear Tests in the Atmosphere, in Outer Space and Under Water* (Partial Test Ban Treaty) (PTBT); the *Convention on the Physical Protection of Nuclear Material* (CPPNM); the *Convention on Nuclear Safety*, the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management*; and the *Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and Ocean Floor and in the Subsoil Thereof* (Seabed Treaty) (CNS 2011b).

Regional nuclear weapon free zones (NWFZs) that are multilateral in nature are some of the recent normative innovations of nuclear diplomacy. By 2011, several NWFZs were operational (see Chapter 5) (CNS 2011b).

Thus, the forms of nuclear diplomacy have expanded since 1945 and now included both bi- and multilateral diplomacy. Diplomatic interactions between states on

nuclear-related issues were established during the Cold War. Subsequent to the end of the Cold War, new nuclear security concerns such as nuclear terrorism, illicit nuclear trafficking and the danger posed by rogue or deviant states emerged, which are addressed through export control regimes, NWFZs and multilateral organisations and treaties.

7.4 The meaning, implications and utility of nuclear diplomacy

For the purpose of this study, the operational definition of the concept of nuclear diplomacy was based on constructivist tenets. Therefore, in following Guzzini (2007 & 2009), the clarification of the concept nuclear diplomacy includes an analytical assessment of its meaning and a constructivist analysis of its performative aspects which are embedded in its conceptual history or genealogy. The latter, in particular, involves the development of nuclear diplomacy and its conduct. According to Guzzini (2009: 12), an analysis of a concept in terms of its meaning is "part of the social construction of knowledge". More importantly, the definition of a concept is in itself an exercise of power and therefore "part of the social construction of reality". Thus, in defining nuclear diplomacy a particular reality is constructed.

The implications of nuclear diplomacy are wide-ranging. Nuclear diplomacy denotes the existence of a particular type of diplomacy that determines and applies internationally-agreed safeguards and principles to verify the nuclear facilities and intentions of states. It also involves the safety and security of nuclear material, scientists and installations. Lastly, it entails the enforcement of norms relating to the development, application, maintenance and transfer of nuclear science and technology for peaceful purposes.

A more significant implication of nuclear diplomacy is that it is an instrument of power, authority and influence. States with a nuclear capability wield significant power, authority and influence. However, a state such as South Africa, which no longer has nuclear weapons, continues to wield considerable soft or normative power. Checkel (2008: 80) refers to the 'compulsive' and "multi-faceted face of power", which refers to broader conceptions of power to capture its institutional and productive dimensions. Institutional power is defined as actors' "control of others in indirect ways, where formal and informal institutions mediate between A and B;

working through the rules of these institutions", whereas productive power is generated by discourse and knowledge systems through which meaning is produced and transformed (Checkel 2008: 80).

This study follows Baldwin (2002: 177-191) in employing power as a generic concept that is used interchangeably with related concepts such as influence, control, coercion, force, persuasion, deterrence, compliance and inducement. The departure from "power as resources" to "relational power" reiterates the social, rather than material, construction of power. Power is a multidimensional concept that, according to Baldwin (2002: 178-179) includes the dimensions of scope, domain, weight and means. Scope refers to the aspect of B's behaviour affected by A, which implies that an actor's power may vary from one issue to another. The domain of an actor's power refers to the number of actors under its influence. This implies that an actor can have considerable influence in one area, and almost none in another. The weight of an actor's power determines the probability that B's behaviour is or could be affected by A and A's ability to influence B is dependent on the cost to A. For example, is it costly or cheap to get B to do what A wants? Means refer to the different ways in which an actor can exercise influence, namely through symbolic, economic, military or diplomatic means.

Apart from understanding what nuclear diplomacy means, it is also instructive to determine what nuclear diplomacy does. Therefore, the performative aspects of nuclear diplomacy are equally important. Five performative aspects of nuclear diplomacy can be identified, namely its official representation at bi- and/or multilateral conferences; meetings and negotiations on nuclear-related issues; its establishment and maintenance of nuclear-related relations with other actors; its initiation and maintenance of ideas on the use of nuclear technology; its socialisation in order to entrench nuclear-related norms in international relations, considering that material resources only "acquire meaning for human action through the structure of shared knowledge in which they are embedded" (Kegley & Raymond 2010: 40); and its intersubjective understandings of the "nuclear taboo" and the peaceful uses of nuclear power. Therefore, nuclear diplomacy is a useful practice which has meaning for states. Moreover, nuclear diplomacy has implications for the conduct of a state's diplomacy, as well as its international relations.

7.5   Elements of nuclear diplomacy

A number of observations can be made about the practice of nuclear diplomacy. Firstly, it is a particular type of diplomacy or a diplomatic niche. Secondly, it is a "Janus-faced" diplomatic practice. Actors, on the one hand, attempt to prevent the spread and use of nuclear weapons and, on the other hand, attempt to acquire nuclear-related capabilities. In the third instance, more diplomatic instruments and initiatives should be developed to accommodate non-state nuclear actors, as the existing export and trade regimes are not sufficient to address pertinent issues in respect of nuclear non-proliferation. Finally, the so-called "nuclear taboo" regarding the non-use of nuclear weapons persists, whereas the civilian use of nuclear energy has increased substantially with scientific developments in several areas, including medicine and physics.

The conduct of nuclear diplomacy includes a variety of practices focussing on various aspects of controlling the use of nuclear energy. As indicated earlier, it entails, amongst others, arms control, non-proliferation and deterrence. These correlates of nuclear diplomacy undermine a comprehensive understanding of state relations on the issue of nuclear power. The concept nuclear diplomacy nevertheless provides a comprehensive approach to state practices that prevent nuclear catastrophes but also their attempts to secure nuclear energy for peaceful purposes. As a diplomatic practice, nuclear diplomacy is no different from other modes of diplomacy identified by, amongst others, Berridge (2010: 25-251). These modes are telecommunications, including routine and crisis diplomacy; bilateral diplomacy, including conventional and unconventional bilateral diplomacy; multilateral diplomacy, including international organisations; summitry of Heads of States and Governments; and mediation of conflict.

However, nuclear diplomacy differs from these modes in that it has a specific focus area (nuclear energy). Actors involved in it are divided into two categories, namely NWS and NNWS, with an increasing number of developing states with a nuclear weapons capability.

7.6   Power, authority and nuclear diplomacy

A state's nuclear capability empowers it significantly. The direct opposite of this does not necessarily apply to states such as South Africa and Libya that have terminated their nuclear weapons programmes. Instead of experiencing a decrease in power, these states are regarded as having unrivalled normative, or soft, power due to their commitment to nuclear non-proliferation. Like hard power, soft power also endows a state with significant authority. The concepts power and authority are closely intertwined. In fact, authority is regarded as a form of power. In a Dahlian sense, power is the ability of an actor to get another actor to do something it would not do otherwise. But in the case of authority, the subordinate actor is driven by obligation - not by power or force - to do something it would not do otherwise. As a form of power, authority can be defined as "legitimate domination" but, as Lake (2007: 51) maintains, it is 'distinct' from but "intimately related" to coercion. The purpose of coercion is to manipulate incentives so that the subordinate actor complies, but there is no obligation on the subordinate actor to do so.

Authority is no longer only public authority. It has increasingly taken on private dimensions. For Hall and Biersteker (2002: 5) "there are so many sites or locations of authority that are neither state, state-based, nor state-created". Moreover, the state is no longer the "sole, or in some instances even the principal, source of authority, in either the domestic arena or in the international system". In fact, Rosenau (1992: 253-272) referred to this phenomenon as the "relocation of authority". Hall and Biersteker (2002: 9-18) distinguish between three types of authority: market, moral and illicit authority. Rosenau (1992: 265-269) adds spontaneous authority as illustrated by the spontaneous convergence of prodemocracy forces on Tiananmen Square in Beijing, China, in May 1989. Rosenau (in Beeson 2004: 518) also identifies the following other types of authority, namely moral, knowledge-based, reputational, issue-specific and affiliative authority.

Reference was previously made to the rights and obligations associated with authority. Reus-Smit (2002: 1) argues that states' recognition of the authority of International Law results in their compliance with that law. Legal obligations focus on the importance of settled norms and procedures in International Law as regulators of international relations (Reus-Smit 2002: 2).

It is widely accepted by theorists that the contemporary international system lacks political authority. This view of the anarchical nature of the international system is shared by constructivists, most notably through Wendt's (1992: 391-425) statement that "anarchy is what states make of it". For Lake (2007: 56), hierarchy exists when one (dominant) actor possesses authority over another (subordinate) actor. In Max Weber's view authority derives from law, that is, law precedes authority. However, if authority creates law, then authority must precede law (Lake 2007: 53-54). But authority is also conceptualised as relational, namely resting on a 'bargain' or 'exchange' between ruler and ruled. Lake (2007: 55), therefore, maintains that a relational conceptualisation of authority can also be applied to the international system, based on a 'bargain' or 'exchange' of compliance.

Hall and Biersteker (2002: 4) assert that authority is an institutionalised form or expression of power. For them, power and authority are distinguished by the latter's legitimacy claims. In other words, the latter involves both the claiming of rights and the recognition of obligations. Moreover, possessing legitimacy indicates some form of normative consent and recognition of an authority by the governed, ruled or regulated. This results in an "implicit social relationship" based on trust, recognition and norms (Hall & Biersteker 2002: 5).

For Hurd (2007: 29) legitimacy is one instrument to increase power. Hurd (2007: 7) defines legitimacy as "an actor's normative belief that a rule or institution ought to be obeyed". He describes it as a "subjective quality, relational between actor and institution, and is defined by the actor's *perception* of the institution". The source of a perception is the "substance of a rule, the procedure or source by which it is constituted". According to Hurd (2007: 12):

> legitimacy matters to social institutions because it affects the decision calculus of actors with respect to compliance, it empowers the symbols of the institution, which become political resources that can be appropriated by actors for their own purposes; and it is the key to their being recognized by actors as 'authoritative.

As a socially-constructed phenomenon, legitimacy affects and determines an actor's behaviour, identity and interests (Hurd 2007: 16 & 19). International institutions,

therefore, according to Hurd (2007: 19) constitute states; their interests; their behaviour; and how institutions can be "sites for the contest between states over status, legitimacy and power".

For constructivists, power is a social construct, determined by a state's identity, interests and roles. Therefore, in its conduct of nuclear diplomacy, a state will attempt to assert its (hard or soft) power to enhance its interests. But power also bestows a state with authority which, according to Cutler (2002: 27), "requires a basis of trust rather than calculation of immediate benefit". Consequently, nuclear cooperation between actors must involve the development of habits, norms, rules and shared expectations. The institutionalisation of cooperation on these norms, habits and rules means that actors recognise the legitimacy and efficacy of its authority. One example of this authority is niche diplomacy.

8. Niche diplomacy

Niche diplomacy refers to diplomatic specialisation in a particular area. It also refers to "concentrating resources in specific areas best able to generate return worth having rather than trying to cover the field" (Evans in Henrikson 2005: 67). The ability to "generate return worth having" implies that a state wants to achieve non-material objectives with niche diplomacy which, in turn, can generate international prestige, status, material benefit, soft power and moral authority. For a state to acquire and maintain a diplomatic niche, it requires authority, influence, power, recognition, a secured position in a globally competitive arena through publicity, advocacy and positive branding (Henrikson 2005: 70-71).

The concept of niche diplomacy, according to Cooper (1997: 5), also focuses on "the ability of individual countries to identify and fill niche spaces on a selective basis through policy ingenuity and execution". Therefore, niche diplomacy can serve as an instrument to examine the behaviour of a state whose "leaders consider that it cannot act alone effectively but may be able to have a systemic impact in a small group or through international institutions" (Keohane in Cooper 1997: 8). Typically, states practicing niche diplomacy focus on a specifically selected issue, organisation or activity. Moreover, the sources of niche diplomacy are located in the tenets of

middle power diplomatic behaviour, which have a strong normative foundation and emphasise "entrepreneurial flair and technical competence" (Cooper 1997: 6, 9).

Other key features of niche diplomacy are the focus on consensus and coalition building; cooperation on an issue-specific basis; and adopting the role of bridge-builder, mediator, facilitator or catalyst. The latter involves planning, convening and hosting meetings, prioritising for future meetings on a particular issue, and drawing up declarations and manifestos (Cooper 1997: 9).

Countries engaged in niche diplomacy employ various diplomatic practices including confrontation, parallelism and cooperation to achieve material and non-material rewards such as status, prestige and trade opportunities. Cooper (1997: 1-24) provides a useful analytical framework to determine the link between a state's identity, role and interests in respect of its nuclear diplomacy (see *Figure 3*). He initially distinguishes between the form of a state's behaviour (heroic or routine approach) and the scope of its activity (discrete or diffuse) but then proceeds to distinguish between the focus or target of its diplomatic activity (multilateral or regional) and the intensity of its diplomatic style (combative or accommodative).

Figure 3: Cooper's extended framework of middle power behaviour
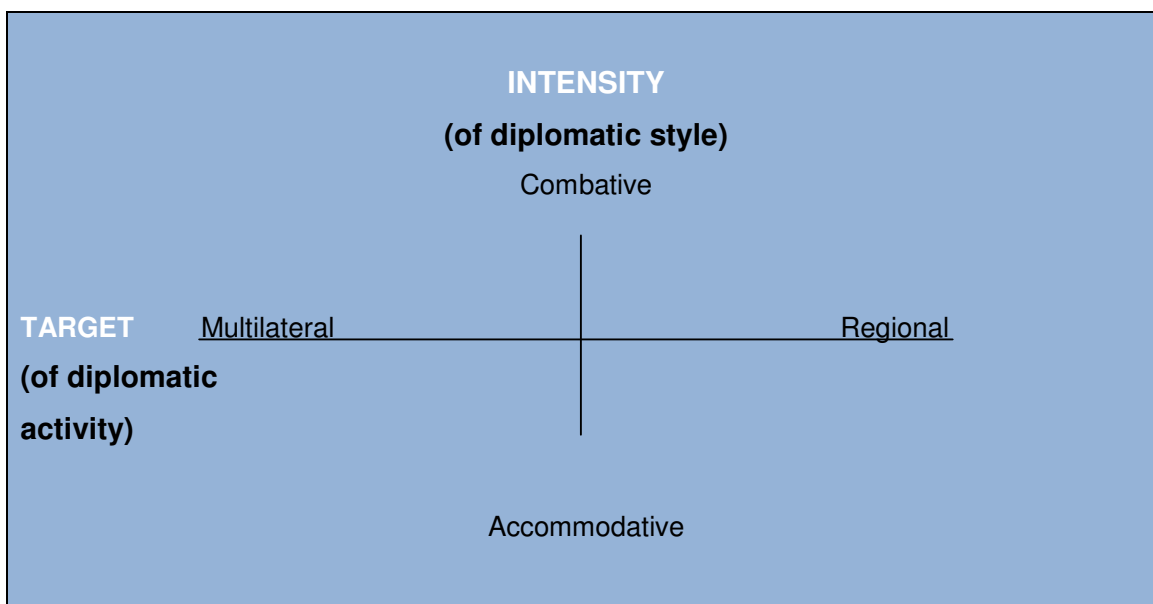
Cooper (1997: 17)

The two latter two aspects, namely the target of diplomatic activity and intensity of diplomatic style is used to produce a 2x2 matrix (see *Figure 3*) which serves as an extended framework to describe, classify and analyse middle power behaviour. In the context of nuclear diplomacy, Cooper's extended framework will be applied to South Africa's nuclear diplomacy.

9. Conclusion

This chapter outlined some of the key elements of constructivism relevant to the study. It focussed primarily on the importance of identity, interests, roles and norms (see *Figure 4*), which inform diplomatic behaviour in three ways. Norms are constitutive (they constitute what is considered as activity), constraining (they limit an actor's action); and enabling (they allow for a certain course of action). Against this background, this study contributes to the formulation of a constructivist approach to nuclear diplomacy (see *Figure 4*). In the context of nuclear diplomacy, a state's identity is mainly determined by the distinction between NWS and NNWS in terms of the NPT. A state's role in its conduct of nuclear diplomacy is that it either complies with nuclear norms, or not, whereas its interests are either material or non-material. Finally, the three major norms associated with nuclear diplomacy are the three pillars of the NPT, namely nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy.

Against the aforesaid, this study traces South Africa's nuclear diplomacy from 1990 until 2010 through four illustrative case studies. In each case, the country applied one, or a combination, of three niche diplomatic strategies during this period, which resulted at times in one or more particular identities, roles, interests, norms and ideas (see *Figure 4*).

Constructivists maintain that diplomacy is guided by the intersubjectively shared norms, ideas and values of actors. This opens the way for the inclusion of the social aspect of their diplomatic behaviour. The social aspect is important since shared ideas, norms and values constitute an ideational structure which constrain and shape actor behaviour (see *Figure 4*). Moreover, these shared ideas and knowledge are major building blocks of the international reality. The ideational structure constitutes and regulates actors. In other words, in its interactions (or socializing)

ideational structures contribute to an actor's redefinition of its interests and its identities. These ideational structures and actors (or agents) co-constitute and co-determine each other.

Figure 4: Elements of a constructivist approach to nuclear diplomacy

1990 ──────────────────────────────────▶ 2010

Niche diplomatic strategies		
Confrontation	Parallelism	Partnership

Case studies illustrative of South Africa's post-1990 nuclear diplomacy

Nuclear export control regimes

IAEA

Pelindaba Treaty

NPT

Elements of a constructivist approach to nuclear diplomacy

Identity
Nuclear weapons state
Non-nuclear weapons state

Roles
Compliance
Non-compliance

Interests
Non-material (status & prestige)
Material (trade & military power)

Norms & ideas
Nuclear non-proliferation
Nuclear disarmament
Peaceful uses of nuclear energy

Nuclear diplomacy

Author's own compilation

Having outlined the origins, assumptions, characteristics and contribution of constructivism, the next section provides a conceptual classification of and a framework for the analysis of diplomacy and nuclear diplomacy in particular.

This chapter presented the analytical framework and constructivist approach that forms the basis for the discussion and analysis of the study's four case studies, namely South Africa's nuclear diplomacy in respect of the nuclear non-proliferation

export control regimes; the IAEA; the Pelindaba Treaty; and the NPT in the next four chapters of the study.

CHAPTER THREE

SOUTH AFRICA AND THE NUCLEAR NON-PROLIFERATION EXPORT CONTROL REGIMES

1.   Introduction

On 10 July 1991 South Africa became a State Party to the NPT. However, it was only after President de Klerk's 1993 announcement that the country had produced at least six "nuclear devices" that the full extent of the country's nuclear weapons programme became known. De Klerk's announcement also raised the questions of how South Africa developed its nuclear weapons capability, and which countries assisted it during this process. In other words, it raised questions on the country's position, involvement and non-compliance with the norms of the nuclear non-proliferation export control regimes operational at the time.[16]

Subsequent to his election as South African President on 14 September 1989, FW de Klerk, according to Waldo Stumpf (1995a) of the AEC, "instructed that an investigation be carried out to dismantle the nuclear deterrent completely with the aim of acceding to the NPT as a state without a nuclear weapons capability". A first report on the matter was submitted to President De Klerk in November 1989 and he subsequently appointed an Experts Committee under the chairmanship of Prof Wynand Mouton, a nuclear physicist, to outline procedures to dismantle and destroy South Africa's "nuclear devices" (De Klerk 1993). These developments paved the way for a new phase in South Africa's nuclear diplomacy and more pertinent to this chapter is that this phase paved the way for South Africa's greater involvement in and compliance with nuclear export control regimes.

The aim of this chapter is to analyse South Africa's involvement in multilateral nuclear export control regimes as a representative case study and manifestation of South Africa's nuclear diplomacy as a FNWS. As a former illicit importer and exporter of nuclear-related equipment South Africa was determined to project itself

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[16] For the purpose of this study, the concept nuclear non-proliferation export control regimes is used interchangeably with the concepts multilateral nuclear export control regimes; nuclear export control regimes; or nuclear export regimes.

as a rehabilitated nuclear weapons state. Despite this and as will be pointed out, the South African government's efforts were undermined by a series of contentious nuclear proliferation-related incidents, most notably the involvement of South Africans in the Khan proliferation network.

The chapter is divided into three main sections. The first section defines and analyses the nuclear non-proliferation export control regime. The second section analyses South Africa's institutional framework to comply with its international commitments due its membership of various nuclear export control regimes. The final section includes an analysis and assessment of South Africa's nuclear diplomacy *vis-à-vis* these regimes. In particular, the chapter analyses the links of the Khan network with South Africans, and their implications for the country's niche diplomacy and state identity.

2. Nuclear non-proliferation export control regimes: definition and utility

A regime can be defined as "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations" (Krasner 2009: 113). Regimes are more than mere temporary arrangements that change with shifts in power and interests. Regimes imply certain norms and expectations, but also a specific form of cooperation. Regime-governed behaviour are not based on short-term interests only but also on the principle of reciprocity. In accepting reciprocity, a state will sacrifice its short-term interests with the expectation that other states will reciprocate, even if they are not obliged to do so. For Krasner (2009: 114), principles and norms "provide the basic defining characteristic of a regime". Several explanations for regime development can be provided. According to Krasner (2009: 120), some explanations are based on a state's egotistic self-interest; political power; norms and principles; habit and custom; and knowledge.

Global nuclear export or nuclear non-proliferation regimes originated prior to the Second World War as the US, the UK, the USSR, Japan and Germany competed and cooperated to develop nuclear technology, equipment and material (IISS 2007: 8). Originally established as the international "Atoms for Peace" organisation within the UN, the IAEA was the first multilateral effort to create a nuclear export regime.

The *Statute of the IAEA* (hereafter IAEA Statute or the Statute) came into force on 29 July 1957 with the objective to:

> accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world. It shall ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose (IAEA 1957).

Article III of the Statute outlines the functions of the organisation, namely to encourage and assist the development of nuclear science and technology for peaceful uses; overseeing the safety and security of nuclear material and installations for peaceful uses; and enforcing safeguards and verification processes with regards to nuclear disarmament (IAEA 1957).

A former Under-Secretary General for Disarmament Affairs at the UN, Jayantha Dhanapala (2003: vii), explained the need for nuclear export controls by stating:

> The exponential growth in dual-use technology around the globe is redefining national interests and deeply complicating national capacities to regulate trade in sensitive technologies. It is, therefore, important to pursue the efficient and effective implementation of national non-proliferation export controls, while ensuring their responsiveness to new challenges.

Thus, the significant range of technologies, material, equipment and raw materials used to construct nuclear weapons also have legitimate civilian, or peaceful, applications; hence the so-called dual-use dilemma for states (Early 2009: 3).

Multilateral nuclear non-proliferation export control regimes can be defined as "laws, regulations and norms designed to regulate the transfer of WMD components, materials and technologies" (Beck & Gahlaut 2003: 2). Nuclear non-proliferation export controls, which form part of these regimes, are defined as:

> laws that regulate the export and sharing of sensitive technologies, equipment, software, and related data and services to foreign states and citizens, including to foreign nationals or representatives of a foreign entity on

domestic territory, for reasons of national security and/or protection of trade (Early 2009).

Both definitions refer to the regulation of various objects through several instruments. These controls are not necessarily complete prohibitions. Rather, they require that licenses or government permission be obtained for the export or dissemination of controlled goods and dual-use technologies.

Multilateral nuclear non-proliferation export control regimes share the following characteristics. They are voluntary, informal and impose no legally-binding obligation on their participants; they involve like-minded states; they have exclusive membership criteria; they rely on states' voluntary cooperation, consensus agreement, and communication to improve national export controls; and they enable the coordination of national nuclear export control policies to control the proliferation of controlled goods through the joint implementation of common export control lists by participating governments. Therefore, members can trade more freely with one another because they know that such trade is safe (Early 2009).

The utility of nuclear export controls is wide-ranging. Firstly, they preserve global security by preventing the spread of nuclear weapons or nuclear WMDs by deviant international actors. In an address to the NSG, former IAEA Director General and Executive Chairman of the UN Monitoring, Verification and Inspection Commission (UNMOVIC), Hans Blix (1997: 11) expressed the importance of export controls, stating that "export control is an important component in the efforts to prevent further nuclear proliferation".[17] Secondly, nuclear export controls can delay the acquisition of nuclear WMDs. In the third instance, export controls "buy time" for diplomatic channels to operate. A fourth utility is that these controls also serve as a deterrent by increasing the cost of acquiring WMDs. In the fifth instance, they contribute to the protection of commercial interests and secure trade in dual-use goods between countries. Finally, nuclear export controls assist to "reinforce international non-proliferation norms" (Beck & Gahlaut 2003: 2-4; Bertsch 2003: ix; Early 2009; Krasner 2009: 117). Therefore, these regimes offer significant benefits to states.

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[17] UNMOVIC was responsible for investigating Iraq's nuclear weapons programme prior to the US-led invasion of Iraq in March 2003. Maintaining that Iraq did not have any WMDs in contrast to the view held by the US government, Blix resigned from UNMOVIC in June 2003.

3. The principal nuclear non-proliferation export control regimes

The UN Office of Disarmament cites six principal multilateral export control regimes, namely the Zangger Committee (ZC); the Nuclear Suppliers Group (NSG); the Wassenaar Arrangement (WA); the Missile Technology Control Regime (MTCR); the Australia Group (AG); and the Proliferation Security Initiative (PSI) (UN 2011b). This section outlines each of these regimes and, where relevant, refers to South Africa's nuclear diplomacy pertaining to these regimes.

The decision on 31 August 1994 of the Nelson Mandela-led Cabinet to accept Minister of Foreign Affairs Alfred Nzo's proposals that South Africa should actively participate in various international non-proliferation regimes and suppliers groups; use its position to promote nuclear non-proliferation publicly; and ensure that export controls are not discriminatory against developing countries, introduced a new era for South Africa's nuclear diplomacy (Markram 2004: 12). The Cabinet decision also set the tone for the country's subsequent employment of multilateral diplomacy as an approach to the country's nuclear diplomacy. Some of the early results of this decision were South Africa's membership of multilateral nuclear export control regimes such as the MTCR and the NSG in 1995, as well South Africa's participation in the 1995 REC.

3.1 The Zangger Committee

Established in 1971, the Zangger Committee (ZC) is one of the oldest nuclear export control regimes and not formally part of the NPT regime. The purpose of the ZC, also known as the NPT Exporters Committee, is to "harmonize the interpretation of nuclear export control policies for NPT Parties" - especially the interpretation of Article III (paragraph 2) of the NPT (ZC 2010a), which requires:

> Each State Party to the [Nuclear Non-Proliferation] Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use, or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this article (IAEA 1970).

In deciding to designate its status as 'informal', its membership as voluntary and its decisions legally non-binding, the ZC had, in 1972, reached consensus contained in two memoranda. These covered several issues most notably the definition of and procedures for the export of materials and equipment described, but not defined in Article III (paragraph 2) of the NPT (ZC 2010b: 2). Members of the ZC agreed to apply these two memoranda as a so-called *Trigger List* (ZC 2010a) (see *Table 4*) since they refer to the containment of equipment, items and material whose export would 'trigger' the need for safeguards to be implemented (SIPRI 2005: 711).

Table 4: The Zangger Committee's *Trigger List*

Memorandum	Contents of *Trigger List*
Memorandum A	Defines two categories of nuclear material: • Source material: natural or depleted uranium and thorium • Special fissionable material: plutonium-239, uranium-233, uranium enriched in the isotopes 235 or 233
Memorandum B	Identifies equipment and material specifically designed or prepared for the processing, use or production of special fissionable material in the following categories: • Nuclear reactors • Non-nuclear materials for reactors • Reprocessing • Fuel fabrication • Uranium enrichment • Heavy water production • Conversion

ZC (2010b: 3)

In addition to the two memoranda, the ZC's *Understandings* and *Trigger List* also reflect the requirements set out in the NPT, with the following three conditions of the export or supply of items specified in its *Trigger List*:

- *Condition #1: Non-diversion.* Exports of source or special fissionable material to NNWS shall not be diverted to nuclear weapons or other nuclear explosive devices.

- *Condition #2: Subject to IAEA safeguards.* Exports of source or special fissionable material, as well as transferred equipment and non-nuclear

material, to NNWS shall be subject to safeguards under an agreement with the IAEA.

- *Condition #3: Re-export based on acceptance of safeguards.* Source or special fissionable material, and equipment and non-nuclear material shall only be re-exported to a NNWS if the recipient state accepts IAEA safeguards on the re-exported material or equipment (ZC 2010a; ZC 2010b).

Unlike the NPT and the provisions of the IAEA Statute, verification and compliance arrangements of the ZC are informal and its decisions are not legally binding upon its members. Member states have also agreed to exchange information about exports or issues of licences for exports to any NNWS which is not party to the NPT, through the ZC's system of "Annual Returns" (CNS 2010). The establishment of the ZC and NSG (see section 3.2) are examples of the international norm of nuclear non-proliferation on the conduct of suppliers which should prevent the transfer of nuclear commodities and technologies to specific users for specific purposes. Another norm developed by these organisations is that of transparency. To advance greater transparency, the IAEA has assisted supplier states in publicising their supplier arrangements. The IAEA also publishes the *NSG Guidelines* and *Trigger List*, and the *Zangger Understandings* and *Trigger List* (Thorne 1997: 25-26).

By 2010, the ZC had 37 members, including all NWS; some NNWS; and South Africa which became a member of the ZC on 23 October 1993 (DIRCO 2011a).[18] According to the South African government, the *raison d'être of* the ZC is to "establish guidelines for implementing the export control provisions" of the NPT and to "define and monitor trade in goods and equipment specially designed for nuclear use" (DIRCO 2011a). In South Africa, the ZC Controls are implemented by NECSA, the state-owned nuclear energy corporation (DIRCO 2011a).

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[18] By August 2010, the ZC's 37 members included Argentina, Australia, Austria, Belgium, Bulgaria, Canada, China, Croatia, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Kazakhstan, South Korea, Luxemburg, The Netherlands, Norway, Poland, Portugal, Romania, the Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the UK and the US. The European Commission is permanent observer at the ZC.

3.2   The Nuclear Suppliers Group

Also known as the "London Club", the NSG was established in 1974 as an informal voluntary institution. Its establishment followed the explosion of a nuclear device by India (a NNWS at the time), which "demonstrated that nuclear technology transferred for peaceful purposes could be misused" (NSG 2010a).[19] In 1978, the NSG published its *Guidelines* "to apply to nuclear transfers for peaceful purposes to help ensure that such transfers would not be diverted to unsafeguarded nuclear fuel cycle or nuclear explosive activities" (NSG 2010a). By 1992, the NSG published additional guidelines, the *Dual-Use Guidelines*, for the transfer of nuclear-related dual-use equipment, material and technology, which could be used for an unsafeguarded nuclear fuel cycle or a nuclear explosive activity. These *Guidelines* are the:

- *Guidelines for Nuclear Transfers*, which governs the export of items that are particularly designed or prepared for nuclear use. These items include nuclear material, nuclear reactors and equipment, non-nuclear material for reactors, plant and equipment for the reprocessing, enrichment and conversion of nuclear material and for fuel fabrication and heavy water production, and technology associated with each of these items.

- *Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software and Related Technology*, which governs the export of nuclear-related dual-use items and technologies that "can make a major contribution to an unsafeguarded nuclear fuel cycle or nuclear explosive activity, but which have non-nuclear uses as well, for example in industry" (NSG 2010b).

The purpose of the NSG *Guidelines* is to:

> ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons or other nuclear explosive devices which would not hinder international trade and cooperation in the nuclear field (NSG 2010b).

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[19] By September 2010, the states participating in the NSG included Argentina, Australia, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, the Czech Republic, Denmark Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Kazakhstan, South Korea, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, New Zealand, Norway, Poland, Portugal, Romania, the Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the UK and the US.

In this way, the *Guidelines* aim to "facilitate the development of trade" by providing the "means whereby obligations to facilitate peaceful nuclear cooperation can be implemented in a manner consistent with international nuclear non-proliferation norms" (NSG 2010b).

South Africa joined the NSG on 5 April 1995, prior to the start of the 1995 NPT REC. According to a former South African diplomat, Thomas Markram (2004: 62), South Africa "worked actively" in the NSG and sought to make the operations of the NSG more transparent as the NSG is perceived by developing countries as secretive and exclusive. By its own admission, the South African government regards its role in the NSG as:

- the promotion of the rights of developing states to develop and maintain nuclear energy programmes for peaceful purposes;
- efforts to make the NSG's activities more transparent; and
- Changing the perception among some developing states that the NSG is not an "exclusive secretive club" (DIRCO 2009a: 39).

By adopting these roles, South Africa gained some advantage as it was elected to leadership positions within the NSG. In 1997, for example, South Africa was elected to chair the *International Seminar on the Role of Export Controls.* South Africa's Governor on the IAEA Board, Abdul Minty, acted as the chairperson of the seminar. Attended by all UN member states, academics, the nuclear industry and international organisations, the seminar reiterated the need for suppliers and recipients to evaluate the legitimacy and effectiveness of their domestic nuclear export controls and how these contributed to nuclear non-proliferation. The seminar also proposed steps to increase the transparency of nuclear export controls (DIRCO 2009a: 39).

The South African government often uses its participation in international nuclear-related fora to express its normative approach to international relations, as well as to reiterate its role and identity. One illustration of this is the statement by the South African Minister of Foreign Affairs, Nkosazana Dlamini-Zuma (2007a) speaking at

the opening of the Plenary of the NSG hosted by South Africa in Cape Town on 19 April 2007.[20] Minister Dlamini-Zuma (2007a) stated that whilst the NSG has to:

> consider how to further strengthen the controls on the export of nuclear and nuclear-related material, equipment and technology, it is imperative that we [members of the NSG] do not lose sight of the many people around the world that continue to live in abject poverty.

She also reminded the participants that the efforts of the NSG should:

> contribute to creating a better life for all and not hinder international co-operation on the peaceful uses of nuclear energy, which potentially could strengthen and accelerate the economic development of the economically marginalized parts of the world (Dlamini-Zuma 2007a).

Minister Dlamini-Zuma (2007a) reiterated that this "renewed international focus on the expansion of nuclear energy as *[sic]* renewable energy source" requires "increased international co-operation to ensure the safety, security and peaceful use of nuclear energy". Explaining South Africa's position, she stated that South Africa 'consistently' maintained that the ownership of advanced dual-use capabilities placed a "special responsibility" on a state to remove any concerns and suspicions about nuclear weapon proliferation. Her statement also reflected a level of realism through her reference to the "activities of the illicit network in nuclear technology to manufacture nuclear weapons" which "will continue to impact on the work of the NSG" (Dlamini-Zuma 2007a).

One of the contentious issues faced by South Africa as a member of the NSG is how to handle India. For years, the NSG deliberated on a special dispensation in terms of the NSG *Guidelines* for India, who is not member of the NSG and not a signatory to the NPT, but who has an extensive nuclear industry and weapons programme (DFA 2008). In 2007, members of the NSG resolved to explore ways for co-operation with India in the civil nuclear field. The NSG's support came at a time when India sought

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[20] Nkosazana Dlamini-Zuma first served as Minister of Health in President Mandela's Cabinet. In 1999, President Mbeki appointed her as his Minister of Foreign Affairs, a position she held until the national elections in 2009. She was appointed as President Zuma's Minister of Home Affairs in May 2009. Accordingly, she was familiar with the South African government's position during the whole period from 1994 to 2010.

the NSG's assistance to commence trade in the nuclear sector with several signatories of the NPT.

Since the ANC came to power in 1994, South Africa and India's diplomatic relations strengthened. In fact, the new South African government's foreign policy priorities, according to the then Director-General of the Department of Foreign Affairs (DFA), Rusty Evans (1995: 100), included an "increased emphasis" on Asia and the Far East.[21] As a result, South Africa and India signed a *Strategic Partnership Accord* in March 1997. Notwithstanding these diplomatic developments, South Africa's nuclear non-proliferation stance emerged as a contentious issue between the two countries. For India, South Africa had aligned itself with the position of major nuclear powers in the West on nuclear arms control (Beri 2001).

South Africa's views on India were expressed by the Minister of Foreign Affairs. In response to the question during a Cable News Network-Indian Broadcasting Network (CNN-IBN) interview on 22 July 2007 on whether South Africa has "any objections to sharing its nuclear resources with India", Minister Dlamini-Zuma reverted to South Africa's preference for multilateralism in its nuclear diplomacy. She stated that the "discussion is going to be put in a multilateral among the nuclear suppliers group" where "we will all have to mark *[sic]* some consensus about it" (Dlamini-Zuma 2007b). Implicitly, the South African government supports the NSG's special dispensation for India, which is not a party to the NPT. This indicates South Africa's nuclear partnership with both the developed and developing world.

3.3 The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies

Established in 1995, the Wassenaar Arrangement (WA) is the first global multilateral arrangement which covers conventional weapons as well as sensitive dual-use goods and technologies that can be used in the development of WMDs and their delivery systems.[22] Therefore, the WA was established in the wake of the end of the

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[21] The position Director-General is often also spelt Director General. See http://www.dfa.gov.za and http://www.dirco.gov.za. In 2009 subsequent to the inauguration of President Jacob Zuma, the DFA's name was changed to the Department of International Relations and Cooperation (DIRCO).
[22] By April 2012, the following states participated in the WA: Australia, Austria, Belgium, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Mexico, The Netherlands, New Zealand,

Cold War as "a nuclear export control regime" to "contribute to regional and international security and stability, by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies, thus preventing destabilising accumulations" (WA 2011).

In order to be admitted to the WA, a state has to comply with three requirements. Firstly, it has to be a producer and/or exporter of arms or sensitive industrial equipment. Secondly, it has to maintain non-proliferation policies and appropriate national policies including the adherence to non-proliferation policies, control lists and, where applicable, the guidelines of the NSG, the MTCR and the AG. A state also has to adhere to the NPT; the *Biological and Toxin Weapons Convention* (BTWC); the *Chemical Weapons Convention* (CWC); and, where applicable, START 1, including the Lisbon Protocol. Finally, a state has to maintain fully effective export controls (DIRCO 2011b).

South Africa became the first African member of the WA on 28 February 2006. Prior to its membership, South Africa had incorporated the WA control lists as part of the National Conventional Arms Control Act 41 of 2002. In addition to this, South Africa also participated in the WA's first outreach seminar in Vienna on 19 October 2004. The purpose of the seminar was to "raise awareness" of the WA's role in transfers of conventional arms and dual-use goods and technologies (SIPRI 2005: 706-707). Thus, for South Africa, its membership of the WA illustrates its compliance with the norms of nuclear non-proliferation and the peaceful uses of nuclear energy. Moreover, the country's adoption of the principles of the WA in legislation prior to its membership signals its commitment to nuclear non-proliferation.

3.4 The Missile Technology Control Regime and The Hague Code of Conduct against Ballistic Missile Proliferation

This section specifically focuses on nuclear export control regimes on missile technology and ballistic (*i.e.* nuclear) missile technology.[23] In addition, it focuses on a specific aspect of South Africa's nuclear diplomacy since 1990; namely the country's

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Norway, Poland, Portugal, Republic of Korea, Romania, Russia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the UK and the US.

[23] According to the UN (1991: 18), ballistic missiles are primarily regarded as nuclear weapon delivery vehicles.

(ballistic) missile capability and its dismantling. The rationale for an extended discussion of these regimes is that several developments related to them occurred during the De Klerk presidency and prior to the country's accession to the first of these regimes in 1995. The development of South Africa's ballistic missile capability has been addressed in various sources (NTI 2009a; Steyn, Van der Walt & Van Loggerenberg 2003) and is not the focus of this section. However, some historical references contextualise these developments. The case of South Africa provides useful insights into the operations of a nuclear proliferator as well as the nuclear non-proliferation regime. Despite UN and other sanctions against South Africa, the country continued to develop a rocket and missile industry as part of its armaments industry; thus acting as a nuclear proliferator in non-compliance with the norms of nuclear non-proliferation; nuclear disarmament; and the peaceful uses of nuclear energy as espoused in the IAEA Statute and the NPT.

South Africa's missile development programme commenced in 1963 and resulted early in the manufacturing of the 22km-range Valkiri (a tactical surface-to-surface artillery rocket) and the 4-10km-range V3 Kukri (a tactical air-to-air missile) (UN 1991: 18). As South Africa's missile-related expertise improved, a missile test range was constructed in St. Lucia (close to the Mozambican border) in 1968. The National Party (NP) government also commenced with the development of a single-stage, intermediate-range ballistic missile (IRBM), the first of what became known as the Republic of South Africa (RSA) missile series (see *Table 5*). This initiative formed part of a government-supported commercial space launch vehicle programme in the 1970s with the assistance of, *inter alia,* Israel and Iraq (NTI 2009a). Originally, the intended payload for these missiles was most likely to be the "fission gun-type devices" developed in South Africa between 1971 and 1989, to which Stumpf (1995a) referred.

In 1978 Kentron Missiles, a subsidiary of the state-owned Armscor, was established as the country's dedicated missile manufacturer (NTI 2009a).[24] In 1983, the South African government announced its intention to close the St. Lucia test range and constructed a new range, the Overberg Toetsbaan (OTB or Overberg Test Range) in the De Hoop Nature Reserve in the Overberg in the Western Cape. This

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[24] While still in office, President de Klerk's government presided over the establishment of Armscor successor, Denel (Pty) Limited (hereafter Denel) on 1 April 1992.

development signaled a new era in South Africa's missile capabilities. By the 1980s according to Hannes Steyn (a former member of the Armscor Board); Richardt van der Walt (a former General Manager of the AEC); and Jan van Loggerenberg (a former Chief of the South African Air Force) South Africa's missile arsenal included, *inter alia,* air-to-air missiles and an anti-tank missile (Steyn, Van der Walt & Van Loggerenberg 2003: 54-55).[25] The RSA-3 missile could have delivered a small warhead, and was most likely a space launch adaptation of the RSA-2 missile. In order to support its missile development programme, the NP-led South African government developed an indigenous solid-propellant production capability, the RSA-4 missile, which was developed when President De Klerk announced the dismantlement and destruction of South Africa's "nuclear devices" and, subsequently, its space programme. The RSA-4 missile may have been capable of delivering a 700kg nuclear warhead from South Africa to any location in Southern Africa (Steyn, Van der Walt & Van Loggerenberg 2003: 54-55).

Table 5: South Africa's missile series

Name of missile	Type	Trajectory (km)	Warhead mass (kg)
RSA-1	Intermediate range, single-stage ballistic missile	1 100	1 500
RSA-2	Intermediate range, single-stage ballistic missile	1 900	1 500
RSA-3	Solid-fuel orbital launch vehicle	Information not available	Information not available
RSA-4	Solid-propellant	Information not available	700

NTI (2010)

As South Africa was developing its ballistic missile capabilities, other states met in 1987 to establish the Missile Technology Control Regime (MTCR). An informal and voluntary regime, the purpose of the MTCR is to:

> restrict the proliferation of missiles, complete rocket systems, unmanned air vehicles, and related technology for those systems capable of carrying a 500

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[25] Steyn, Van der Walt and Van Loggerenberg were closely involved in various aspects of the South African nuclear weapons programme.

kilogram payload at least 300 kilometres, as well as systems intended for the delivery of weapons of mass destruction (MTCR 2011).[26]

Notwithstanding these restrictions, partners to the MTCR recognise the "importance of controlling the transfer of missile-related technology without disrupting legitimate trade and acknowledge the need to strengthen the objectives of the Regime through cooperation with countries outside the Regime" (MTCR 2010c). The MTCR *Guidelines for Sensitive Missile-Relevant Transfers* (also called the MTCR Guidelines) and the *Equipment, Software and Technology Annex* provide states with guidelines to legislate national control laws taking a two-category common control list into account. It also provides guidelines to states to deny the transfer of any nuclear weapon delivery systems development (CNS 2011c: 1).

South Africa did not initially join the MTCR. Instead, the country continued with its missile development programme and on 5 July 1989, two months before President De Klerk took office, successfully launched what the South African government called a "booster rocket" but what US intelligence sources called a missile from the OTB (UN 1991: 19; NTI 2009a). According to the UN (1991: 25), the range of this rocket was 1 450 km. Towards the end of 1989 the Berlin Wall collapsed which, *inter alia,* ushered in the demise of the USSR and the end of the Cold War. These events cascaded to Southern Africa with the independence of Namibia; the withdrawal of Cuban troops from Angola; and the USSR's departure from the region.

Despite President De Klerk's announcement on 2 February 1990 on the release of political prisoners like Nelson Mandela and the unbanning of liberation movements such as the ANC, and his decision to commence with the dismantlement and destruction of the country's "nuclear devices" the international community remained concerned about the country's nuclear capabilities and nuclear missile proliferation activities. Several developments contributed to this. Firstly, on 19 September 1990 US Customs officials charged a Dutch national and an accomplice for buying parts for guided missiles intended for sale to South Africa (NTI 2009a).

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[26] By April 2010, the MTCR's members included Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, The Netherlands, New Zealand, Norway, Poland, Portugal, the Republic of Korea, the Russian Federation, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the UK and the US.

Secondly, in November 1990, the South African government admitted that it was conducting a second missile test-flight from an operational site in the Judaean Hills in Israel. This test was followed by a joint Israeli-South African test of Israel's Barak 1 missile off the South African coast in August 1991; followed by US intelligence reports that Israel exported key ballistic missile components to South Africa (NTI 2009a). Further evidence of international concerns pertaining to South Africa's missile capabilities was the publication by the UN Department of Disarmament Affairs of the 1991 report on *South Africa's Nuclear Tipped Ballistic Missile Capability* (UN 1991). The report outlined South Africa's ballistic capabilities and South Africa's nuclear-related diplomatic relations with Israel to acquire these capabilities. In addition to this, reports of South Africa's missile-related nuclear diplomacy with Taiwan and China also surfaced (NTI 2009a).

Amidst all of this, US officials were negotiating with the South African government to terminate the manufacture of long-range missiles and to dismantle its capability to produce large space rockets. South Africa agreed to terminate and dismantle these missiles and capabilities on 30 June 1993. In return, according to the NTI (2009a) South Africa was given access to the military and high-tech markets of industrialised countries. The US government also provided financial assistance to South Africa for the destruction of South Africa's MTCR Category I ballistic missile delivery systems in January 1994. The US assistance included US$ 500 000 for the destruction of South Africa's rocket motor static facility at Rooi Els in the Western Cape. Moreover, the SA-US agreement also resulted in President De Klerk's announcement of the termination of the RSA-3 and RSA-4 space launch vehicle (SLV) programmes. By March 1994, a month before South Africa's first all-inclusive elections in April 1994, negotiations between South Africa and the US on South Africa's membership of the MTCR had already progressed significantly.

Barely a month after the April 1994 elections, the new South African government issued Government Notice No 88, which introduced licensing requirements for all items that fell within the limits of the MTCR. On 4 October 1994, South Africa and the US signed a bilateral agreement on South Africa's termination of its missile development programme (US 1994). Moreover, South Africa undertook to comply with the export guidelines of the MTCR.

South Africa became a member of the MTCR on 13 September 1995. This development can be regarded as one of the first successes of the nuclear diplomacy of the ANC-led government. It can also be regarded as one of the last nuclear-related diplomatic actions of President de Klerk's government, which also presided over the IAEA's successful verification of the dismantling of the country's nuclear weapons programme in 1993 (see Chapter 4). In the case of the MTCR, South Africa's missile-related nuclear diplomacy from 1990 to 1995 was characterised by two strategies, namely cooperation (with the US) and confrontation. The latter refers to South Africa's confrontation with the international community during this period on Israeli-South African cooperation on missile development. This cooperation ended once the ANC came to power as it favoured an independent Palestinian state.

With the government of South Africa as the sole shareholder, Denel is the largest manufacturer of defence equipment in South Africa and operates in the military aerospace and landward defence environment. As indicated earlier, President de Klerk also presided over the termination of South Africa's manufacturing programme for long-range missiles and the dismantling of its capability to produce large space rockets. These developments severely impacted on the operations and revenue of state-owned Denel. There followed a series of restructurings of Denel to align South Africa's major armaments manufacturer with the new South African government's policies and interests.

Despite the termination of a large section of its missile development programme, South Africa was able to maintain and further develop some capabilities. From 1999 onwards, Denel actively sought joint venture partners to develop its missile programme. However, Denel's efforts coincided with a new development pertaining to the missile-related nuclear export control regime. The Hague Code of Conduct against Ballistic Missile Proliferation (HCOC or the Code) entered into force in 2002. Regarded as a political rather than a legally binding instrument by its 131 subscribing states, the Code encourages states to limit and report on their ballistic missile activities. Moreover, it is the only global instrument that morally obliges states to verify the proliferation of ballistic missiles capable of delivering WMDs (HCOC 2011).

Apart from the HCOC, another development impacted on the development of Denel's missile business. In July 2004, a decade after the ANC came to power, the

US government rescinded its debarment against state-owned South African arms manufacturing companies Armscor, Fuchs and Denel. Originally instituted in 1994 in response to the activities undertaken in the US by these three South African state-owned entities during the pre-1994 arms embargo era, the debarment was suspended in 1998 as a result of an agreement between the South African and US governments. In response to the US decision, Deputy Minister of Foreign Affairs Aziz Pahad (quoted in DFA 2004) welcomed the US statement that the South African government "instituted concrete and far-reaching measures to establish a comprehensive and effective national export control regime". This signaled the normalisation of diplomatic relations between the US and South Africa.

Subsequent to several restructurings and cognisant of South Africa's obligations in terms of the MTCR and the HCOC (South Africa became a subscribing state to the Code on 26 November 2006), Denel aligned its nine business entities, which currently (2012) include Denel Dynamics, the only African missile house. Denel Dynamics is a designer, developer, system engineer, manufacturer, supplier and provider of services in all related aspects in the domains of missiles, guided weapons and unmanned air vehicle (UAV) systems (Denel 2010: 36). Denel Dynamic's Missile Business Unit designs, develops and manufactures five types of missiles (see *Table 6*).

The South African National Defence Force (SANDF) remains Denel Dynamic's primary local customer. However, local defence expenditure is insufficient to sustain Denel Dynamics, making it highly dependent on its sales of a small number of products to a limited number of international clients. Denel Dynamics and its counterpart in Brazil cooperated to develop Denel's fifth generation Darter air-to-air missile, which has been integrated with Gripen, the Swedish-built fighter aircraft acquired by the South African government in terms of the South African government's controversial *Strategic Arms Procurement Package*. The fifth generation Darter is expected to enter production in 2012/13 (*Engineering News* 18 January 2012). Denel Dynamic's Umkhonto (MK) surface-to-air missile has proved successful in the South African Navy, while the MK 2 is in production for the Finnish Navy and has also been selected for purchase by Sweden. By 2010, Denel Dynamic's 10km-range Mokopa laser-homing missile was ready for integration with

Gripen but lacked a launch customer, whereas the laser beam-riding Ingwe has been in production for export and will arm the South African Army's future tank destroyer. The television-guided Raptor II boosted standoff bomb is also exported and has been cleared on, amongst others, the Su-24 (Römer-Heitman 2010).

Table 6: South Africa's current missile development programme

Type of missile	Name of missile	Key features of missile
Air-to-air Missile Systems	A-Darter	Infrared air-to-air missile
Air Defence Missile Systems	Umkhonto-IR	Vertically-launched, high-velocity, infrared homing missile
Anti-Armour Missile Systems	Ingwe	Medium-range multi-purpose, anti-armour missile
	Mokopa	Long-range, precision-guided, anti-armour missile
Stand-off Weapon	Raptor II	Long-range, precision-guided weapon that can be launched from a variety of aircraft

Denel (2009: 33-36; 2010: 36)

Addressing the 9th Regular Meeting of Subscribing States to the HCOC in 2010, South African Ambassador Xolisa Mabhongo (2010) stated that South Africa supports efforts to achieve universality of the Code. This statement is in accordance with South Africa's position on global nuclear disarmament. However, South Africa finds itself in a peculiar position. According to the South African government, the country's "advanced arms industry has developed technology and items which could contribute to the development of ballistic and cruise missiles" (DIRCO 2012). Although the country's nuclear-related programme has been terminated, the South African arms and missile industry is one of the country's major export sectors. According to, *inter alia,* Members of Parliament (MPs) (Feinstein 2007; Maynier 2009; De Lille 2010), these industries and the South African government drew considerable domestic and international criticism against post-1994 South Africa due to the country's controversial arms sales.

These developments indicated the South African government's intentions and attempts to expand the South African defence industrial complex. With a workforce of 721, Denel Dynamics Missiles had revenues of R 656 million in, for example, 2010, up from R 575 million in 2009 (Denel 2010: 36). This adds much-needed income to the South African government. However it is too early to determine the implications of the draft 2012 Defence Review under the chairmanship of Roelf Meyer, a former NP-government Minister of Defence, for the South African missile industry.

3.5   The New Agenda Coalition

Towards the end of Nelson Mandela's presidential term, on 9 June 1998, South Africa along with Ireland, Sweden, New Zealand, Egypt, Brazil, Mexico and Slovenia (collectively known as the New Agenda Coalition or the NAC) announced a joint declaration, *Towards a Nuclear Weapons Free World - the need for a new agenda* (DFA 1998). At the announcement of the declaration, Deputy Minister of Foreign Affairs Aziz Pahad (1998) alluded to South Africa's identity as a state which had terminated its nuclear weapons programme. He stated that:

> South Africa's own experience of turning away from the brink of the nuclear weapon abyss is a telling one: not only for the recognised five nuclear weapon states but also for the three nuclear-weapon-capable states.

Pahad further reiterated South Africa's identity and role as a "good international nuclear citizen" by pointing out that South Africa has 'actively' worked to "move the process of nuclear disarmament forward in all disarmament forums including the Conference on Disarmament where the establishment of an Ad Hoc Committee on nuclear disarmament has been proposed (DFA 1998).

Moreover, the South African government referred to the announcement as an "important international initiative on nuclear disarmament" (DFA 1998). With the declaration, South Africa and these like-minded states:

> underlines the threat to humanity represented by the perspective of the indefinite possession of nuclear weapons and calls for a clear commitment to the speedy, final and total elimination of nuclear weapons and nuclear weapons capability (DFA 1998).

For South Africa, this reiterated its niche role and state identity in nuclear diplomacy. South Africa's decision to sign the NAC declaration serves as an example of the application of Henrikson's (2005: 74) three niche diplomatic strategies. South Africa's employment of partnership is clear in its cooperation with other signatories to the NAC declaration, and parallelism is evident in its involvement in this concurrent initiative alongside existing nuclear regimes. Confrontation as a niche diplomatic strategy is evident in South Africa's support of the text of the NAC declaration:

> We can no longer remain complacent at the reluctance of the nuclear-weapon States and the three nuclear-weapons-capable States to take that fundamental and requisite step, namely a clear commitment to the speedy, final and total elimination of their nuclear weapons and nuclear weapons capability and we urge them to take that step now (NAC 1998).

Moreover, NAC members declared: "We are deeply concerned at the persistent reluctance of the nuclear-weapon states to approach their Treaty obligations as an urgent commitment to the total elimination of their nuclear weapons" (NAC 1998). Coalition members also called on the governments of each NWS and "nuclear-weapons-capable states" to:

> commit themselves unequivocally to the elimination of their respective nuclear weapons and nuclear weapons capability and to agree to start work immediately on the practical steps and negotiations required for its achievement (NAC 1998).

Therefore, South Africa's involvement in the NAC reflects some nuclear activism (confrontation with NWS); cooperation with these like-minded states; and parallelism. The latter is further evident in and enhanced by the country's participation in the NAC as well as in other regimes.

In summary, the nuclear export control regimes addressed in this section have been criticized by non-members as "violating obligations to foster international cooperation in the peaceful uses of the related technologies under the NPT, the CWC and the BWC" (UN 2004: 47-48). Non-members also regard these export control regimes as 'suspicious' and that they serve "the defence of economic privileges by their

predominantly more wealthy, industrialized members" (UN 2004: 47-48). In some cases, members of these regimes from developing countries such as Brazil also maintain that these export controls are discriminatory where the transfer of advanced nuclear technology is concerned (Zaborsky 2003: 134). In response to these accusations, regime members and participants have defended these regimes as "necessary to implement their undertakings under the legal regimes or to prevent dangers to peace and international security" (UN 2004: 47-48).

Despite differences in the nature, membership, structure and operations of each of the existing global nuclear export control regimes, all share the same objective: to prevent nuclear proliferation. Moreover, these regimes have evolved from initial global cooperation on nuclear non-proliferation to the global coordination of nuclear non-proliferation (Zaborsky 1998: 92-93). Some regimes such as the WA and the MTCR have coordination arms only. Consequently, non-proliferation efforts and regimes focus predominantly on limiting technical proliferation instead of focusing on the level of political decision-making of nuclear proliferants. The ZC *Trigger List* and the NSG *Guidelines* are examples of the focus on technical aspects of proliferation. As Zaborsky (1998: 94) contends, a state or a non-state actor with a strong political will to develop a nuclear weapons capability is "likely to do so despite technical barriers to proliferation". Therefore, evidence suggests that there is a need for the development of a new legal framework for international nuclear export control cooperation (SIPRI 2005: 701).

South Africa's defence in supplier regimes of developing countries' right to access advanced nuclear technology can be regarded as a strategy of confrontation against the more advanced developed states in the supplier regimes. In reinforcing its status as a "responsible producer, possessor and trader of advanced nuclear diplomacy" (DFA 2009a), South Africa has partnered with major nuclear states in control regimes to combat nuclear proliferation. In this respect, former South African diplomat Thomas Markram (2004: 61) described South Africa as a "dialogue bridge and interlocutor between the developed and developing states". From the analysis in the aforesaid it is evident that nuclear non-proliferation export control regimes and South Africa's involvement therein give credence to the country's recognition and observance of the norms of nuclear non-proliferation, nuclear disarmament and the

peaceful uses of nuclear energy. If not managed properly and constrained, a state's "dual-use dilemma", its nuclear ambitions and its need for status and prestige are a powerful combination that contributes to nuclear proliferation.

4. South Africa's nuclear non-proliferation export control policy and mechanisms

Whereas the previous section outlined nuclear export control regimes and referred to South Africa's nuclear diplomacy related to these regimes, this section analyses the dynamics and processes contributing to South Africa's compliance with the norms associated with the export control regimes. The purpose is to indicate South Africa's efforts to also depart from its nuclear past on an institutional level, which informed its foreign policy and nuclear diplomacy. Although this nuclear past on an institutional level is not the main focus of this study and also considering that it is addressed in detail by respectively O'Meara (1996); Steyn, Van der Walt and Van Loggerenberg (2003); and Sanders (2006), a brief historical overview is provided to contextualise South Africa's efforts to transform its nuclear policy and diplomacy. In the process, reference is made to the South African link between the agents and structures of these regimes.

4.1 The diplomatic context of South Africa's involvement in nuclear export regimes

In response to the country's domestic policies, the UNSC adopted its first resolution calling for an arms embargo against South Africa in 1963. Unanimously adopted, UNSC Resolution 181 (1963) called on all UN member states to "cease forthwith the sale and shipment of arms, ammunition of all types and military vehicles to South Africa" against the background of an "arms build-up" by the South African government to further "that Government's racial policies" (UNSC 1963). However, the resolution was not implemented by all UN members. By 1977, the UNSC adopted another resolution, Resolution 418 (1977), against South Africa which called for a mandatory arms embargo against South Africa. Acting in terms of Chapter VII of the UN Charter, the UNSC expressed its concern that "South Africa is at the threshold of producing nuclear weapons" and decided that "all states shall refrain

from any cooperation with South Africa in the manufacture and development of nuclear weapons", as well as any other types of arms (UN 1977).

Subsequent to the adoption of these resolutions, the UNSC also adopted Resolution 473 (1980) to implement Resolution 418 (1977), which imposed a mandatory arms embargo on South Africa. This resolution was extended by Resolution 558 (1984) that prohibited the imports of arms and weapons from South Africa. Subsequently, Resolution 569 (1985) prohibited "all new contracts in the nuclear field" with South Africa (UNSC 1985). On 28 November 1986, the UNSC adopted yet another resolution against South Africa. Resolution 591 (1986) called on all UN members to strengthen the arms embargo against South Africa and included a prohibition on any contribution to the manufacture and development of nuclear weapons by South Africa (UN 1994: 52).

What concerned the international community was that South Africa, despite these comprehensive UN arms and weapons embargoes, continued to improve and maintain its nuclear weapons capability. In a further series of resolutions (A/RES/37/69 A, 9 December 1982; A/RES/44/27 I, 22 November 1989; A/RES/45/176 C, 19 December 1990; A/RES/46/79 C, 13 December 1991) the UN General Assembly (UNGA) called on all UN members and in particular on the US, Israel, the UK, France, Chile and the Federal Republic of Germany (West Germany, now Germany) to terminate their cooperation with South Africa in the military and nuclear fields. It was only in December 1993, during the final phases of the South African constitutional negotiations and after the IAEA's verification of the completeness of South Africa's dismantlement, that the UNGA lifted its call for sanctions and embargoes against South Africa (UN 1994: 52, 114).

The above-mentioned developments highlight some of the loopholes in global nuclear non-proliferation efforts, especially in nuclear export control regimes during the Cold War and its immediate aftermath. President De Klerk's 1993 announcement paved the way for South Africa's full disclosure of its nuclear weapons programme. It also resulted in the country's accession to, membership of and participation in a number of global nuclear non-proliferation export control regimes and related arrangements that "contribute to the prevention of the proliferation of weapons of mass destruction and their means of delivery" (UN 2011b).

The development of domestic nuclear non-proliferation export controls in South Africa occurred in tandem with South Africa's diplomatic initiatives and legal commitments to nuclear non-proliferation since 1990. Writing prior to the institution of the GNU in his now oft-quoted article in *Foreign Affairs*, Nelson Mandela (1993: 87) outlined the 'pillars' of South Africa's post-1994 foreign policy, which included human rights; the promotion of democracy worldwide; global peace, "including effective arms-control regimes"; a focus on Africa; and economic development based on international cooperation.

In 1993, prior to the 1994 democratic elections the South African government commenced to align the country's international nuclear non-proliferation position with its domestic legislation. The promulgation of the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993, as amended in 1995 and 1996, on 23 June 1993 was not only one of the last nuclear-related policy actions of the NP government under President FW de Klerk but, in its amended form, one of the first nuclear-related policy actions of the President Nelson Mandela-led GNU in South Africa.

Speaking at the *Conference on Nuclear Policy for a Democratic South Africa* in February 1994 (a few months prior to the ANC's accession to power), Trevor Manuel (1994: 5) stated that "(w)e [the ANC] need to state unambiguously that the African National Congress does not want a nuclear weapons capability in South Africa. We have endorsed the OAU [Organisation of African Unity] declaration calling for the African continent to be a nuclear weapon-free-zone. The ANC has also endorsed the Nuclear Non-Proliferation Treaty".[27] Years later, Manuel's view was confirmed by South Africa's second post-1994 Minister of Foreign Affairs, Nkosazana Dlamini-Zuma (2007a) who admitted that the ANC government:

> at that early stage [1994] already adopted a policy whereby South Africa should be an active participant in the various non-proliferation regimes and suppliers groups; adopt positions publicly supporting the non-proliferation of weapons of mass destruction with the goal of promoting international peace

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[27] In the late 1980s Trevor Manuel was a founder-member of the United Democratic Front (UDF), an ANC front organisation during the time the ANC was banned. He served on the ANC's Economic Desk and, after the elections of April 1994, became Minister of Trade and Industry. Subsequently, he served as Minister of Finance until 2008. Since 2009, he served as National Planning Minister in the Cabinet of President Jacob Zuma.

and security; and use its position as a member of the suppliers' regimes and of the Africa Group and the Non-aligned Movement to promote the importance of non-proliferation and to ensure that these controls do not become the means whereby developing countries are denied access to advanced technologies required for their development.

Table 7: South Africa's membership of nuclear non-proliferation export control regimes

Nuclear export control regime	Date of membership
Australia Group (AG)	Not applicable
Missile Technology Control Regime (MTCR)	1995
Nuclear Suppliers Group (NSG)	1995
Proliferation Security Initiative (PSI)	Not applicable
Wassenaar Arrangement (WA)	2006
Zangger Committee (ZC)	1993

Authors own compilation

Minister Dlamini-Zuma (2007a) also reiterated that the South African government:

has therefore since its inauguration in May 1994, committed itself to a policy of non-proliferation, disarmament and arms control, which covers all weapons of mass destruction and extends to concerns relating to the proliferation of conventional weapons.

In fact, South Africa joined the principle nuclear export control regimes prior to the time of the Minister's statement, *i.e.* during the Mandela presidency (see *Table 7*).

Earlier, a similar statement on South Africa's post-1994 commitment to nuclear non-proliferation was made by the South African government in a *Note Verbale* to the UN that it has, since the new Government's inauguration in May 1994, 'committed' itself to non-proliferation, disarmament and arms control. By its own admission, South Africa is, therefore, committed to prohibiting the manufacture, acquisition, transport

or use of weapons of mass destruction and their means of delivery, including by non-State actors (South Africa 2005: 2-3). Since 1994 these views and statements have became the mantra of South Africa's nuclear diplomacy.

4.2 The sources of South Africa's nuclear non-proliferation export control policy

Various sources inform the South African government's policy on nuclear non-proliferation, arms control and disarmament practices. These include:

- Policy documents and statements by government and its officials. Since 1994, the ANC-led government has repeatedly maintained that it has been consistent in its non-proliferation stance. It claims that "throughout our long liberation struggle" (Gumbi 2008a: 5) and "since its inauguration in 1994", it has "committed itself to a policy of non-proliferation, disarmament and arms control which covers all weapons of mass destruction and extends to concerns relating to the proliferation of conventional weapons" (DIRCO 2010). The South African government's stance on multilateralism and nuclear non-proliferation was repeated in a statement by the DFA prior to President Mbeki's attendance of the UNGA's 58th session in September 2003. According to the DFA, "[the] goal of ensuring peace and stability in Africa remains a high priority for the Government" (DFA 2003). Moreover, the South African government included, amongst others, in its foreign policy objectives to "reinforce the role of multilateralism and challenge the unilateral and protectionist approach"; to "promote the central role of the UN in combating terrorism and the conclusion of the Comprehensive Convention Against Terrorism"; and to "promote arms control and disarmament in the context of conventional arms, including small arms, and weapons of mass destruction" (DFA 2003).
- Various Acts of Parliament, including the Nuclear Energy Act 46 of 1999; the National Nuclear Regulator Act 47 of 1999; and the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993, as amended in 1995, 1996 and 2005.
- Several Government Notices such as Government Notice No 20 (3 February 2010) which include the declaration of certain nuclear-related dual-use

equipment, materials and software and related technology as controlled goods, and control measures applicable to such goods. Government Notice No 21 (3 February 2010), for example, includes an additional declaration of certain nuclear-related dual-use equipment; materials and software and related technology as controlled goods; and control measures applicable to such goods. In addition to this, Government Notice No 22 (3 February 2010) contains a declaration of certain missile technology and related items as controlled goods and control measures applicable to such goods (NPC 2010).

Apart from the above-mentioned measures, South Africa also executes its international nuclear non-proliferation commitments through several international instruments. These include the NPT to which it acceded on 10 July 1991; the *Agreement between the Government of the Republic of South Africa and the International Atomic Energy Agency for the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons* (hereafter the Comprehensive Safeguards Agreement or Safeguards Agreement) on 16 September 1991; and the *Protocol Additional to the Agreement between the Government of the Republic of South Africa and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons* (hereafter the Additional Protocol) on 13 September 2002) with the IAEA. Other instruments include its membership of the NSG and the ZC; and its ratification of the *Convention on the Physical Protection of Nuclear Material* (CPPNM) (17 September 2007) and the Pelindaba Treaty (DOE 2010).

In other words, South Africa adheres to the fundamental *pacta sunt servanda* principle of International Law that states should comply with international agreements. South Africa recognises, in the words of International Law expert Malcolm Shaw (2008: 94), the "obligatory nature of treaties". In fact, one of the principles 'underpinning' South Africa's foreign policy is "a commitment to justice and international law in the conduct of relations between nations" (DIRCO 2009a). In compliance with this principle, South Africa has incorporated its obligations in terms of international agreements into its domestic legislation and policy.

4.3   South Africa's nuclear non-proliferation export control policy

In 1994, South Africa's nuclear energy installations included the Koeberg Nuclear Power Station's two nuclear power reactors (Koeberg 1 and Koeberg 2) (see *Table 8*) and Pelindaba's research reactor (SAFARI-1).

Table 8: South Africa's nuclear reactors

Reactors	Type	Purpose	Net Megawatt	Operational Since
SAFARI-1	Pool-type Research Reactor	Research	20	1965
Koeberg 1	Pressurised Water Reactor	Power generation	921	1984
Koeberg 2	Pressurised Water Reactor	Power generation	921	1985
TOTAL			1 862	

World Nuclear Association (2010); Eskom (2011) & Tillwick (2011)

The Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993 served as South Africa's primary nuclear non-proliferation legislation. The aim of the Act is to control and manage matters relating to the proliferation of such weapons in South Africa (NPC 2009). The Act prohibits:

- the conduct of nuclear explosions and tests in South Africa; and
- any person to be or become involved in any activity or with goods that contribute to WMD programmes; any person to be or become involved in any dual-use goods or activities that could contribute to WMD with countries, individuals, groups, undertakings and entities subject to restrictions imposed by the UNSC acting under Chapter VII of the UN Charter; and involved in international terrorism, including non-state actors (NPC 2011a).
- South Africa's promulgation of the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993 is significant for a number of reasons. Firstly, the legislation generated some diplomatic benefits for South Africa. Through the Act, South Africa - after entering the NPT in 1991 - illustrated its commitment to global nuclear non-proliferation. Secondly, by adopting the Act South Africa

prepared itself for membership of other nuclear export control regimes such as the MCTR and the NSG, which it joined in 1995. In the third instance, the Act enabled the South African government, through the NPC, to maintain control over the import and export of dual-use and sensitive goods. Finally, the ANC's support of the Act once in government was a continuation of the liberation movement-turned-governing-party's historical anti-nuclear stance (Reddy 1994).[28]

In August 1994, the South African Cabinet reiterated the country's commitment to nuclear non-proliferation. According to former South African diplomat Thomas Markram (2004: 12), the Cabinet on 31 August 1994 accepted a proposal by the Minister of Foreign Affairs, Alfred Nzo that South Africa should:

- actively participate in various international non-proliferation regimes and suppliers groups;

- publicly adopt positions on nuclear and other WMD non-proliferation in order to promote international peace and security; and

- Use its position in the NAM and suppliers groups to ensure that nuclear-related export controls do not turn into instruments whereby developing states are denied access to advanced nuclear-related technology.

The GNU's term expired in 1999. From 1999, the South African government adopted additional nuclear and non-proliferation related legislation in support of South Africa's nuclear non-proliferation stance. These included the:

- Nuclear Energy Act 46 of 1999;

- National Nuclear Regulator Act 47 of 1999; and the

- National Conventional Arms Control Act 41 of 2002 (see *Table 9*).[29]

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[28] A review of the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993 commenced in 2005 to incorporate UN and IAEA resolutions that were adopted since the promulgation of the Act in 1993. A draft of the review of the Act was submitted to the Minister of Trade and Industry in mid-2012.
[29] The nuclear sector in South Africa is also governed by several other related Acts, including the National Radioactive Waste Disposal Institute Act 53 of 2008; the Hazardous Substances Act 15 of 1973; the Patent Act 57 of 1978; the National Strategic Intelligence Act 39 of 1994 as amended by Act No 67 of 2002; the National Key Points Act 102 of 1980 as amended by Act No 47 of 1985; the Protection of Constitutional Democracy Against Terrorist and Related Activities Act 33 of 2004; the Mine Health and Safety Act 29 of 1996; the Mineral and Petroleum Resources Development Act 28 of 2002; the National Environmental Management Act 107 of 1998; the National Water Act 36 of 1998 and the Dumping at Sea Control Act 73 of 1980 as amended by Act No 73 of 1995.

Table 9: South Africa's core nuclear non-proliferation legislation (1990-2010)

Legislation	Date of promulgation
Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993, as amended in 1995 and 1996	1993, as amended in 1995 and 1996
Nuclear Energy Act 46 of 1999	1999
National Nuclear Regulator Act 47 of 1999	1999
National Conventional Arms Control Act 41 of 2002	2002
National Radioactive Waste Disposal Institute Act 53 of 2008	2008

DOE (2011)

The Nuclear Energy Act 46 of 1999 provides, *inter alia,* for the establishment of NECSA as the successor of the NP-era's AEC. In terms of section 33(1) of the Nuclear Energy Act 46 of 1999, the Minister of Energy is responsible for the implementation of the country's Safeguards Agreement and Additional Protocols. The Ministry of Energy delegated this function to NECSA. NECSA, therefore, also executes South Africa's international obligations in terms of the ZC. In addition to this, the main functions of NECSA (2011) are:

> to undertake and promote research and development in the field of nuclear energy and radiation sciences and technology; to process source material, special nuclear material and restricted material; and to cooperate with persons in matters failing within these functions.

4.4   South Africa's nuclear non-proliferation export control mechanisms

South Africa employs two mechanisms or institutions to control and regulate nuclear exports, namely the NPC and the National Conventional Arms Control Committee (NCACC) (see *Table 10*). Both institutions were established after 1990. The

members of the NPC are appointed by the Minister of Trade and Industry, whereas the members of the NCACC are appointed by a higher state authority, *i.e.* a Statutory Committee of Cabinet and the President.

4.4.1 The Council for the Non-Proliferation of Weapons of Mass Destruction

The Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993 provides for the establishment of the South African Council for the Non-Proliferation of Weapons of Mass Destruction (NPC) administered by the Minister of Trade and Industry. In South Africa, all transfers of listed technologies, equipment and material require permits issued by the NPC. In terms of the Act, the NPC "on behalf of the State protect the interests, carry out the responsibilities and fulfil the obligations of the Republic with regard to non-proliferation". In terms of section 6 the functions of the NPC are, *inter alia*, to control and manage all activities relating to non-proliferation and to supervise and implement South Africa's compliance with international conventions, treaties and agreements related to non-proliferation affairs and issues.

The NPC ensures that all relevant industries and government departments are represented. It also oversees the implementation of South Africa's nuclear export control policy in compliance with South Africa's international commitments in this regard. For this purpose, the NPC has produced a 94-page document, *Internal compliance programme for industry,* on guidelines for the South African industry (NPC undated). The latter document outlines South Africa's non-proliferation policies, legislation, mechanisms, control processes and permit application procedures. It also outlines the multilateral nuclear export control regimes which South Africa participates in.

Finally, it includes lists of all controlled goods and activities in terms of South African legislation (NPC 2011a). The NPC is one of the first nuclear non-proliferation institutions established after the complete dismantlement of the country's nuclear weapons programme. As a regulating organisation, it ensures that the South African government and companies comply with the various nuclear non-proliferation export control regimes.

4.4.2 The National Conventional Arms Control Committee

In 1994 South Africa had the most sophisticated defence force and arms industry in Africa. Moreover, the country's arms industry was also one of its most lucrative industrial sectors. Between 1989 and 1993 the value of the country's arms exports increased by more than 160 percent (Truesdell 2009: 112). By 1994, South Africa's arms were the second largest export product amounting to approximately R 1 billion and employing almost 54 000 people. However, between 1991 and 1995, the South African defence budget decreased by 45 percent and arms production by 60 percent, reflecting the new political realities of the post-Cold War era, as well as the new realities in South and Southern Africa (Truesdell 2009: 112).

In May 1996 the South African government published *The White Paper on Defence* and in December 1999 *The White Paper on the South African Defence Related Industries.* One of the significant proposals of *The White Paper on Defence* was that the NCACC should control and regulate the import, export and transit of conventional arms through South Africa. Established in 1995 by a Cabinet memorandum, but legislated in 2002 in terms of the National Conventional Arms Control Act 41 of 2002, the NCACC is a statutory body which reports to Parliament (see *Table 10*). It is composed of Cabinet Ministers and Deputy Ministers, effectively making it a subcommittee of Cabinet. In terms of section 4 of the National Conventional Arms Control Act 41 of 2002, the functions of the NCACC include "the regulation of development, manufacturing and transfer of conventional arms in South Africa" and to:

- ensure compliance with the arms control policy of the South African government;
- ensure the implementation of a legitimate, effective and transparent control process;
- foster national and international confidence in South Africa's control procedures;
- provide for an Inspectorate to ensure compliance with the provisions of the Act;
- provide for guidelines and criteria to be used when assessing applications for permits made in terms of the Act;

- ensure adherence to international treaties and agreements;
- ensure proper accountability in the trade in conventional arms; and
- Provide for matters connected with the work and conduct of the NCACC and its Secretariat.

Table 10: South African institutions responsible for nuclear non-proliferation

Controlling institution		
	South African Council for the Non-Proliferation of Weapons of Mass Destruction (NPC)	**National Conventional Arms Control Committee (NCACC)**
Date established	1993	2002
Appointed by	Minister of Trade and Industry	Statutory Committee of Cabinet and appointed by the President
Members	Government officials and representatives from industry	Cabinet Ministers and Deputy Ministers
Controlled material	Chemical, biological, nuclear dual-use and missile delivery items	So-called 'other' dual-use materials and items
Relevant legislation	Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993	National Conventional Arms Control Act 41 of 2002

South Africa (2005: 3)

In terms of the National Conventional Arms Control Act, no person "may trade in conventional arms or render foreign military assistance unless that person is registered with the NPC and is in possession of a permit authorised by the NCACC" (NPC 2011b). In South Africa, permits are required for:

armaments development and manufacturing, marketing, contracting, exporting, importing or transferring (conveyance) of conventional arms, which includes; weapons, munitions, vessels (land, sea and air) designed for war, articles of war, and related systems, components, technologies, dual-use goods or services (NPC 2011b).

The proposals of the *White Paper on the South African Defence Related Industries* of 1999 meant that the South African government did not regard the country's defence industry as a separate industrial sector and that the Government did not intend to develop a separate industrial development policy for the defence industry (Truesdell 2009: 117). Facing a future with relatively little government support, the South African defence industry, including state-owned arms manufacturers such as Armscor and Denel was forced to realign itself with these new political realities, compounded by the controversial 1999 Strategic Defence Procurement Package (the so-called arms deal). Despite these factors, exports by the South African defence-related industries have increased significantly between 1996 and 2004, most notably from 2002 when the NCACC was established. For example, exports increased from R 517 million in 1996 to more than R 1 billion in 2001, and from approximately R 2 billion in 2002 to more than R 2 billion in 2004 (Truesdell 2009: 118). In 2008, 111 South African companies had registered with the NCACC (2008: 6). These companies exported to 88 countries, whereas they imported material and equipment from 61 countries (NCACC 2008: 6 & 18).

The 2009 report of the NCACC indicated that the South African government approved contracting permits worth more than R 82 billion for 2009. Not all approved contracts resulted in exports and sales as companies often apply for approval prior to this in order to market their products. Figures showed that the NCACC approved 371 contracts between South African companies and approved defence procurement authorities in 89 countries. This is over four times more than the R 19 billion allocated for the 2008 calendar year. In 2008, the NCACC approved 370 contracts with 90 countries. The figures are down from 388 in 2004, but up from 326 in 2003 (*DefenceWeb* 20 September 2010).

Few aspects of post-1994 South Africa's international relations have been as contentious as the country's arms sales. In some instances, accusations were made that South Africa had sold dual-use goods to known nuclear proliferators. However, it is unclear whether these were nuclear or military dual-use goods in terms of the WA's dual-use lists. As indicated below, irregular reporting to Parliament by the relevant South African government authorities inflamed these accusations.

Section 1 of the South African National Conventional Arms Control Act 41 of 2002 defines "dual-use goods" as "products, technologies, services or other goods which, besides their normal use and application for civilian purposes, can also be used for the furtherance of general military capability" (NPC 2009). Speaking at the 1995 REC, Minister Alfred Nzo (1995: 137) stated that "democratic South Africa is a responsible possessor of advanced technologies" and that South Africa regards its "non-proliferation and arms control policy as being an integral part to *[sic]* our commitment to democracy, human rights, sustainable development, social justice and environmental protection". In addition to this, from 1994 onwards, the South African government admitted that "a primary goal" of its foreign policy is to:

> reinforce and promote South Africa as a responsible producer, possessor and trader of defence-related products and advanced technologies in the nuclear, biological, chemical and missile fields. South Africa, in so doing, promotes the benefits which non-proliferation, disarmament and arms control hold for international peace and security, particularly to countries in Africa and the Non-Aligned Movement (NAM) (DFA 2009).

This position of South Africa has influenced the moderation of NAM's position on the export control regimes considerably (Potter & Mukhatzhanova 2011).

The National Conventional Arms Control Act 41 of 2002 defines 'services' as *"aid, advice, assistance, training, and product support"* (section 1), whereas the NSG defines "dual-use goods or items" as goods or items that "can make a major contribution to an unsafeguarded nuclear fuel cycle or nuclear explosive activity, but which have non-nuclear uses as well, for example in industry" (NSG 2010b). The NPC primarily looks at the proliferation risk of a particular transaction while it takes note of the NCACC decisions based on the issues highlighted below. Where the same items are controlled by both bodies, a process of consultation takes place to ensure that both bodies' decisions are consistent. Apart from the definitions in the National Conventional Arms Control Act 41 of 2002, several criteria are used by the NCACC when it approves arms contracts and import and export permits. These are:

- respect for human rights and fundamental freedoms in the recipient country;

- an evaluation based on the UN *Universal Declaration of Human Rights* and the *African Charter on Human and People's Rights*;

- the internal and regional security situation in the recipient country against the background of existing tensions or armed conflicts;

- the recipient country's record of compliance with international arms control agreements and treaties;

- the nature and cost of the arms to be transferred relative to the situation in the recipient country, including the recipient country's legitimate security and defence needs, taking into account that the transaction should divert minimal funding from human and economic development; and

- The degree to which arms sales are supportive of South Africa's national and foreign interests (Landsberg 2010: 112).

The South African government had not consistently applied these criteria. South Africa's arms trade, conducted predominantly by the state-owned entity Denel, remains a contentious foreign policy and diplomatic issue. Academics such as Sylvester and Seegers (2008); MPs of opposition parties such as the Democratic Alliance's Shadow Minister of Defence and Veterans Affairs David Maynier (2009) and the Independent Democrats' Patricia de Lille (2010); and former ANC MP Andrew Feinstein (2007) have repeatedly expressed grave concerns about South Africa's arms sales to countries such as Libya, Pakistan and Zimbabwe. Concerns centred around the volume of exports; the types of arms exported (including dual-use); the imbalance between South Africa's stated policy on human rights and its sale of arms to undemocratic governments; and South Africa's national economic interests and the ideal of an ethical foreign policy.

Nonetheless, South Africa's legislation complies with the nuclear non-proliferation regimes referred to earlier. In some instances, as previously indicated, the South African government had even implemented certain regulations before it joined a particular regime. This signals the Government's efforts to comply with the norms of nuclear non-proliferation; nuclear disarmament; and the peaceful uses of nuclear energy as espoused by these regimes.

5.   Concerns about South Africa's post-1990 commitment to nuclear non-proliferation

South Africa is one of at least 20 states that have terminated their nuclear weapons programmes since 1945. Several explanations have been offered for South Africa's nuclear reversal.[30] These explanations include US pressure on the NP government (Levite 2003: 65-66; Liberman 2001: 78); De Klerk's "anti-nuclear preferences" (Liberman 2001: 75); changes in the decision-makers and advisors involved in nuclear decision-making under the De Klerk-government (Liberman 2001: 75); the NP government's determination not to transfer a nuclear weapons capability to the ANC government (Levite 2003: 94; Fig 2005: 70); international sanctions against South Africa (Liberman 2001: 48); changes in the regional and domestic security environment (De Klerk 1993; Levite 2003: 84; Liberman 2001: 45); the ANC's historical stance against nuclear energy and nuclear weapons (Gumbi 2008a: 5); changes in the international environment in the wake of the end of the Cold War (De Klerk 1993; Tsygankov & Tsygankov 2010: 665); domestic regime change (Levite 2003: 84); national ideology (Tsygankov & Tsygankov 2010: 667); and international incentives such as the US offer for future commercial and scientific cooperation (Liberman 2001: 79).

Speaking prior to the ANC's accession to power in 1994, Trevor Manuel (1994: 5) observed that:

> indications are that important Western powers are far more nervous about a nuclear capability in the hands of an ANC-led government than they ever were about the same, or even an enlarged capacity in the hands of the apartheid regime.

Since 1993, a series of developments, events and statements cast on the post-1994 South African government's commitment to nuclear non-proliferation. Firstly, the international community was concerned about the South African government's stance on its weapons capability. By its own acknowledgement, the South African government "is engaged in various aspects of the trade in weapons and related

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[30] Nuclear reversal can be defined as the "phenomenon in which states embark in *[sic]* a path leading to nuclear weapons acquisition but subsequently reverse course, though not altogether abandoning their nuclear ambitions" (Levite 2003: 61).

materials, equipment, technology and services" (NPC 2011a). For the South African government, "(t)rade in weapons/armaments/defence equipment and related materials, equipment, technology and services forms an integral part of South Africa's foreign-, defence-, trade- and industrial policies and initiatives" (NPC 2011a). Moreover:

> it is South Africa's declared national interest in conjunction with its international obligations and commitments, particularly as these relate to non-proliferation, disarmament and arms control, and the implementation of international humanitarian law, to exercise due restraint in the transfer and trade in weapons and related materials, equipment, technology and services (NPC 2011a).

The South African government also acknowledged the competitive nature of the international nuclear-related market and that it wants to be regarded as a "responsible and reliable supplier of weapons and related materials, equipment, technology, aid and services" (NPC 2011a).

The South African government repeatedly emphasised that "a primary goal" of South Africa's foreign policy is to "reinforce and promote South Africa as a responsible producer, possessor and trader of defence related products and advanced technologies in the nuclear, biological, chemical and missile fields" (Markram 2004: 12). Moreover, it is South Africa's:

> declared national interest in conjunction with its international obligations and commitments, particularly as these relate to non-proliferation, disarmament and arms control, and the implementation of international humanitarian law, to exercise due restraint in the transfer and trade in weapons and related materials, equipment, technology and services (NPC 2011a).

In addition to this, the South African government through the NPC maintains that "(t)rade in weapons/armaments/defence equipment and related materials, equipment, technology and services forms an integral part of South Africa's foreign-, defence-, trade- and industrial policies and initiatives" (NPC 2011a). This decision was the "opening [of] a new chapter in South Africa's nuclear history" (Shelton 2000b: 19); particularly in respect of its obligations in terms of the nuclear export control regimes.

Secondly, another concern was the South African government's "nuclear inheritance" whereby:

> nuclear weapons or nuclear weapons material produced by South Africa might fall in to the hands of a radical ruling faction, black or white, which might use or threaten to use them to advance extremist objectives (Pabian 1995: 10).

The co-called "mini nuke conspiracy", referred to by Hounam and McQuillan (1995) suggested that the pre-1994 South African government manufactured over 1 000 small tactical nuclear warheads that could be in the hands of an anti-Mandela, right-wing faction. Following the "mini nuke conspiracy", reference was also made to a "confidential Afrikaner Weerstandsbeweging (Afrikaner Resistance Unit, AWB) report", prepared by its intelligence unit, which claimed that "enough raw materials and equipment might have been removed from the nuclear project site [at Pelindaba near Pretoria] during the winding-down phase [in 1993] to enable such a device to be assembled elsewhere" (Koch, Moodley & Porteous 1996: 150). The report also referred to the "high level of support among personnel in the nuclear sector for the right-wing cause" and stated that "at the very least the raw materials, parts and expertise are available to the right to build such a device at short notice" (Koch, Moodley & Porteous 1996: 150). However, the so-called "Completeness Report" referred to previously by the IAEA Director General in paragraphs 28 to 32 concluded that all HEU from the South African nuclear weapons programme was accounted for and placed under IAEA safeguarding by 1993 (IAEA 1993a).

In the third instance, the US, in particular, was concerned about the post-1994 South African government's nuclear-related diplomatic relations with nuclear ambitious states such as Iran, Pakistan and Libya (Koch, Moodley & Porteous 1996: 113). The South African government's controversial arms sales were linked to this. These included the sale of dual-use goods to so-called rogue states such as Iran and Libya. The UNSC resolutions on Iran have been strictly enforced. There may be a few areas where South African legislation is limited to the UNSC resolutions but US and EU sanctions are much wider. However, the time factor is important as exports made prior to UNSC Resolutions do not count as a contravention of the Resolution.

The fourth concern was the 'complex' nature - according to IAEA officials von Baeckmann, Dillon and Perricos (1995) who were involved in the process - of the verification of South Africa's nuclear inventory and the termination of South Africa's nuclear weapons programme. The international community regarded South Africa as not always willing to cooperate. Moreover, according to the IAEA (2005: 5), South Africa still had "several hundred kg" of HEU in the country's inventories which are under IAEA safeguards, whereas other sources estimated about 300kg (Fig 2005: 71). South Africa's refusal to give up its large HEU stockpile was also regarded as a concern (Bunn 2008: 51). This HEU inventory is a major political lever in favour of the South African nuclear diplomacy. If South Africa forfeited this inventory, it would lose its niche political position. This is one of the reasons why South Africa did not support the IAEA decision to establish a nuclear fuel reserve (see Chapter 4).

These concerns were amplified when the international community realised that the post-1994 South African government was slow in its efforts to convert the country's nuclear research reactor (SAFARI-1) at Pelindaba from using HEU to using LEU. This conversion was only achieved by 2009 considering that the conversion process began as early as 1994 (NECSA 2009).

Another concern was the fate of South African nuclear scientists who worked on the country's nuclear weapons programme. It was feared that these scientists may be employed by emerging nuclear weapons states. In 2007, for example, reports stated that Iran had been actively recruiting South African nuclear scientists for its nuclear programme (Barletta *et al.* 1998:145). These concerns re-surfaced in 2010 when the South African government announced the termination of its PBMR programme, which once again resulted in the retrenchment of a large number of South African nuclear scientists (Hogan 2010; Fig 2010).

A sixth concern was the safety of South Africa's nuclear installations. For example, in 2006, the World Association of Nuclear Operators (WANO) conducted a peer-review of the Koeberg Nuclear Power Station north of Cape Town and identified "gaps in performance in several areas" at the power station (South Africa 2007: 8). On 8 November 2007 armed attackers broke in at South Africa's major nuclear facility, Pelindaba, where significant volumes of weapons-grade HEU are kept, raising global concerns about nuclear safety in South Africa (Bunn 2008: v, 3-4).

In the seventh instance, the South African government's stated ambition to develop the country's nuclear energy sector is another matter of concern. The South African government has adopted the *Nuclear energy policy for the Republic of South Africa* in 2008 (DME 2008) and has stated its intentions in the *Ten Year Plan for Science and Technology, 2008-2018* to develop the country's nuclear-related industrial sector (DST 2007; Economic Sectors and Employment Cluster 2010). In 2011, the Minister of State Security, Siyabonga Cwele (2011), announced that government was investigating the restarting of the country's enrichment facilities. Moreover, in 2012/13, the South African government is expected to announce the successful bidders for the construction of new nuclear power stations.

A final concern was the involvement and the subsequent charging of South Africans in the nuclear proliferation network of AQ Khan (NPA 2007; IISS 2007) (see section 5.1). This compromised South Africa's commitment to nuclear non-proliferation (Minty 2007a). In addition to this, the South African government seemed unwilling to charge Asher Karni, a businessman with South African connections and a known operator in the global nuclear illicit market, for alleged illicit activities in South Africa. However, South African authorities conducted a search of Karni's premises in December 2003. Subsequent to this, Karni requested permission to go on holiday in the US, which was granted by the NPA. He was arrested in Denver (Colorado) on 2 January 2004, less than a month after the South African authorities had opened a case against him. The US prosecuted him and sentenced him before he could return to South Africa. Karni was sentenced in the US to three years imprisonment on 4 August 2005 (US 2005: 1; Lacey 2010).

In response to the aforesaid concerns and developments, the South African government employed several confidence-building measures such as portraying a positive nuclear identity; joining major multilateral nuclear export control regimes to reiterate the country's commitment to nuclear non-proliferation; and communicating the country's national interests as complementing (and not opposing) international nuclear non-proliferation. Internationally, South Africa also aligned its international and domestic nuclear non-proliferation export control policies. Notwithstanding this, the activities of the nuclear proliferation network of Pakistani nuclear physicist AQ

Khan in South Africa contributed to concerns about South Africa's commitment to nuclear non-proliferation.

5.1 The AQ Khan nuclear proliferation network in South Africa

The arrest of AQ Khan on 31 January 2004 confirmed the diplomatic and security challenges posed by illicit nuclear proliferation networks. Considered the 'father' of Pakistan's nuclear weapons programme, Khan's nuclear black market spanned the globe and involved actors from NWS and NNWS. It included illicit trade in nuclear equipment, expertise, goods, weapons and nuclear material by, amongst others, Iraq, North Korea, Libya, Dubai, Malaysia, Turkey, Spain, The Netherlands, Germany, Switzerland, the UK, South Korea and Japan. The Khan network also operated in several African states, including Egypt, Mali, Mauritania, Sudan, Tunisia, Niger, Côte d'Ivoire, Nigeria and South Africa (IISS 2007: 43-50; 65-88). The involvement of South Africans in the AQ Khan network was confirmed and reported to the IAEA by South Africa's representative at the IAEA, Ambassador Abdul Minty. He also confirmed that Khan's illicit nuclear weapons proliferation network operated in more than 30 countries and that it comprised of several entities and individuals of different nationalities (Minty 2007a).

Prior to 1990, South Africa was an active international nuclear trader who tapped into clandestine procurement networks in Europe, the US and Israel (Albright 1994; UN 1994: 52, 114). South Africa thus undermined global norms pertaining on nuclear trade. For the post-1994 government, South Africans' involvement in the Khan network (henceforth the Wisser *Affaire*) was a diplomatic embarrassment which brought into question and undermined South Africa's constructed identity and status as a self-professed good global nuclear actor. It also raised fears of the country's nuclear recidivism.

5.1.1 The Wisser *Affaire*

Subsequent to Khan's arrest, the South African government instituted an investigation into the possible involvement of two South African registered corporate entities, namely Krisch Engineering Company (Property) Limited and Tradefin Engineering CC, in the network's procurement activities for Libya and Pakistan. The

allegations related to the import and export of a controlled flow-forming lathe as well as the production and possession of certain components of a centrifuge enrichment plant without the necessary permits. These items do not constitute a weapon of mass destruction, but they are essential components of the process to enrich uranium. It was alleged that these activities were intended to assist in the now abandoned nuclear weapons programme of the Libyan government. On the premises of Tradefin Engineering, the South African authorities found 11 shipping containers containing dual-use components of a centrifuge uranium enrichment plant. They also uncovered feed systems/product and tails withdrawal systems and machine header piping systems, defined in the NSG lists; and documentation relating to the import and export of a flow-forming machine, classified as "nuclear related dual-use equipment (NPC 2004; Minty 2007a).

In response to these developments, Minty as chairperson of the NPC stated that:

> the South African Government shares the international community's concern over the illicit transfer of nuclear and nuclear related dual-use technology and materials that could be used in weapons of mass destruction and encourages the sharing of information that would identify individuals or entities involved in such illicit activities with a view to prevent, combat and eradicate this illicit trade (NPC 2004).

Minty's "damage control" statement confirmed South Africa's diplomatic embarrassment to the extent that it reminded the international community of South Africa's clandestine nuclear behaviour before 1990 (Minty 2007a).

The South African government's investigation also revealed that both the flow-forming machine and the systems formed part of Libya's undeclared nuclear activities. At the time, Libya was subject to UN sanctions. The South African investigation also revealed that during the period from 1986 to 1995, South Africans supplied controlled nuclear equipment to Pakistan. On 2 September 2004, eight months after the arrest of AQ Khan, Johan Andries Muller Meyer formerly involved with the South African government's nuclear weapons programme and founding-director of Tradefin Engineering in Vanderbijlpark was arrested. He had been responsible for the manufacture of the feed systems/product and tails withdrawal

systems, and machine header piping systems. He was subsequently charged with contravening the NSG *Guidelines*; the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993 "by importing and exporting a flow-forming lathe without the necessary permits"; and the Nuclear Energy Act 46 of 1999 "by possessing and producing certain components of a centrifuge enrichment plant without the necessary authorisation of the Minister of Minerals and Energy" (NPC 2004).

The charges against Meyer were withdrawn once he revealed that he had been acting on behalf of Krisch Engineering. The South African government gave Meyer the status as a cooperating, complicit witness. On the strength of Meyer's evidence, the Managing and Design Directors of Krisch Engineering, namely German citizen Gerhard Wisser and Swiss citizen Daniel Geiges - both mechanical engineers - were arrested. Wisser and Geiges were subsequently charged with contravening South Africa's non-proliferation legislation (Minty 2007a). The South African National Prosecuting Authority (NPA) indicted Wisser and Geiges on ten charges. Six of these charges related to Libya's nuclear weapons programme and the remaining four to Pakistan's programme. The NPA's indictment alleged that Wisser and Geiges cooperated with other members of the AQ Khan network outside South Africa (Minty 2007a). Gerhard Wisser was convicted for contraventions of the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993 and the Nuclear Energy Act 46 of 1999. On 4 September 2007, in the case of *S v Gerhard Wisser*, Wisser entered into a Plea and Sentence Agreement with the State. Wisser confirmed that his crimes had contributed to the Khan network's activities and admitted that he had cooperated with other members of the network outside South Africa (NPC 2007).

Wisser also pleaded guilty to charges linked to the Libyan nuclear weapons programme, namely the import and export of a flow-forming machine between November 2000 and December 2001; the manufacture of systems for the Libyan gas centrifuge plant between 1999 and 2003; and an attempt to export nuclear systems in 2003. On charges relating to Pakistan's nuclear weapons programme, Wisser pleaded guilty to four charges, namely the manufacture of three autoclaves in 1994/1995; the export of the autoclaves in 1995; forgery of an order form in order to acquire Leybold Heraeus vacuum equipment in May 1995; and forgery of an order form in order to acquire Leybold Heraeus equipment in July 1995 (NPC 2007).

Wisser entered into a Plea and Sentence Agreement with the State and pleaded guilty to charges linking him to the Khan network, and to the Libyan (from 1999 to 2003) and Pakistani (from 1994 to 1995) nuclear weapons programmes. Found guilty, Wisser's concurrent sentences included three years correctional supervision, and three to ten year imprisonment, suspended for five years. Wisser also consented to a confiscatory order in respect of almost € 3 million and R 6 million as being the proceeds of crime (Minty 2007a; NPA 2007; NPC 2007).

The case against the remaining accused, Daniel Geiges, continued (NPC 2007). In 2006, he was diagnosed as being terminally ill with cancer, which resulted in him not being able to attend certain trial hearings. The case against him was separated and postponed, pending medical reports concerning his health status and ability to stand trial. On 5 February 2008, a South African court convicted Geiges on charges linking him to the Khan network. Geiges' plea bargain with South African authorities resulted in him receiving a 13 year suspended sentence on the condition that he assists South African authorities in further investigations into the Khan network (NPA 2008).

The South Africans involved in the Khan network were economically - rather than politically - motivated. This undermined global efforts to counter illicit proliferation. The Wisser *Affaire* undermined not only South Africa's national security and interests but also its identity as a former "nuclear-contender-turned-good-global-nuclear-citizen". Moreover, it affected South Africa's nuclear diplomacy; a niche area it was carefully crafting for itself in the global arena.

5.1.2 The implications of the AQ Khan legacy

The social construction of the AQ Khan legacy and the Wisser *Affaire* as a nuclear proliferation crisis has several implications. Jutta Weldes' (1999) analysis of the Cuban Missile Crisis is instructive. Weldes (1999: 37) observes that crises are "social constructions that are forged by state officials in the course of producing and reproducing state identity". Despite the routine nature of crises for states, crises also benefit states in two ways. In the first instance, crises facilitate the domestic consolidation of state power by facilitating the establishment of state machinery, enhancing the control exercised by a state over its citizens, and refine or elaborate relations of power within a state. In the second instance, crises enable the

"(re)articulation of relations of identity/difference as a means of both constituting and securing state identity" (Weldes 1999: 58). In the case of the AQ Khan network and the Wisser *Affaire*, the narrative of the 'crisis' (*i.e.* nuclear proliferation in South Africa) included references to the dangers of nuclear proliferation to global security, the legacy of South Africa's nuclear past and the post-1994 government's continuing commitment to nuclear non-proliferation. Therefore, in the social construction of these events, South Africa made every effort to maintain its identity as a state committed to nuclear proliferation.

According to South Africa's Deputy Minister of Foreign Affairs, Aziz Pahad (2008a), Mohamed ElBaradei, Director General of the IAEA, described the AQ Khan network as the "biggest threat to the NPT", a statement with which he (Pahad) agreed. The legacy of the AQ Khan network had several implications for South Africa's nuclear diplomacy. Firstly, the South African government admitted that the investigations which resulted in Wisser's sentencing had taken place in the context of the so-called Khan network. The South African government confirmed that certain countries were indeed provided with nuclear technology through international networks (NPC 2004) and that the exposure of the Khan network and the Wisser *Affaire* had occurred after South Africa's initial successes at diplomatic events such as the 1995 REC of the NPT. Despite the arrest and sentencing of Wisser, the *Affaire* raised concerns about South Africa's commitment and ability to fulfil its obligations to the norm of nuclear non-proliferation (Minty 2007a).

Secondly, in constructivist terms, the Wisser *Affaire* highlighted the social dimensions of South Africa's nuclear diplomacy. In terms of language, South Africa had constructed a role and identity as a state that had voluntarily terminated its nuclear weapons programme; that was a subscriber to and advocate of nuclear non-proliferation and disarmament; and that was a trustworthy nuclear actor. In contrast, the Wisser *Affaire* raised concerns about South Africa's nuclear intentions, trustworthiness and integrity.

A third implication of the Wisser *Affaire* underlined the importance of multilateral efforts to prevent nuclear proliferation. In a statement to the IAEA Board, Minty (2007a) attempted to allay the international community's fears of a nuclear-South Africa. Apart from stating that investigation into the contravention of non-proliferation

legislation was "yet another demonstration of South Africa's commitment to the Treaty's non-proliferation provisions", South African authorities cooperated with other countries as well as with the IAEA (Minty 2007a). In its response to the conviction of Wisser and through its NPA, the South African government indicated specifically that the governments of the US, the UK, Malaysia, Switzerland, Spain and Jordan had provided assistance in the matter (NPA 2007).

In the fourth instance, the South African government regarded the Wisser *Affaire* as one of the "first successful cases" against individuals involved in the Khan network, with the South African experience having "illustrated the value of the IAEA and of effective information-sharing that has allowed us to identify individuals or entities involved in such illicit activities with a view to prevent, combat and eradicate this illicit trade" (NPC 2007).

A fifth implication was that the Wisser *Affaire* remained unresolved. Although the NPC had withdrawn the charges against Meyer (NPC 2004), South Africa's Deputy Minister of Foreign Affairs, Aziz Pahad (2008a) confirmed the unresolved nature of the Wisser *Affaire* and the impact of the network by stating that he suspected that:

> many governments feel that they have evidence, but not enough evidence for a conviction. In Germany, they have attempted a couple of prosecutions but they did not succeed as the authorities wished to. And there are some indications that they might be resuming some of those efforts.

Pahad (2008a) also lamented the fact that despite some countries being "well-positioned" to assist the South African government in its investigations into the Khan network, assistance from these countries was "not forthcoming".

Finally, the South African government's self-assessment of its handling of the Khan network and the Wisser *Affaire* was in line with the country's constructed identity and role. Commenting on South Africa's handling of the *Affaire*, Pahad (2008a) observed that "we [South Africa] have acted far better than other countries involved in it". Pahad (2008a) also described South Africa's handling of the issue by explaining that when government authorities first found evidence, it cooperated with internal authorities on the matter and conducted a "very thorough and comprehensive"

investigation. Thus, the South African government's handling of the matter was another indication of its commitment to comply with international nuclear non-proliferation norms.

6.   An assessment of South Africa's role and identity regarding the nuclear non-proliferation export control regimes

Concerns about a possible South African nuclear reversal have persisted between 1990 and 2010. However, South Africa's niche role and identity is evident from its nuclear diplomacy pertaining to the nuclear non-proliferation export control regimes.

6.1   South Africa's state identity and national interests

Since the ANC came to power and despite diplomatic efforts to assert a new identity, South Africa continues to grapple with "multiple identities" (Serrão & Bischoff 2009: 363). In terms of nuclear-related matters South Africa identified itself as a "responsible possessor, producer and trader" of dual-use goods (DIRCO 2009: 42) and as a state that has a "long and principled position on advancing the peaceful uses of nuclear energy" (Gumbi 2008a: 5). These self-defined identities emanate from the country's reconstructed post-1994 foreign policy which, in turn, has resulted in new diplomatic practices to give expression to them. In this way, South Africa conceptualised its nuclear-related identity through both negative approximation and positive approximation (Messari in Serrão & Bischoff 2009: 371). The former refers to an identity that is formed and maintained through interaction with so-called enemies. In other words, identity is defined in terms of what South Africa is not. In this regard, South Africa has distanced itself from actors such as the AQ Khan network contravening the nuclear export control regimes. In contrast, the latter refers to South Africa's positive identification with allies, like-minded states and non-state actors when commonalities are reinforced through mutual constitution of ideas and norms. Examples of this included South Africa's membership of the various nuclear export control regimes.

In order to define South Africa's state identity in accordance with its nuclear diplomacy, Wendt's (1999:224) constructivist typology of identity, namely corporate or personal, type, role and collective identities, is applied. Therefore, in the context of the nuclear export control regimes, South Africa's corporate or personal identity was

constituted by its legislation which complied with the nuclear non-proliferation norm. South Africa's type identity referred to its shared identity with like-minded states in the nuclear export control regimes to prevent nuclear proliferation. The country's role identity was evident from its ability to play various roles in these regimes. These roles include that of a compliant state and a state that promoted nuclear non-proliferation. South Africa's collective identity was a combination of its roles as well as its type identity as a state committed to nuclear non-proliferation.

6.2   South Africa's diplomatic roles and strategies

South Africa's social identity as a reflection of its diplomatic roles consists of a set of meanings that the South African state attributes to itself while taking those of other states into account. Therefore, the meaning(s) that South Africa ascribes to actors, events and developments becomes the basis for the country's actions and interactions. For South Africa, the material and non-material incentives associated with niche diplomacy were of particular importance in its attempt to convince the international community of its commitment to continue with a civilian nuclear programme. With the dismantling of its nuclear weapons programme and nuclear weapons, South Africa has accrued moral authority and legitimacy. It has also secured a niche role through the construction of the country's nuclear identity. Speaking at the 1995 NPT REC, Foreign Minister Alfred Nzo (1995: 137) stated that "democratic South Africa is a responsible possessor of advanced technologies" and that South Africa regards its "non-proliferation and arms control policy as being an integral part to [sic] our commitment to democracy, human rights, sustainable development, social justice and environmental protection". This nuclear identity includes an identity of self-proclaimed leadership in nuclear matters. Addressing the Parliamentary Portfolio Committee on Foreign Affairs in May 1995, Rusty Evans (1995: 106), the then Director-General of the DFA, for example, stated that due to South Africa's destruction of its nuclear weapons and accession to the NPT, it is "able to play a leading role in multilateral disarmament fora".

South Africa's diplomatic behaviour pertaining to multilateral nuclear export control regimes exemplifies that of a typical middle power. In fact, South Africa is recognized as a middle power by Van der Westhuizen (1998); Nel, Taylor and Van der Westhuizen (2001); and Schoeman (2000 & 2003); and as an "emergent para-

Western middle power" (Serrão & Bischoff 2009: 378). As Ungerer (2007: 396) indicates, middle powers more often than not have substantial technical and scientific expertise that contributes to their diplomatic competence in negotiations on these issues. South Africa falls into this category. At the height of its nuclear weapons programme, the AEC, predecessor of NECSA employed about 8 200 scientists (Liberman 2001: 77).

In its practice of nuclear diplomacy, South Africa has employed all the strategies of confrontation, parallelism and partnership on the international nuclear non-proliferation export control regimes. In engaging on international nuclear non-proliferation export controls, South Africa has applied partnership as a diplomatic strategy, as evidenced by its collaborative partnership with NWS and emerging NWS in voluntary export control regimes such as the ZC and the WA. Its use of parallelism is evidenced by its parallel action alongside one or more nuclear superpowers and its coalition partners in the NAC. In supporting India, for example, a special dispensation outside the NSG, or supporting Iran's nuclear programme for some years (Du Preez 2006), South Africa also confronted some NWS. South Africa is strongly supporting the principles of Article III of the NPT which provides states an "inalienable right" to nuclear power for peaceful purposes (see Chapter 4). More recently in 2011, South Africa cooperated with NWS in the call upon Iran to implement the requirements set by several UN Resolutions calling on Iran to terminate its nuclear weapons programme (Minty 2011a).

South Africa's nuclear diplomacy provided it with locational (one of the few African states to have acquired and give up nuclear weapons); traditional (the country has a nuclear history); and consensual (South Africa's non-proliferation commitment is reflective of the country's post-apartheid commitments) advantages over other countries. Therefore, South Africa has increased its diplomatic influence, authority, non-material power and economic incentives. Moreover, the country has constructed a unique brand of niche diplomacy by employing a number of diplomatic practices which have provided some material and non-material rewards such as status, prestige and trade opportunities. For South Africa, these rewards were particularly important to convince the international community of its commitment to continue with a civilian nuclear programme rather than reverting back to a nuclear weapons

programme or becoming involved in illicit nuclear networks. By dismantling its nuclear weapons programme and destructing its "nuclear devices", South Africa has accrued moral authority and legitimacy. South Africa has evolved as a normative power from the developing South in the area of nuclear diplomacy.

The South African government has also expressed its preferred form for its nuclear diplomacy, *i.e.* "all bilateral and multilateral initiatives to prevent the proliferation and development of such weapons on the one hand and to promote total disarmament of these weapons on the other" (DIRCO 2011a). In fact, the South African government maintained that it regards multilateralism as an important instrument for the "resolution of global challenges" such as disarmament and the non-proliferation of nuclear weapons (DIRCO 2010c: 41).

6.3   South Africa's norm entrepreneurship and leadership

In terms of Young's (1991) leadership autonomy, South Africa has displayed at least two out of three types of leadership in the multilateral nuclear export regimes. Young's (1991) first type of leadership is structural leadership. This is exhibited when leaders, or a leading country, make decisions about resources available to them to achieve a multilateral bargain. With regards to South Africa's role exposing the Khan network, the Nuclear Threat Initiative (NTI) stated that South Africa "worked closely" with the IAEA after investigations of a South African connection to the Khan nuclear non-proliferation network (NTI 2010a).[31] The South African government has admitted that South Africa's experience has "shown that no control regime, no matter how comprehensive, can fully guarantee against abuse" (Dlamini-Zuma 2007a).

Secondly, entrepreneurial leadership refers to leaders who are not in a position of power but nonetheless use their diplomatic negotiating and bargaining skills to achieve a particular outcome. South Africa has positioned itself as a norm entrepreneur (Geldenhuys, 2006a). Moreover, South Africa has also positioned itself as a "responsible possessor, producer and trader" in dual-use goods (DIRCO 2009a: 42); especially in its handling of the Wisser *Affaire* and the Khan network. South Africa's norm construction in its nuclear diplomacy is evident in the South African

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[31] Established in 2001, the NTI is a US-based non-governmental organisation under the co-leadership of US Senator Sam Nunn. The NTI focuses, *inter alia*, on nuclear disarmament and uranium security (NTI 2011).

government's legislation and policies on nuclear non-proliferation, disarmament and arms control that incorporates the obligations of the CWC, the BTWC, the NSG and the WA (DIRCO 2011a). South Africa has incorporated these obligations sometimes prior to its accession to or membership of these conventions or groups.

Predominantly, most governments require only export permits for the export or re-export of controlled goods. However, according to the South African government, the country is one of a small number of states that require both import permits for the import of controlled goods and export permits for the export or re-export of controlled goods (South Africa 2005a: 8). In terms of the Non-Proliferation of Weapons of Mass Destruction Act 87 of 1993, it is required that for the import and export of chemical, nuclear dual-use and missile controlled goods, import and export permits should be obtained from the NPC. In addition to this and in terms of the Nuclear Energy Act 46 of 1999, the South African government requires that for the "import, export or transport of nuclear material", import, export or transport permits should be obtained from the Minister of Minerals and Energy (since May 1990, the Minister of Energy). For the import, export or re-export of conventional armament items or dual-use items, import or export permits should be obtained from the NCACC (South Africa 2005a: 8-9).

Finally, intellectual leadership can change the normative or ideational environment to create opportunities for the achievement of a particular objective (Browne, Shetty & Somerville 2010: 381). South Africa has styled itself and gained global recognition as a leader in the global nuclear arena. Some global recognition for South Africa's nuclear non-proliferation efforts occurred. In January 2010, the NTI, amongst others, maintained that South Africa "has emerged as a champion of both global nuclear nonproliferation and equal access to peaceful nuclear energy" (NTI 2010a).

7.   Conclusion

Since 1990, South Africa has constructed its norms, identity, role and interests in such a way that it has increased its diplomatic influence, authority and non-material power in terms of nuclear non-proliferation export control regimes. Moreover, the country has constructed a brand of nuclear diplomacy by employing a number of

niche diplomatic practices which have provided some material and non-material rewards in the form of status, prestige and even trade opportunities.

This chapter traced South Africa's nuclear diplomacy in the multilateral nuclear non-proliferation export control regimes. It explained the nature and utility of these regimes prior to outlining the principles of export control regimes and it traced South Africa's ascension to these regimes. South Africa's involvement in these regimes is voluntary and only places a moral responsibility on the country. Thus, it indicated the sincerity of the South African government to comply with its international nuclear non-proliferation obligations. However, the period between 1990 and 1993 - the *interregnum* between a nuclear-armed South Africa and a global nuclear icon - was particularly problematic. During this period, South Africa continued with testing ballistic missiles and importing nuclear-related equipment. Subsequent to the IAEA's verification of the dismantling of South Africa's nuclear weapons programme in 1993, the South African government introduced aspects of these regimes in its legislation prior to its membership of some of these regimes.

South Africa's nuclear export control establishment and policies are wide-ranging and comply with its international obligations. However, despite these comprehensive institutional frameworks, several concerns about South Africa's sincerity remained. These international concerns were amplified with the involvement of former government nuclear scientists and foreign nationals' involvement in the AQ Khan network. Nevertheless, South Africa has conducted its nuclear diplomacy in such a manner as to secure a niche role and state identity by employing three main strategies.

South Africa's membership and partnership of these regimes illustrates the country's departure from its previous nuclear identity as a state with nuclear weapons. Moreover, South Africa's nuclear diplomacy pertaining to these regimes resulted in the construction of a niche role and state identity as a FNWS that complies with nuclear non-proliferation norms.

The next chapter analyses South Africa's diplomatic relations with the IAEA as an expression of South Africa's commitment to multilateralism and nuclear non-proliferation norms in its conduct of nuclear diplomacy.

CHAPTER FOUR

SOUTH AFRICA AND THE INTERNATIONAL ATOMIC ENERGY AGENCY

1. Introduction

Since its inception in 1957, the International Atomic Energy Agency (hereafter IAEA or the Agency) has been the primary multilateral institution to prevent nuclear proliferation, to oversee the peaceful uses of nuclear energy and to secure the safety of nuclear material and facilities. The IAEA can also be regarded as the "implementation agency" of the NPT. As a founder member of the IAEA, South Africa has subscribed to these principles. However, once the NP-led government's nuclear weapons programme went 'critical' and global opposition to the Government's domestic policies increased, relations between South Africa and the IAEA deteriorated.[32] South Africa was suspended from the IAEA Board of Governors (hereafter Board or IAEA Board) which is the IAEA's principal decision-making body. It was only by the beginning of the 1990s, after South Africa had again taken up its position in the IAEA that relations normalised. However, following the return of the "prodigal nuclear son" relations have at times been strained due to South Africa's stance and the IAEA's demands on particular issues.

The aim of this chapter is to analyse South Africa's nuclear diplomacy with the IAEA since the country terminated its nuclear weapons programme. Although the period between 1990 and 2010 is considered, references to earlier relations will be made. The main emphasis is the IAEA's verification of the dismantling of South Africa's nuclear weapons programme; the implementation of the Comprehensive Safeguards Agreement between South Africa and the IAEA from 1989 to 1994; the process of converting the SAFARI-1 nuclear research reactor from using HEU to LEU (1991-2005); South Africa's position in favour of greater representation for developing countries on the Board (1995 onwards); its ambition to be elected to the position of Director General (2008-2009); and its refusal to support the establishment of a nuclear fuel bank in Russia under the IAEA's auspices (2009-2010).[33]

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[32] The term 'critical' refers to the minimum mass of a uranium-235 (U-235) isotope required to cause a nuclear chain reaction.
[33] The IAEA uses the spelling Director General instead of Director-General. See http://www.iaea.org.

Accordingly, the objective is to show how South Africa constructed a brand of niche diplomacy in its relations with the IAEA by employing the diplomatic practices of confrontation, parallelism and partnership. It is argued that these practices have provided South Africa with material and non-material rewards that include status, prestige and trade opportunities. One of the *raisons d'être* of niche diplomacy is its ability to "generate return worth having" (Henrikson 2005: 70-71), implying that a state wants to achieve non-material objectives. This, in turn, can generate international prestige, status, material benefit, soft power and moral authority. These incentives are of particular importance to convince the international community of South Africa's commitment to continue with a non-weapons nuclear programme and to uphold its commitment to nuclear non-proliferation.

Four main themes dominate South Africa's diplomacy with the IAEA. These are South Africa's commitment to nuclear non-proliferation; its call for the complete elimination of nuclear weapons; its support of the inalienable right of all states to develop nuclear energy for peaceful purposes; and its call for more representation of developing countries in the IAEA. In order to contextualise these themes, the next section chronicles South Africa's involvement in the establishment of the Agency, as well as the country's relations with the Agency until 1990. The chapter then proceeds to an analysis of South Africa's relations with the IAEA between 1990 and 2010 by focusing on selected case studies. The selected cases include the membership and leadership of the Board of Governors; the expansion of the membership of the Board; the IAEA nuclear fuel reserve; the Khan network; and the conversion of SAFARI-1. The chapter concludes with an assessment of South Africa's nuclear diplomacy with the IAEA.

2. South Africa's pre-1990 relations with the International Atomic Energy Agency

The "Atoms for Peace" address to the UNGA by US President Dwight D Eisenhower on 8 December 1953 paved the way for the establishment of the IAEA. In his address, Eisenhower (1953) proposed the establishment of an atomic energy commission by stating that governments developing nuclear energy:

should begin now and continue to make joint contributions from their stockpiles of normal uranium and fissionable materials to an international atomic energy agency. We would expect that such an agency would be set up under the aegis of the United Nations.

Eisenhower (1953) also proposed that the purpose of the agency should be to "devise methods whereby this fissionable material would be allocated to serve the peaceful pursuits of mankind". Eisenhower's address resulted in a series of developments; most notably the establishment of the IAEA. Moreover, for South Africa it signalled its first multilateral involvement in nuclear diplomacy.

2.1 South Africa's role in the establishment of the International Atomic Energy Agency (1953-1964)

Typical of most Cold War relations, the USSR dismissed Eisenhower's proposal. By November 1954, the US presented more concrete proposals to the UNGA for the establishment of an atomic energy agency. In December 1954, the UK presented the US with a proposed draft of a Statute for the agency to which the US responded with a revised draft of its own. In the beginning of 1955, the US, the UK, France, Canada, Australia, South Africa, Belgium and later Portugal commenced with negotiations in Washington on the Statute of the new agency based on the US/UK draft. South Africa's involvement - as a member of the Eight-Nation Negotiating Group that also included Australia, Belgium (due to the uranium-rich Belgian Congo), Canada and Portugal (Hecht 2006: 27) - stemmed from its status as a major uranium-producing country. The main purpose of the Eight-Nation Negotiating Group was to reach agreement on the text of a Statute for the agency, establish the agency and invite other states to join as members (Fischer 1997: 30). When the USSR finally joined the negotiations on 18 July 1955 - the "first major thaw in the post-war relations between Moscow and Washington" (Fischer 1997: 31) - the proposed agency was already named the IAEA.

From 8 to 20 August 1955 the UN convened the first major international conference on the peaceful uses of atomic energy in Switzerland. The so-called "First Geneva Conference" was attended by 1 500 delegates, including scientists and engineers. More importantly, the Conference was the first ever inter-governmental gathering on

the peaceful uses of atomic energy and paved the way for the formal establishment of the IAEA. However, South Africa was not part of the negotiating group (the US, USSR, UK, France, Canada and Czechoslovakia) which met at the Geneva Conference to "consider the technical questions that would arise in drawing up a system of safeguards" (Fischer 1997: 33). At the UNGA session in 1955 it was agreed that the Eight-Nation Negotiating Group would be expanded to 12 as per a proposal of the USSR. The UNGA also took a decision that a revised version of the draft Statute would be circulated to all UN members and specialised agencies, and that the UN would host a conference towards the end of 1956 to review and finally approve the Statute (Fischer 1997: 31-34).

However, in March 1956, while the Twelve-Nation Negotiating Group met in Washington, UN Secretary-General Dag Hammarskjöld implemented the UNGA's call for an atomic agency and established the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). His decision ensured that the UN - rather than the IAEA - would play the major role in securing global nuclear safety (Fischer 1997: 46).

When the US distributed the draft Statute to all UN members in April 1956, the question of China's representation (as a permanent member of the UNSC) was still unresolved. The matter was eventually resolved and on 20 September 1956, 82 states attended the Conference on the Statute of the IAEA at the UN headquarters in New York. This was an *ad hoc* meeting of concerned states and not of the UN itself. By 23 October 1956, the Conference approved the complete revised text of the Statute. On 29 July 1957, the IAEA Statute entered into force with the ratification of the Statute by 26 states (Fischer 1997: 47, 49).

South Africa, as indicated in Section A of the Annex of the IAEA Statute, along with 18 other states, became a member of the First Preparatory Commission (PrepCom) on 26 October 1956 (the day that the Statute opened for signature) and remained a member of the PrepCom until the formal establishment of the IAEA on 3 October 1957 (IAEA 1957). These 18 states included the Twelve-Nation Negotiating Group and six other states elected by the Statute Conference. The PrepCom designated the members of the first Board of the IAEA, including:

- Canada, France, the USSR, the UK and the USA;

- Five states from other regions leading in nuclear technology (Australia, Brazil, India, Japan and South Africa);
- Two producers of uranium (Czechoslovakia and Portugal); and
- A purveyor of technical assistance (Sweden) (Fischer 1997: 64).

South Africa became a member of the IAEA on 6 June 1957. Reflecting on these negotiations, a South African diplomat and delegate at these meetings, Donald Sole (1997: 21), admitted that his "major concern in the drafting of the IAEA Statute was to secure for South Africa a seat on the Governing Body of the new agency". Sole, who was later elected as the third Chairman of the IAEA Board, acknowledged that the South African delegation had achieved their "primary objective - a seat on the Board of Governors" (Sole 1997: 21). However, according to Sole (1997: 20), at this early stage in the life of the Agency pressure was already mounting against South Africa as a "pariah state" due to its domestic policies.

The first phase of South Africa's diplomatic relations with the IAEA demonstrated its use of partnership as a diplomatic strategy. During this phase, South Africa's diplomatic relations also focused on the institutionalisation of the norms of the peaceful uses of nuclear energy; nuclear disarmament; and nuclear non-proliferation. This is further evidenced in South Africa's support for the institutionalisation of the IAEA as the main global organisation to promote and maintain nuclear safeguards for the peaceful uses of nuclear energy. However, the next phase (1965-1990) of South Africa's diplomatic relations with the IAEA turned out to be more confrontational as a result of international opposition to the country's domestic policies and the development of South Africa's nuclear weapons programme and the "nuclear devices" announced by FW de Klerk in 1993.

2.2   South Africa's role in the International Atomic Energy Agency (1965 - 1989)

With the onset of the Cold War and the increase in the number of NWS, the need to prevent the proliferation of nuclear weapons culminated in the signing of the NPT in 1968 and its entry into force in 1970 (see Chapter 6). As part of nuclear export control regimes and in terms of Article I of the NPT, NWS undertook "not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices" and not to "assist, encourage, or

induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices" (NPT 1970). For their part, according to Article II, NNWS undertook not to "receive the transfer", not to "manufacture or otherwise acquire nuclear weapons" or not to "receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices" (NPT 1970).

Therefore, the NPT reiterated and expanded the IAEA's authority by requiring that all state parties accept and apply IAEA safeguards to "all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere". In addition to this, the NPT also requires state parties not to provide "source or special fissionable material" or:

> equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes unless the source or special fissionable material shall be subject to the safeguards required" [by the IAEA] (IAEA 1970).

During the first years of IAEA membership South Africa had complied with the IAEA Statute. This initial phase of partnership and cooperation lasted until 1964, after which South Africa's relationship with the IAEA gradually regressed into one of confrontation. This was mainly due to the country's domestic policies and suspicions of norm deviance as far as nuclear energy was concerned. As a result, from 1965 when Prime Minister Hendrik Verwoerd inaugurated the first nuclear reactor on the African continent (SAFARI-1) the relations between South Africa and the Agency changed. South Africa embarked on a collision course with the aforesaid normative and legal framework. For years the NP-led government denied the country's nuclear capabilities and weapons.[34] Until the full extent of its nuclear weapons programme from 1969 to 1989 became evident, the relationship between South Africa and the

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[34] Walters (1987) and Moore (1987) reported the existence of a secret South African nuclear weapons programme prior to President de Klerk's announcement in March 1993. Further archival and primary research by Reiss (1995); Hounam and McQuillan (1995); Van Vuuren (2003); Purkitt and Burgess (2005); Venter (2008) and Van Wyk (2010) revealed the extent of South Africa's nuclear weapons programme from 1969 to 1989. This archival and primary research was supplemented by presentations and publications by South African scientists and military officials such as Waldo Stumpf (1995a & 1995b); and Hannes Steyn, Richardt van der Walt and Jan van Loggerenberg (2003).

Agency deteriorated and changed.[35] This was evidenced by a series of developments which, amongst others, contributed to South Africa losing its designation as a member for the African region on the Board in 1976 and being replaced by Egypt in 1977 (Nzo 1994: 28; Hecht 2006: 46) (see *Figure 5*).

Between 1969 and 1979, all research and development on South African nuclear explosive devices were undertaken by the South African Atomic Energy Board (AEB), the predecessor of the AEC. In 1979, this responsibility was transferred to Armscor, which operated from its so-called Circle facilities, 15km from Pelindaba where the AEC was located. The AEC, however, remained responsible for the production and supply of HEU and for theoretical and development studies on nuclear weapons technology (Von Baeckmann, Dillon & Perricos 1995: 47).

Although South Africa's nuclear explosives programme was "officially still aimed at peaceful uses until about 1977…the emphasis changed officially to a strategic deterrent capability" (Stumpf 1995a). As an adjunct of this shift in April 1978, Prime Minister John Vorster approved a three-phased "deterrent strategy" for South Africa (see *Figure 6*). More pertinent were the results of the South African nuclear weapons programme that underpinned the deterrent strategy. The first South African 'device' was completed in 1978 with more 'devices' completed at an "orderly pace of less than one per year" (Stumpf 1995a). The first aircraft-deliverable vehicle was completed in 1982. Eventually, six "nuclear devices" were produced (De Klerk 1993).

South Africa ignored repeated calls by the IAEA to subject itself to IAEA safeguards and inspections. According to Ambassador Ampie Roux (1970), the South African delegate at the IAEA, some states are "understandably reluctant to surrender, almost irrevocably, long-held sovereign rights without having precise details of all the implications". This view became South Africa's nuclear mantra until it finally ratified the NPT in 1991. South Africa's refusal to ratify the NPT meant that none of the country's nuclear research facilities and activities was covered by IAEA safeguards and inspections.

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[35] Waldo Stumpf (1995a) indicated that results from an indigenous uranium enrichment process were achieved as early as 1969.

Figure 5: A summary and contextualisation of South Africa's diplomatic relations with the IAEA (1957 - 2010)

Eisenhower's "Atoms for Peace" Address to UNGA (8 December 1953)	Member of Eight Nation Negotiating Group drafting IAEA Statute (1955)	Member of First PrepCom (26 October 1956)	Formal establishment of IAEA (3 October 1957)
Member of IAEA (6 June 1957)	Member of first and subsequent Boards (1957 - 1977)	Egypt challenges South Africa's designation as Board member (1977)	Suspended from Board (1977)
Koeberg operational (1984)	IAEA consultations with South Africa (1980s)	De Klerk terminates weapons programme (1989)	Signs NPT and *Safeguards Agreement* with IAEA (1991)
IAEA verification process of nuclear weapons programme (1991-1993)	De Klerk confirmed that South Africa has six "nuclear devices" (March 1993)	Inauguration of GNU with Nelson Mandela as President (April - June 1994)	Returns to take up its seat as Board member (1995)
Signs *First Country Programme Framework* with IAEA (1999)	Signs *Additional Protocol* with IAEA (13 September 2002)	Announces PBMR programme (2002)	South Africans involved in AQ Khan network (2004)
Consultations with IAEA on SAFARI-I conversion (July 2005)	Signs Second CFA with IAEA (2006)	Minty's candidature for IAEA Director-General (12 September 2008)	Minty loses to Japanese candidate (2009)

Author's own compilation

In contrast, South Africa eagerly informed the Agency of its nuclear development activities. In 1972, for example, Ambassador Roux (1972) informed the IAEA General Conference (GC) that the construction of South Africa's small-scale enrichment plant was progressing and that South African advances in nuclear

science had "far exceeded expectations".[36] In 1975 Roux informed the IAEA that "apart from developing its enrichment capability, South Africa was constantly intensifying its prospecting activities"; that the first phase of the country's pilot enrichment plant was successfully commissioned; and that feasibility studies for the construction of a "full-scale commercial plant" were completed 'satisfactorily' (Roux 1975).

Figure 6: South Africa's three-phased nuclear deterrent strategy

Phase 1

Strategic uncertainty in which nuclear deterrent capability will not be acknowledged or denied.

Phase 2

Should South Africa be threatened by Warsaw Pact countries through surrogate Cuban forces in Angola, covert acknowledgement to certain international powers, e.g. the US would be contemplated.

Phase 3

In case partial disclosure does not result in the removal of the threat, public acknowledgement or demonstration by an underground test of South Africa's capability, would be considered.

De Klerk (1993) & Stumpf (1995a)

The IAEA also made various attempts to persuade the South African government to terminate its nuclear weapons programme. Amongst others these included South Africa's suspension from the IAEA Board of Governors in 1977, a position the country held from 1957; the adoption of several resolutions against South Africa; and the institution of South Africa's nuclear weapons programme as a standing issue on the IAEA GC agenda. Moreover, the credentials of the South African delegation attending the IAEA GC in 1979 were refused and several calls were made by,

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[36] The IAEA GC is the highest policymaking body of the Agency. Composed of representatives of all member states of the IAEA, the GC meets annually to discuss and approve the Agency's annual programme and budget. The GC also considers and decides on any other matters brought before it by the Board of Governors, the Director General or any member state (IAEA 1957 & 2012a).

amongst others, Nigeria and the Group of 77 (G-77), to terminate South Africa's membership of the IAEA (Khan 1997: 307) (see *Figure 6*).

Once it became clear that the IAEA attempts to influence South Africa had failed, the confrontation between the IAEA and South Africa shifted to the main organs of the UN. When the UNGA urged South Africa in December 1982 to stop the development of its nuclear weapons capability, it also requested the IAEA to discontinue its assistance to South Africa on nuclear issues and to exclude South Africa from all of its technical working groups. As the political situation in South Africa deteriorated, the IAEA Board and the GC considered the suspension of South Africa's privileges and rights of membership of the IAEA. Amidst all of these concerns, South Africa's first nuclear power station, the Koeberg Nuclear Power Station, began to supply the national power grid on 4 April 1984 (Xingwana 2004: 20).

Whereas the calls for South Africa's suspension mainly emanated from African member states such as Egypt and Nigeria, Western governments such as the US and the UK pressurised South Africa to ratify the NPT. They argued that South Africa's suspension would undermine the IAEA's efforts to engage South Africa on the termination of the country's nuclear weapons programme. Subsequent to South Africa's suspension from the Board, the GC adopted various resolutions condemning South Africa's domestic policies and its nuclear weapons programme. In addition to this, several IAEA reports on the South African nuclear weapons programme served before the GC and various resolutions calling on South Africa to submit its nuclear facilities to IAEA safeguards were also adopted (IAEA 1985 & 1986).[37]

Communication between the Agency and South Africa during 1984 revealed that South Africa was considering the application of IAEA safeguards for the nuclear facility Valindaba. Subsequent to meetings between the IAEA and South Africa in May 1985, an IAEA delegation visited the country in August 1985 and met with the AEC to discuss drafts of a safeguards agreement with the South African government (IAEA 1985). Despite these interactions, the South African government refused to accept the IAEA proposals. Consequently, the IAEA decided to take stricter action against the country. Despite the efforts of Western countries to influence South

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[37] These included resolutions of the GC, namely GC(XXVIII)/RES/423 (1985) and GC(XXX)/RES/789 (1986).

Africa to accede to the NPT, the Board decided to suspend South Africa from the Agency in June 1987 and recommended that the GC should proceed with South Africa's suspension from the Agency (Fischer 1997: 109-110).

However, South African State President PW Botha announced on 21 September 1987 that the South African government "hopes that it will soon be able to sign the NPT and has decided to open discussions with others to this end" (UN 1991: 9). Consequently, the Board decided to defer its decision to suspend South Africa's membership of the Agency. Subsequent to President Botha's announcement diplomatic efforts shifted to influencing the South African government to accede to the NPT. From August 1988, a series of talks between South African officials and the NPT depository countries, the US, the Soviet Union and the UK took place at the IAEA headquarters in Vienna. Led by South Africa's Minister of Foreign Affairs, Pik Botha, the South African delegation was mainly interested in "clarifying the cost and benefits of adherence" as well as the responsibilities under the IAEA Safeguards Agreement (UN 1991: 11). These commercial - rather than security and military - concerns date back to 1968 when South Africa explained to the UNGA that it would not submit to IAEA safeguards as it was concerned about commercial espionage. This view was repeated in 1970 when the South African Prime Minister explained to Parliament that South Africa was willing to accept IAEA safeguards on the condition that the safeguards "did not allow commercial espionage or hinder South African civilian nuclear research" (UN 1991: 11).

The next round of talks between the South African government and the depository countries took place in Vienna in December 1989. This time the South African delegation, composed of pro- and anti-NPT delegates, expressed concern about the practicalities of acceding to the NPT. The talks concluded with the South African delegation indicating that domestic concerns about accession to the NPT should first be addressed before the country could accede. However, it took almost a year to address these domestic concerns.

By September 1990, a written statement by Minister Pik Botha was circulated at the 34th Regular Session of the GC. In the statement, Botha indicated that South Africa was "prepared to accede to the Treaty" - but with a *caveat* - "in the context of an equal commitment by the other states in the Southern African region" (Minister of

Foreign Affairs 1990: 1). Moreover, Botha also indicated that his government intended to commence with talks with the IAEA on concluding a safeguards agreement with the Agency. South Africa's diplomatic effort paid off. At its conclusion, the IAEA Director General indicated that the Agency was ready to commence with talks with South Africa "without delay" (UN 1991: 11).

Thus, South Africa's diplomatic relations with the IAEA between 1965 and 1990 were characterised by confrontation as the country deviated from IAEA norms. The Agency pressurised the South African government to reveal the extent of its nuclear weapons programme, whereas the South African government refused to yield on any of the IAEA's demands due to the government's threat perception and the country's increased isolation. South Africa also faced increasing UN sanctions and was severely criticized by, amongst others, the G-77. However, as forthwith indicated, once South Africa 'returned' to the IAEA, it became a vocal campaigner for the right of developing countries to access nuclear energy for peaceful purposes.

3. South Africa's post-1990 relations with the International Atomic Energy Agency

The first years of South Africa's 'return' to the IAEA overlapped with the constitutional negotiations and the political transition in the country. Since 1994, successive Government statements to meetings of the IAEA reiterated the good technical cooperation between the country and the IAEA (Nzo 1994; Mlambo-Ngcuka 1999; Xingwana 2004). This was a repetition of South Africa's historical stance on the technical - rather than political - role of the IAEA since the establishment of the IAEA (Hecht 2006: 30).

3.1 The legal and diplomatic framework of South Africa's post-1990 relations with the International Atomic Energy Agency

In 1991, South Africa concluded two major international nuclear-related agreements, namely the ratification of the NPT (10 July 1991) and the conclusion of a Comprehensive Safeguards Agreement with the IAEA (16 September 1991) (see Chapters 3 and 6). The Safeguards Agreement was preceded by the approval of the dismantling and destruction of South Africa's nuclear weapons and programme by President de Klerk and the assurance that "all of the HEU from the weapons, [was]

melted down and returned from Armscor to the AEC" by 6 September 1991 (IAEA 1993a: 7).

3.1.1 The verification process and the implementation of the Safeguards Agreement

Comprising 98 articles, the Safeguards Agreement between South Africa and the Agency entered into force on 16 September 1991 (IAEA 1991). The implementation of the Safeguards Agreement, including *ad hoc* inspections of South African facilities by a team of senior IAEA officials specially appointed by the Agency's Director General, began in November 1991. This followed the IAEA's receipt of South Africa's *Initial Report* (submitted on 31 October 1991) as well as the *Report on the completeness of the inventory of South Africa's nuclear installations and nuclear material as of 30 September 1991* produced by the AEC in 1991 (AEC 1991). Notwithstanding these two South African reports, the IAEA maintained that the initial assistance provided by the South African government "was not considered to be sufficient" (AEC 1991: 2).

Between November 1991 and September 1993 the IAEA carried out 22 inspection missions in South Africa. These missions included more than 150 inspections at individual South African nuclear facilities and locations outside facilities (IAEA 1993a: 1) to "implement the [Safeguards] agreement and verify the completeness and assess the correctness of South Africa's Initial Report" (IAEA 1993b: 27). The IAEA team found "no evidence that the list of facilities and locations outside facilities" provided by South Africa in its Initial Report was 'incomplete' (IAEA 1993a: 2). However, the IAEA inspection team reported that "the uranium-235 [U-235] balances they had calculated for both the pilot enrichment plant and the semi-commercial enrichment plant showed apparent discrepancies" (IAEA 1993a: 2).

Subsequent to this report, the IAEA inspection team made additional visits to South Africa to examine these U-235 discrepancies. Based on historical records provided by the AEC, the IAEA team concluded that, at the time, South Africa's U-235 balance of the HEU, LEU and depleted uranium produced by the pilot enrichment plant "is consistent with the uranium feed" and that the amounts of HEU "which could have been produced by the pilot enrichment plant are consistent with the amounts

declared in the initial report [by the South African government]" (IAEA 1993a: 2-3). The "apparent discrepancy" in the U-235 balance of the semi-commercial enrichment plant was not resolved at the time (IAEA 1993a: 3). Against the background of the U-235 discrepancies, the US expressed concerns about the South African programme by stating that the US had "serious questions about South Africa's compliance" with its obligations in terms of the NPT (Lockwood & Wolfsthal 1993: 253).

According to Von Baeckmann, Dillon and Perricos (1995: 42), the South African verification process was 'complex' and "further complicated" by President de Klerk's announcement on 24 March 1993 which meant that the IAEA was required to extend its assignment and include nuclear weapons experts in its teams verifying the destruction and dismantling of South Africa's nuclear weapons and its programme. In addition to this, the IAEA (1993a: Annex 1; 1993a: 7) alleged that President de Klerk ordered the destruction and damage of "classified documents" and 'sensitive' equipment. In response to these allegations, the South African government invited the IAEA inspection team to assess the status of South Africa's former nuclear weapons programme. These visits occurred from 22 April to 4 May; from 3 to 11 June; and from 9 to 13 August 1993. The team had to determine the 'adequacy' of the measures taken by the South African government to destroy sensitive components of its nuclear weapons and to recover the nuclear material involved in terms of the Safeguards Agreement with South Africa (IAEA 1993a: 3).

When the IAEA inspection team visited South Africa, the dismantling and the destruction of weapons components and technical documentation (during what was designated as Operation Masada) of the country's nuclear weapons programme had been "nearly completed" (IAEA 1993a: 8). No records had been kept of the dismantling of the demonstration device or on "any of the pre-production experimental devices or on the destruction of their components" (IAEA 1993a: 8). In response to this, the IAEA inspection team recommended the "complete destruction" of all remaining "components, photographs and drawings" which could reveal any information of the nuclear material core and components (IAEA 1993a: 8-9).

The IAEA inspection team concluded that it found "substantial evidence" of the destruction of non-nuclear material components; that it found "no indication" that "substantial amounts of depleted or natural uranium used in the nuclear weapons

programme are unaccounted for"; and that South Africa's nuclear weapons programme had been terminated (IAEA 1994a: 157). Unlike previous inspections, South African authorities provided "extensive co-operation" with the Agency in the implementation of safeguards, the IAEA inspection team "encountered a highly cooperative attitude on behalf of the South African authorities" and in arranging access to all the facilities, concluded that no information about the existence of "any undeclared facilities" could be determined and that the Vastrap test site in the Kalahari Desert was "rendered useless" (IAEA 1993a: 2, 9, 10 & 27). Despite the destruction of documentation during Operation Masada, the South African government was complimented for the "transparency and openness shown" during the verification process (Von Baeckmann, Dillon & Perricos 1995: 48). South Africa's norm compliance was confirmed by several IAEA publications and officials (see IAEA 1993a).

The IAEA's verification process was, according to the Agency's publication entitled *History of the International Atomic Energy Agency: The first forty years,* "made easier by the co-operation of the South African nuclear authorities, who provided the IAEA with access and data beyond those required by its NPT safeguards agreement" (Fischer 1997: 110). Moreover, the IAEA confirmed that the South African government provided the IAEA verification team with "all the operating records of South Africa's previously unsafeguarded enrichment plant, and permitted the IAEA inspectors 'to go any place, any time'" (Fischer 1997: 110).

By September 1993, the IAEA (1993a: 10) concluded that the status of the Safeguards Agreement between South Africa and the IAEA was 'satisfactory' (see *Figure 7*). In particular, the IAEA (1993a:10, 11 & 27) reported that:

- the HEU amounts presented to the IAEA were "consistent with amounts declared in the initial report";
- there was nothing "to suggest that substantial amounts of depleted or natural uranium used in the nuclear weapons programme are unaccounted for"; and
- There was nothing "to suggest that there remain any sensitive components of the nuclear weapons programme which have not been either rendered useless or converted to commercial non-nuclear applications or peaceful nuclear usage".

With this, the IAEA concluded that South Africa's nuclear weapons programme had been terminated, that all South Africa's HEU had been accounted for and that no evidence of any sensitive components of the nuclear weapons programme existed as these components had been rendered useless or converted to commercial non-nuclear applications.

Figure 7: The IAEA verification process of South Africa's declared nuclear inventory (1991-1994)
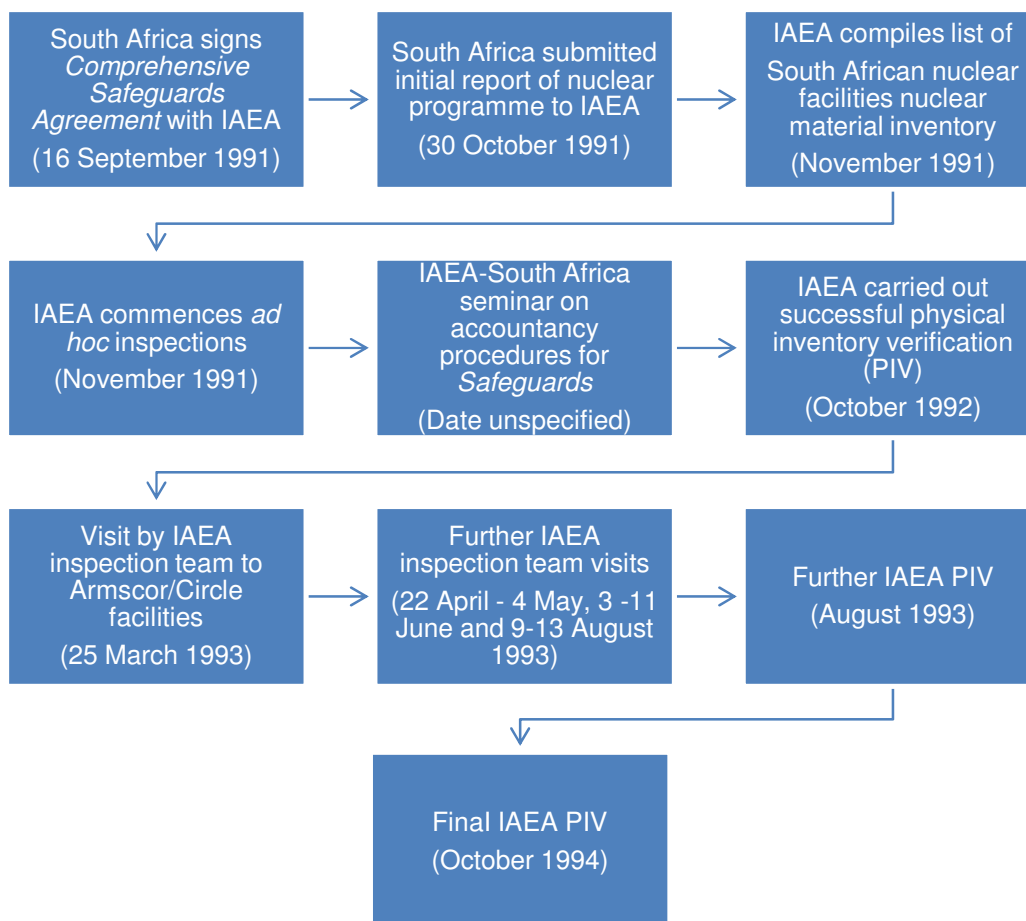
Von Baeckmann, Dillon & Perricos (1995: 42-43, 45)

In summary, the post-1990 South African government cooperated with the IAEA during the Agency's verification process and the implementation of the Safeguards Agreement in South Africa. Employing cooperation as a diplomatic strategy paved the way for greater acceptance of South Africa's intention to comply with nuclear

non-proliferation norms. The next section outlines South Africa's bilateral agreements with the IAEA as a further indication of the Government's norm compliance during the final stages of the NP Government.

3.1.2 South Africa's bilateral agreements with the International Atomic Energy Agency

Apart from the Safeguards Agreement with the IAEA, South Africa concluded several other agreements with the IAEA (see *Table 11)*, most of them since the termination of South Africa's nuclear weapons programme.

Table 11: South Africa's agreements with the IAEA (1990-2010)

Agreement	Status	Date
NPT-related agreement	Entry into force	16 September 1991
African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology	Entry into force	18 May 1992
Improved procedures for designation of safeguards inspectors	Accepted	19 July 1995
First Country Programme Framework	Implemented	1999-2004
Second Extension Agreement	Entry into force	4 April 2000
Protocol Additional to the Agreement between the Government of the Republic of South Africa and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons	Entry into force	13 September 2002
Second Country Programme Framework	Implemented	2006-2010
Supplementary Agreement on provision of technical assistance by the IAEA	Entry into force	Not available
Agreement on Privileges and Immunities	Entry into force	Non-party

BuaNews (5 December 2006) & IAEA (2009a)

Of the bilateral agreements the *Protocol Additional to the Agreement between the Government of the Republic of South Africa and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons* (hereafter the Additional Protocol) is one of the most important SA-IAEA agreements since 1990. The Additional Protocol is designed for states which have already signed a Safeguards Agreement with the IAEA. The purpose of the Additional Protocol is to strengthen the IAEA's ability to "detect undeclared nuclear material and activities in order to provide credible assurances of and confidence in the peaceful application of nuclear energy" (South Africa 2011). Signed by South Africa on 13 September 2002, the Additional Protocol, according to the South African government, placed an "extra burden on South Africa in terms of comprehensive information to be submitted and kept up to date in terms of Articles 2 and 3 of the Protocol" (South Africa 2005b). In terms of the Additional Protocol, IAEA inspectors also have greater access to South Africa's nuclear sites, facilities and activities. According to the South African government, this "additional burden" is outweighed by the "advantages in terms of strengthening our goals of nuclear disarmament and nuclear non-proliferation" (South Africa 2005b).

South Africa's diplomatic relations with the IAEA was also techno-political in nature. In 2006 South Africa concluded a second *Country Programme Framework* (CPF) agreement with the IAEA, following on the first CPF (1999-2004). This made South Africa the only African country to have concluded a second CPF with the IAEA. The latter outlines South Africa's future needs for nuclear technological cooperation and development and its main objective is for the IAEA to establish a system of "supervision and controls" in order to prevent the Agency's assistance programmes or distributed materials being used for military purposes (DST 2006). Moreover, according to the DST Director General at the time, Philemon Mjwara, the CPF is a "mutually agreed strategy for matching nuclear technology to priorities identified by South Africa for its sustainable development" (*Independent Online* 5 December 2006). By 2010, the review of South Africa's third CPF with the IAEA commenced (NECSA 2010: 25).

Apart from bilateral agreements with the IAEA, South Africa has hosted several IAEA conferences and seminars. In June 2002, for example, South Africa and the Agency

co-hosted an intergovernmental seminar for African states which was attended by 80 government representatives from at least 33 African countries. According to the South African government, the seminar aimed to "encourage African countries to honour their commitment to the non-proliferation of nuclear weapons" (*BuaNews* 20 June 2002). From 14 to 18 December 2009 South Africa's National Nuclear Regulator (NNR) hosted the IAEA *International Conference on Effective Nuclear Regulatory Systems* (Peters 2009). The IAEA also provided South Africa with technical assistance in preparation for South Africa's hosting of the 2010 *Fédération Internationale de Football Associations* (FIFA) World Cup (Peters 2009).

Thus, South Africa maintains comprehensive bilateral links and agreements with the IAEA. It illustrates the country's norm compliance and its application of cooperation as a diplomatic strategy. Moreover, it also signals a return to the relations South Africa initially had with the IAEA in the early years of the Agency.

3.1.3 Multilateralism as South African diplomatic practice

Since the establishment of the IAEA, South Africa has reiterated the technical - rather than political - role of the IAEA. However, as the Cold War intensified, the IAEA took on a more political role. Once South Africa's nuclear intentions and activities became known, the relations between South Africa and the Agency also took on a more political nature.

South Africa's position on this was reiterated in 2005 when its delegation stated that the IAEA remains the:

> internationally recognised competent authority responsible for verifying and assuring compliance with the safeguards agreements of States [*sic*] Parties concluded in fulfilment of their obligations under article III, paragraph 1, of the [Nuclear Non-Proliferation] Treaty, with a view to preventing the diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Nothing should be done to undermine the authority of the IAEA in this regard (South Africa 2005b).

A similar view was expressed in 2006 by the South African Minister of Energy, Buyelwa Sonjica (2006), when she informed the 50th Regular Session of the IAEA GC that South Africa is "fully committed" to the objectives of the IAEA. In 2007, Sonjica (2007) reconfirmed that, for South Africa, the IAEA is the "sole internationally recognised authority" responsible for nuclear verification. This position was further reiterated by Abdul Minty (2007b) when he informed the Board that South Africa will continue to:

> support activities aimed at strengthening and developing verification capabilities to provide assurance of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world.

Minty (2008a) is also on record for recognising the IAEA as the only global competent authority pertaining to nuclear non-proliferation:

> My delegation has on numerous occasions stated that the IAEA is the only internationally recognised competent authority responsible for verifying and assuring compliance with the safeguards agreements concluded with the agency.

Once the political transition in South Africa resulted in the inauguration of the GNU, South Africa's membership in numerous international organisations, including the IAEA, was normalised. A feature of South Africa's diplomatic relations from 1990 to 1999 was the emphasis on bilateral diplomacy. Once Thabo Mbeki became the South African president, multilateral diplomacy became a dominant feature of South Africa's diplomatic relations (Lee, Taylor & Williams 2006). Within the context of nuclear diplomacy, South Africa continued to emphasise the importance of multilateral diplomacy to achieve global nuclear non-proliferation. The importance South Africa ascribed to multilateralism was reiterated by Deputy Minister of Foreign Affairs Aziz Pahad (2004) when he stated that South Africa maintains that "multilateralism should be and could be the only cornerstone of global security".

3.2   Selected case studies of South Africa's relations with the International Atomic Energy Agency

A selection of case studies illustrates South Africa's relations with the IAEA. Each of these cases, as will be explained, is of particular significance to South Africa.

3.2.1   Membership of the Board of Governors

Article VI of the Statute refers to the composition, responsibilities and powers of the Board of Governors, whereas Article VII refers to the role and powers of the Director General of the Agency. Appointed by the Board with the approval of the GC, the Director General is the chief administrative officer of the Agency (IAEA 1957). Membership of the Board is based on two discriminatory requirements. It includes not only a geographical requirement, but also a high level of technical competency or as Article VI stipulates, members should be among the "most advanced in the technology of atomic energy including the production of source materials" (IAEA 1957). For South Africa, these discriminatory requirements have been unacceptable since it resumed its seat on the Board in 1995. Subsequently, they became a key area of the country's diplomatic relations with the IAEA.

South Africa's position on this issue is informed by the statement of President Mbeki (2006) that one of South Africa's foreign policy objectives is to terminate global apartheid and any form of discrimination: "we [South Africa] have a duty to fight against domestic and global apartheid". This was reconfirmed by the Government publication *BuaNews* (22 September 2010) and the DFA document *South African foreign policy* (DFA 1996). The discussion below elaborates on this policy position in the context of South Africa's relations with the IAEA. Therefore, this section outlines South Africa's position on the membership of the Board, as well as South Africa's efforts to lead the Board by nominating its representative on the Board, Abdul Minty, for the position of the Director General of the Agency.

3.2.2   Article VI of the Statute

Historically, South Africa's position on Article VI of the Statute had been to expand its membership (Sole 1997). Since 1995, South Africa has continued to take the

position that membership should be increased to include more developing countries, thereby also removing the discriminatory geographical requirement.

In terms of Article VI of the Statute, the Board is the principal decision-making body of the Agency. Of its current 35 members, 13 are designated, including the ten "most advanced in the technology of atomic energy including the production of source materials" and the most advanced members from each of the three geographical areas not represented among the ten (IAEA 1957). The remaining 22 Board members are elected from eight area groups, namely North America, Latin America, Western Europe, Eastern Europe, Africa, the Middle East and South Asia, South East Asia and the Pacific, and the Far East (IAEA 1957). Since its establishment in 1957, the number and proportion of African and Middle Eastern members of the IAEA have increased significantly. However, the Statute initially allocated only one elective seat to Africa and the Middle East respectively. As previously indicated, South Africa's representation on the Board dates back to 1957 when it held the designated seat for Africa on the Board until 1977 (*BuaNews* 2 December 2008).

Since the Agency's establishment, South Africa proposed the increase of the number of African seats on the Board (Sole 1997). South Africa's proposal was accepted when, in 1961, the Board and the GC approved the first amendment to the Agency's Statute by adding two more elective seats for the African region. A second amendment entered into force on 1 June 1973, resulting in the increase of Board membership to 34 with developing states having a small majority (Fischer 1997: 90). Developing countries used this majority to their advantage in September 1976 when the G-77 requested the Board to review the designation of South Africa as a Board member from Africa. Egypt's challenge of South Africa's membership proved beneficial to it when, in June 1977, the Board decided by a vote of 19 to 13 with one abstention, to uphold the nomination of Egypt as the member state in Africa, being the "most advanced in nuclear technology including the production of source materials" as per the requirement of Article VI of the Statute (IAEA 1957).

The 1977 decision introduced a new phase of South Africa's diplomatic relations with the IAEA as the Agency's members joined the international community in its condemnation of South Africa's domestic policies as well as the country's alleged nuclear weapons programme. One of the earliest actions against South Africa was

the rejection of its delegation's credentials for the session of the GC in September 1979. The diplomatic relations between South Africa and the IAEA became tenser between 1977 and 1989.

However, with the political transition underway in South Africa, at the 38th Regular Session of the IAEA GC in 1994, South Africa was invited to "resume participation in all activities of the Agency" as a result of "her dismantling her nuclear weapons programme" (IAEA 1994b: 1). Moreover, the GC requested the Board of Governors to "review the designation of South Africa to the Board" (IAEA 1994b: 2). Once the IAEA concluded its verification process in South Africa and with Egypt's concurrence, South Africa regained its seat on the Board in 1995 (Fischer 1997: 93-94). It was only on 25 September 1995 that South Africa returned to the Board as the representative of the African region since its suspension in 1977 (Nzo 1996).

Once reinstated as a Board member in 1995, South Africa sought to improve the representation of developing countries on the Board. South Africa's call for a "stronger voice for developing countries" (*BuaNews* 22 September 2010) is in line with South Africa's stated foreign policy, as well as its self-proclaimed role as a bridge between developed and developing countries. In March 1995, Alfred Nzo formulated South Africa's position:

> The position in which South Africa finds itself is that it has features both of the developed and the developing world. It is truly at the point of intersection between both worlds - an industrialised state of the South which can communicate with the North on equal terms to articulate the needs, the concerns and the fears of the developing world. Conversely we can interpret the concerns and the fears of the developed world (DFA 1996).

Moreover, South Africa's call for a "stronger voice for developing countries" (*BuaNews* 22 September 2010) was in line with the "characteristics and crucial elements of South Africa's foreign policy and international relations", which included:

- A self-ascribed role as an African leader: "South Africa should assume a leadership role in Africa in all those areas where a constructive contribution could be made without politically antagonising the country's African partners".

- An orientation of non-alignment: "The Government should continue to pursue a non-aligned approach, with due regard for South Africa's SADC, OAU, NAM and other membership commitments".

- A specific diplomatic style and role as a bridge builder: "A diplomacy of bridge-building between the 'North' and the 'South' should be pursued".

- Multilateralism as the preferred diplomatic practice as well as the promotion of its national interests: "In multilateral forums, South Africa should strive to promote its interests in regard to the major global issues such as respect for human rights, democracy, global peace, security and the protection of the environment".

- A self-ascribed role as an agenda setter and norm entrepreneur: "South Africa should constantly endeavour to positively influence and change the direction of events and developments internationally, to the extent that they affect South Africa" (DFA 1996).

Against this background, South Africa on numerous occasions expressed its position on the representation of the Board members of the IAEA. As early as 1998 South Africa stated that it "regretted deeply" the little progress that has been made on the expansion of the membership of the Board of Directors, which could have "benefited Africa" (Maduna 1998: 22). South Africa indicated that it felt that this situation is "unreasonable and unfair to the Africa Group" in the GC (Maduna 1998: 22). In advocating for the expansion of the membership and representation on the Board, South Africa is cognisant of the growing interest in nuclear energy to meet the energy requirements of developing countries.

Speaking at the *Symposium on International Safeguards: Addressing Verification Challenges* in 2006, Abdul Minty (2006) observed that there is "growing concern, especially among developing countries, at the growing resort to unilateralism and unilaterally imposed prescriptions". Moreover, according to Minty, "developing countries believe that the IAEA-established multilateral mechanism is the most effective way to address verification and safeguards issues and challenges".

A similar view was expressed in 2007 when South Africa's Minister of Minerals and Energy, Buyelwa Sonjica (2007), stated: "I need to encourage the Secretariat to work

tirelessly in ensuring that representation of developing countries is improved." More recently, in September 2010, Abdul Minty stated that a failure to achieve greater African and developing country representation "would delay the agency's democratisation" (*BuaNews* 22 September 2010). Explaining South Africa's position, Minty (2010a: 5) reiterated South Africa's position that there should be an increase in the number of African countries on the Board in order to reflect the "proportionate increase to 42 African countries" which are members of the IAEA. This duality in South Africa's diplomatic relations with the IAEA is not new. As Hecht (2006) indicates, since the negotiations on the establishment of the IAEA began in the 1950s, South Africa used this position as well as its identity as a unique case or a bridge builder to promote its interests in the IAEA.

3.2.3 Leadership of the Board of Governors

With his election as IAEA Director General on 4 June 1997, Egyptian Mohamed ElBaradei became the Agency's first Director General from a developing country. By the time ElBaradei's 12 year tenure ended in 2009, deep divisions between the Board's advanced nuclear states on the one hand, and developing and non-aligned IAEA member states that form the majority of the Board's members on the other hand became increasingly evident (Hibbs & Persbo 2009: 21). With ElBaradei's departure, Board members from advanced nuclear states intensified their search for a "candidate who would scale back the IAEA's ambitions" (Hibbs & Persbo 2009: 22), preferring a "strong consensus candidate bridging divisions between industrialised and developing nations" (*Reuters* 14 May 2010).

ElBaradei's departure presented South Africa with an opportunity to nominate a South African candidate to lead a major multilateral organisation. By 2008, South Africa had already hosted conferences of several multilateral organisations such as the AU and the NAM, and the United Nations Conference on Trade and Development (UNCTAD). On 12 September 2008, Ayanda Ntsaluba (2008), the Director-General of the South African DFA announced the nomination of Abdul Minty for the position of the Director General of the IAEA. This followed Ntsaluba's successful request to Parliament in 2006 to extend Minty's employment contract with the DFA (Portfolio Committee on Local Government and Administration 2006). He admitted that it is "the first time that South Africa is going to engage such a senior

position". Ambassador Minty's candidature was endorsed by the AU Summit of Heads of State and Government held in Sharm El Sheik in Egypt. According to Ntsaluba (2008), South Africa requested the "[AU's] endorsement on condition that the current Director General [Egyptian Mohamed Elbaradei] would not stand" as a gesture of African solidarity.

South Africa's efforts to become elected to the position of the IAEA Director General can be analysed in terms of Muller's (1976) typology of foreign representation. Minty's candidature is indicative of South Africa's symbolic representation at the IAEA. The country is a founder member that had served on the Board during the early years of its existence. Moreover, with South Africa's verified dismantling of its nuclear weapons programme, the country's election would be a symbolic 'return' to the country's nuclear non-proliferation origins. Moreover, Minty's election would be an example of substantive representation. This refers to the qualities and qualifications of the representative. Therefore, given Minty's background as an anti-apartheid and anti-nuclear activist, he combines these two types of foreign representation.

In presenting Minty's candidature, Ntsaluba (2008) provided the rationale for the South African government's decision. From his explanation and Minty's (2008b) comments at the announcement, there were three main reasons for the decision, namely South Africa's identity and unique nuclear experience; Minty's personal background and credentials as a disarmament activist; and South Africa's role as a bridge between developed and developing countries. With regards to the latter, Minty (2008b) reiterated South Africa's role as a bridge between these countries by stating that South Africa will be "combining the developed world and the developing world's perspective of these global issues". Minty (2008b) also returned to the duality of South Africa being:

> part of the developing world and so the combination of this means we will try to bring together the perspectives of the developing countries and the developed world's perspectives to try and produce and have a possible global consensus on the kind of issues that we face.

With regard to his personal background and credentials as a disarmament activist, Ntsaluba (2008) referred to Minty's involvement in multilateral disarmament fora and issues since 1977. Amongst others, Minty served as a special consultant at the second UN-OAU Conference in Lagos, Nigeria, where the establishment of the World Campaign against Military and Nuclear Collaboration with South Africa (hereafter World Campaign) was initiated.[38] Established under the patronage of Tanzanian President, Julius Nyerere, and other leaders of the Frontline States (FLS), the World Campaign's sponsors included Swedish Prime Minister Olof Palme; David Steel of the UK; and Coretta Scott King, wife of the late US civil rights activist Dr Martin Luther King (Ntsaluba 2008). Between 1977 and 1994, Minty also gave evidence to the UNSC and the UNSC Arms Embargo Committee on South Africa's apartheid policies. Once Minty returned from exile to South Africa, he was appointed to the DFA in 1994 (Ntsaluba 2008).

Other aspects of Minty's candidature were his leadership qualities and contribution to the activities of the IAEA. Minty regularly attended the annual GC of the IAEA in Vienna to lobby for sanctions against the NP-led South African government. This, and other efforts, eventually resulted in the removal of South Africa from the designated seat for Africa on the Board of Governors (Ntsaluba 2008). Since his appointment as Governor for South Africa on the Board, Minty has developed a good working relationship with the African Group of the NAM and other members of the IAEA. Minty also "played a major role in shaping key decisions" of the Board (Ntsaluba 2008). In addition to this, Minty has served as an advisor to South Africa's delegation to the 1995 REC of the NPT. In 2000 and 2005, he also led the South African delegations to the RevCons of the NPT. Since June 1995, he served as the chairperson of the South African NPC and has been a member of the UN Secretary-General's Advisory Board on Disarmament Matters (2001 to 2002); President of the 50th Session of the IAEA GC on behalf of Africa (2006); and chairperson of the NSG (April 2007 to May 2008) (Ntsaluba 2008).

At the announcement of his candidature, Minty (2008b) explained the diplomatic process pertaining to the election of the IAEA Director General. Minty's explanation is produced *verbatim* and divided into distinguishable phases. The purpose is to

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[38] Refer to Reddy's (1994) collection of Minty's speeches, statements and writing during this period.

provide insight into the operations of the IAEA and a procedure South Africa had been involved in earlier with the election of Donald Sole, the third Chairman of the Board in the 1960s. Moreover, it provides an account of South Africa's diplomatic history and nuclear diplomacy in the words of one of its most important post-1990 diplomats in the field of nuclear issues:

Phase 1: Commencement of process
> The formal process is that the new Board of Governors will be confirmed, some elected, at the GC of the IAEA which will be at the end of September this year [2008].

Phase 2: Meeting of new Board, circulation of procedures and formal invitation to members to submit candidatures
> In the first week of October the new Board of Governors will meet and the Chairman of the Board of Governors will then circulate a document which will outline the procedures. The procedure is that countries will be formally invited to submit candidatures and that process will be terminated at the end of December this year [2008].

Phase 3: Chairperson of Board employs methods to determine candidate(s) with largest support
> Then from January to June [2009] the Chairman [of the Board of Governors] can use a number of methods, or a number of methods together, to determine which candidates has [sic] the largest support. The Chair has in the past consulted with members of the Board - 35 including South Africa - and through that consultation if they find that some candidates have the support of five or six members, they may request them to withdraw - some may withdraw and some may remain in the race. In the end the procedure is that if they have to take a vote then you need two thirds support for any one candidate for the Chair - a lady this time - to feel she can then put it forward as the decision of the Board of Governors. That then goes formally to the GC next year [2009] in September and the conference endorses it. It has never happened that the GC takes a decision different from the Board so far.

Phase 4: Vote
> The Board also meets in March next year [2009] and should they make remarkable progress and decides [sic] on the candidate in March [2009] then it would be clear from March [2009] that the Board will make a recommendation. But often because of the high level political and other interaction that takes place the Board usually makes the decision by June when it meets. That is the last meeting of the Board before the GC where it has to submit all the documentation. So the decision will be made by the Board no later than June [2009].

Phase 5: Confirmation by GC
> Decision needs to be confirmed by the GC in September [2009].

Phase 6: Incumbent completes term

>The current Director-General then completes his term at the end of November in 2009.

Phase 7: New incumbent takes office

>The newly-elected Director-General will have to take over the Agency's helm by the first of December 2009.

From Minty's explanation it is clear that the election process can be divided into seven phases and that it was relatively short, its duration ranging from October 2008 until July 2009 when the election took place.

On 27 November 2008 South Africa submitted the nomination of Minty for the position of Director General to the Chairperson of the IAEA Board. In a statement on the submission, the DFA (2008b) made reference to South Africa's identity as "founder member of the IAEA" and the "most advanced country in the nuclear field on the African continent"; its role as promoter of the peaceful uses of nuclear energy; and its preferred diplomatic practice (multilateralism) as it "firmly believes in a multilateral approach as the only sustainable road" to address global issues.

Minty's main contenders included experienced candidates from Spain, Belgium, Slovenia and Japan (see *Table 12*). Realising the strength of Minty's contenders, Ntsaluba (2008) stated that:

>We [the South African government] will obviously doing [sic] what is necessary to support ambassador Minty's candidature up to and including the fact that he will have to obviously, as this is the normal practice for this sort of things [sic], visit quite a number of capitals so that people could have the opportunity to pose the questions that they may wish to pose to be sure that he has the necessary credentials.

Speaking on the agenda item of the election of the Director General on 5 March 2009, Minty (2009a) outlined his commitment and intentions should he be elected by focusing on the following issues:

- The "need to maintain the Agency's impartiality and integrity";
- The role of the IAEA as the "leading international organisation seeking to accelerate and enlarge the contribution of nuclear energy to peace, health

and prosperity throughout the world, but without contributing to any military purpose";

- Nuclear disarmament and nuclear non-proliferation;
- Strengthening the safeguards system;
- Improving the human, financial and technical resources, and operation of the IAEA;
- The political and technical role of the IAEA by stating that the Agency "by its very nature has a political role"; and
- "Inclusive and consultative leadership" and decision-making based on consensus.

Table 12: Candidates and non-binding poll results for the position of the Director General

Candidate	Nationality	Position	Votes received
Luis Echávarri	Spanish	Head of the Organisation for Economic Cooperation and Development's (OECD) nuclear arm	4
Jean-Pol Poncelet	Belgian	Former Belgium Defence and Foreign Minister	0
Ernest Petrič	Slovenian	Judge	0
Yukiya Amano	Japanese	Japan's Ambassador to the IAEA	20
Abdul Minty	South African	South Africa's Ambassador to the IAEA	11

IAEA (2009c) & *Reuters* (14 May 2010)

Minty (2008a) made very few references to developing countries in his first statement on the elections but in his second statement on 27 March 2009, he returned to the issue of developing countries' right to nuclear energy by stating that he "will also be vigilant that developing countries are not denied access to the

benefits of nuclear energy and advanced technologies needed for their own development" (Minty 2008b); a position that has often resulted in diplomatic confrontation between South Africa and NWS on the Board, especially on South Africa's support of Iran's nuclear programme.

On 9 June 2009 the Board of Governors conducted an informal non-binding poll on the five candidates. The purpose of the poll was to indicate to member countries if their prospects of success were declining or not (NTI 2009b). The Japanese candidate, Yukiya Amano, received the most votes, with Minty receiving the second highest number of votes. Amano beat Minty in the March 2009 run-off, but did not achieve the majority vote (IAEA 2009c).

Figure 8: The process of the election of the Director General of the IAEA (2009)
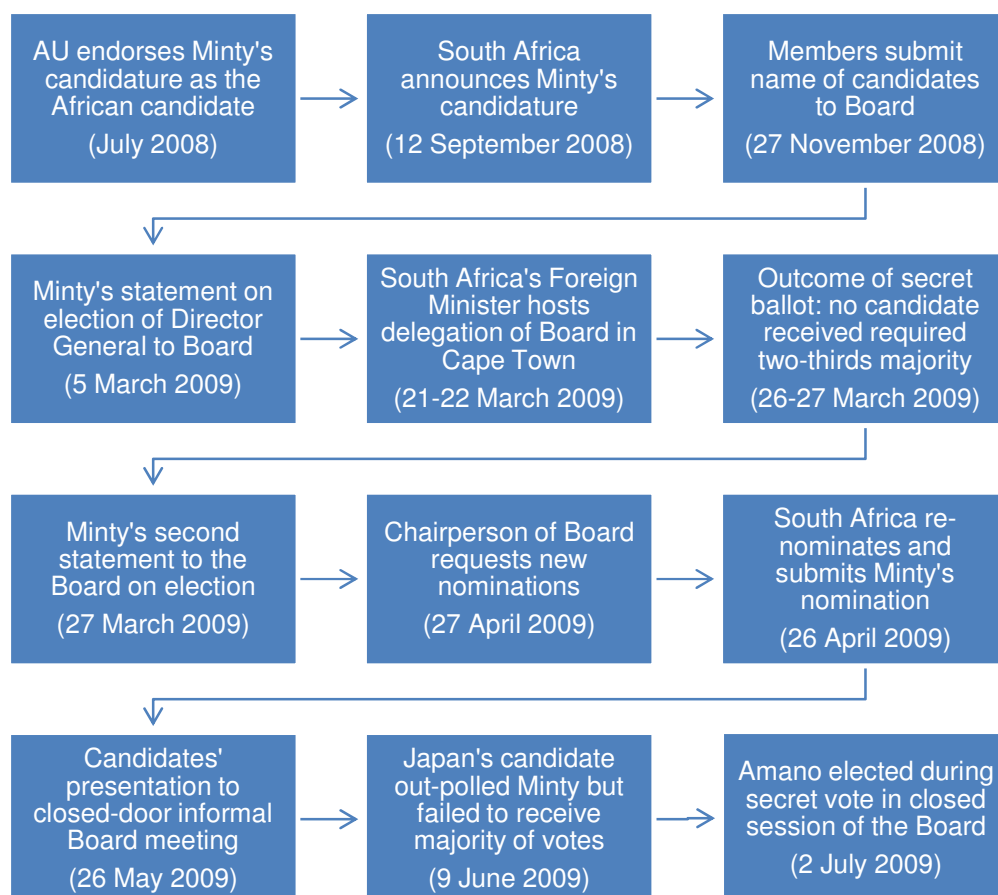
Minty (2008a & 2008b); DFA (2008b & 2009b); NTI (2009b); IAEA (2009c) & *Reuters* (14 May 2010)

In accepting defeat after the final secret vote on 2 July 2009, Minty (2008c) admitted that the election process "has been a long drawn out and hard fought campaign" and declared South Africa's support for Amano's tenure as Director General (see *Figure 8*). Ntsaluba's (2008) "doing what is necessary" eventually amounted to more than R 3 million, which the Minister of International Relations and Cooperation, Maite Nkoana-Mashabane, confirmed (*News24* 6 September 2010).

The election of the Director General is an extremely political process requiring intense diplomatic efforts. The election of past Director Generals likewise involved their own diplomatic wrangling with both Hans Blix and Mohamed ElBaradei being elected as 'compromise' candidates (McGoldrick 2009: 2). Eventually, South Africa's identity and unique nuclear experience, Minty's personal background and credentials as a disarmament activist and South Africa's role as a bridge between developed and developing countries did not contribute to the election of the country's candidate as the Director General. Minty's election failure may be regarded as a failure of South Africa's nuclear diplomacy.

Despite a concerted effort by South Africa to support Minty's candidature, Western countries with nuclear capabilities supported the Japanese candidate. The South African candidate whose activist credentials may have worked against him, whereas developing countries preferred a "moderate G-77 candidate" (*Reuters* 14 May 2010), namely South Africa's Abdul Minty, who was "intensely opposed by most advanced nuclear members" (Hibbs & Persbo 2009: 22). Another aspect which may have undermined Minty's election was the South African government's ongoing support of Iran's nuclear programme.

3.2.4 The Nuclear Fuel Reserve

South Africa has repeatedly expressed the view that there should be "no unwarranted restrictions on the inalienable right of states to the peaceful application of nuclear energy" (Minty 2007b). In this way, South Africa has adopted a position on the upholding of all states' nuclear sovereignty.[39] Its support of Iran's right to develop

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[39] Nuclear sovereignty refers to a state's right to use nuclear energy for peaceful purposes. In Chapter 7, the concept is discussed in the context of the provisions of the NPT. Article IV of the NPT provides for "the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination".

nuclear energy for peaceful purposes has resulted in several diplomatic confrontations between South Africa and other Board members.

South Africa's support of the "inalienable right" of all states to develop nuclear energy for peaceful purposes has also resulted in diplomatic partnerships on the issue with India, Brazil and the NAM (Pahad 2006b & 2008b). As a NAM member South Africa subscribed to the Movement's support of the "basic and inalienable right" of a state (including Iran) to "develop research, production and use of atomic energy for peaceful purposes, without any discrimination and in conformity with their respective legal obligations" in terms of Article IV of the NPT (Pahad 2008b). In an indirect reference to the opposition of states such as the US and the UK to Iran's nuclear programme and their efforts to influence the IAEA in this matter, the 2008 NAM Ministerial Conference reiterated the role of the IAEA as the:

> sole competent authority for verification of the respective safeguards obligations of Member States and stressed that there should be no undue pressure or interference in the Agency's activities, especially its verification process, which would jeopardize the efficiency and credibility of the Agency (Pahad 2008b).

Apart from its support of Iran and the right of developing countries to develop nuclear energy, South Africa's position on nuclear sovereignty and the inalienable rights of states to develop nuclear energy was illustrated by its opposition to the nuclear fuel reserve established under the auspices of the IAEA.

The origins of the idea of a nuclear fuel reserve go back to 2006. Addressing a summit of the Eurasian Economic Community on 25 January 2006 in St. Petersburg, Russian President Vladimir Putin proposed the creation of a Global Nuclear Power Infrastructure (GNPI) which would establish a network of service providers to provide full fuel-cycle services; including uranium enrichment; fuel fabrication; and reprocessing to states lacking such capabilities. He also suggested that these facilities should be placed under IAEA safeguards and that they would provide states with fuel cycle services on a non-discriminatory basis. According to Putin, his proposed initiative aimed to limit the proliferation of sensitive technologies while

providing nuclear fuel supply assurances to states that refrain from acquiring full fuel-cycle capabilities (UN 2006).

In a subsequent interview, Minty indicated that South Africa would not support the Russian initiative since it would 'preclude' South Africa and developing countries from pursuing uranium enrichment (quoted in *News24* 22 March 2006); especially as the South African *Nuclear energy policy for the Republic of South Africa* of 2008 indicated the Government's intention to enrich uranium (DME 2008). South Africa's stance on the NWS position to limit newcomers' efforts to develop nuclear energy was linked to South Africa's relations with developing countries.

Speaking at the GC of the IAEA in September 2006 (a few months after Putin's proposal), the South African Minerals and Energy Minister, Buyelwa Sonjica, stated that South Africa cannot support "unwarranted restrictions" on countries that have decided to use nuclear energy for peaceful purposes in terms of the NPT (*BuaNews* 19 September 2006). She repeated a common theme of South Africa's diplomacy, namely the prevalence of global inequities and observed that the:

> imposition of additional restrictive measures on some NPT member states, while allowing others to have access to those capabilities, only served to aggravate existing inequalities that were already inherent; and undermined one of the central bargains contained in the treaty (*BuaNews* 19 September 2006).

Sonjica also referred to another theme, namely the support of "the unambiguous principle" enshrined in Article IV of the NPT which states that nothing in the NPT:

> shall be interpreted as affecting the inalienable right of all parties to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II (*BuaNews* 19 September 2006).

Russia's 2006 proposal also included the establishment of several global International Nuclear Fuel Centres (INFCs) and its offer to host the first INFC. Kazakhstan joined the Russian initiative and, on 26 October 2006, the construction of a joint Russian-Kazakh enrichment centre at the Angarsk Electrolysis Chemical

Plant in eastern Siberia along with plans to enrich uranium from Kazakhstan was announced (UN 2006).

At the Board of Governors meeting in June 2009, Director General Mohamed ElBaradei (2009a) proposed the establishment of a LEU reserve under IAEA auspices. In addition, Russia proposed the idea of an "assurance of supply mechanism" (ElBaradei 2009a). In presenting the idea of a LEU bank to IAEA members, ElBaradei reassured members that the purpose of the IAEA LEU bank and the Russian proposal was to "provide assurance of supply over and above countries' existing rights". Moreover, he reiterated that the proposed fuel bank "does not limit countries' rights in any way" and that "no state would be required to give up any of its rights, including the right to develop its own fuel cycle". The Director General's proposal entailed a physical LEU bank at the disposal of the IAEA as a "last-resort reserve for countries with nuclear power programmes which face a supply disruption for non-commercial reasons" and accessible to all states in order for states that "they might not need their own enrichment or reprocessing capability" (ElBaradei 2009a & 2009b). The rationale for ElBaradei's (2009b) proposal was to "move from national to multinational control of the nuclear fuel cycle".

Developing states, including South Africa, perceived ElBaradei's nuclear fuel cycle initiative as intended to prevent them from benefitting from nuclear energy and technology (Hibbs & Persbo 2009: 22). ElBaradei's proposal to commence with the planning of a multilateral civilian nuclear fuel supply was blocked by the Board on 18 June 2009 (NTI 2009c). However, later in 2009, the IAEA approved the establishment of the first international nuclear fuel repository. Twenty-eight IAEA member states voted in favour of the establishment of the facility, whereas six members abstained. In abstaining from the vote, South Africa agreed with Tunisia, Venezuela, Ecuador, Brazil and Argentina not to support the nuclear fuel reserve. Pakistan did not vote.

In what can be regarded as a reaction to the IAEA decision to establish a nuclear fuel reserve, South Africa's Minister of Energy, Dipuo Peters (2009), reiterated South Africa's intention to secure its own fuel supply for "future national energy needs" at the 53rd Regular Session of the IAEA GC in 2009. The Minister also indicated that various feasibility studies were undertaken by NECSA with the cooperation of some

"international players in fuel cycle services" (Peters 2009). In addition to this, Peters (2009) also announced that laboratories and facilities were under construction to "facilitate [the] re-establishment of fuel cycle operations in South Africa".

By December 2010, the repository referred to above opened a uranium enrichment facility at the International Enrichment Centre (IEC) at Angarsk in Siberia (Russia). This followed an IAEA-Russian agreement to reduce nuclear proliferation and uranium processing by providing LEU to any IAEA member country that could be denied access to conventional nuclear fuel markets (NTI 2010c; *World Nuclear News* 1 December 2010). Under IAEA safeguards, the IEC would ensure an uninterrupted supply of LEU for nuclear power generation. Apart from funding the establishment of the 120 tonnes reserve, Russia also funded the maintenance, storage, safety, security and safeguards of the IEC.

At the time of Russia's initial proposal of a global nuclear fuel reserve in 2006, Abdul Minty (2006) reiterated that developing countries maintain that it is "the basic and inalienable right of all states" to "develop research, production and use of atomic energy for peaceful purposes" and that this right "should be without any discrimination and in conformity with their respective legal obligations". Minty (2006) pre-empted the outcome of the vote by some development countries on the establishment of the nuclear fuel reserve by stating their:

> choices and decisions in the field of peaceful uses of nuclear technology and its fuel cycle policies must be respected. Just as for developed countries, developing countries also have a sovereign right to make their own decisions consistent with their national priorities and interest.

The decision by the South African government on nuclear fuel announced by Minister Peters (2009) signals a major departure from IAEA policies as well as the use of parallelism as a diplomatic strategy with South Africa initiating nuclear fuel facilities parallel to the IAEA's nuclear fuel reserve.

South Africa employed confrontation as a diplomatic strategy in the IAEA's establishment of the nuclear fuel reserve. It regarded NWS to be promoting their interests above those of other members of the IAEA despite the provision of Article

IV of the NPT. In addition to this, the South African government's decision not to support the initiative may have also undermined Minty's candidature. South Africa was protecting its national interests, especially since it was conducting feasibility studies to recommence with its uranium enrichment programme.

3.2.5 The AQ Khan network and the Wisser *Affaire*

Since 1994, it was very important for the Government to gain the trust of the international community on South Africa's commitment to nuclear non-proliferation. Presidents Mandela (1998) and Mbeki (2004a) and the government officials have repeatedly reiterated South Africa's commitment not only to nuclear non-proliferation but also to complete disarmament (DIRCO 2010c: 42). On this, ambassador Minty (2008a) clearly formulated South Africa's position:

> The South African national liberation movement and after 1994, democratic South Africa has a long and consistent record of commitment to and engagement on the need to eliminate all weapons of mass destruction.

A few months after the involvement of South Africans in the AQ Khan network, Minty (2005) reconfirmed South Africa's position on nuclear non-proliferation and nuclear disarmament:

> South Africa continues to believe that nuclear disarmament and nuclear non-proliferation are mutually reinforcing processes that require continuous and irreversible progress on both fronts. We are convinced that the only real guarantee against the use or threat of use of nuclear weapons is their complete elimination and the assurance that they will never be produced again ... South Africa believes that nuclear weapons do not guarantee security, rather, they distract *[sic]* from it. The longer nuclear weapons exist, the longer the world will have to wait to be free from the use or threat of use of such weapons. Many also fear that such weapons could also fall into the wrong hands. However, our belief is that nuclear weapons are illegitimate, irrespective of whose hands these weapons are in. Those who rely on nuclear weapons to demonstrate and exercise power should recognise that such

dependence on weapons of mass destruction only serve *[sic]* to increase insecurity rather than promote security, peace and development.

Speaking at a symposium on safeguards in October 2006, Minty (2006) yet again reiterated South Africa's position on nuclear non-proliferation and nuclear disarmament and reminded the audience that South Africa's position on the "mutually reinforcing processes" of nuclear non-proliferation and nuclear disarmament is widely documented:

> The total elimination of all nuclear weapons is our common objective, and, therefore, the issues of nuclear disarmament and nuclear non-proliferation are inextricably linked to each other. Our concerted efforts to prevent the proliferation of nuclear weapons should be matched by a concurrent effort to eliminate, in a verifiable and irreversible manner, all nuclear weapons and universal adherence to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

This position has resulted in South Africa confronting states such as the US and China who support the idea of the limitation (rather than elimination) of nuclear weapons. South Africa's position on this has also resulted in partnerships. One such partnership is the India-Brazil-South Africa Dialogue Forum (IBSA). As early as IBSA's second summit in 2007, India, Brazil and South Africa repeated their commitment to the goal of the "complete elimination of nuclear weapons and expressed concern over the lack of progress in the realisation of this goal". These states also emphasised that nuclear disarmament and nuclear non-proliferation are "mutually reinforcing processes requiring continuous, irreversible progress on both fronts". IBSA members also stated that the objective of non-proliferation can be achieved by the "systematic and progressive elimination of nuclear weapons in a comprehensive, universal, non-discriminatory and verifiable manner" (Minty 2008a).

Nevertheless, South Africa's partnership with its fellow IBSA states requires more reflection. In the context of the NSG, South Africa supported the exception granted to India not to require an Additional Protocol in terms of the NSG Guidelines in terms of the US-India nuclear cooperation agreement. South Africa, however, opposed the proposal to grant an exception to Argentina and Brazil (NTI 2012). In both cases,

South Africa maintained that nuclear non-proliferation norms were compromised but it continued to cooperate with other states to protect the integrity of the export control regime as a member of NAM and in terms of its identity as a middle power.

More importantly, for South Africa the "primary goal" of its nuclear-related activities and diplomacy remains the promotion of South Africa as a "responsible producer, possessor and trader of advanced nuclear technologies and should adopt positions publicly supporting international peace and security" (DIRCO 2010c: 42). It was, therefore, a diplomatic embarrassment when a series of events caused the international community to raise concerns about South Africa's commitment to non-proliferation (see Chapter 3).

In an effort to control the diplomatic damage caused by the Wisser *Affaire*, South Africa requested the IAEA to seal the 11 containers confiscated at Tradefin Engineering. Through the South African Police Service (SAPS), the Government maintained control over the containers and equipment. In updating the IAEA Board on the events, Minty (2004: 2) confirmed that all material, documentation and instruments confiscated at various locations were placed "under IAEA seal" (Minty 2004: 2). In further efforts to counter the diplomatic damage caused by the Khan network and the Wisser *Affaire*, the South African government issued several statements at IAEA gatherings reiterating its "principled policy regarding nuclear disarmament" while warning against the acquisition of nuclear weapons capabilities by states and non-state actors (Xingwana 2004: 21).

In a statement on safeguards; non-proliferation; and nuclear weapon free zones made in New York in May 2005, the South African government outlined the diplomatic process it followed in order to address the issue. It indicated that South Africa (2005b), in cooperation with other affected countries and the IAEA, conducted a "thorough and urgent investigation" into the Khan network. South Africa (2005b) also expressed its gratitude to the IAEA for the "important role" that it has played in the investigation of the network that had led to the prosecution of those contravening South Africa's non-proliferation legislation. The South African government also indicated that it would "continue to closely co-operate with these and others involved in the investigations into the international illicit network and efforts to ensure its elimination" (South Africa 2005b).

During the period that Wisser's case served before a South African court, Minty (2007b) once again reiterated South Africa's position on illicit nuclear proliferation networks. He maintained that South Africa:

> remains concerned about the illicit clandestine nuclear networks" and he also called on states that "[i]t is imperative that all countries that have been affected by the network closely co-operate to eliminate this threat. Our own experiences with the illicit network for the transfer of and trade in nuclear material, equipment and technology have clearly shown that States need to provide their pro-active and full support to the Agency in its verification obligation.

A few months after the sentencing of Wisser, Minty addressed the second PrepCom for the 2010 NPT RevCon in Geneva on 29 April 2008. Repeating South Africa's earlier views on illicit nuclear networks, he warned of the dangers of these networks as they pose "one of the most serious challenges to the international community" (Minty 2008c). Minty also suggested that the international community "effectively and decisively take appropriate action" against these networks.

For South Africa, its response to the Wisser *Affaire* had several diplomatic implications. As previously indicated, South Africa's use of multilateral diplomacy throughout the process is clear from its cooperation with affected European states and the IAEA. South Africa was also required to improve its diplomatic communication on its commitment to nuclear non-proliferation (Minty 2007). These measures resulted in cooperation and partnership as diplomatic strategies.

A third implication for South Africa's nuclear diplomacy was the opportunity to demonstrate leadership; the opportunity to assert its identity as a state committed to nuclear non-proliferation; and renewed norm entrepreneurship. To the extent that it related to the IAEA, South Africa (2005b) proposed the review and improvement of controls over nuclear material, technologies and equipment in order to "prevent nuclear weapons proliferation and illicit trafficking". Once the establishment of an Advisory Committee on Safeguards and Verification to improve the effectiveness of the IAEA's safeguards system took effect, South Africa also proposed that IAEA members should use the opportunity to "evaluate and possibly agree on

recommendations that could improve the safeguards system" (Minty 2006). Following the break-in at NECSA's headquarters, Pelindaba, on 8 November 2007, South Africa invited the IAEA to assist the country in assessing and improving the security of Pelindaba. At the time South Africa observed that the IAEA's visit could also benefit other IAEA members in the "implementation of their nuclear security policies and the improvement of relevant guidelines".

A similar request for the improvement of safeguards was made by South Africa's Minister of Energy, Dipuo Peters (2009), in her address to the IAEA GC in September 2009. South Africa also made a greater diplomatic effort to emphasise the role of the Agency as the "sole competent authority in the field of nuclear safeguards and verification", reiterating that it "attaches great importance to the role, authority, impartiality and integrity of the Agency and would not wish to do anything that would reduce or undermine its solemn responsibilities" (Minty 2006). Continuing with its self-ascribed role as the voice of developing countries at the IAEA, South Africa also proposed that developing countries should receive more support in the implementation of their agreements with the IAEA.

Whereas this section focused on South Africa's nuclear non-proliferation experience since it terminated its nuclear weapons programme and on its diplomatic strategies of cooperation, confrontation and parallelism, the next section outlines the country's relations with the IAEA against the background of the provision in the IAEA Statute that all states have an inalienable right to develop nuclear energy for peaceful purposes.

3.2.6 The SAFARI-1 conversion and isotope production

In the wake of 9/11, international concerns about the threat of nuclear terrorism increased. Through its *Nuclear Security Plan 2006-2009,* the IAEA and its members cooperated to improve nuclear security worldwide and counter illicit nuclear trafficking (IAEA 2008a). One of these efforts was to shift the use of HEU to LEU in commercial applications through the conversion of nuclear reactors (IAEA 2010a: 8). However, these initiatives were preceded by IAEA diplomatic efforts to influence the South African government to convert South Africa's nuclear research reactor, SAFARI-1, from using HEU to LEU.

Initiated in 1960 as a 20 megawatt (MW) tank-in-pool type light water reactor, the operation of the SAFARI-1 nuclear reactor was affected by South Africa's international isolation.[40] In 1976 an international embargo was instituted against the supply of nuclear fuel to SAFARI-1. This did not deter the South African government from using SAFARI-1 to commence with uranium enrichment, *inter alia*, for its nuclear weapons programme.

Figure 9: Events and developments in the existence of NECSA

Establishment of AEB Cabinet approval for Four Point Nuclear Research and Development Programme (1959)	Construction and operation of SAFARI-1 and Koeberg Uranium enrichment, fuel fabrication and development of nuclear weapons (1960-1989)	IAEA verification and safeguarding Ratification of NPT (1989-1993)
Restructuring of nuclear arena Commercialisation of nuclear and related products (1993-1999)	Establishment of NECSA and NPC (2000)	South Africa signs Additional Protocol (13 September 2002)
Arrest of former NECSA scientist involved in Khan's network (2004)	Break-in at Pelindaba (8 November 2007) IAEA assist with Pelindaba's security (2008)	Release of national *Nuclear Energy Policy* (2008)
LEU medical isotope production Major Mo-99 producer (on the increase since 2007)	NECSA investigating re-establishment of nuclear fuel cycle in SA (2008/09 onwards)	Conversion of SAFARI-1 (Completed in 2009)

IAEA (1994b, 2008b & 2010b); Damane (2001); NECSA (2003 & 2009); DME (2008) & Adam (2009)

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[40] SAFARI-1 was inaugurated by Prime Minister Hendrik Verwoerd in 1965.

Following the post-1994 developments, the diplomatic focus between South Africa and the IAEA also shifted to the conversion of SAFARI-1 from HEU to LEU as some IAEA members remained cautious of South Africa's nuclear intentions. By 1993, SAFARI-1's operations shifted from military purposes to commercial applications, especially producing medical isotopes, using HEU from South Africa's inventory verified by the IAEA (Vlok 2006: 2). However, the IAEA demanded the conversion of the nuclear reactor; an issue South Africa was hesitant to address as SAFARI-1's HEU-based operations provided South Africa with considerable scientific status and prestige; valuable income from its isotope production; and even some deterrent status.

As the successor of the AEB, NECSA is the contact point between the South African government and the IAEA (see *Figure 9*). NECSA is also, in terms of the Nuclear Energy Act 46 of 1999, responsible for the management of South Africa's Safeguards Agreement with the IAEA and the country's nuclear material to prevent nuclear proliferation. Subsequent to the efforts of the IAEA, the South African government authorised the conversion of SAFARI-1 in July 2005 and financed the conversion to the amount of R 12 million *per annum* for three years (De Waal & Galeni 2005).

According to Piani (2007: 4), a SAFARI-1 nuclear scientist at NECSA, the original conversion process was to be completed over three to four years in two main phases, namely the establishment of a local LEU manufacturing capability, which NECSA manufactured (NECSA 2010: 11), and the conversion of the SAFARI-1 core from HEU to LEU fuel. By 2010, the latter phase had already resulted in NECSA (2010: 21) producing 83 LEU fuel elements and 18 control rods (see *Figure 10*).

By 2008, NECSA (2008: 16) reported that "good progress" had been made with the conversion of SAFARI-1 through a cooperation agreement with AREVA-CERCA, a French state-owned nuclear power utility which provided NECSA with LEU fuel plates. On 25 June 2009, SAFARI-1 used LEU for the first time since it went critical on 18 March 1965 (IAEA 2009d). Announcing the successful conversion, NECSA (2009) stated that the conversion was "in line with international norms to reduce proliferation risks" and that it will 'enable' South Africa to promote South African products as "non-proliferation compliant" and enable "preferential treatment" in key

markets such as the US, and in other international joint ventures. This statement correlates with Colby's (2011) observation that states base the conversion of their nuclear reactors on economic, political, military and technical considerations. From 2009 to 2010 NECSA's subsidiary, NTP Radioisotopes (Property) Limited (hereafter NTP), earned South Africa considerable foreign exchange amounting to R 623 million, exceeding its sales target for the period by 21 percent (*Reuters* 1 March 2010). Moreover, the NECSA (2009) statement is indicative of the strategies of cooperation and partnership, especially as they relate to South Africa's relations with the IAEA.

Figure 10: The schedule for the SAFARI-1 conversion
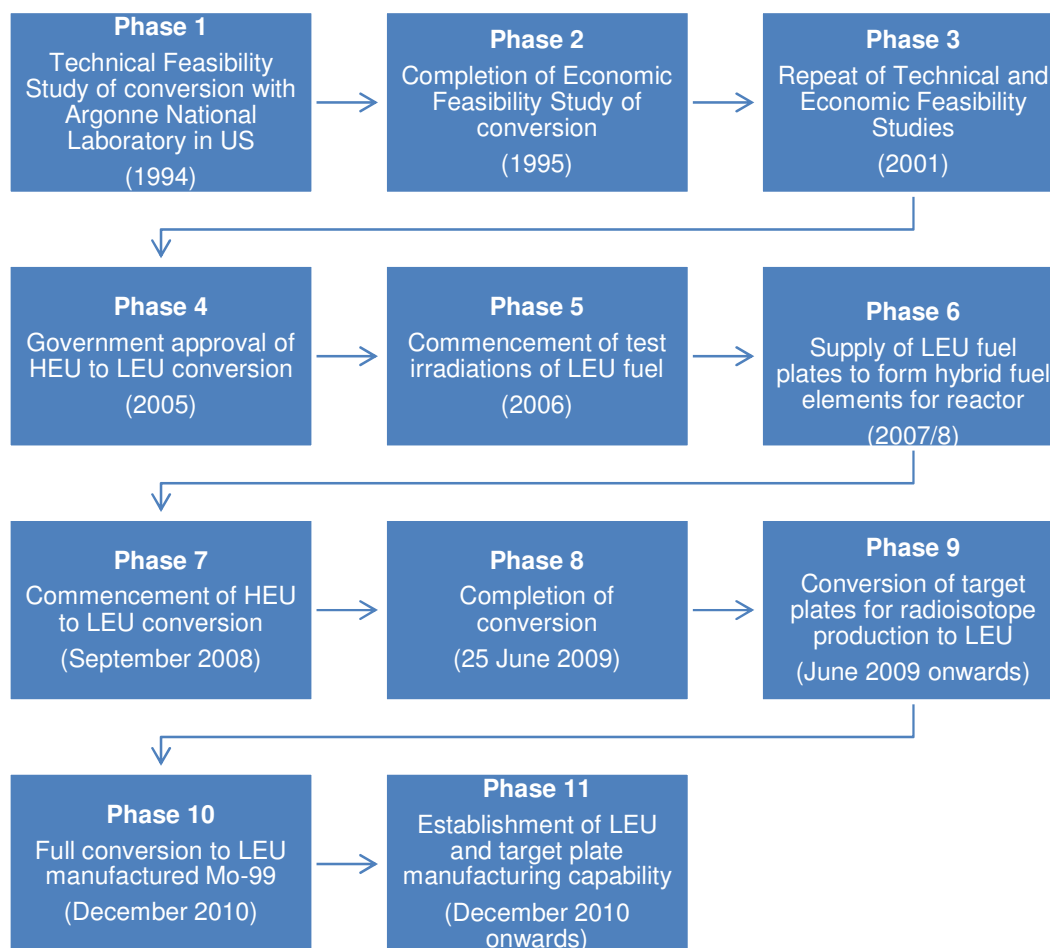
Piani (2007: 4) & NECSA (2008: 16; 2009 & 2010: 21)

More important than the aforesaid considerations are the diplomatic considerations of and diplomatic 'returns' on the conversion (Colby 2011). For South Africa, the successful conversion was beneficial in non-material terms. Not only did it receive international recognition from the IAEA, but its status and prestige were advanced by the scientific expertise, as well as by the moral authority, associated with the conversion. By April 2010, during President Obama's NSS in Washington, South Africa announced that it "quite ambitiously, had not only adopted a national policy of HEU-free production of medical isotopes - that is, using only LEU for both fuel and targets - but it also had developed the technology to carry it out" (Pomper & Potter 2010). In 2010, NECSA announced that its subsidiary, NPT Radioisotopes, had become the first and only company in the world producing the medical isotope Molybdenum-99 (Mo-99) on a commercial scale using LEU-based technology (NECSA 2010: 5; *World Nuclear News* 14 April 2010).[41]

Table 13: Major reactors producing and supplying all types of medical isotopes

Reactor producing and supplying medical isotopes	Country of origin	Years in operation (in 2009)	Share of global production (percentage)
NRU (Chalk River)	Canada	52	40
BR-2 (Mol)	Belgium	48	10-15
HFR (Petten)	The Netherlands	48	30
Osiris (Saclay)	France	43	5-8
SAFARI-1 (Pelindaba)	South Africa	44	10-15

IAEA (2010a: 156; 2010b: 3)

The South African Minister of Energy (2010) also observed that South Africa "will be the first radioisotope producing country to have completed this conversion process, which is a requirement for supplying radio isotopes into certain key markets". Reporting on South Africa's activities to the 54th Session of the IAEA GC,

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[41] The medical isotope Mo-99 is used in diagnostic tests for illnesses such as cancer and heart disease.

ambassador Minty (2010a: 4) announced that, since July 2010, South Africa had been the world's largest supplier of Mo-99 based on LEU. Subsequently, the IAEA (2010b: 8) recognised that South Africa's conversion of SAFARI-1 to LEU as the "first step" towards LEU target conversion by a 'major' ^{99}Mo producer.[42]

In 2010, the IAEA (2010a: 18-19) acknowledged that subsequent to the conversion of SAFARI-1, South Africa became the world's "first large scale" producer of Mo-99, whereas it was only the world's third largest isotope producer in 2007, according to NECSA Chief Executive Officer (CEO), Rob Adam (2007). Moreover, in 2010, the IAEA (2010b: 2) recognised SAFARI-1 as one of the world's major five isotope producers. In 2010, South Africa (NTP); Canada (MDS Nordion); Belgium (*Institut National des Radioéléments*); France (Osiris); and The Netherlands (Covidien) produced 95 percent of the medical isotope Molybdenum-99 (Mo-99) (Ahmad 2009: 286; IAEA 2010a: 151) (see *Table 13*). Other Mo-99 producing countries include Australia, Argentina, China, Malaysia, Brazil, Russia, Poland, France, India, Kazakhstan and Uzbekistan (Ahmad 2009: 286-287; IAEA 2010a: 153).

Through SAFARI-1's conversion, South Africa has contributed to a redefinition of the concept "nuclear symbolism", which previously referred to the idea that a state's nuclear weapons capability "symbolizes a strong, independent and modern state". By referring to the LEU requirements set by some isotope-importing countries to which South Africa now complies with, NECSA (2009) has added "nuclear leverage" to South Africa's nuclear diplomacy. Through the conversion, the country also acted as a norm entrepreneur as a state that previously had a HEU-based nuclear weapons programme. In addition to this, it has become a country that produces medical and other isotopes from LEU, thereby illustrating its commitment to nuclear non-proliferation and the peaceful uses of nuclear energy. With this, South Africa has consolidated its identity as a major nuclear power and moral authority in the developing world.

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[42] The IAEA (2010b: 8) has been involved in 'fostering' developments in the production of Mo-99 for more than three decades. Since 2007, disruptions such as planned and unplanned shut-downs of major Mo-99 producing reactors in Canada and The Netherlands affected the global production and supply of Mo-99 (IAEA 2010a: 155).

4.   An assessment of South Africa's relations with the International Atomic Energy Agency

In an assessment of South Africa's international relations policy from 1994 until 2010, DIRCO (2010c: 38-42) identified South Africa's major foreign policy "priorities and objectives" which includes, amongst others, the consolidation of the African Agenda; the strengthening of South-South cooperation; the strengthening of North-South cooperation; participation in the global system of governance; and the strengthening of political and economic relations. This section assesses South Africa's relations with the IAEA and all these foreign policy priorities and objectives in the context of norm compliance and state identity.

4.1   The African Agenda and South-South cooperation

With regards to its position on the consolidation of the African Agenda and strengthening South-South cooperation, South Africa has cooperated and established partnerships with African and other developing countries on issues such as the reform of the IAEA, and has advocated the expansion of developing countries' representation on the IAEA Board (hence also Minty's nomination for the position of Director General of the IAEA) as well as their right to develop nuclear energy for peaceful purposes. South Africa's position has also been evident in discussions on the establishment of the IEC in Russia as South Africa maintains that the nuclear fuel reserve will prevent some countries from obtaining enriched uranium for developmental purposes. Moreover, South Africa exports medical isotopes to several developing countries and therefore promotes the Millennium Development Goals (MDGs); a key objective of the IAEA. This application of South Africa's nuclear expertise and industry is a major departure from the earlier position taken by the head of the ANC Environment Desk, Thami Sokutu (1994: 238) in February 1994. Addressing a conference on *Nuclear policy for a democratic South Africa* he stated that: "The nuclear industry should be phased out in the shortest possible time".

In 2001, the South African Minister of Minerals and Energy, Phumzile Mlambo-Ngcuka (2001) declared that "(t)he nuclear energy industry in South Africa, although relatively small, plays an important role in our country". According to her, the South African nuclear industry, at the time, employed approximately 2 700 people and

accounted for foreign exchange earnings of R 330 million in 2000 through the export of uranium oxide by the Nuclear Fuels Corporation of South Africa (NUFCOR) and of medical isotopes by NECSA (Mlambo-Ngcuka 2001).

4.2   North-South cooperation

On the issue of strengthening North-South cooperation, South Africa has used its position as a member of the IAEA Board to cooperate and form partnerships with traditional diplomatic partners of the North. Addressing the National Assembly on 18 May 1995, Minister of Foreign Affairs Alfred Nzo (1995: 114-115) highlighted some of South Africa's earliest foreign policy dilemmas, namely balancing relations between the developing and industrialised countries while South Africa sought to expand its relations with Africa and the developing world. Nzo cautioned that South Africa cannot afford to "overlook or downgrade the importance of the industrialised countries" to South Africa's national interests. Moreover, South Africa also advocated that IAEA members from developed countries should assist members from developing countries to comply with the IAEA Statute and with other IAEA obligations. However, South Africa's conversion of SAFARI-1 to use LEU provides a very good indicator of North-South cooperation, as well as cooperation and partnerships in the IAEA.

South Africa's intention to participate in the global system of governance has been clearly evident in its membership of the Board once it resumed its seat in 1995 after its suspension in 1977. According to the Government, its foreign policy attaches great importance to multilateralism for the "resolution of global challenges and places the UN [and hence the IAEA as an agency of the UN] at the centre of the multilateral system" (DIRCO 2010c: 38-42). An example of this is its cooperation with the IAEA on its verification process in South Africa.

More importantly, South Africa's participation in the global system of governance is also evident in its repeated commitment; diplomatic actions; and statements on nuclear disarmament, non-proliferation and arms control to promote international peace and security. On this issue, Minister of Foreign Affairs Nkosazana Dlamini-Zuma (2007a) noted that the ANC-led government had at an "early stage" decided that the country should be an active participant in various non-proliferation regimes

and suppliers groups; that it should adopt positions publicly supporting the non-proliferation of WMDs; and use its position as a member of the nuclear export control regimes, the Africa Group in the IAEA and the NAM to promote nuclear non-proliferation. In pursuance of this, South Africa in the IAEA supported the "inalienable right of nations to use nuclear technology for peaceful purposes" (DIRCO 2010c: 42).

4.3   Norms and state identity

From 1989 onwards, South Africa engaged in norm re-enactment by ratifying the NPT and allowing the IAEA to verify the dismantling of its nuclear weapons programme. South Africa has reconstructed its state identity as a NWS to a state that has terminated its nuclear weapons programme and that complies with the IAEA Statute's nuclear non-proliferation norms (see *Figure 11*). In this respect, South Africa acted as a morally responsible and good global citizen. Moreover, it acted as a leader on behalf of the developing countries on the Board.

Once the IAEA completed the verification of the termination of South Africa's nuclear weapons programme in 1993, South Africa engaged in norm compliance by restructuring its nuclear regulatory environment and adherence to the IAEA Statute. South Africa's construction of a norm-abiding identity as a responsible producer, possessor and trader of advanced nuclear technology is even more significant in this respect.

South Africa has also exerted its influence as a norm entrepreneur in the context of the IAEA. This is evident in South Africa's stance on the use of LEU and the representation of developing countries on the IAEA Board.

4.4   South Africa's diplomatic conduct at the International Atomic Energy Agency

South Africa's diplomatic conduct at the IAEA follows the country's stated foreign policy objectives. It maintains its preference for multilateral diplomacy; especially in the context of the G-77 and the NAM at the IAEA. It has emerged as a campaigner for more representation of developing countries and their right to the peaceful uses of nuclear energy. South Africa's diplomatic relations with the IAEA and its members

display several aspects of the country's nuclear diplomacy since 1989. South Africa has not only constructed a new state identity and role but has also constructed and advanced its national interests in its diplomatic relations with the IAEA. Apart from gains in its material interests through the conversion of SAFARI-1 and the increase in its isotope production and exports, South Africa also gained in a non-material sense through the status and prestige it acquired due to its often quoted "unique identity". Finally, South Africa has consistently promoted the norm of nuclear non-proliferation; the norm behind the existence of the IAEA and the idea of the peaceful uses of nuclear development to improve human security.

Figure 11: South Africa's norm construction and state identity in the IAEA
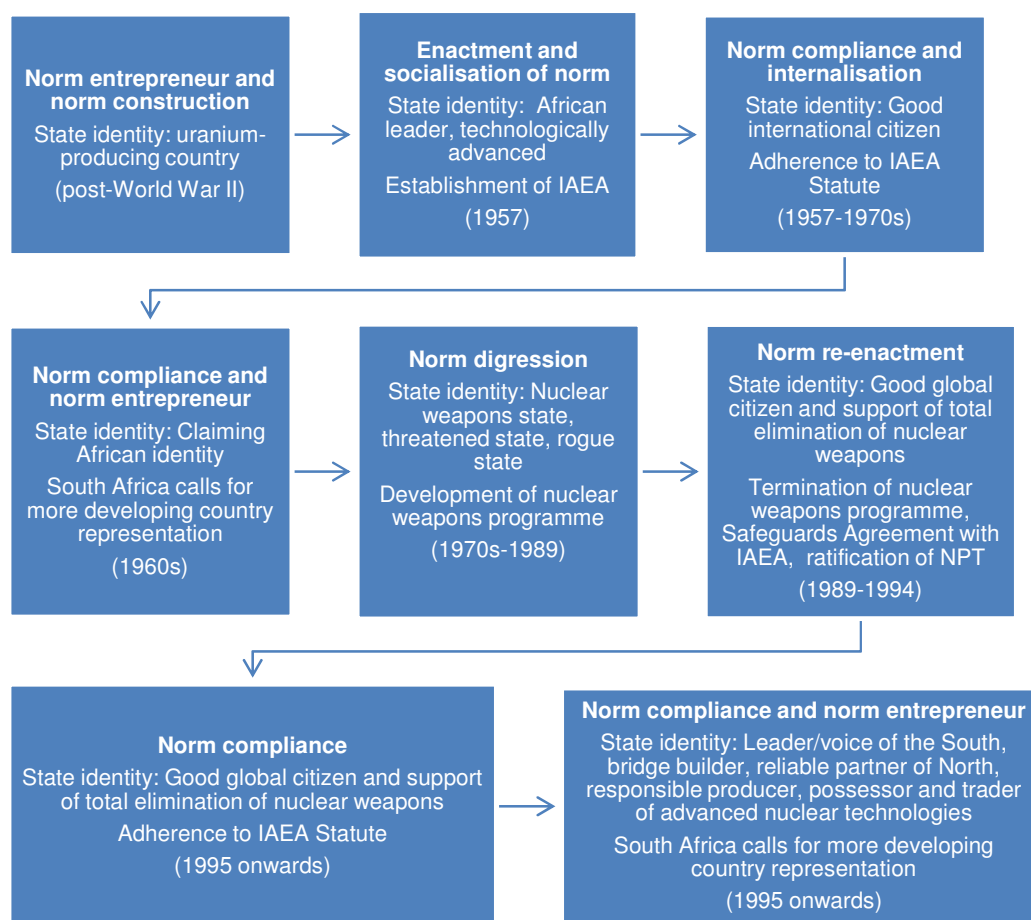
DFA (1996); Koh (1997: 2598-2599); Finnemore & Sikkink (1998: 894-905); Farrell & Lambert (2007: 97; 104-105) & DIRCO (2010c: 38-42)

5. Conclusion

This chapter considered South Africa's nuclear diplomacy with the IAEA in respect of two major phases. The first phase covered South Africa's relations with the Agency since its establishment in 1957 until 1990. The second phase covered the period subsequent to 1990. Initially the first phase (until 1964) was characterised by the country's initial norm entrepreneurship and norm compliance. The period subsequent to the inauguration of SAFARI-1 and the development of a nuclear deterrent strategy contributed to the increased isolation of South Africa. In the context of the Cold War, the NP government attempted to protect the integrity and national security of South Africa. In the IAEA, South Africa's eventual refusal to comply with non-proliferation norms entrenched in the IAEA Statute resulted in the country's suspension from the Board in 1977, and the rejection of the South African delegation's credentials and Egypt's replacement of South Africa as the designated African country on the Board in 1979. As South Africa's nuclear capabilities increased, the Agency adopted a more strict approach towards the country. This resulted in a decision in 1987 to suspend South Africa from the Agency. However, subsequent decisions by President PW Botha resulted in the IAEA deferring this decision. Nonetheless, the latter part of this first phase was characterised by confrontation as a diplomatic strategy.

The second phase coincided with the presidency of FW de Klerk with South Africa cooperating with the IAEA to verify the complete dismantlement of the country's nuclear weapons programme. South Africa's norm compliance is evident in a series of agreements it signed with the IAEA. Despite its identity as a state that had dismantled its nuclear weapons programme, South Africa's diplomatic strategy towards the IAEA also involved confrontation on issues such as the expansion of the membership of the Board, the establishment of a nuclear fuel reserve and the right of developing countries to use nuclear energy for peaceful purposes. Although the conversion of SAFARI-1 was eventually concluded, it took a number of years to complete. Finally, South Africa's leadership ambitions were also evident during the post-1990 period. However, Abdul Minty's candidature for the position of the Director General of the Agency failed despite Government efforts to prevent this.

As a founder member, South Africa's return to the IAEA Board of Governors in 1995 represents a major development in its post-1990 nuclear diplomacy. The IAEA's

verification of South Africa's terminated nuclear weapons programme and the country's membership on the Board added weight to its nuclear diplomacy and, amongst others, paved the way for South Africa's ratification and the entry into force of the *African Nuclear Weapons Free Zone Treaty* (the Pelindaba Treaty).

CHAPTER FIVE

SOUTH AFRICA AND THE AFRICAN NUCLEAR WEAPON FREE ZONE TREATY

1.   Introduction

The *African Nuclear Weapon Free Zone Treaty* (hereafter the Pelindaba Treaty or the Treaty of Pelindaba) entered into force on 15 July 2009. The idea of an African Nuclear Weapon Free Zone (ANWFZ) originated in the OAU during the 1960s. After those initial attempts to denuclearise Africa, the diplomatic process lost momentum with the entry into force of the NPT on 5 March 1970. Further impinging factors were the nuclear ambitions of some African states, as well as South Africa's hawkish nuclear posture and nuclear weapons programme.

The Pelindaba Treaty entered into force simultaneously with what has been described as a global "nuclear renaissance", namely the renewed interest in nuclear energy to address energy shortages. This nuclear revival was driven by increased energy demands, the quest for energy security and efforts to mitigate global warming and climate change (Findlay 2011). The uneven distribution of energy resources and increased energy shortages in Africa had contributed to the decision by some African leaders to pursue nuclear energy. Countries in this position include Algeria, Egypt, Morocco, Namibia and Nigeria (Khripunov 2007: 1; Cawthra & Møller 2008: 133-153; Gourley & Stulberg 2009: 22-24; Meshesha 2011). Moreover, as previously discussed, South Africa had also indicated its intention to expand its nuclear energy programme.

The aim of this chapter is to analyse South Africa's nuclear diplomacy with Africa, particularly the country's nuclear diplomacy on to the evolution; entry into force; and implementation of the Pelindaba Treaty. It is argued that since 1990, South Africa has conducted its nuclear diplomacy with African states in a manner to convince the continent of its commitment to nuclear non-proliferation and its support of the continental norm of a denuclearised Africa.

Accordingly, the chapter traces this norm cycle through an analysis of the origins of nuclear weapons free zones (as an expression of the norm of nuclear non-

proliferation), as well as South Africa's involvement in the Pelindaba Treaty process. It also covers the country's nuclear diplomacy with the AU and African states regarding South Africa's compliance with the norms espoused by nuclear weapons free zones, and its identity, roles and interest concerning nuclear weapons and Africa. The chapter concludes with an assessment of the country's diplomatic instruments and achievements.

Three *caveats* apply to this chapter. Firstly, as the Pelindaba Treaty only entered into force in 2009, it is arguably premature to assess the full extent of South Africa's nuclear-related relations in this regard. Secondly, since the African Commission on Nuclear Energy (AFCONE), the Treaty's compliance mechanism was only established in 2010, this prevents a comprehensive analysis of AFCONE and South Africa's nuclear diplomacy.[43] Finally, the chronological scope of the chapter extends beyond the 1990 to 2010 period. As a point of departure and to contextualise the Pelindaba Treaty, the next section covers the origins and meaning of nuclear weapons free zones as an expression of the norms of nuclear non-proliferation, the peaceful use of nuclear energy and nuclear disarmament.

2. Nuclear weapons free zones

The establishment of nuclear weapons free zones (NWFZs) has been one of the most significant post-1945 multilateral efforts to prevent nuclear proliferation. In the context of this study, a NWFZ is deemed to be an international regime (see Chapter 2) since it includes mutually agreed upon norms and operating procedures on nuclear issues (Ruggie 1998; Keohane & Nye 1977; Haas 1980; Young 1980; Krasner 1993). However, NWFZs are not a normative innovation but rather an instrument and innovative expression to prevent nuclear proliferation. The institutionalisation of NWFZs continues well into the 21st century with efforts to also declare the Middle East a NWFZ.

Underpinned by the norm of nuclear non-proliferation, NWFZs exist, in constructivist terms, due to states' intersubjective understanding of the dangers of nuclear weapons proliferation. In fact, NWFZs do not prevent states from developing nuclear

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[43] The acronym AFCONE is used throughout this study. Initially, the AU used the acronym ACNE, but changed it subsequently in 2011 to AFCONE. See, in this regard, AU (2011a, 2011b & 2011c) and Minty (2011).

energy for peaceful purposes, based on their "inalienable right" in Article IV of the NPT. Their *raison d'être* is to provide national and regional security. In contrast to NNWS, who deem that the NPT serves to perpetuate certain nuclear inequalities in favour of NWS, NWFZs are perceived as not serving to perpetuate these inequalities and insecurities. More importantly, the existence of NWFZs limits the use and development of nuclear weapons in a specific geographically-defined area and therefore contributes to regional and international security (Reddy 1997: 275-276).

In their analyses of NWFZs in the post-Cold War era, Parrish and Du Preez (2005: 2-3) and Hamel-Green (2007: 6-8) similarly regard NWFZs as effective instruments to express the nuclear non-proliferation norm. They observed that these zones place geographical limitations on the development and proliferation of nuclear weapons; prevent nuclear tests; build confidence and trust among states in an insecure region; and advance regional cooperation on nuclear energy.

As an institution, NWFZs originated in the early days of the Cold War in Europe with Poland acting as a norm entrepreneur. Fearing West Germany's emergence as a nuclear power and the Soviet Union's troop deployment on its territory, Poland, on 2 October 1957, proposed the so-called Rapacki Plan (after Poland's foreign minister, Adam Rapacki) to the UNGA. The Plan called for a NWFZ in Central Europe - comprising of Poland, Czechoslovakia and the Federal Republic of Germany -to prevent nuclear proliferation in the region. As the Cold War intensified, norm leaders failed to socialise other states to become norm followers, the Rapacki Plan had little chance of implementation (Goldblat 1997: 18; Epstein 2001: 155).

Despite this failure of norm cascade, the idea of NWFZs as instruments of the norm of nuclear non-proliferation did not disappear. On the contrary, barely two years after the Rapacki Plan, the Antarctic Treaty, which entered into force in 1959, became the first expression of the norm of nuclear proliferation in the form of a NWFZ. The Cold War delayed further expressions of the norm. However, in 1967 the *Treaty for the Prohibition of Nuclear Weapons in Latin America* (the Treaty of Tlatelolco), declaring Latin America a NWFZ, entered into force. Today, the ideas encapsulated in the Rapacki Plan continue to be recognised as the foundation for all current NWFZs (see *Table 14*). Moreover, the Rapacki Plan is recognised as one of the earliest pre-NPT

expressions of the norm of nuclear non-proliferation; another being the establishment of the IAEA.

Table 14: Major nuclear weapons free zones

Nuclear weapons free zone	Treaty	Short title of Treaty	Entry into force
Antarctica	*Antarctic Treaty*	Antarctic Treaty	1959
Latin America	*Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (LANWFZ)*	Treaty of Tlatelolco	1967
Outer Space	*Treaty on Principles Governing the Activities of States in the. Exploration and Use of Outer Space*	Outer Space Treaty	1967
Seabed	*Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and Ocean Floor and in the Subsoil Thereof*	Seabed Treaty	1971
Moon	*Agreement governing the Activities of States on the Moon and other Celestial Bodies*	Moon Treaty or Moon Agreement	1979
South Pacific	*South Pacific Nuclear-Free Zone (SPNFZ)*	Treaty of Rarotonga	1995
Southeast Asia	*Southeast Asian Nuclear-Weapon-Free-Zone Treaty (SEANWFZ)*	Bangkok Treaty	1997
Central Asia	*Central Asia Nuclear-Weapon-Free-Zone (CANWZ)*	Treaty of Semipalatinsk	2006
Africa	*African Nuclear-Weapon-Free-Zone Treaty (ANWFZ)*	Pelindaba Treaty	2009

Goldblat (1997: 18-19) & CNS (2011b)

The legacy of the Rapacki Plan is also evident in the NPT, notably Article VII of the NPT that affirmed the right of states to establish NWFZs in their territories "in order

to assure the total absence of nuclear weapons in their respective territories (UN 1968).

Thus, the NPT recognises regional treaties (on which NWFZs are based) as instruments of the norm of nuclear non-proliferation. A similar view on the rationale of socialisation of the norm of nuclear non-proliferation was expressed by the UNGA. In 1974, the UNGA initiated a comprehensive study of NWFZs. Subsequently, the UN encouraged the establishment of NWFZs as regimes expressing the norm of nuclear non-proliferation and in UNGA Resolution 3472B (1974) of 11 December 1974, described NWFZs as the "most effective means for preventing the proliferation, horizontal and vertical, of nuclear weapons" (quoted in Mukai 2005: 80).

In clarifying its position, the UNGA maintained that the objective of a NWFZ is to provide a legally binding instrument between two or more states to establish a specific region as free from nuclear weapons. Moreover, the objective is also to institute a series of verification and compliance mechanisms and negative security guarantees by all NWS (UNGA in Mukai 2005: 80). The NWFZ regime was further entrenched in 1975 when the UNGA adopted several guidelines that states should follow when establishing a NWFZ.[44] The First Special Session of the UNGA on Disarmament in May 1978 also reiterated the importance of NWFZs as a "disarmament measure" (UNGA 1978). However, since the UN first addressed the question of NWFZs in 1974, it took five years for the establishment of the next NWFZ, namely the *Agreement governing the Activities of States on the Moon and other Celestial Bodies* (Moon Agreement). It was only when the Cold War ended that more NWFZs were established with the Treaty of Rarotonga establishing the first post-Cold War NWFZ in the South Pacific (see *Table 14*). One possible explanation for this is that, as Cold War superpowers, the US and the USSR prevented these developments as both had stationed their nuclear weapons in several locations outside their national territories. Therefore, the presence of their nuclear weapons in

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[44] These guidelines that were included in a consensus report of the United Nations Disarmament Commission of 1999 stated that NWFZs should emanate exclusively from states in the region and be based on mutually agreed upon legally binding arrangements by all states in the region; it should be recognized by extra-zonal states; NWS should be consulted prior to the ratification of the Nuclear Weapons Free Zone Treaty (NWFZT); state parties can decide on the access of nuclear aircraft, ships or submarines; the NWFZT should have a compliance mechanism; states have the right to develop and use nuclear energy for peaceful purposes; the obligations of the NWFZT should comply with International Law; and international assistance, including UN assistance should be provided to states to establish a NWFZ (Goldblat 2004: 54-55).

a particular region (or zone) was counterfactual to the idea of a nuclear weapons free area. This did not apply to an ANWFZ as forthwith discussed.

3. The evolution of the Treaty of Pelindaba

The idea of an ANWFZ was first raised in the 1960s and coincided with the development of South Africa's nuclear programme. This section chronicles the origins of the African nuclear non-proliferation position; the delays and the repeated resumptions of negotiations on a NWFZ treaty; and post-1990 efforts to include South Africa in negotiations on the treaty. It also describes the final phases of negotiating and drafting the treaty on a denuclearised Africa.

3.1 The origins of Africa's nuclear non-proliferation position

The origins of the Treaty of Pelindaba (see *Figure 12*) reside in the preoccupation of African states with nuclear energy since the dawn of the nuclear era. As a major repository of uranium, Africa has obtained strategic importance to emerging nuclear powers with the discovery of uranium in the former Belgian Congo (the current DRC). Like the Belgian Congo, South Africa's entrance into the nuclear era also resulted from its abundant uranium resources.

The early developments in this regard were confirmed by the South African diplomat, Donald Sole. In May 1944, a meeting took place between South Africa's Prime Minister, General Jan Smuts, and the Danish nuclear scientist Niels Bohr. Sole, serving in London at the time, described the event as the "genesis of South Africa's atomic energy policy" (quoted in Fourie *et al*. 2010: 263). Subsequently, the UK government requested General Smuts in 1945 to conduct a secret survey of the country's uranium reserves. Prior to this request, geological reports on radioactive materials in South Africa had already been released between 1915 and 1923 (Fourie *et al*. 2010: 264).

Towards the end of the 1940s, a uranium processing pilot project began operations in South Africa. The country's uranium production increased significantly with its exploration and extraction of uranium in South West Africa (now Namibia), which South Africa at the time administered as a League of Nations C-Class Mandate.

Figure 12: The evolution of the Treaty of Pelindaba

French nuclear testing in Sahara Desert (1960)	UNGA Resolution entitled "Consideration of Africa as a denuclearized zone" approved (November 1961)	OAU resolution declaring Africa a denuclearised zone (July 1964)
UNGA endorses the OAU Declaration on a denuclearised Africa (December 1965)	France terminates nuclear tests in Sahara Desert (1966)	UNGA adopts annual resolutions focusing on obstacles to the achievement of ANWFZ (1970 – 1990)
UNGA mandates Group of Experts to conduct a study on "South Africa's plan and capability in the nuclear field" (1979)	UNGA commissions "South Africa's nuclear tipped ballistic missile capability" study (1989)	South Africa accedes to the NPT and destroys six nuclear devices (1990)
OAU affirms the implementation of Cairo Declaration (1992)	UNGA mandates Group of Experts to drafting a treaty on the denuclearisation of Africa (1992)	Group of Experts holds workshops in Windhoek and Addis Ababa on draft treaty provisions (1994)
Group of Experts meets to finalise the draft treaty in Pelindaba, South Africa (29 May - 2 June 1995)	OAU agreed to ANWFZ (June 1995)	Signing of the ANWFZT by all OAU members (11 April 1996)
Entry into force of Pelindaba Treaty (15 July 2009)	First Conference of Parties (4 November 2010)	Election of members of AFCONE (2011)

UNSC (1996); Lamamra (2010); Stott, Du Rand & Du Preez (2010: 5)

As South Africa's isolation increased, South African mining operations in South West Africa were repeatedly criticised as being "the illegal acquisition of Namibian uranium" at IAEA GCs (IAEA 1985 & 1986), and at the UNGA (UN 1994). Apart from Belgium's uranium exploration in the Belgian Congo, France also commenced uranium exploration in Africa and its early operations in Gabon, Niger and the Central African Republic (CAR) continue to this day. As France's nuclear energy and weapons programme developed, the country's uranium exploration in Africa correspondingly increased (Adeniji 2002: 25-26).[45]

The 1960s was a geo-political and nuclear turning point for Africa. Considering that most African states gained independence in the 1960s; that the Cold War had intensified; that the OAU was established; and that France conducted nuclear atmospheric tests in the Sahara Desert in February 1960 (Goldblat 1997: 24; Epstein 2001: 155), African states responded by expressing their opposition to these tests by terminating diplomatic relations (*e.g.* Nigeria); freezing French assets (*e.g.* Ghana); and by sponsoring a 1960 UNGA resolution condemning the French tests. The resolution, however, was not adopted due to a lack of international support.

As more African states became independent and faced new national and continental security threats, Kwame Nkrumah (1961: 231), Ghana's first post-independence president, observed:

> There are two threatening swords of Damocles hanging over the continent, and we must remove them. These are the nuclear tests in the Sahara by the French government and the apartheid policy of the Government of the Union of South Africa.

Nkrumah's government, as indicated, was one of the African governments to freeze French assets in response to French atmospheric nuclear tests in Africa. Moreover, Nkrumah's stature as Africa's first post-independence president added weight to anti-nuclear sentiments on the continent. In 1961, a larger number of African states supported the adoption of UNGA Resolution 1652 (XVI) (1961) on the *Consideration*

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[45] Oluyemi Adeniji, a Nigerian diplomat and later Nigerian Minister of Foreign Affairs, served in numerous international positions relating to nuclear non-proliferation. His publication is unique as a first-hand account of the evolution of the Pelindaba Treaty and, *inter alia*, South Africa's role in the diplomatic process which resulted in the entry into force of the Treaty in 2009.

of Africa as a Denuclearized Zone, which declared Africa a nuclear weapon free zone. This resolution also called on UN members to refrain from testing, storing or transporting nuclear weapons in Africa (Epstein 2001: 155-156).

The UN initiative was endorsed by the OAU. At the Inaugural Summit of the OAU from 22-25 May 1963 French nuclear tests in Africa which were eventually terminated in 1966 were discussed under the agenda item of general disarmament. Resulting from this discussion, the summit unanimously adopted a resolution to declare "Africa a denuclearized zone" and to "promote the peaceful uses of nuclear energy" (OAU 1963). At the first Assembly of Heads of States and Governments of the OAU in July 1964, the organisation adopted Resolution AHG/Resolution11(1) (1964) on the *Declaration on the Denuclearization of Africa* (hereafter the Declaration)*.* Moreover, the OAU committed itself to negotiate an international agreement on this matter under the auspices of the UN (OAU 1964a). When the Declaration was submitted to the UNGA in November 1965, the UNGA furthermore endorsed another resolution, Resolution 2033(XX) (1965), on the non-proliferation of nuclear weapons in Africa (UNGA 1965).

Despite these developments in the 1960s and the subsequent formulation of a *Draft Convention for the Denuclearization of the Continent of Africa* by the OAU in 1964 (OAU 1964b), a treaty (the Pelindaba Treaty) on Africa as a nuclear weapon free zone only entered into force in July 2009. Several explanations for this can be offered. As the Cold War intensified, calls for a universal rather than a regional (African) nuclear non-proliferation treaty increased. The resultant treaty, the NPT, only entered into force in March 1970. Several African states participated in the negotiations on the NPT, thus delaying the negotiation of a treaty on an African nuclear weapon free zone, and they eventually became party to the NPT (see Chapter 6). In addition to this and at the same time, South Africa's status as a state with a nuclear weapons capability contradicted the purpose of such an African treaty. In fact, South Africa's nuclear capability was a negation of Africa's aim to keep the continent free from nuclear weapons.

The detection of an underground nuclear test site in the Kalahari and the so-called "double flash" incident left no doubt that South Africa indeed had a nuclear weapons capability (see Chapters 3 and 4). For African states, these incidents confirmed

South Africa's nuclear intentions on the continent (Saxena 1998). Therefore, several African states including Egypt and Nigeria embarked on a global campaign to force the South African government to dismantle its nuclear weapons programme and change its domestic policies. This campaign included diplomatic actions, UN sanctions and OAU resolutions against South Africa. While the majority of African states' rhetoric on a denuclearised Africa and post-apartheid South Africa continued unabated, a small number of African states embarked on the development of their own nuclear capability when Egypt, Libya and Nigeria commenced with nuclear development programmes in the mid-1970s (Oyebade 1998: 97).

These African developments further delayed negotiations for a denuclearised Africa. Thus, despite earlier initiatives to declare the continent a NWFZ, Cold War realities and the nuclear ambitions of certain African states contributed to the delay of the establishment of an ANWFZ. A further impediment was the South African government's unwillingness to join other global and continental nuclear non-proliferation efforts. This serves as a further illustration of South Africa's non-compliance (as a founder member of the IAEA) with, for example, the nuclear non-proliferation norms espoused by the IAEA Statute. Moreover, South Africa refused to accede to the NPT.

3.2   The resumption of negotiations on an African nuclear weapon free zone

The ending of the Cold War; the new political era in South Africa; and the legacy of the country's nuclear past and De Klerk's 1993 announcement had several nuclear-related diplomatic consequences. The country returned to the fold of the international community, along with its re-admittance to multilateral organisations and the establishment and re-establishment of new and old diplomatic relations; acceded to the NPT in 1991; and dismantled its nuclear weapons programme as verified by the IAEA, thus paving the way for the resumption of negotiations on an international agreement on the denuclearisation of Africa. Within the framework of UNGA Resolution 2033(XX) (1965) on the *Declaration on the Denuclearization of Africa,* the UN and OAU convened a meeting in Addis Ababa, Ethiopia, in May 1991 to "examine the modalities and elements for the preparation and implementation of a convention or treaty" (Adeniji 2002: 50). Despite its nuclear expertise, South Africa was not invited to this meeting, which was the first in a series of meetings on the

denuclearisation of Africa and included participants from the OAU Secretariat; government officials from Nigeria, Zaire (now the DRC), Algeria, Tanzania and Zimbabwe; representatives of the IAEA Secretariat; and several observers from NFWZs in existence.

Since this meeting was held prior to De Klerk's 1993 announcement and the IAEA's verification, concerns about the nuclear capability, status and position of South Africa were discussed despite the country's absence (see Adeniji 2002: 49-55 for detail). Nonetheless, a working group of the meeting discussed how to deal with South Africa. It was concluded that there was an "absolute need for South Africa to be an integral part of the zone and subjected to its obligations" (Adeniji 2002: 53).

By the time the Secretary-General considered the report on the Addis Ababa meeting, South Africa had already acceded to the NPT and signed a Safeguards Agreement with the IAEA. Upon the recommendation of the Secretary-General and subsequent to a UNGA Resolution 46/43B (1991), a second meeting of the UN/OAU Group of Experts took place in Lomé, Togo, from 28-30 April 1992. Once again, South Africa was excluded from the proceedings. Oluyemi Adeniji of Nigeria was re-elected as the second meeting's chairperson and provided a comprehensive account of the proceedings and decisions of the meeting (Adeniji 2002: 55-60). Once again, South Africa's position was discussed. Some participants (unspecified by Adeniji 2002: 58) proposed that South Africa, as the most advanced nuclear power on the continent, should be required to ratify a continental agreement on denuclearisation before it entered into force. Other participants (also unspecified by Adeniji 2002: 58) viewed this proposal as conferring a veto if not implemented. The issue of the ratification of the agreement, with the inclusion of South Africa, was referred to the drafters of the first draft text of an agreement as envisaged in UNGA Resolution 2033(XX) (1965) and UNGA Resolution 46/43B (1991) for further consideration.

When the OAU Council of Ministers met in Dakar, Senegal, from 22-28 June 1992, to, *inter alia*, consider the report on the Addis Ababa meeting, it decided that the OAU Group of Experts should draw up a draft treaty and distribute comments to OAU members before the Council's meeting of June 1993.[46] Apart from drafting the

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[46] The OAU Group of Experts consisted of representatives from Algeria, Cameroon, Egypt, Ethiopia, Mauritius, Namibia, Nigeria, Senegal, Sudan, Togo, Zaire (now the DRC) and Zimbabwe.

treaty, another challenge was the inclusion of South Africa in the treaty-making process, despite the opposition to this (Adeniji 2002: 58).

3.3 Efforts to include South Africa in negotiations

South Africa's exclusion from the initial negotiations was justified by the OAU negotiators on the basis that the country was still governed by the minority NP and not by an all-inclusive majority government. However, the reports of the Group of Experts emphasised the importance of South Africa's inclusion in the ANWFZ. Parallel to this was President De Klerk's diplomatic strategy to embark on official visits to about 33 African states by mid-1992 in an effort to improve South Africa's relations with the continent (Du Pisani 1994: 60; Oyebade 1998: 104-106). According to De Klerk (1993) these visits, amongst others, took place in an effort to reach agreement on the use of medical isotopes and training programmes. Despite these developments, some scepticism about the South African government's nuclear and domestic intentions remained.

As constitutional negotiations progressed in South Africa, De Klerk (1993) repeated his government's commitment to the ANWFZ in Parliament in March 1993. It also became clear that the ANC would continue with its historical anti-nuclear stance despite some ANC support for the continuation of a nuclear weapons programme for South Africa (Muller 1996: 39; Oyebade 1998: 107, 115; Mackerdhuj 1999: 7). As an ANC-led government posed no threat to African security and Nelson Mandela (in Oyebade 1998: 107) publicly expressed support for an ANWFZ, continental attitudes towards South Africa on nuclear issues began to change.

In an early effort to include South Africa in the negotiations on the continent's nuclear future, the Programme for the Promotion of Nuclear Non-Proliferation (PPNN) (an NGO) acted as a broker between African and the South African government. The PPNN's facilitation included regional meetings promoting nuclear non-proliferation. Amongst others, it scheduled a meeting from 1-4 April 1993 in Harare, Zimbabwe, in collaboration with the University of Zimbabwe. De Klerk's 1993 announcement prompted the PPNN to invite South Africa to this meeting. Waldo Stumpf, the CEO of the AEC, was invited to address the meeting. In his presentation Stumpf emphasised South Africa's "determination to be transparent and its acceptance in principle of a

NWFZ for the continent" and expressed South Africa's willingness to assist African states with the peaceful uses of nuclear technology (Adeniji 2002: 61).

Two important consequences of South Africa's participation in this meeting of the PPNN were the emergence of African confidence in the country's commitment to nuclear non-proliferation on the continent and an invitation to South Africa participate as an observer in the negotiations to draft an African nuclear weapons free treaty (Adeniji 2002: 62). An additional consequence was that the country's continental nuclear diplomacy gradually expanded. For example, South Africa joined the *African Regional Cooperation Agreement for Research, Development, and Training related to Nuclear Science and Technology* (AFRA) (De Klerk 1993). As an organisation that operates under the auspices of the IAEA, AFRA coordinates peaceful nuclear energy projects in Africa and nuclear-related cooperation among African states. Immediately after it joined, relations with AFRA developed to such an extent that South Africa indicated its support of two AFRA projects on the continent; that it was designated as the host country for the 1995 AFRA annual meeting; and that it offered its assistance for AFRA and IAEA training programmes (Muller 1993: 39).

South Africa's inclusion in the negotiations of what became known as the Pelindaba Treaty was the result of a combination of factors, including domestic changes and the country's nuclear diplomacy such as the country's accession to the NPT and the conclusion of a Safeguards Agreement with the IAEA. More importantly, several African efforts were made to include South Africa notwithstanding the fact that when the OAU resumed its efforts to draft a treaty on the denuclearisation of Africa which coincided with De Klerk's reforms the OAU's official position was not to engage with the South African government. Therefore, calls to include South Africa in the treaty-making process were indicative of a changing continental position on South Africa.

3.4   Negotiating and drafting the treaty on a denuclearised Africa

The PPNN meeting was immediately followed by a meeting of the proposed treaty's negotiating group in Harare from 5-8 April 1993 to negotiate the draft text of the treaty. By now the negotiating group consisted of representatives of Mauritius, Egypt, Nigeria, Tanzania, Zimbabwe and Senegal; two representatives of the OAU; and a representative of the UN. In contrast to the previous inter-governmental meetings

which excluded South Africa, the country attended the Harare meeting as an invited observer and was represented by a troika consisting of representatives of the NP-led government, and representatives of the ANC and the Pan Africanist Congress of Azania (PAC).

The negotiations at the second Harare meeting focussed on the title of the instrument; the geographical application of the NWFZ; the declaration, dismantling and destruction of nuclear weapons facilities; peaceful nuclear activities; the mechanism of implementation; safeguards; the complaints procedure; the role of non-African states; and the physical protection of nuclear materials, which were included in the so-called Harare Report to the UN Secretary-General. At this meeting, the title of the instrument (the name of the treaty) was, for the first time, presented as *The African Nuclear-Free-Zone Treaty*. Until then declarations, documents and resolutions on the treaty referred to the denuclearization of the continent. Despite its observer status at this meeting, South Africa's nuclear weapons experience was often cited and resulted in several innovations to NWFZs in general. One example of this is the inclusion of an article on the declaration, dismantling, destruction or conversion of nuclear explosive devices and facilities operational prior to the entry into force of the NWFZ treaty. On the question of peaceful nuclear activities, one of the South African observers emphasised the contribution that nuclear energy could make to Africa's socio-economic development (Adeniji 2002: 64-69); an issue Abdul Minty referred to during his election campaign for the IAEA Director General (see Chapter 4).

Subsequent to the second meeting in Harare in 1993, the UNGA requested the Secretary-General to arrange a follow-up meeting of the Group of Experts in 1994. Accordingly, meetings took place in Windhoek (March 1994) and in Addis Ababa (May 1994) (Adeniji 2002: 71-155). Commenting on the ANC-government's position on nuclear non-proliferation Stumpf (1995b: 7), an observer in the above-mentioned meetings, commented that South Africa in the period subsequent to the ANC's election victory and Nelson Mandela's presidential inauguration "on numerous occasions committed itself to a policy of transparency" on the non-proliferation of WMDs. Examples of this are the Cabinet decision of 31 August 1994 and Mandela's statement in 1994 at the OAU Heads of State Summit to this effect.

At the Harare meeting (1993), the definitions of "African Nuclear-Weapon-Free Zone" and 'territory' caused considerable debate, especially as the definition of the zone affects the territories of some NWS and a non-African state such as Spain. Three of Spain's territories, namely the Canary Islands and two coastal enclaves in Morocco, Ceuta and Melilla, fall within the territory specified by the Pelindaba Treaty.

As some issues remained unresolved at the Harare meeting such as a map of the zone and certain functions of the AFCONE, the UNGA proposed a follow-up meeting in 1995 to finalise the drafting of the ANWFZ treaty for UNGA's consideration by its 50th Session in 1995. This provided South Africa with a unique opportunity considering that the UNGA recommended the final meeting be held in Johannesburg, South Africa, from 29 May to 2 June 1995 (Adeniji 2002: 71). By now South Africa was a full participant in the negotiations (and no longer an observer) and the country's GNU had been governing for approximately a year since the elections of April 1994. The meeting's location (South Africa) was symbolic as it indicated the OAU's acceptance of the country as being committed to nuclear non-proliferation on the continent. Moreover, South Africa at the time was most recent OAU member and the choice of venue also signalled the acceptance of the country as a full OAU member.

Both the Harare and Windhoek meetings were of significance to South Africa. Both drafts of the treaty negotiated at these meetings included an article on the establishment of a continental commission on nuclear energy which South Africa in a subsequent OAU meeting proposed to host; a proposal which was accepted by the OAU (1996). Moreover, the Johannesburg meeting agreed on the short title of the treaty, namely the Pelindaba Treaty. Suggested by a South African representative, the name of the treaty refers to the headquarters of South Africa's AEC, Pelindaba, west of Pretoria. Moreover, South Africa's involvement in the denuclearisation concluded a drawn-out process. Apart from this, the word 'Pelindaba' is derived from two Zulu words "pelile indaba", which means "the matter is settled" or "the discussion is closed". Another diplomatic kudo for South Africa which resulted from the Johannesburg meeting was the proposal to host the formal adoption of the final draft text at the AEC headquarters at Pelindaba. The final adoption at Pelindaba on 2

June 1995 was attended by the chairman of the AEC, JWL de Villiers, and Waldo Stumpf (Adeniji 2002: 154-155).

The 62nd Ordinary Session of the OAU Council of Ministers in June 1995 considered the final draft treaty. This meeting recommended that the draft treaty should be adopted at the 31st Ordinary Session of the Heads of State of the OAU. The Council also endorsed Egypt's proposal to host the treaty's signing ceremony and South Africa's proposal to host the headquarters of the AFCONE. These three proposals were approved by the 31st Ordinary Session on 23 June 1995 and by the UNGA on 6 November 1995 (CNS 2011d: 1).

On 11 April 1996, OAU member states signed the Pelindaba Treaty in Cairo, Egypt, and adopted the *Cairo Declaration* (OAU 1996). As indicated previously, the OAU had adopted its first resolution on the denuclearisation of Africa in Cairo in 1964. In the 1996 *Cairo Declaration*, members of the OAU recognised the "valuable contribution" of NWFZs to nuclear non-proliferation. In addition to this, OAU members called on all NWS to ratify the Pelindaba Treaty's Protocols and to pursue the "complete elimination" of nuclear weapons (OAU 1996). Despite the initial positive reaction by African states to the Pelindaba Treaty (47 of the 53 OAU members signed it on 11 April 1996) and the adoption of the *Cairo Declaration*, most states delayed the ratification and deposit of the Treaty with the AU.

A decade later, in 2006, the AU Peace and Security Council (AUPSC) expressed concerns about the long delay in the entry into force of the Pelindaba Treaty since it was signed in 1996. At the time and after ten years, only 20 of the 28 required states had deposited their instruments of ratification with the AU (AUPSC 2006: 1). The Pelindaba Treaty entered into force on 15 July 2009 when the required 28th state deposited its ratification of the Pelindaba Treaty. This formalised the territory covered by the ANWFZ. Annex I in the Pelindaba Treaty includes a map of the ANWFZ (see *Figure 13*) which "extends across the entire continent of mainland Africa" and several islands, including the Agalega Island, Bassas da India, the Canary Islands, Cape Verde, the Cardagos Carajos Shoals, the Chagos Archipelago - Diego Garcia, Comoros, Europa, Juan de Nova, Madagascar, Mauritius, Mayotte, Prince Edward and Marion Islands, Reunion, Rodrigues Island, São Tomé and Principe, Seychelles, Tomelin Island, and Zanzibar and Pemba Islands.

Figure 13: The territory covered by the Pelindaba Treaty
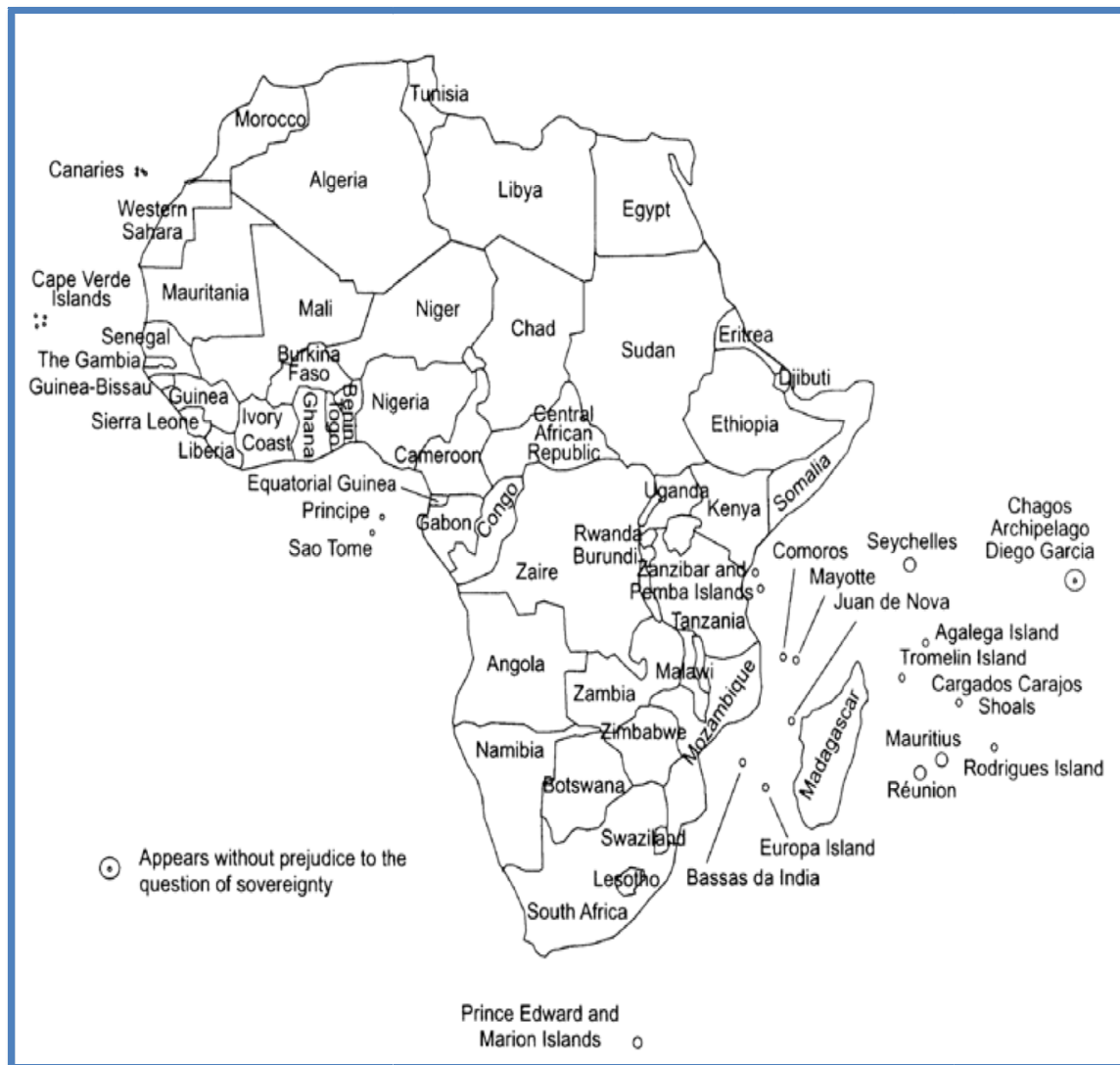
Pelindaba Treaty (Annex I)

The provisions of the Pelindaba Treaty (2009) require signatory states to undertake the following:

- renounce nuclear weapons (Article 3);
- prevent the stationing of nuclear explosive devices (Article 4);
- prohibit the testing of nuclear explosive devices (Article 5);
- declare, dismantle, destruct or convert nuclear explosive devices and facilities for their peaceful development (Article 6);
- prohibit the dumping and storage of radioactive waste (Article 7);

- promote peaceful nuclear uses and verification of these peaceful uses (Articles 8 and 9);

- provide physical protection of nuclear facilities and materials, and prohibit armed attacks on nuclear installations (Articles 10 and 11);

- establish the AFCONE (Article 12); and

- Report and exchange information on nuclear activities (Article 13).

The Pelindaba Treaty is an innovative development of NWFZs and the norm of nuclear non-proliferation. The AU (2006:3) identifies five innovations in the Pelindaba Treaty as a NWFZ treaty. Firstly, it bans research into nuclear explosive devices by any means in the zone's territory (Articles 3, 4 and 5). Secondly, it requires the destruction of nuclear devices that a state may have had prior to the Treaty's entry into force (Article 6). Thirdly, it prohibits the dumping of radioactive waste and other radioactive matter anywhere in the ANWFZ (Article 7). The fourth innovation is that armed attacks by conventional and other means against nuclear installations in the ANWFZ are prohibited (Articles 10 and 11). Finally, the Treaty supports the states' use of nuclear science and technology for peaceful purposes (Article 8).

4.   South Africa and the Treaty of Pelindaba

Since the idea of an ANWFZ was first mooted, South Africa practically held the African continent to ransom until 1991 when it acceded to the NPT. It was only after the IAEA verified the completion of South Africa's nuclear dismantlement in 1993 that the country was invited, albeit at first as an observer, to participate in African efforts to establish an ANWFZ. Characterised by a combination of partnership and cooperation as diplomatic strategies, South Africa's post-1990 nuclear diplomacy on the entry into force of the Pelindaba Treaty is a major departure from its pre-1990 strategy of confrontation with Africa. South Africa's nuclear diplomacy on the Pelindaba Treaty resulted in several symbolic achievements. The country successfully used its identity as a country that had dismantled its nuclear weapons programme to host the final draft conference in Johannesburg, as well as name the ANWFZ treaty after the country's nuclear headquarters. Both these achievements illustrated post-1990 South Africa's commitment to nuclear non-proliferation and its acceptance on the continent.

The Pelindaba Treaty introduced a new phase in South Africa's nuclear diplomacy on the African continent, also considering that the Treaty outlines specific obligations regarding the First COP and the establishment of a mechanism of compliance.

4.1   First Conference of Parties to the Treaty of Pelindaba (November 2010)

The First COP to the Pelindaba Treaty took place in Addis Ababa, Ethiopia, on 4 November 2010 in accordance with Articles 12 and 14 of the Treaty. Article 14 prescribes that a COP should be convened once the Treaty entered into force to establish and elect the members of AFCONE and to determine its headquarters (AU 2010a: 1). In this respect, the Pelindaba Treaty is unique among NWFZ treaties in that it provides for the establishment of a continental nuclear energy commission as the Treaty's mechanism of compliance. In the opening address of the First COP on 4 November 2010, Ramtane Lamamra (2010), Commissioner for Peace and Security of the AU, reiterated the "important role" that the AFCONE has to play in Africa's "collective security and development". Lamamra (2010) also indicated that the AFCONE would undertake four main tasks. These are to serve as an "African mechanism" to ensure African states' compliance of their obligations under the non-proliferation requirements; to ensure Africa's protection from nuclear testing and dumping of nuclear materials; to promote the peaceful uses of nuclear science and technology in Africa; and to develop outreach activities to states eligible to ratify the Treaty.

In essence, one of the AFCONE's major tasks is to assist African states to comply with their nuclear non-proliferation obligations in terms of the Pelindaba Treaty and the NPT. More specifically, the Commission's purpose and objectives outlined in Article 12 ("Mechanism of compliance") and Annex III ("African Commission of Nuclear Energy") of the Treaty include collating reports and the exchange of information; arranging consultations; convening conferences; reviewing the application to peaceful nuclear activities of safeguards by the IAEA; administering a complaints procedure; encouraging regional and sub-regional cooperation programmes for peaceful uses of nuclear science and technology; and promoting international cooperation (Pelindaba Treaty 2009). The composition and term of the AFCONE are also contained in Annex III. Accordingly, the AFCONE consists of 12 members, each elected for a period of three years. The composition of the

Commission will also be 'equitable' and geographically representative, and include African states with "advanced nuclear programmes" (Pelindaba Treaty 2009).

According to the AU (2010b: 2), the First COP was attended by a wide variety of representatives of African countries, international observers, NWS and international organisations, including AU member states parties to the Treaty (Algeria, Botswana, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, Equatorial Guinea, Ethiopia, Gabon, The Gambia, Kenya, Lesotho, Libya, Malawi, Mali, Mauritania, Mauritius, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Swaziland, Tanzania, Togo, Tunisia, Zambia and Zimbabwe); AU states not yet party to the Treaty (Egypt, the DRC, Djibouti, Ghana, Namibia, the Sahrawi Arab Democratic Republic, Sudan and Uganda); Parties to Protocols I, II and III of the Treaty are expected to become parties to these instruments (China, France, the Russian Federation, Spain and the UK); AFRA; the IAEA; the PrepCom for the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO); and the UN.

The First COP elected Mali (Chairperson); Rwanda (1st Vice Chairperson); Algeria (2nd Vice Chairperson); Cameroon (3rd Vice Chairperson); and Zambia (*Rapporteur*) as the Bureau to conduct the Conference's proceedings (AU 2010b: 2). The COP discussions focused on the "promotion of safe, secure and peaceful use of nuclear energy; nuclear security and combating of illicit trafficking; and the prohibition of testing of nuclear explosive devices" (AU 2010b: 4). Apart from these issues, the structure and budget of the AFCONE were also discussed. Final decisions on these matters were referred to the next meeting of the AFCONE.

The First COP also elected the members or Commissioners of the AFCONE (see *Table 15*). The 12 elected AFCONE Commissioners included several individuals who were already involved with or held positions in AFRA and the IAEA; several career scientists, some of whom rose through the ranks of various government departments; a career diplomat (who served in India and in Pakistan) and a military man. Only Abdul Minty of South Africa and Togo's Lieutenant-Colonel Manzi Pidalatan appear to have had extensive background experience of WMDs or nuclear non-proliferation (see *Appendix 1*).

For South Africa, the First COP produced some diplomatic success. The COP endorsed South Africa as the host country of the AFCONE. This endorsement was preceded by "considerable debate" on the issue (DIRCO 2010d: 5) despite the fact that the AU in the *Cairo Declaration* of 11 April 1996 agreed that South Africa would host the AFCONE. Some countries, unspecified by DIRCO (2010d), questioned the earlier decision that South Africa should host the AFCONE by referring to Article 14 of the Pelindaba Treaty which prescribes that the First COP should determine the Commission's headquarters. South Africa's position on the issue resulted in confrontation with some conference delegates. Senegal, amongst others, indicated that it sent a *Note Verbale* to the AUC on its offer to host the AFCONE. The AUC indicated that it did not receive Senegal's *Note Verbale*.

Table 15: Members of the AFCONE (2010)

Country elected to AFCONE	Commissioner representing country
Algeria	Messaoud Baaliouamer
Burkina Faso	Badiori Outtara
Cameroon	Augustin Simo
Ethiopia	Atnatiwos Zeleke Meshesha
Kenya	Shaukat Abdurazak
Libya	Bulgasem Hammouda Ali El-Fawaris
Mali	Tezana Coulibaly
Mauritius	Anund P Neewor
Senegal	Christian Sina Diatta
South Africa	Abdul Samad Minty
Togo	Manzi Pidalatan
Tunisia	Mourad Telmini

AU (2010b: 4); CNS (2011d: 3) & Stott (2011: 3-4)

South Africa reiterated that the AU in the *Cairo Declaration* (11 April 1996) endorsed South Africa as the host of the AFCONE. For South Africa, the 1996 AU decision was taken two years into the ANC-led government. Furthermore, the decision also symbolised the continent's confidence in South Africa's nuclear non-proliferation commitments. Subsequent to further debate on the matter, the conference finally proceeded to endorse South Africa as the AFCONE's host as originally intended. According to DIRCO (2010d: 5), South Africa received "strong support" from Algeria and "most countries in the SADC region", with Zimbabwe trying to "avoid endorsement" on a 'technicality' to host the AFCONE. Zimbabwe and Gabon also 'insisted' that Commission members should be re-elected after three years and that the AU principle of regional rotation should apply. This is prescribed by Annex III of the Pelindaba Treaty which also requires that Commission members should meet specific criteria.

Another diplomatic success for the country was its election as one of the Commissioners of the AFCONE. Abdul Minty, who failed to be elected as the Director General of the IAEA, became South Africa's Commissioner on the AFCONE. Irrespective of these successes, some continental opposition was evident. During the tenure of President Mbeki (1999-2008), South Africa promoted the idea of an African Renaissance and an African Agenda in its foreign policy. This may have strengthened perceptions that South Africa was too ambitious and dominant in continental affairs. By the time the First COP took place, President Zuma had been in office since May 2009. Like President Mbeki, he is also a strong promoter of the African Agenda in South Africa's foreign policy. The establishment of the AFCONE did not mean that the Commission was operational. In order to achieve this, a First Ordinary Session of the AFCONE was scheduled for May 2011, which was attended by South Africa.

4.2 First Ordinary Session of the AFCONE (May 2011)

Prior to the First Ordinary Session of the AFCONE in Addis Ababa, Ethiopia, on 4 May 2011, the AU (2011b: 1) announced that it intended to "intensify its efforts" to achieve the "early operationalization" of the AFCONE. The main objective of the Session was to address matters relating to the operation of the Commission (AU 2011a:3). This included the finalisation of the AFCONE's Rules of Procedure; the

programme of work for 2011-2013; its structure, as well as the position of the AFCONE's Executive Secretary (AU 2011c: 1-4). The AFCONE session was attended by representatives of its member states and, as observers, representatives of AFRA; the IAEA; the CTBTO; and the Forum of Nuclear Regulatory Bodies (FNBRA). Kenya, Libya and Togo, a quarter of the AFCONE's elected members, failed to attend the Session (AU 2011d).

In the opening address of the Session, Ramtane Lamamra (2011: 2), Commissioner for Peace and Security of the AU, reiterated its purpose, namely to operationalise the AFCONE in order to assist state parties to the Pelindaba Treaty to comply with their treaty obligations. More specifically, the Session's deliberations focused on several operational matters and procedures, including the election of the chairperson and vice-chairperson of the Board of Representatives of the AFCONE; the adoption of the roles of procedures of the AFCONE Board; the structuring of the AFCONE and the terms of reference of the Executive Secretary of the AFCONE Board; the programme of work of the AFCONE; and the scale of assessment and the Commission's budget (AU 2011a: 3).

At this point it is important to take note of the Executive Secretary's responsibilities. H/she is tasked to collaborate with the Chairperson and Vice-Chairperson of the AFCONE and report on nuclear-related developments in Africa; lead the implementation of the strategic goals and objectives of the AFCONE; serve the AFCONE's Commissioners and Conference of State Parties and provide reports and information on the activities of the Secretariat and the AFCONE; resolve issues arising from the implementation of the Pelindaba Treaty and recommend a course of action to Commissioners; liaise with States, intergovernmental organizations, specialized agencies and energy-related industries on matters concerning the peaceful, safe and secure application of nuclear science and technology as well as nuclear non-proliferation; solicit and receive suggestions from State Parties, organizations, agencies and industries regarding the activities of the AFCONE; mobilize technical and financial support required to assist in the work of the AFCONE and negotiate partnership agreements; promote greater understanding and support for the Treaty of Pelindaba and the work of the AFCONE; commission consultants to advise on special matters related to the work of the AFCONE or

conduct expert studies when such work cannot be undertaken by the Secretariat; ensure and protect the confidentiality of the work of the AFCONE; inform State Parties of their share of contribution to the scale of assessment of the AFCONE's annual budget, and report thereon to the Commissioners on a regular basis; ensure the efficient management of human and financial resources of the Secretariat; prepare the draft budget and other financial reports of the AFCONE, as well as periodic reports on the implementation of the Programme of Work; and carry out any other tasks as may be assigned by the Commissioners (AU 2011c: 1-4). The secrecy clause of the Executive Secretary ("ensure and protect the confidentiality of the work of AFCONE") is a disturbing inclusion as it may compromise the transparency of nuclear development in Africa.

For South Africa, the First Session produced some diplomatic successes. Firstly, South Africa's Abdul Minty was unanimously elected as the chairperson of the AFCONE (AU 2011d). For South Africa, both the hosting of the AFCONE's headquarters and Minty's chairmanship advanced its national interests and strengthened its identity as a leader in nuclear diplomacy and as a responsible and committed supporter of nuclear non-proliferation. Moreover, Minty's chairmanship offers some diplomatic reward after South Africa's failure to head the IAEA. In addition to this, South Africa's Home Affairs Minister (and a former Minister of Foreign Affairs), Nkosazana Dlamini-Zuma faced a fierce behind-the-scenes battle for the Presidency of the AU Commission in 2012, the body that will oversee the Pelindaba Treaty and thus the AFCONE. Dlamini-Zuma won the contest against the incumbent Jean Ping in July 2012.

In addition, undercurrents are increasing over South African dominance in atomic development and its political role on the continent, irrespective of Abdul Minty's election as the AFCONE chair and despite his country's well-developed atomic expertise. Obviously, this may pose a threat to the implementation of the AFCONE. When the Pelindaba Treaty opened in 1996, it was intended that the AFCONE would "supervise the implementation of the (Pelindaba) treaty, with headquarters in South Africa" (AU 1996). However, more African states including Egypt, Kenya, Namibia and Nigeria are increasingly vying for prestige and leadership in Africa's nuclear sector. This appears to be a spin-off from the extent to which the IAEA has become

integrated with African states in various collaborative projects that have escalated in number over the past 20 years.

Secondly, South Africa's attendance of the First COP and its election to and leadership of the AFCONE realised some of the country's foreign policy objectives outlined as "Key Priority Area 1: Enhanced African Agenda and Sustainable Development" in DIRCO's *Strategic Plan 2011-2014* (DIRCO 2011c: 29, 31)*.* The *Strategic Plan* outlined the objective to 'strengthen' the ANWFZ; utilise South Africa's membership of the AFCONE to contribute to nuclear non-proliferation and the peaceful uses of nuclear energy; and prepare for hosting the headquarters of the AFCONE. In this respect, South Africa's position is similar to that of the AU during the NPT RevCon meeting that was held from 3-28 May 2010 at the UN headquarters in New York (see Chapter 6).

Despite the decision of the AFCONE's First Session to meet again in July 2011 to discuss the next steps to speed up activities (AU 2011e), no record of this meeting or its cancellation could be found. Instead, on 8 July 2011, another AU statement after the 17th Ordinary Session of the AU Assembly held in Equatorial Guinea, again urged remaining African states as well as Protocol countries to ratify the Pelindaba Treaty without delay. The AU also called on its members to provide the AFCONE with the necessary support, alluding to possible reasons for the AFCONE's second meeting being skipped (AU 2011d). Consequently, indications are that the AFCONE already lacks sufficient backing, not only for reasons stated by the AU, but also due to political tensions among and the different agendas of its member states. The nature of contentious issues that were raised between its members remains undisclosed. Additionally, the issue of the AFCONE's funding remains unclear. Overall, the prognosis for a fully operational AFCONE is unclear and not positive.

The First Ordinary Session of the AFCONE did not address all the outstanding matters pertaining to the operation of the Commission. The election of Abdul Minty as the AFCONE chairperson points to some success of South Africa's nuclear diplomacy. Similar to his election to other leadership positions, Minty's election yet again enhanced the country's status and prestige, and with the hosting of the headquarters of the AFCONE, will bring some material benefit for the country.

Despite these successes, an in-depth analysis of South Africa's nuclear diplomacy with Africa in the context of the Pelindaba Treaty is required.

5.   An assessment of South Africa's nuclear diplomacy in Africa

Several *caveats* to South Africa's nuclear diplomacy with Africa in terms of the Pelindaba Treaty were stated at the outset of this chapter. Against this background, this section assesses aspects of South Africa's nuclear diplomacy in terms of its African Agenda; its niche diplomacy in Africa; its state identity and power on nuclear issues in Africa; and the performative aspects of its nuclear diplomacy in Africa.

5.1   South Africa's African Agenda

South Africa's nuclear diplomacy with its African counterparts is conducted against the background of its post-1994 foreign policy, which places Africa high on the foreign policy agenda. This Africanist turn has accelerated the country's integration in continental affairs and decision-making. Moreover, South Africa - especially during the presidency of Thabo Mbeki - has positioned itself as the 'voice' of Africa and the global South (Hamill 2006: 118-140; Serrão & Bischoff 2009: 363-380; Becker 2010: 133-146). This posture is complemented with that of an emergent middle power (Schoeman 2000 & 2003) and a good international citizen (Serrão & Bischoff 2009). South African foreign policy and diplomacy also displayed some characteristics of transformational diplomacy that signifies a return to the use of the traditional instruments of diplomacy, partnership and the idea that norms matter more than material power (Landsberg 2010:12-13).

South Africa's diplomatic relations with other African countries on nuclear issues show all the signs of transformational diplomacy. In Africa, South Africa's nuclear diplomacy is aimed at undoing the legacies of its nuclear weapons programme and at convincing Africa that the country remains committed to nuclear non-proliferation. Moreover, South Africa also attempted to undo existing global nuclear-related power structures by working towards a denuclearised African continent. In addition to this, South Africa's state identity as a domestic reformer proved to be useful in a diplomatic sense by advocating and supporting African and global nuclear-related reforms. Thus, the country achieved some of the objectives of its African Agenda.

5.2   South Africa's niche diplomacy in Africa

A major implication of South Africa's diplomatic niche is that it has some advantage over other African countries due to its nuclear past. This advantage has been locational, traditional or consensual. It has been locational to the extent that South Africa is one of a few African states to have acquired and given up nuclear weapons. Moreover, the country maintains a globally-competitive nuclear science capability. The traditional advantage of South Africa is that the country has a nuclear history and its consensual advantage resides therein that its non-proliferation commitment is reflective of post-apartheid commitments.

South Africa's ability to "generate return worth having", implies that it wants to achieve non-material objectives with its niche diplomacy in Africa. This in turn generates African prestige, status, material benefit, soft power and moral authority. With the dismantling of its nuclear weapons programme and nuclear weapons, South Africa has accrued unprecedented moral authority and legitimacy for a former nuclear weapons state. These non-material incentives are of particular importance to convince the rest of Africa of South Africa's intentions to use nuclear energy for peaceful purposes.

South Africa has constructed a new identity and interests on nuclear matters post-1990. Typically, states practicing niche diplomacy focus on a selected issue, organisation or activity. By focusing on an issue, a country therefore constitutes its identity and interests. South Africa is no exception in this regard. The sources of South Africa's niche diplomacy in Africa are located in the tenets of middle power diplomatic behaviour, which has a strong normative foundation and of emphasising "entrepreneurial flair and technical competence" (Cooper 1997: 6, 9). Other key features of South Africa's niche diplomacy in Africa are its focus on consensus and coalition building and its willingness to cooperate on nuclear issues. As a result, South Africa plays the roles of bridge-builder between Africa and NWS; mediator between African states on, for example, the headquarters of the AFCONE; facilitator of African gatherings on nuclear issues such as the Johannesburg meeting referred to earlier; and as a catalyst by changing its nuclear posture on African nuclear issues. The latter involved South Africa's planning, convening, and hosting meetings, prioritising for future meetings on a particular issue, and drawing up declarations and

manifestos. Thus, South Africa's constructed identity since 1990 has resulted in its norm compliance on continental nuclear non-proliferation and in the promotion of niche diplomacy as a particular type of diplomacy in Africa.

5.3   South Africa's state identity and power on nuclear issues in Africa

An actor's conduct and practice of nuclear diplomacy is an expression of its identity and its interests. Therefore, the main purpose of South Africa's nuclear diplomacy in Africa has been to achieve objectives aligned with its construction of self/national interests, its particular identity and the nuclear-related norms it maintains and complies with. Moreover, according to Serrão and Bischoff (2009: 370), South Africa has attempted to construct a "new conception" of its foreign policy identity, with the 'other' being its apartheid past, rather than other international actors. In this sense, South Africa has managed to construct a nuclear identity in Africa through "positive approximation", that is, by associating or identifying with the positive nuclear norms and identities of other African states. This nuclear identity has also been achieved through "negative approximation", namely by distancing the country from its historical nuclear conduct, capabilities and posture.

South Africa's improved status can be ascribed to several factors, including its soft power and influence. Its departure from "power as resources" to "relational power" reiterates the social - rather than the material - construction of power. Accordingly, several dimensions of power can be applied to South Africa's nuclear diplomacy with Africa. In terms of the scope of its power, South Africa's power varied from one issue to another within the context of the Pelindaba Treaty. Although South Africa had little influence in the initial establishment of the AFCONE it wielded considerable influence by re-asserting its niche role as the host of the AFCONE.

In terms of the number of actors under its influence, South Africa attempted on several occasions to re-direct the focus of the Pelindaba Treaty and the AFCONE away from nuclear safety and security - which it regards as imperative - to the peaceful uses of nuclear energy to contribute to the continent's development. This emanated from the country's broader African foreign policy agenda and its role in the establishment of the New Partnership for Africa's Development (NEPAD) at the time of the negotiation of the Pelindaba Treaty.

In terms of the weight of its power, South Africa succeeded in naming the ANWFZ Treaty to a South African installation; to lead the AFCONE; and to host the Commission. Finally, in terms of the means to exercise, South Africa has been able to exercise its power and influence through diplomacy.

The implications of South Africa's nuclear diplomacy in Africa have been wide-ranging. Not only did it contribute to the entry into force of the Pelindaba Treaty but it enhanced the country's status and prestige. South Africa, which no longer has power in the form of nuclear weapons, continues to wield considerable soft or normative power on the continent. Checkel (2008: 80) refers to the 'compulsive' and "multi-faceted face of power", thus to broader conceptions of power to capture the institutional and productive dimensions of power. Moreover, as the leading country in the AFCONE, South Africa assumes the responsibility to lead the continent in applying and enforcing norms on the development and application of nuclear science and technology for peaceful purposes. A more significant implication of South Africa's nuclear diplomacy in Africa is that it is an instrument of power and authority.

5.4   The performative aspects of South Africa's nuclear diplomacy in Africa

Apart from understanding what South Africa's nuclear diplomacy *means* it is also instructive to determine what the country's nuclear diplomacy *does*, namely to determine the performative aspects of South Africa's nuclear diplomacy. These performative aspects are the following:

Firstly, South Africa maintained official representation at bi- and/or multilateral conferences, meetings and negotiations on nuclear-related issues. South Africa's foreign policy identity has informed the conduct of its nuclear diplomacy on the continent. South Africa employed various diplomatic strategies in Africa, ranging from confrontation to cooperation. Engaging predominantly in multilateral diplomacy in Africa (Lee, Taylor & Williams 2006), South Africa initially employed non-governmental representatives such as Waldo Stumpf, the CEO of the AEC, and representatives of the chief negotiating political parties and liberation movements. As South Africa's influence, identity and status as a state committed to a denuclearised Africa improved, the status of its diplomatic representation and representatives also

changed from observer to official diplomatic representatives. This included having career diplomats at negotiations and institutions such as the AFCONE.

Secondly, South Africa established and maintained additional nuclear-related relations with African states through its membership of AFRA and the signing of bilateral agreements on nuclear energy with France, the US and the UK. Thus, South Africa regards this as an additional framework for cooperation.

Thirdly, South Africa initiated and supported ideas on the use of nuclear technology. Closely related to this performative aspect is a fourth aspect, namely the intersubjective understandings of the "nuclear taboo" and the peaceful uses of nuclear power. At the First COP of the Pelindaba Treaty, for example, South Africa emphasised the importance and utility of the peaceful uses of nuclear energy for Africa's development.

Finally, South Africa engaged in socialisation with other African states in order to entrench nuclear-related norms in international relations. This socialisation also included scientific cooperation, as indicated by President De Klerk (1993) and by the country's involvement in African organisations such as AFRA and the FRNBA. South Africa has also socialised with African states at AU and NPT gatherings and at the UN, the NAM and the IAEA where African states often meet to discuss common positions on particular nuclear-related issues. Despite the early positive indications of South Africa's niche diplomacy in Africa, the country's nuclear diplomacy continues to face several challenges.

6.   South Africa's nuclear diplomacy challenges in Africa

As the host and chairperson of the AFCONE, South Africa is confronted with several challenges in Africa. Firstly, with regard to foreign policy South Africa's African Agenda has resulted in what Hamill (2006: 119) refers to as "continental overstretch". Whereas Presidents Mandela and Mbeki had a clearly defined African Agenda, President Zuma simply builds on the foundations of his predecessors' agenda. Mbeki's erstwhile African Renaissance rhetoric seems to have disappeared since his departure from office. Moreover, South Africa's self-acclaimed role as the 'voice' of Africa has been met with distrust elsewhere on the continent.

Secondly, the authority and operation of the AFCONE are problematic in its early stages. The Commission is already experiencing budget constraints, which will affect its operation and, therefore, its contribution to nuclear non-proliferation. Moreover, tension is emerging between the Commission and certain African states. Nigeria, for example, which is not a member of the AFCONE, has called on the AU in September 2011 to "fast track" the implementation of the Pelindaba Treaty by operationalising the AFCONE to "ensure nuclear security in the continent" (*Daily Champion* 19 September 2011). Nigeria's Science and Technology Minister, Ita Okon Bassey Ewa, called for a 'stronger' IAEA and cited the "uncoordinated desire for political control" as being among the disturbing dangers that seem to be propelling nuclear non-proliferation in Africa. He also made a strong case for the Nigerian Defence Academy's involvement in the AFCONE's nuclear security agencies in the first explicit link between the use of military power and atomic development in Africa. Ewa implied that Nigeria hoped to counter the perceived interference from AFRICOM, the US African Command. Discontent is rife over AFRICOM's role in the North Atlantic Treaty Organisation-led (NATO) military intervention in Libya in 2011, and there is further discontent over the manner in which African developmental objectives are coupled with sovereignty issues and the viability of Africans "doing it for themselves". Without divulging details, Minister Ewa also spoke of unsecured HEU stockpiles in Africa; of "anti-social activities involving the use of nuclear materials"; of "misdirected technological diffusion"; and of anticipated dangers in nuclear proliferation propelled by the "uncoordinated desire for political control". Nigeria's anxiety, in part, stems from an emerging nuclear envy among African states vying for prominence in African politics and Africa's atomic development. Ewa's statements followed the announcement by Nigerian President Goodluck Jonathan in September 2011 that his country had revived its Atomic Energy Commission to push ahead with plans to develop its own nuclear power (*Reuters* 16 September 2011).

In the third instance, nuclear security on the continent remains a concern. For example, illicit nuclear trafficking and thus nuclear proliferation on the continent predates the entry into force of the Pelindaba Treaty. The most notable cases are South Africa and Libya's previous nuclear weapons programmes. The implication is that these two countries' nuclear facilities and material can still be used in proliferation activities. Since the signing of the Pelindaba Treaty some African

countries were implicated in the Khan nuclear proliferation ring, including South Africa and Libya, among others (IISS 2007). Since nuclear security in Africa continues to attract global attention, the IAEA and the US remain involved in the continent. However, in 2010 President Obama invited only five African states to the NSS in Washington, US, to address the question of nuclear security. Broader African participation was required for Obama's second NSS held in Seoul, South Korea, in 2012 to strengthen commitment to nuclear security in Africa if the continent intends to further develop its peaceful nuclear programmes without endangering its citizens. For South Africa, as host and leader of the AFCONE, the question of nuclear security will have to be addressed at the continental level.

In the fourth instance, South Africa faces the challenge of improving treaty compliance among African states. Africa's new sovereignty regime, described by Geldenhuys (2006b: 1-29), offers the continent and South Africa the opportunity to hold African leaders and states accountable to their commitments to the AU and the AFCONE decisions.[47] Notwithstanding this new regime, some African states are notorious for non-compliance with international agreements. In this regard, Dye (2008) refers to African states' poor performance in the submission of the reports required by UNSC Resolution 1540. The resolution adopted in 2004 came in the wake of 9/11 and was intended to prohibit states providing support to non-state actors from acquiring WMDs, and provides for the development and maintenance of measures and controls over WMDs, related materials and delivery systems. By 2008, only 19 African states had submitted reports, most of which were incomplete. All 53 AU-recognised states have either signed and ratified, or acceded to the NPT that came into force in 1970. Unlike their commitment to the NPT, African states' signature or ratification of the Pelindaba Treaty is less convincing. By January 2012, the AU confirmed that it logged 33 deposited ratifications and 51 signatories. Equatorial Guinea and Madagascar have still not signed the Treaty, but both have ratified it. However, 20 of these signatory African states are yet to deposit their instruments of ratification with the AU as the Treaty depository, indicating some progress (AU 2012). In this respect, South Africa's nuclear diplomacy could promote treaty compliance through such instructive methods as reminding states of their

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[47] This sovereignty regime refers to the AU's departure from the OAU's position on the non-intervention in African states.

treaty-related interests and socialising states to adhere to the fundamental International Law norm of obedience to treaties. However, non-compliance in terms of the International Law principle of obedience to treaties is often a result of ambiguities in the Treaty, a lack of capacity to comply and time constraints, so South Africa needs to pre-empt these issues in an appropriate manner.

In the fifth instance, the Pelindaba Treaty in Article 8 does not prohibit the "peaceful use of nuclear science and technology for peaceful purposes". The Article also requires states to "promote individually and collectively the use of nuclear science and technology for economic and social development" (Pelindaba Treaty 2009). These provisions may pose some challenges to nuclear security. Several African states have already declared their intention to develop nuclear energy. According to the Interim Secretary of the FNRBA and member of the AFCONE, Atnatiwos Zeleke Meshesha (2011) they are Algeria, Egypt, Ghana, Kenya, Libya, Morocco, Namibia, Nigeria, Senegal, Sudan, Tanzania, Tunisia, Uganda and eight unspecified African countries. South Africa has also indicated its intention to expand its existing nuclear energy facilities. Article 8 of the Treaty also requires states to "establish and strengthen mechanisms for cooperation" and therefore stresses that it is imperative for states to cooperate. However, increased competition among African states and foreign investors to gain access to Africa's nuclear market may compromise these provisions. In terms of verification, Article 9 makes it clear that all states who undertake activities for peaceful purposes shall conclude a Safeguards Agreement with the IAEA to verify compliance and shall not provide any material which may be used for the construction of a nuclear device (Pelindaba Treaty 2009).

In the sixth instance, South Africa will be required to coordinate relations and cooperation between AFRA, the African Energy Commission (AFREC), the FNRBA and the AFCONE. Established in 1990 by the IAEA and African states, AFRA predates the AFCONE by more than two decades and has already achieved some successes (Edwerd 2009: 53-56). South Africa will have to address African states' entrenched interests in AFRA in order to establish an equal role for both organisations. With only 12 members, the AFCONE is a much smaller organisation than the more influential AFRA which has 39 partnered African member states, up

from 32 in 2005. This is more than the ratified members of the Pelindaba Treaty.[48] The intended role for AFRA, which entered into force on 4 April 1990, may pose difficulties and cause it and other recently established atomic organisations such as the FNRBA to compete with rather than complement the AFCONE. This scenario may arise irrespective of the fact that both AFRA and IAEA officials have been elected as AFCONE Commissioners. Article 12 of the Pelindaba Treaty intended that the AFCONE should exert greater control over the development of nuclear projects on the continent and work closely with AFRA and the FNRBA to ensure greater security of radioactive materials (Pelindaba Treaty 2009). AFRA's purpose is to maximize the use of infrastructure and skills present in Africa and help countries to move towards self-sufficiency by using peaceful applications of nuclear techniques.

AFREC was created during the 37th Conference of AU Heads of State in July 2001 to devise policies, strategies and plans for energy development in Africa, and is also likely to jump into the fray and consider nuclear options. The FNRBA, which was created in 2009 due to the increasing use of radioactive materials for peaceful applications of nuclear energy in the areas of health, agriculture and energy production, is a network of regulatory bodies which promote nuclear safety and security in Africa (IAEA 2012b). FNRBA membership is "open to all national nuclear regulatory bodies in Africa on a voluntary basis" and it collaborates with the US Nuclear Regulatory Commission (NRC), the IAEA and other state regulatory bodies (Meshesha 2011). By September 2011, the FNBRA's members included 31 African member states.[49] The General Deputy Director of the IAEA, Tomihiro Taniguchi, regards it as important to strengthen nuclear safety and security in Africa.

Abdul Minty (2011b: 2) pinpointed the Pelindaba Treaty's unique nature by describing it as the "only nuclear weapon free zone having a strong developmental focus" which thus "offer(s) many opportunities for cooperation with AFRA and the IAEA to enhance ongoing efforts to address development needs and challenges" in

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[48] In December 2011 AFRA's National Liaison Officers in Africa included Algeria, Angola, Burundi, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, the DRC, Egypt, Eritrea, Ethiopia, Gabon, Ghana, Kenya, Lesotho, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Tunisia, Uganda, Tanzania, Zambia and Zimbabwe.

[49] These are Algeria, Angola, Botswana, Burkina Faso, Cameroon, Côte d'Ivoire, the DRC, Egypt, Ethiopia, Gabon, Ghana, Kenya, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Senegal, Seychelles, South Africa, Sudan, Tanzania, Tunisia, Uganda and Zimbabwe (Meshesha 2011).

Africa. Speaking at the IAEA Technical Assistance and Cooperation Committee (TACC) in November 2011, Minty (2011b: 3) repeated the developmental focus of these bodies. Minty encouraged the Agency to "consider ways of collaborating with the African Commission of Nuclear Energy (AFCONE), to complement its support activities for the Region". By working together (and with the IAEA) the AFCONE, AFRA and the FNRBA are supposed to avoid redundant activities in order to strengthen Africa's commitments on disarmament and non-proliferation, and to find a balance between the needs of security and development in Africa.

In the seventh place, South Africa's nuclear diplomacy within the AFCONE context may be challenged on the contentious issue of the geographical area subject to denuclearisation in terms of Article 1 of the Pelindaba Treaty. The issue of the geographical territory of the ANWFZ is not unique as a similar problem is experienced with the Southeast Asian NWFZ in terms of the Bangkok Treaty (Chin 1998: 175-190). This issue is aggravated by various territorial claims. The UK 'detached' the Chagos Islands from Mauritius in 1965 to establish the British Indian Ocean Territory (BIOT). However, Mauritius still claims Chagos and Diego Garcia; a claim supported by the AU, but denied by the US and the UK (Harvey 2009). In addition to this, Diego Garcia (a UK possession) and the Chagos Archipelago both host US naval bases in accordance with several US-UK bilateral agreements (Sand 2009; Rosen 1997). The US military base on Diego Garcia, according to Harris (2011: 498), is 'subverting' non-proliferation and the anti-nuclear weapons regime as envisaged by the Pelindaba Treaty.

In the eighth instance and related to the previous issue, South Africa will have to ensure that extra-zonal states comply with security assurances. Three Protocols to the Pelindaba Treaty require extra-zonal states to comply with the Treaty's provisions (see *Table 16*). The AU has repeatedly indicated that the failure of non-African countries and NWS to ratify the Treaty's Protocols has hindered some African states from ratifying it. This weakens the Treaty and poses a challenge to global non-proliferation. On 8 July 2011, the AU supported by the US and the UN repeated calls on non-member African states to ratify the Pelindaba Treaty and for NWS and Spain to ratify its Protocols as prescribed without further delay (AU 2011b). The AU issued this call despite welcoming the long-awaited Russian

Federation's ratification of the Treaty's Protocol I and II on 11 March 2011, albeit conditional and thus contrary to the text of the Pelindaba Treaty.

On 8 July 2011, the AU also welcomed President Obama's undertaking of 2 May 2011 to seek consent for Protocol I and II from the US Senate, reversing a long-standing reluctance on the part of the US to ratify them. Obama expressed the belief that it is in the interest of the US to ratify Protocols I and II to strengthen US relations with African allies. This would improve the security of the US by serving the overall objective of non-proliferation and arms control; demonstrate US commitment to the decisions taken at the 1995 REC of the NPT; and contribute to the achievement of an ANWFZ (Mukhatzhanova & Pomper 2011). China has ratified Protocol I and II, while France has ratified Protocols I, II and III. The UK and Russia have ratified Protocols I and II but with provisos. The UK objected to the inclusion of the Chagos Archipelago in the Treaty as an infringement of the UK's sovereignty, whereas Russia objected to the military base of the US, a NWS, on Diego Garcia. For Russia, the presence of a NWS in an area subject to denuclearisation is counter to the objective of the Treaty (Goldblat 2002: 211). Spain has neither signed nor ratified Protocol III. However, it remains equally disturbing that the AU has not called on the world's risky atomic weapons states in Asia and the Middle East, namely India, Iran, Israel, North Korea and Pakistan, to ratify the Pelindaba Treaty.

In the ninth instance, the regime changes brought about by the so-called "Arab Spring" since 2011 in North Africa may pose the challenge of nuclear reversal to South Africa's nuclear diplomacy in Africa. Nuclear reversal, according to Levite (2002: 61 & 67), can be described as the process whereby states embark on an officially-sanctioned nuclear weapons programme, then reverse the programme without necessarily abandoning their nuclear ambitions. This is closely related to Levite's (2002: 69) conceptualisation of nuclear hedging, which refers to a "national strategy of maintaining, or at least appearing to maintain, a viable option for the relatively rapid acquisition of nuclear weapons" based on a domestic technical capability (such as nuclear fuel-cycle facilities and nuclear scientists) to produce these weapons in a relatively short period. Both Libya and Egypt, for example, have not yet stabilised since the removal of Colonel Muammar Al-Qaddafi and President

Hosni Mubarak respectively.[50] Middle Eastern and North African countries such as Saudi Arabia, the United Arab Emirates (UAE), Jordan and Egypt have also expressed their intention in September 2011 to initiate nuclear construction and operation projects amounting to US$ 400 billion (*Your Nuclear News,* 6 September 2011). Egypt may be described as a potential nuclear hedger. Its nuclear ambitions can be ascribed to, amongst others, its perception of Israel as a threat; the ambition to lead the Arab world technologically and politically; and strong historical domestic support for a national nuclear capability (Levite 2002: 63).

Table 16: Protocols of the Pelindaba Treaty

Protocol	Obligations	Open for ratification by	Signed	Ratified
I	NWS not to use or threaten to use a nuclear weapon against any Party to the Treaty and against any territory within the ANWFZ	By all NWS	By all NWS	France China UK
II	NWS not to participate or assist in or encourage the testing of a nuclear explosive device in the ANWFZ			
III	Parties *de jure* or *de facto* in control of territories within the zone (France & Spain) to apply the Treaty's principles in the territories under their control	France Spain	France Spain	France

Pelindaba Treaty (2009)

Finally, South Africa may face challenges posed by efforts to establish a Middle East NWFZ. Briefing Parliament on the Pelindaba Treaty in 2002, Deputy Foreign Minister

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[50] The spelling of Qaddafi is in line with the spelling in documents of the Qaddafi-led Libyan government. See Libya (undated).

Aziz Pahad (2002) stated that one of the reasons for the delay in the entry into force of the Pelindaba Treaty was the campaign by North African states to establish a NWFZ in the Middle East. This resulted in the low priority given to the Pelindaba Treaty. South Africa may be required to promote the establishment of a Middle East NWFZ. To this end, South Africa has, for example, participated in the IAEA *Forum on Experience of Possible Relevance to the Creation of a Nuclear-Weapon-Free Zone in the Middle East* in Vienna, Austria, from 21 to 22 November 2011. In addition to this, Ambassador Lamamra (2010), Commissioner for Peace and Security of the AU, referred to a NWFZ in the Middle East in his opening address to the First COP of the Pelindaba Treaty. Lamamra raised an expectation of African involvement in the establishment of the Middle East zone by stating that the AU "strongly believes" that the establishment of a NWFZ, in the Middle East would enhance African security.

South Africa's hosting and leadership of the AFCONE will test the country's normative power. South Africa's maintenance of its normative power on nuclear non-proliferation on the continent and elsewhere is dependent on the legitimacy of the country's nuclear diplomacy. On its part, this legitimacy is dependent on the country's persuasive actions to promote nuclear non-proliferation on the continent and on the AFCONE's activities. More importantly, South Africa's normative power will be determined by the impact and consequences of the country's socialisation of the norms espoused by the AFCONE.

7.   Conclusion

This chapter analysed South Africa's nuclear diplomacy with Africa, particularly the country's nuclear diplomacy pertaining to the Pelindaba Treaty. The Pelindaba Treaty made an innovative contribution to the institutionalisation of NWFZs as functional regimes by, for example, providing for a mechanism of compliance through the establishment of a continental commission, the AFCONE, with clearly defined tasks.

Since 1990, South Africa has conducted its nuclear diplomacy with African states in such a manner as to convince the continent of its commitment to nuclear non-

proliferation. By ascribing to the continental norm of a denuclearised Africa, South Africa constructed its identity accordingly to serve its national interests.

It is concluded that NWFZs are an effective instrument to express nuclear non-proliferation as a norm. Africa's interest in this normative instrument has originated in the 1960s. However, despite this early commitment to the norm and the African acceptance of an ANWFZ, the Pelindaba Treaty only entered into force in 2009. One of the reasons for the delay was the unwillingness of the pre-1989 South African government to join the continent's nuclear non-proliferation efforts. By the time continental efforts to resume negotiations on the ANWFZ treaty commenced in 1991, changes in South Africa's nuclear position had changed. Initial continental negotiations on the treaty excluded South Africa. Once the IAEA verification process was completed, South Africa was invited to join the continental and international efforts to draft a treaty.

Throughout this treaty-making process, South Africa's nuclear diplomacy followed two main strategies, namely cooperation and partnership. Its identity as a country with nuclear expertise and a former nuclear proliferator-turned-norm-complier resulted in the country being able to fulfil a particular role in these deliberations. Several diplomatic successes resulted from this. South Africa was endorsed as the host of the AFCONE; it was elected to serve on the AFCONE; and a South African was elected to lead the AFCONE.

Efforts to denuclearise Africa slowed down once the NPT entered into force in 1970. By 1990, political changes in South Africa included exposing the country's nuclear past. Once the continent accepted South Africa's nuclear non-proliferation commitments, it invited the country to deliberations on the ANWFZ treaty. This marked the beginning of South Africa's integration into the continent's nuclear affairs. Subsequently, South Africa played a significant role in the final draft of the Treaty and was elected as the leader and host of the Treaty's mechanism of compliance, the AFCONE.

South Africa's post-1990 nuclear diplomacy in Africa has undergone several changes. Most notably, the country has ascribed to the continental norm of nuclear non-proliferation. It has acquired a niche role in nuclear diplomacy on the continent

and has constructed a new identity as a state complying with the norm of nuclear non-proliferation as expressed, *inter alia*, through the continent's nuclear weapons free zone. South Africa's involvement in the Pelindaba Treaty coincided with the country's accession to the NPT in 1991. Hence the need to consider the country's nuclear diplomacy in respect of the NPT.

CHAPTER SIX

SOUTH AFRICA AND THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS

1.   Introduction

The *Treaty on the Non-Proliferation of Nuclear Weapons* (hereafter NPT) entered into force on 5 March 1970 and rests on three major pillars or principles, namely nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy and technology (NPT 1970). In order to achieve the objectives and obligations set out in the NPT, the IAEA is regarded as its "implementation agency". It took South Africa 21 years to accede to the NPT since the Treaty entered into force in 1970. This remains one of the major legacies of President FW de Klerk.

The aim of this chapter is two-fold. Firstly, the chapter analyses South Africa's nuclear diplomacy in the context of the NPT in terms of South African involvement in various RevCons and PrepComs since 1991, the year South Africa acceded to the NPT.[51] South Africa's participation in the 1995 REC and subsequent conferences in 2000 and 2005 have previously received scant attention. Secondly, this chapter analyses specific events preceding and surrounding each of these NPT conferences which, apart from the content of the Treaty, significantly influenced not only South Africa's nuclear diplomacy, but also the negotiations at these conferences. The chapter therefore traces South Africa's construction of its identity, roles and interest in terms of the NPT, and the country's norm construction and involvement in related conferences and events. In conclusion, an assessment is made of South Africa's use of diplomatic instruments and its achievements.

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[51] Pursuant to the NPT, parties to the Treaty meet every five years at a RevCon, usually held in New York, to assess the status and implementation of the Treaty's main pillars. In the three preceding years a RevCon, a Preparatory Committee Conference (PrepCom) is held in preparation of the RevCon. For the 2010 RevCon, for example, three PrepComs were held in Vienna (2007), Geneva (2008) and New York (2009).

2.   The origins and provisions of the Treaty on the Non-Proliferation of Nuclear Weapons

The origins of the NPT coincided with the onset of the Cold War (Fischer 1993; Joyner 2011; Lodgaard 2011). The idea to consolidate the norm of nuclear non-proliferation in an international agreement (later the NPT) was first proposed by Ireland. As a norm entrepreneur, Ireland brought the issue of nuclear proliferation to the UN in 1959 and requested action to prevent the existing nuclear weapons states from supplying nuclear weapons to non-nuclear states. Subsequently, in 1961, the UNGA adopted the "Irish Resolution" which called for limitations on the transfer of nuclear weapons, as well as limitations on the acquisition of nuclear weapons by non-nuclear as well as nuclear states. Negotiations to consolidate the "Irish Resolution" into a treaty stalled for some years. A breakthrough came with the adoption of UNGA Resolution 2028 (1965) and the tabling of a joint US-Soviet draft treaty on 11 March 1968. Following further amendments, a further draft was submitted to the UNGA on 12 June 1968 which was signed by most members of the UN on 1 July 1968. The NPT formally entered into force on 5 March 1970, with Ireland and Norway as the first signatories (Joyner 2011: 13-20). Since its inception, the NPT has been regarded as the basic global normative framework for nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy.

Consisting of a mere eleven articles, the core of the NPT corresponds with the substantive structure of the Treaty text in that it rests on three pillars or norms, namely, nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy (see *Table 17*).

Article VIII of the NPT provides for a five-yearly review process to determine whether the purpose and provision of the Treaty are being realised, and to review the operation of the Treaty. In addition to this review provision, Article X of the Treaty provides for an additional review of the Treaty by providing for a review conference 25 years after the entry into force of the NPT (thus 1995) to decide whether the Treaty will continue indefinitely or be "extended for an additional fixed period or periods" (NPT 1970).

Table 17: The core provisions of the NPT

Norm (Pillar)	Article	Provision
Non-proliferation	I	NWS undertake not to transfer nuclear weapons or to grant any other state control over them.
	II	NNWS may not receive nuclear weapons or control nuclear weapons.
	III	NNWS undertake to conclude safeguard agreements with the IAEA. This is intended to prevent peaceful nuclear energy programmes from being misused for military purposes.
Peaceful uses of nuclear energy	IV	The NPT should not affect the right of all parties to develop, research, and use nuclear energy for peaceful purposes in conformity with Articles I and II. State Parties are encouraged to facilitate the fullest possible exchange of equipment, material, and information for the peaceful uses of nuclear energy.
	V	Each state party (on this matter the Preamble reads: NWS) to the NPT have to share the potential benefits from any peaceful application of nuclear explosions available to NNWS in a non-discriminatory way.
Disarmament	VI	All parties to the NPT commit themselves to pursuing negotiations in good faith on effective measures to end the nuclear arms race at an early date and to nuclear disarmament, and to a treaty on general and complete disarmament under strict and effective international control.
Procedural	X	Any state party can withdraw from the NPT giving three months' notice and with reference to extraordinary events jeopardising its supreme interests.

NPT (1970) & Joyner (2011: 26)

The NPT reflects the Cold War power relations at the time of its negotiation, and hence contains several contradictory, even discriminatory, provisions (Joyner 2011). Firstly, the Treaty distinguishes between two classes of state parties, that is, NWS and NNWS. A further distinction is made, based on the technological capabilities, status and privileges of the state parties. A NWS is defined in Article IX as a state which has "manufactured and exploded a nuclear weapon or other nuclear explosive

device" before 1 January 1967 (NPT 1970). States not in this category are defined as NNWS.

Secondly, the Treaty distinguishes between states on the grounds of the status and privileges afforded to NWS but not to NNWS. Thirdly, the Treaty distinguishes on the grounds of states' obligations. For example, in terms of Article III, NNWS are obliged to enter into a safeguards agreement with the IAEA "for the exclusive purpose of verification of the fulfilment of its obligations assumed under this Treaty" (NPT 1970). Article V requires states to share the benefits of nuclear energy with NNWS. These divergent obligations contribute to the *quid pro quo* nature of the obligations in the NPT, which has often resulted in major disputes in proceedings related to the NPT.

Essentially, as Joyner (2011: 33-35) observes, the NPT is a three-pillared compromise agreement between two classes of state parties with different sets of obligations. Unique to the NPT are the *quid pro quo* elements on benefit sharing. In addition to this, Joyner (2011: 35) maintains that the NPT is essentially concerned with the regulation and application of the dual-use nature of nuclear energy and not only, as its title suggests, with nuclear weapons.

When the NPT opened for signature on 1 July 1968, South Africa had already established a nuclear-related Research and Development Programme which, *inter alia*, prioritised the implementation of nuclear power in the country. The Programme resulted in the establishment of a Nuclear Power Committee which included members of the AEB, Eskom, and representatives from the industrial and mining sectors. It was upon the recommendation of the Nuclear Power Committee that the South African government decided to construct two nuclear power reactors at Koeberg (Steyn, Van der Walt & Van Loggerenberg 2003: 32).

Barely two months before the NPT's opening for signature, the AEB (1968: 2), in May 1968, published a feasibility study, *Report on the investigation into the possible introduction of nuclear power in the Republic of South Africa*. The report resulted from a request by the Minister of Mines and Planning, JFW Haak, in June 1965 to investigate the possible application of nuclear power in South Africa. Although this report focused on the possible use of nuclear energy for electricity generation, it

paved the way for South Africa's nuclear weapons programme and the "nuclear devices" FW de Klerk (1993) referred to.

Moreover, in terms of the NPT at the time of its opening for signature and entry into force, South Africa was categorised as a NNWS. In addition to this, South Africa was also benefitting from assistance provided by NWS, most notably France and the UK (AEB 1968: 2), in the development of South Africa's nuclear capability. More pertinent to this study, South Africa also refused to sign and ratify the Treaty. Ironically, as is the case today, South Africa then argued, that the Treaty is inherently discriminatory, albeit on different grounds.

As a point of departure it is necessary to provide a historical background to South Africa's post-1990 nuclear diplomacy. Accordingly, before proceeding to South Africa's nuclear diplomacy pertaining to the NPT, the next section provides a brief overview on South Africa's position on the NPT prior to its ratification of the Treaty.

3.   **South Africa's pre-1991 nuclear diplomacy on the Treaty on the Non-Proliferation of Nuclear Weapons**

As the South African government's apartheid policies increased in scope and the country ignored international objections to it, the international community increasingly became concerned not only with the secrecy surrounding South Africa's nuclear programme but also with the South African government's rationale for the programme. Suspicions about South Africa's nuclear weapons capability, according to the *New York Times* (27 September 1987), increased when South Africa repeatedly refused to sign and ratify the NPT.

South Africa explained and justified its refusal to join the NPT on a number of occasions. When, for example, South Africa was pressurised by the IAEA in 1970 over its reluctance to ratify the NPT, South Africa's Ambassador to Austria and the country's permanent representative at the IAEA, Ampie Roux (1970) explained that the country was reluctant to "surrender, almost irrevocably, long-held sovereign rights without having precise details of all the implications".

South Africa's refusal to ratify the NPT meant that none of the country's nuclear research, facilities and activities was covered by IAEA safeguards and inspections.

In contrast, South Africa eagerly informed the Agency of its nuclear development activities. In 1972, for example, Ambassador Roux (1972) informed the IAEA GC that the construction of South Africa's small-scale enrichment plant was progressing well and that South African advances in nuclear science had "far exceeded expectations". By 1975, Ambassador Roux (1975) announced that "apart from developing its enrichment capability, South Africa was constantly intensifying its prospecting activities". The South African government also informed the Agency that the first phase of the country's pilot enrichment plant was successfully commissioned and that feasibility studies for the construction of a "full-scale commercial plant" was completed 'satifsfactorily' (South Africa 1975). Despite its unwillingness to ratify the NPT, South Africa continued to regularly report to the international community on its nuclear-related activities.

Despite diplomatic efforts to influence South Africa to accede to the NPT, existing international concerns about South Africa's nuclear ambitions and intentions during the late 1970s escalated with the Soviet Union's detection of a nuclear test site in the Kalahari Desert in August 1977, and the detection by the US of a "double flash" towards the end of the 1970s in the South Atlantic Ocean. The latter, which was regarded as a possible nuclear test, raised international concerns about South Africa's nuclear intentions and resulted in the country's increased international isolation. By then, calls for South Africa's suspension from the IAEA increased, and emanated predominantly from African states. Western governments such as the US and the UK, however, increasingly pressurised South Africa to ratify the NPT arguing that South Africa's suspension from the IAEA would undermine the Agency's efforts to engage South Africa on the termination of the country's nuclear weapons programme which, by then, was widely accepted to exist. Parallel to these international developments, the international community increased its efforts to isolate South Africa through a series of embargoes and sanctions. Increasingly, South Africa began to feel the pressures which paved the way for some nuclear disarmament initiatives by the South African government (see Chapters 3, 4 and 5 for a detailed discussion on these developments).

State President PW Botha announced on 21 September 1987 that the South African government "hopes that it will soon be able to sign the NPT and has decided to open

discussions with others to this end" (South Africa 1990: 1). This was the first sign of political and nuclear-related changes afoot in South Africa. Subsequent to Botha's announcement, diplomatic efforts focused on influencing the South African government to accede to the NPT. From August 1988, several meetings between South African officials and their counterparts of the NPT depository countries, namely the US, the Soviet Union and the UK, took place at the IAEA headquarters in Vienna. Led by Pik Botha in his dual capacity as Minister of Foreign Affairs, and the Minister of Energy and Minerals Affairs, the South African delegation was mainly concerned with "clarifying the cost and benefits of adherence" as well as the responsibilities under the IAEA safeguards agreement (UN 1991: 11). This view was later repeated when the South African Prime Minister explained to the South African Parliament that South Africa was willing to accept IAEA safeguards if these safeguards "did not allow commercial espionage or hinder South African civilian nuclear research" (UN 1991: 11). These commercial - rather than security and military - concerns date back to 1968 when South Africa explained to the UNGA that it would not submit to IAEA safeguards as the country was concerned about commercial espionage (see Chapter 4).

The *New York Times* (15 July 1988) reported that the South African government requested negotiations with the UK, the USSR and the US to discuss "renouncing nuclear weapons and opening all its atomic establishments to international inspection" and signing the NPT (*New York Times* 14 August 1988). Fearing expulsion from the IAEA, South Africa approached these NWS to acquire assurances that these countries would not support motions to suspend South Africa from the Agency.

A major implication of South Africa's ratification of the NPT was that it would have to negotiate an agreement with the IAEA to allow Agency officials to visit all of South Africa's nuclear plants, and declare and place under safeguard any stocks of HEU it may have acquired in the past (*New York Times* 15 July 1988). At the time, Pik Botha articulated some of Pretoria's concerns about the NPT. He maintained that his government required assurances on whether the NPT's provisions "would be applied to us [South Africa] in a non-discriminatory manner if we [South Africa] are to consider joining it" (*New York Times* 14 August 1988) and that there would be no

interference with South Africa's "research and development programme in producing products for peaceful purposes" (Botha in Papenfus 2010: 732); a position and requirement dating back to the 1970s as indicated earlier. The July 1988 negotiations produced some preliminary results.

Ending years of speculation on these issues, Pik Botha admitted in August 1988 that South Africa had the capability to produce nuclear weapons. As *The Citizen* (22 September 1988) reported at the time, Botha refused to admit that South Africa had produced nuclear weapons. However, Botha (in Papenfus 2010: 732) admitted that he knew of the existence of South Africa's nuclear weapons programme since his appointment as Minister of Mineral and Energy Affairs and had accompanied PW Botha to one of the facilities where South Africa's six atomic bombs were kept.[52] Subsequent to Pik Botha's public denial, US diplomat Herman (Hank) Cohen "kept up the pressure" on South Africa to sign the NPT (Botha in Papenfus 2010: 733). By the end of September 1988, the international community once again appealed to South Africa to sign the NPT.

The next round of negotiations between the South African government and the depository countries took place in Vienna in December 1989. This time the South African delegation, composed of pro- and anti-NPT delegates, was concerned about the practicalities of acceding to the NPT. The talks concluded with the South African delegation indicating that domestic concerns about South Africa's accession to the NPT should first be addressed before the country would accede to the Treaty. However, it took almost a year to address these domestic concerns as the country was by now preoccupied with the release of Nelson Mandela; the unbanning of liberation movements; and the initial negotiations on the country's future constitutional dispensation.

By September 1990, a written statement issued by Pik Botha was circulated at the 34th Regular Session of the IAEA GC. In the statement Botha indicated that South Africa was 'prepared' to accede to the NPT, but with a *caveat* "in the context of an equal commitment by the other states in the Southern African region" (South Africa

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[52] Unlike De Klerk (1993) and Stumpf's (1995a & 1995b) references to "nuclear devices", Pik Botha referred to "atomic bombs" (Papenfus 2010: 733). Steyn, Van der Walt and Van Loggerenberg (2003) refer to "nuclear weapons" and "nuclear devices".

1990: 2). Moreover, Botha also indicated that his government intended to commence talks with the IAEA on concluding a Safeguards Agreement with the Agency (South Africa 1990: 2). The South African diplomatic effort paid off: the IAEA Director General indicated that the Agency was ready to commence talks with South Africa "without delay" (UN 1991: 11).

In June 1991, Pik Botha announced that the South Africa government intended to reverse its years of opposition to the NPT and sign the Treaty. At the time, the *New York Times* (21 March 1990) reported that the development that "appears to have swung South Africa around in favour of signing the treaty, officials say" was an assurance from the US, the UK and the USSR that "for procedural reasons" the IAEA:

> would not be in a position to start inspecting South Africa's plants for about two years after it signed. Britain also assured South Africa that if it signed the treaty, European countries were likely to lift their ban on nuclear cooperation with South Africa.

On 8 July 1991, the *New York Times* (9 July 1991) reported that Pik Botha had signed South Africa's accession to the NPT at a ceremony in Pretoria. This was later confirmed by the South African government and the IAEA.

South Africa's signing of the NPT coincided with major political developments in the country. Moreover, the signing of the NPT paved the way for the IAEA's verification process in the country, which was successfully concluded by 1993. With this completed, South Africa was recognised as a unique case of nuclear roll-back. As previously indicated, this bestowed the country with significant moral and normative power and a unique nuclear identity as a state that terminated its nuclear weapons programme. Important in terms of its signature of the NPT, South Africa as a state party to the NPT could now participate in the conferences on the NPT such as the RevCons and PrepComs. Ironically, South Africa's attendance of its first NPT-related conference in 1995, the REC, coincided with the 25 year review conference of the NPT as prescribed in Article X of the Treaty. The latter had to determine the future life-span of the very Treaty South Africa had been repeatedly called upon to sign since 1968.

Thus, South Africa's accession to the NPT in 1991 illustrated a departure from its pre-1990 nuclear diplomacy. Since the 1970s South Africa has followed a policy of deliberate nuclear opacity.[53] The latter refers to a situation where the existence of a nuclear weapons programme "has not been acknowledged by a state's leaders, but where the evidence for the existence of such a programme is enough to influence of [*sic*] other nation's perceptions and actions" (Cohen in Abraham 2009: 117). In this respect, the notion of nuclear opacity sheds light on South Africa's position on the NPT as the country never confirmed the existence of its programme despite the existence of its programme at the time.

South Africa's accession to the NPT also indicated the country's acceptance by the international community due to its commitment to nuclear non-proliferation. South Africa's first opportunity to attend an NPT conference occurred in 1995, which is the focus of the next section.

4.   The 1995 Review and Extension Conference

The 1995 REC of the NPT was significant for a number of reasons. In pursuance of Article VIII of the NPT, it had to review the Treaty. More importantly, in pursuance of Article X of the NPT, the 1995 conference took place 25 years after the entry into force of the Treaty and, in addition, had the task of deciding whether the NPT will continue indefinitely or be extended for an additional fixed period or periods (NPT 1970). For South Africa, due to its absence from earlier NPT conferences, this meant that considerable preparation would be required. Not only was a new government in power in South Africa, but the South African diplomatic corps also had no experience of participation in NPT conferences. In an effort to prepare for the REC, South African officials participated in a series of PrepComs prior to the REC.

4.1   South Africa's participation in the Preparatory Committee Conferences

The PrepCom for the 1995 REC held four sessions, respectively in New York (May 1993 and January 1994), in Geneva (September 1994) and again in New York (January 1995). South Africa was able to attend all of these sessions (UN 1995b: 1),

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[53] The concept of nuclear opacity is preferred to the concept nuclear ambiguity. The latter refers to the uncertainty of the presence of a nuclear weapons programme, or the indecision by decision-makers in respect of the utility, efficacy and morality of nuclear weapons (Abraham 2009: 117).

with the session in New York from 10-14 May 1993 being the country's first-ever attendance of the proceedings of an NPT conference. In fact, South Africa contributed 0.28 percent, thus more than any other African state, to the cost of these PrepComs (UN 1995b: 17-24). South Africa's participation in these PrepComs was relatively low-key, which could be explained by the country's inexperience. Moreover, its participation in the first session of the PrepCom took place a few weeks after President De Klerk's 1993 announcement which caused considerable international interest. South Africa's participation also coincided with the IAEA's final verification of the dismantling of the country's nuclear weapons programme.

At the PrepComs for the 1995 REC, South Africa's position on the NPT built on the ANC's historical position on the Treaty. This was maintained by ANC activist Denis Goldberg (1994: 217; 218, 228) when he spoke at the conference on *Nuclear Policy for a Democratic South Africa* convened by the ANC in Cape Town in February 1994, and he pointed out that the Treaty "perpetuates the historically imposed inequalities" between NWS and NNWS, and that the ANC is in favour of the extension of the Treaty for a "shorter or longer period" (see Chapter 1). At the third session of the REC's PrepCom, South Africa's delegation, led by Riaan Eksteen, reminded delegates that the GNU had been in power only for a few months and that the country required more time to formulate a position on the extension of the Treaty (Masiza & Landsberg 1996: 21). However, the position which South Africa seemed to have favoured at the time was close to the NAM's position, which was to support a fixed extension of the Treaty. In the period leading up to the REC, the US as a NWS, indicated that it preferred an unconditional indefinite extension of the NPT (Taylor 2006: 166), which was contrary to the position of the NNWS and the NAM in particular. Against the background of Eksteen's observations, the South African government commenced with its preparations for the REC.

4.2   South Africa's preparation for the Review and Extension Conference

Prior to various PrepComs for the 1995 REC, through South African diplomat Peter Goosen (1995: 2), who was a member of the South African delegation at the 1995 REC, South Africa applied certain diplomatic strategies and instruments in preparation of the country's participation in the PrepComs and the REC. Goosen (1995: 2) explained that South Africa 'consulted' with OAU members, the NAM and

other states in an effort to "understand the perspectives of other countries and to analyse what might happen at the Conference [the REC]". He also indicated that South Africa considered various extension options and their implications prior to the various PrepComs and the REC. Subsequent to these consultations the high-level meeting (also referred to by Markram 2004: 24) took place. According to Goosen (1995: 2), the high-level meeting concluded that South Africa realised that the NPT provides security guarantees to the country and that the NPT "has been successful" in achieving some level of nuclear disarmament.

"Thus, we concluded", Goosen (1995: 3) indicated, that the NPT was in "South Africa's national security interests, and that the best way to retain the Treaty would be by supporting indefinite extension in principle". The question that now emerged was: How to achieve an extension without threatening the NPT? Goosen (1995: 3) explained that, in order not to jeopardise the NPT, South African diplomats and principals in Pretoria formulated a series of principles as a political - rather than as a legal - instrument because the Treaty could not be easily amended. It was against this background that the South Africa government attended the 1995 REC.

4.3   South Africa's nuclear diplomacy at the Review and Extension Conference

South Africa attended the 1995 REC in New York from 17 April to 12 May 1995. Apart from reviewing the implementation of the NPT, the REC had to decide whether to extend the NPT for one or more periods or indefinitely. More importantly, the 1995 REC had to address the several unresolved issues of the previous RevCon in 1990. Since the 1990 RevCon NNWS maintained that some security assurances were not kept by NWS; that NWS did not implement the Treaty's provisions; and that an indefinite extension of the Treaty should be approved by the majority of the parties to the Treaty. The NNWS, mostly composed of members of the NAM, maintained that they constituted the majority of State Parties to the NPT and therefore preferred a limited extension of the NPT.

The 1990 RevCon could not reach an agreement on these matters and therefore carried these debates over to the 1995 REC. Although the 1990 RevCon produced no substantial results, several developments concerning nuclear disarmament were

apparent. In the wake of the collapse of the USSR, the future of the former USSR's nuclear arsenal at the time was questioned since it was based in newly-independent states not party to the NPT. This resulted in a process whereby 38 countries, mainly former Soviet Union republics, France, China and South Africa, amongst others, acceded to the NPT between 1990 and the 1995 REC. Moreover, concerns about the intentions of NWS remained despite the end of the Cold War. The NNWS were of the opinion that NWS did not comply with Article VI of the Treaty, which requires all state parties to the Treaty to negotiate on the "cessation of the nuclear arms race" and nuclear disarmament (NPT 1970).

By the time of the 1995 REC, the ANC had been elected into power (albeit in a GNU with the NP) subsequent to South Africa's 1994 election. This meant that the country enjoyed considerable international goodwill, a position it put to good use in the negotiations at the REC. In fact, in the opening statement of the President of the REC, later recalled by South Africa's Minister of Foreign Affairs, Alfred Nzo (1995), the Conference President referred to South Africa's unique position as the "first country to have unilaterally and voluntarily" dismantled its nuclear weapons programme and devices.

Intense debates, most notably on the provisions on disarmament (Article VI), safeguards (Article III) and the peaceful uses of nuclear energy (Article IV), followed the opening of the REC. Divergences of opinion between developing and developed NNWS emerged on the need for NWS disarmament in terms of Article VI. Although the NWS stated that the nuclear arms race had ended and that they had reduced their arsenals, the NNWS forming part of the NAM in particular were not convinced and demanded more security assurances (Reaching Critical Will 2011).[54] Despite these debates insufficient time was devoted to issues concerning the review of the Treaty as more time was devoted to debates on the extension of the NPT, which was preferred by most states. However, divergent views also emerged on the nature of the extension, a provision of Article X of the Treaty. These divergent views were contained in three draft texts submitted by Mexico, Canada (on behalf of 102 states)

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[54] Two types of security assurances exist. A negative security assurance is a guarantee by a NWS that it will not use or threaten to use nuclear weapons against a NNWS. A positive security assurance is a guarantee by a NWS that it will come to the aid of a NNWS if it is attacked by another state with nuclear weapons (Reaching Critical Will 2012).

and a group of non-aligned, predominantly developing states. Some NNWS preferred an extension for a fixed period of 25 years with a subsequent review of the NPT's continuance in an effort to curb NWS. Contrary to this position the NWS preferred an indefinite extension of the Treaty.

South Africa's position on the extension of the NPT, as expressed by its Foreign Minister, put the country in a diplomatic quandary. Whereas South Africa's position at the PrepCom corresponded with that of the NAM, its position at the REC resembled that of the US. This risked South Africa's alienation from the NAM, an organisation which had supported the liberation struggle in South Africa and to whom the ANC owed considerable political debt. Moreover, as the largest grouping of NNWS (compared to only five NWS), the NAM yielded considerable influence at NPT conferences.

South Africa's amended stance on the extension of the Treaty since its position at the PrepCom is ascribed to the intense diplomatic pressure of the US during the period between the PrepCom and the 1995 REC. The US warned of the danger to "mutual interests" if South Africa took a position contrary to that of the US (Taylor 2006: 167). South African diplomat Thomas Markram (2004: 24) who was part of the country's delegation to the 1995 REC provided the following first-hand account of how these changes occurred. According to him, South Africa's "strategies and tactics" for the REC were finalised two weeks prior to the start of the Conference in New York in a meeting at the Diplomatic Guest House in Pretoria:

> Thabo Mbeki, then Deputy President of South Africa guided the discussions that concluded that the Treaty was too valuable for nuclear disarmament and non-proliferation to put into jeopardy by only permitting a limited extension of time and that South Africa consequently had no other option but to support the indefinite extension of the Treaty. It was, however, agreed that such an extension should not be agreed to without the reciprocal agreements on the accomplishment of the provisions of the Treaty. The task of giving definition to these broad directives was handed to the Department of Foreign Affairs and to officials working on these issues. Based on the proposal from the Foreign Affairs officials Deputy President Mbeki subsequently wrote a letter to [US]

Vice President Al Gore of the United States setting out the position that would be adopted by South Africa at the Conference.

Although not mentioned by Markram (2004), Taylor (2006: 167) states that Gore "personally lobbied" Mbeki and that US President Bill Clinton wrote to President Mandela "demanding support" for the US position as South Africa was seen to have influence over the NAM and African countries. Eager to attract US goodwill and investment, South Africa adopted the US position but offered some solutions to break the impasse between NWS and NNWS on key issues.

South Africa used various strategies and instruments to conduct its nuclear diplomacy at the REC. Initially, South Africa preferred a limited extension of the NPT, as explained by Goldberg (1994). In this, the country cooperated with some NNWS. At the PrepComs for the 1995 REC, South Africa developed a new position, resulting in confrontation with some of the countries of the developing world and some NNWS. It cooperated with the NWS, most notably with the US, in achieving the indefinite extension of the NPT.

South Africa's proposals on a mechanism for strengthening the review process were developed in consultation with other countries. The first draft of this document was compiled in Pretoria and finalised prior to the REC in New York. Goosen (1995: 3) explained that the "ideas in the original South African draft on the review mechanism were not this of South Africa alone, as was the case with the draft on principles".

On 19 April 1995, two days into the conference, South Africa's Minister of Foreign Affairs, Alfred Nzo, addressed the REC. According to Nzo (1995), South Africa played an "active part" in the PrepCom meetings and had, in compliance with a Nigerian-sponsored UNGA resolution, provided legal analysis of the extension options to the Treaty's future. Nzo (1995) also stressed South Africa's position that the NPT should not be jeopardised and that the Treaty should be strengthened and not weakened. He reiterated that the NPT is the "only international instrument on nuclear disarmament" which binds all five NWS. Referring to the "inequalities inherent" in the Treaty, Nzo stated that it should be dealt with in such a manner as not to threaten the security provided by the NPT. More importantly, he confirmed that

South Africa "in principle supports the view that the NPT should be extended indefinitely. The termination of the treaty is not an acceptable option".

Nzo (1995) also proposed that a mechanism must be found to address these concerns in order to fully implement the NPT. In order to achieve this, Nzo proposed the adoption of a set of *Principles for Nuclear Non-Proliferation and Disarmament* (hereafter Principles) to be taken into account when the implementation of the NPT is reviewed. He made it clear that these Principles were not intended to amend the Treaty but were intended to consider the current international environment, which differs from time to time. Nzo also proposed that these Principles should be renewed at every RevCon. He did not identify these proposed Principles but referred to issues which should be considered when formulating these Principles. These were:

- a restatement on the commitment to the non-proliferation of nuclear weapons;
- the strengthening of and full compliance with the IAEA safeguard agreements;
- access to nuclear material and technology for peaceful purposes;
- progress in the Cut-Off Convention negotiations;
- progress in the reduction of nuclear arsenals;
- progress in the negotiations for the CTBT;
- a commitment to the establishment of regional NWFZs; and
- Enforcing binding security assurances for NNWS (Nzo 1995).

Nzo also proposed a strengthened review process by recommending the establishment of a committee to study the review process, which should make recommendations to strengthen the NPT and its implementation. These recommendations, Nzo (1995) proposed, should be considered by the PrepComs for the 2000 RevCon.

South Africa's proposals served as the basis for the package of decisions presented by the President of the Conference, Ambassador Jayantha Dhanapala from Sri Lanka. According to Thomas Markram (2006: 24), the package of decisions "provided a way for all State Parties to support the indefinite extension" and the means for achieving progress on nuclear disarmament. The final decisions adopted by the REC reflected South Africa's initial proposals. Two of the REC's three major decisions, Decision I (*Strengthening the Review Process of the Treaty*) and Decision

II (*Principles and Objectives for Nuclear Disarmament*) were based on South Africa's proposals presented by Minister Nzo.

4.4 An assessment of South Africa's nuclear diplomacy at the 1995 Review and Extension Conference

In its nuclear diplomacy at the REC, South Africa developed a niche role to achieve its objectives. Constructing its identity as a state with a unique nuclear identity which bestowed on it a certain normative power, South Africa was able to play the role of a norm entrepreneur by facilitating the socialisation of certain non-proliferation norms by other states. South Africa identified and filled specific niche areas, as described by Cooper (1997: 5), pertaining to the NPT. It deliberately focused on the "elements of the NPT", according to Goosen (1995: 3), to "identify the various issues which could be addressed". South Africa's behaviour in this case was typical of middle powers whose behaviour, as explained by Keohane (in Cooper 1997: 8), was that of a state "whose leaders consider that it cannot act alone effectively, but may be able to have a systemic impact in a small group or through international institutions".

For South Africa, the norms espoused by the NPT formed the foundation of its diplomatic practice prior to and at the REC. South Africa's "entrepreneurial flair and technical competence" (Cooper 1997: 6, 9) are evident in its decision to focus on the "elements of the NPT" and to consult with other actors such as the OAU, the NAM and other countries (Goosen 1995: 1-3). Furthermore, South Africa's "entrepreneurial flair" was also recognised by the President of the REC, Ambassador Jayantha Dhanapala (1995: 2) of Sri Lanka when he referred to South Africa's "very imaginative proposal of having a statement of principles and a strengthening of the review process" which "led to the other two parallel decisions that were taken together with the decision on the extension". South Africa's diplomacy, therefore, was based on consensus and coalition building, and cooperation with other states on two specific issues (the indefinite extension of the Treaty and a review of the Treaty). In this South Africa adopted the roles typical of middle powers practicing niche diplomacy as identified by Cooper (1997: 9), namely bridge-builder, mediator, facilitator and catalyst. The latter involved South Africa's planning; convening and hosting of consultations on the NPT; and drawing up an initial statement which it amended after more consultations at the REC in New York.

Some critics, most notably Masiza and Landsberg (1996), and Taylor (2006) referred to South Africa's 'betrayal' of the "non-aligned position". Masiza and Landsberg (1996: 25), for example, questioned South African diplomats' consultation with non-aligned countries as having been too time-consuming. However, Masiza and Landsberg (1996: 25) and Taylor (2006: 170) maintain that there was no "common non-aligned position". Although the 1995 REC achieved some consensus on the review of the Treaty and its extension, it could not reach a decision on the implementation of Article VI; an issue which was carried over to the 2000 RevCon and which confirmed the historical gap that exists between NWS and NNWS on nuclear disarmament.

South Africa's nuclear diplomacy at its first NPT conference produced significant diplomatic results for the country. It produced non-material rewards such as status and prestige. Moreover, it also signalled the country's compliance with the norms espoused in the NPT. It is against this background that South Africa prepared for the NPT's 2000 RevCon.

5.   The 2000 Review Conference

Several events pre-empted the 2000 NPT RevCon, which ultimately affected the goodwill generated at the 1995 REC. Moreover, it required South Africa to react to these events which impacted on its nuclear diplomacy at the NPT.

5.1   Events preceding the 2000 Review Conference

In the wake of the 1995 REC, the French President, Jacques Chirac, announced on 13 June 1995 that France had decided to resume its nuclear weapon testing programme in the South Pacific. In response to this, the South African government employed several diplomatic strategies. Along with several other NNWS, South Africa expressed its regret at the decision in the strongest terms. France's decision was not the only one made by a NWS in the wake of the 1995 REC. China also conducted nuclear tests on 15 May 1995 (CNS 1998), a mere three days after the REC.

From South Africa's perspective, France and China's decisions "seriously undermine the decisions" and "contradicts the spirit of the decisions" taken at the REC (DFA 1995). Moreover, the South African government stated that France and China participated in the consensus decision which approved and adopted the *Statement of Principles and Objectives for Nuclear Non-Proliferation and Disarmament*, as a result of proposals made by South Africa's Foreign Minister, Alfred Nzo. With regard to nuclear testing, South Africa indicated that the *Statement of Principles and Objectives* states that:

> 4. The achievement of the following measures is important in the full realisation and effective implementation of article VI, including the programme of actions listed below:
>
> I. The completion by the Conference on Disarmament of the negotiations on a universal and internationally and effectively verifiable Comprehensive Nuclear Test Ban Treaty no later than 1996. Pending the entry into force of a CTBT the nuclear-weapon States should exercise utmost restraint (DFA 1995).

For South Africa, the French and Chinese decisions remained matters of concern. Firstly, France and China are NWS that gave certain undertakings at the 1995 REC, which included exercising restraint in nuclear tests pending the entry into force of the CTBT. Secondly, the French announcement coincided with what South Africa regarded as "sensitive negotiations" for the CTBT (DFA 1995). In response to the French announcement, the South African government 'urged' the French government to 'reconsider' its decision (DFA 1995). These views were expressed directly to the French government at meetings with the French *Charge d'Affaires* in Pretoria subsequent to the announcement in June 1995. At the time, the South African government also indicated its intention to "use further diplomatic measures" through its mission in Paris and "other important capitals abroad to impress upon the Government of France its opposition to any further nuclear tests" (DFA 1995).

One positive development in the run-up to the 2000 RevCon, in contrast to the French and Chinese tests, was the UNGA's adoption of the CTBT. South Africa's reaction to the Chinese and French tests emanated, *inter alia,* from South Africa's commitment to the CTBT. The CTBT originated from an *ad hoc* committee of the CD

in Geneva, which commenced with negotiations on the text for a CTBT in January 1994. At the 1995 REC, state parties of the NPT undertook to complete negotiations on the CTBT "no later than 1996". The CTBT was adopted on 10 September 1996. The most important provision of the CTBT is contained in Article 1. In terms of this, each State Party to the CTBT undertakes not:

> to carry out any nuclear-weapon test explosion or any other nuclear explosion, and to prohibit and prevent any such nuclear explosion at any place under its jurisdiction or control (DFA 1999).

South Africa, along with 70 other states, signed the CTBT on 24 September 1996 (Taylor 2006: 175). Subsequent to this, the South African Parliament approved its ratification and, on 30 March 1999, South Africa deposited its *Instrument of Ratification* of the CTBT with the UN Secretary-General in New York. South Africa was one of the members of the core group of states that facilitated the process of the resolution on the CTBT adopted in New York in September 1996. According to the South African government, two of the items of the CTBT text could be "attributed to South African proposals", namely those addressing funding the International Monitoring System and the levels of explosions (DFA 1999). In addition to this, the then Director-General of the South African Department of Foreign Affairs, Jackie Selebi, while serving as South Africa's Ambassador to the UN in Geneva, was elected to serve as the first chairperson of the PrepCom of the CTBTO in recognition of South Africa's role in the CTBT.

Another development in the run-up to the 2000 RevCon resulted from indications that NWS were not delivering on their commitments agreed to at the 1995 REC. Prior to the RevCon, South Africa, in 1998, became one of the founder-members of a new grouping of NNWS states, namely the New Agenda Coalition (NAC) (see Chapter 3). This grouping shared the NNWS frustrations with the NWS on the matter. Moreover, nuclear tests by India and Pakistan raised further concerns about the future of commitments to nuclear disarmament and nuclear non-proliferation. Apart from South Africa, the NAC mainly consisted of middle powers or emerging middle powers including Brazil, Egypt, Ireland, New Zealand, Mexico and Sweden.

Amidst these international developments, South Africa also experienced certain changes which ultimately affected the country's nuclear diplomacy. The presidential term of Nelson Mandela ended and Thabo Mbeki was inaugurated as the country's second post-apartheid President in 1999. Widely regarded as a "foreign policy President", a reference to his years as an ANC official serving on the ANC's international relations desk, Mbeki's tenure had significant implications for South Africa's diplomacy. He also appointed a new Minister of Foreign Affairs, Nkosazana Dlamini-Zuma. At a bureaucratic level, the Ministry of Foreign Affairs also underwent changes and restructuring to reflect the country's foreign policy direction. It was against these domestic and international developments that South Africa joined other state parties to the NPT for the 2000 RevCon.

5.2 South Africa's nuclear diplomacy at the 2000 Review Conference

The 2000 RevCon followed a series of PrepComs in 1997, 1998 and 1999. South Africa and Canada took an active role in PrepCom II prior to the 2000 RevCon from 14 April to 19 May 2000. Following South Africa's proposal at the 1995 REC on the establishment of committees to review the implementation of the NPT, the PrepCom meetings for the 2000 RevCon agreed that the business of the RevCon should be organised into three main committees:

- Main Committee I to address issues relating to Article VI.
- Main Committee II to address issues relating to the IAEA and regional issues. The addition of regional issues emanated from a proposal by the NAM to address nuclear issues relating to the Middle East and nuclear disarmament.
- Main Committee III to address the peaceful uses of nuclear energy.

The recently-established NAC's major objective at the 2000 RevCon was to convince the NWS to commit to the elimination of nuclear weapons. In their joint declaration, *Towards a nuclear free world: the need for a new agenda,* members of the NAC (1998) maintained that the "indefinite possession" of nuclear weapons by NWS and nuclear-weapons-capable states pose a "continued threat to humanity". The 2000 RevCon was the NAC's first attendance of a RevCon. According to DIRCO (the erstwhile South African Department of Foreign Affairs), South Africa and other members of the NAC's focus at the 2000 RevCon was to negotiate agreements on "a

series of practical steps for the systematic and progressive efforts" to implement the provisions on nuclear disarmament of Article VI of the NPT (South Africa undated). The NAC also required an "unequivocal undertaking" by the NWS to eliminate their nuclear arsenals. By now, the NAC incorporated members of the NAM and began to articulate common positions on behalf of the organisation. However, as NWS realised that the NAC is becoming increasingly influential in the RevCon, the US requested a meeting with the NAC on 13 May 2000. Prior to the RevCon, according to US Ambassador Norman Wulf (2000) who led the US delegation during PrepComs and at the RevCon, the US held several meetings with individual members of the NAC.

In presenting South Africa's case at the RevCon, Abdul Minty (2000) reminded delegates of the undertakings agreed to at the 1995 REC. Expressing concerns over the status of the NPT and the implementation of nuclear disarmament by NWS, he reminded delegates of South Africa's experience whereby the possession of nuclear weapons does not guarantee a state's security but rather results in an arms race due to other states' insecurity. Minty also referred to several unresolved issues and developments since 1995 which contradict and are counter-productive to the achievement of the NPT's objectives. These issues were:

- NWS continued reliance on nuclear weapons in their strategic doctrines;
- compliance issues with the NPT in the case of Iraq and North Korea;
- nuclear tests in South Asia;
- delays in implementing START II and the commencement of START III;
- the repercussions of modifying the Anti-Ballistic Missile (ABM) Treaty;
- delays in the entry into force of the CTBT; and
- Delays in the CD negotiations on a Fissile Material Treaty (FMT) (Minty 2000).

Minty's (2000) criticism was not limited to the NWS inability to present an "unequivocal undertaking to nuclear disarmament and the elimination of nuclear weapons". He also proposed steps which should be taken by the NNWS in compliance with the NPT. Minty referred to states such as Israel, India and Pakistan who were not complying with the Treaty's provisions or who had not acceded to the Treaty or intended as a matter of urgency. Minty also called upon states to accede to the CTBT in order for this Treaty to enter into force.

Unlike the 1995 REC, South Africa's position at the 2000 RevCon was much more critical of the NWS due to the fact that South Africa shifted its position form a reformist to a revisionist middle power (Leith & Pretorius 2009). At the 1995 REC, South Africa was criticised for abandoning the NNWS position in favour of that of the NWS. Now, South Africa's position was much more aligned to that of the NNWS as, for example, South Africa's efforts at the REC to commit the NWS to terminate nuclear testing proved to be a failure due to the series of nuclear tests by NWS subsequent to the REC.

According to the South African Department of Foreign Affairs, the country has "played an active role" at the 2000 RevCon that adopted a *Final Document* (South Africa undated). Praising itself as part of the NAC, the South African government maintained that the "successful achievement of these objectives was instrumental in ensuring the success" of the 2000 RevCon (South Africa undated).

Despite initial major differences, the 2000 RevCon produced a final consensus document, the first in the history of the NPT. In the three-volume *Final Document* of the RevCon, states undertook to implement 13 agreed steps. These were to:

- sign the CTBT to secure the entry into force of the Treaty;
- terminate nuclear weapons testing pending the entry into force of the CTBT;
- negotiate a FMB Treaty;
- continue within the CD to achieve nuclear disarmament;
- implement the principle of irreversibility of nuclear disarmament;
- procure an unequivocal undertaking by the NWS to totally eliminate their nuclear arsenals;
- ensure NWS compliance with existing treaties such as START II and the commencement with START III;
- introduce a step-by-step approach by NWS to nuclear disarmament;
- put excess fissile material under the control of the IAEA;
- achieve the objective of general and complete disarmament;
- all states to report regularly on the implementation of the NPT; and
- Improve the verification process to assure compliance with the NPT (UN 2000).

Similar to the 1995 REC, South Africa's nuclear diplomacy produced results which confirmed the country's identity and its diplomatic role.

5.3 An assessment of South Africa's nuclear diplomacy at the 2000 Review Conference

South African diplomatic strategies for the 2000 RevCon included confrontation (with the NWS) and cooperation (with the NNWS). South Africa's membership of the NAC, as Geldenhuys (2006: 93,103) concluded, is illustrative of the country's norm-related activities since 1994. These norm-related activities, which constitute an identity as a norm entrepreneur, include the upholding; advocating; and formulating of internationally-acceptable norms and behaviour. This identity and role as a norm entrepreneur, which advocated and maintained the norms espoused by the NPT, illustrates the country's identification and pursuit of opportunities. This "opportunity niche", as Geldenhuys (2006a: 93) refers to it, subsequently resulted in South Africa gaining niche diplomacy on nuclear matters.

6. The 2005 Review Conference

Like its predecessors, the 2005 RevCon was preceded by three PrepComs (in 2002, 2003 and 2004). Moreover, like previous RevCons, a series of international events set the scene for the 2005 RevCon. These events provided several opportunities for South Africa's nuclear diplomacy.

6.1 Events preceding the 2005 Review Conference

On 11 September 2001, Al-Qaeda attacked the US in what became known as 9/11. Subsequent to these attacks the US and its allies invaded Afghanistan (2001) and Iraq (2003). In his State of the Union Address in January 2003, President George W Bush referred to a "War on Terrorism" in which the US was engaged. Unable to persuade the UNSC to intervene in Iraq the US increasingly considered unilateral options in this regard. One of the justifications for the US threats of an impending invasion of Iraq was the claim that Iraq's Sadam Hussein had developed and maintained WMD. This was not only in contravention of a series of UN resolutions and the NPT, but also posed a real risk to US national security.

A series of diplomatic efforts ensued to address the Iraqi issue after 9/11 until the US-led invasion in 2003. Apart from UN efforts, President Mbeki offered South Africa's assistance to resolve the matter which posed a major threat to the provisions of the NPT; also considering that as Iraq was a NNWS and the US a NWS. In February 2003, Mbeki requested seven South African disarmament experts to visit Iraq in an effort to avert a US-led invasion (see *Table 18*).

Table 18: Members of the South African delegation to Iraq (2003)

Member of delegation	Position
Aziz Pahad	Leader of delegation and South African Deputy Minister of Foreign Affairs
Colonel Ben Steyn	Chemical and biological advisor to the Surgeon-General of the South African National Defence Force and advisor to the NPC
Dr Philip Coleman	Technical advisor to the Chemical Weapons Convention
Daan van Beek	Director of Non-Proliferation and Space, South African Department of Trade and Industry
Deon Smit	General Manager of Procurements, Armscor
Super Moloi	Member of the Presidential Support Unit
Pieter Goosen	Chief Director of Peace and Security, South African Department of Foreign Affairs
Thomas Markram	Director of Peace and Security, South African Department of Foreign Affairs

Markram (2006: 105)

South African diplomat Thomas Markram (2004: 105-106) outlined some of the elements of South Africa's nuclear diplomacy pertaining to the country's norm construction and maintenance, and its identity construction in this matter:

> The experts were tasked to impart the manner in which South Africa had undergone its own disarmament process through co-operation and transparency with the international community, and the manner in which it had

developed policy and gained the world's confidence as a responsible producer, trader and possessor of advanced technologies. It was hoped that Iraq could be persuaded to open themselves to full co-operation with UN weapons inspectors and thereby remove the basis for intervention as a perceived 'imminent' threat to international security due to their possession of weapons of mass destruction.

According to Markram (2006: 105), the South African delegation visited Iraq with some diplomatic clout and "with the full support" of Kofi Annan, the UN Secretary-General, and a "tacit positive nod" from the UK Prime Minister Tony Blair and the George W Bush Administration. Not mandated to act as weapons inspectors, the delegation had access to Iraq's Deputy President, Tariq Aziz, and individuals involved in the country's weapons programme. The South African delegation visited destroyed WMD sites. However, as Markram (2006: 105) observed, the Iraqis had been 'negligent' in their documentation of the destruction processes. However, interviews on the extent of the destruction could be conducted. The South African delegation succeeded in at least one instance. Once the South African delegation left Iraq, it became known that the Iraqi government had commenced with the dismantling and destruction of its missiles; an issue in respect of which, according to Markram (2006: 105), the South African delegation "had tried to persuade the Iraqis".

Once back in South Africa the delegation prepared a report for President Mbeki, a copy of which was also delivered to Kofi Annan. Markram (2006: 106) summarises the findings of the South African delegation, which concluded that "Iraq had undergone a considerable disarmament process and conceivably did not possess any weapons of mass destruction that posed a threat to international security". However, the report acknowledged that Iraq continued to have some of the resources required to produce WMDs but that its general ability has been severely limited by international actions against the country.

Markram's (2006: 106) observations on the diplomatic significance of the South African delegation's visit to and findings on Iraq had a direct bearing on South Africa's nuclear diplomacy and its international standing and identity on nuclear issues. Moreover, it confirmed Geldenhuys' (2006) observations on South Africa's role and identity as a norm entrepreneur. Markram (2006: 106) reiterated this by

referring to the confidence in South Africa, its acknowledgement by the international community, its identity, role and technical capabilities:

> The pre-emptive and preventative action on Iraq underlines the confidence South Africa has acquired in dealing with its inherited past and the ability to utilise this experience to contribute to international peace and security. The acceptance by key players that South Africa has the technical capacity and political standing to play a peace role and encouragement to do so emphasises the country's status and reputation as an influential, credible and honest broker in an area traditionally reserved for major powers.

Despite the efforts of South Africa and the international community, a US-led coalition invaded Iraq in March 2003.

Libya's announcement on 19 December 2003 on its decision to terminate its nuclear weapons programme was a welcome and positive development in terms of the NPT. However, by 2004 the world, including South Africa, discovered the nuclear proliferation activities of the Khan network, which spanned Libya and several continents. In addition to this, was North Korea's nuclear brinkmanship through its non-compliance with the NPT and its eventual withdrawal from the Treaty in 2004. In an effort to reiterate South Africa's commitment to nuclear non-proliferation against the background of the Wisser *Affaire* and multilateralism (see Chapter 3), President Mbeki (2004b) stated in the South African Parliament on 21 May 2004 that South Africa "will intensify" its preparations to participate in the 2005 RevCon. Mbeki joined other world leaders in signing the UN *International Convention for the Suppression of Acts of Nuclear Terrorism* in New York on 14 September 2005 (DFA 2005). It was against this background that South Africa attended the 2005 RevCon.

6.2   South Africa's nuclear diplomacy at the 2005 Review Conference

Despite these events and efforts prior to the 2005 RevCon, it commenced with major differences between the NWS and the NNWS, and without an agreed agenda, which was only adopted on the ninth day of the conference. The US refused to acknowledge the outcome of the 2000 RevCon contained in its *Final Document*, which was reached by consensus and espoused in the *Thirteen Practical Steps*

referred to earlier. The US also refused to accept these outcomes as a basis for the 2005 agenda. It also maintained that global conditions changed dramatically since 2000 and that the RevCon should reflect that. The US also demanded that Iran and North Korea should receive more attention at the RevCon, whereas Egypt, Iran and the NAM, for example, demanded feedback on progress made on previous commitments (Johnson 2005).

Opposing the US position, the NAC and other delegates refused to accept any agenda which did not take the 2005 decisions into account. The US refusal to accept the outcomes of the 2000 RevCon resulted in significant delays in debates on substantive issues. Procedural differences resulted in the RevCon's failure to achieve results on substantial issues for which as little as four days were left and failure to force NWS to comply with the Treaty (Johnson 2005).

Most participating states maintained that the CTBT's entry into force, a prerequisite required by previous RevCons, was too slow. Here, NWS like the US and China ended in a stand-off with NNWS. Both the US and China have not ratified the CTBT and opposed the RevCon's emphasis on the CTBT. On the banning of fissile materials, controversy erupted on the CD's failure to proceed with negotiations on the decisions taken at the 1995 REC. Reminding delegates of this decision, the NAM continued to call for a "non-discriminatory, multilateral and internationally and effectively verifiable treaty" (Johnson 2005), whereas the NWS and their allies preferred not to delve too deeply into the matter.

The issue of North Korea's withdrawal from the NPT and Iran's nuclear ambitions also resulted in considerable debate. A number of states and the EU urged Iran to suspend its enrichment programme to which Iran's Minister of Foreign Affairs, Kamal Kharrazi (quoted in Johnson 2005), responded that his country is "determined to pursue all legal areas of nuclear technology, including enrichment, exclusively for peaceful purposes". The universality of the NPT drew little debate, except for calls on India and Pakistan to comply with the NPT and to ratify the CTBT as a confidence-building measure.

Whereas the issue of NWFZs received considerable attention at previous RevCons, the issue received very little attention in 2005, except for a reference to the Middle

East and Central Asia where NWFZs could greatly contribute to peace and stability as these regions have several states outside the NPT with nuclear weapons capabilities (Johnson 2005).

In the wake of 9/11, the US-led invasion of Iraq and the exposure of the Khan network, considerable attention was paid to the changed security environment and the risks that terrorism were perceived to pose. Some delegates from the US, the UK and France raised concerns about the risks of terrorists acquiring nuclear technology despite existing global efforts such as UNSC Resolution 1540 (2004) to counter these. Despite its concerns about terrorism, South Africa was one of the few states who warned against the over-legislation of terrorism since this could affect other treaty commitments. South Africa also expressed concerns about a "savings clause" on terrorist activities in other multilateral agreements and its definitions, which could undermine the NPT (Johnson 2005).

Whereas the NAC played an important role during the 2000 RevCon, it lost momentum at the 2005 RevCon. Apart from submitting a report on its activities in compliance with the NPT since 2000, the Coalition allowed it to be subjugated by procedural debates. Another factor which undermined the effectiveness of the NAC was rivalry between two NAC members, South Africa and Egypt. This rivalry was partly due to these countries' competition for a non-permanent seat on the UNSC (Müller 2005a: 12). In addition to this, other NAC members, most notably Sweden, New Zealand and Brazil, were involved in the RevCon's proceedings by serving as chairpersons, which also resulted in the Coalition's inability to perform optimally as it had lost its most experienced diplomats (Müller 2005a: 12).

Egypt's strong stance enabled the NAM to remain unified. The NAM maintained its position that the 1995 and 2000 decisions and undertakings should be honoured. In this, the NAM targeted the US as a NWS for its non-compliance with the NPT (Müller 2005a: 13).

In presenting South Africa's position during the General Debate of the 2005 RevCon, Abdul Minty (2005) reminded delegates of the state of the NPT and proposed that the Conference adopt a "constructive and positive approach". Referring to the challenges previous conferences had faced in trying to achieve consensus, Minty

(2005) also called on delegates to reach "consensus agreements on the obligations, commitments and undertakings" that are "implementable and achievable in the period before 2010". Minty then proceeded to identify 12 measures which, if agreed upon by consensus, could form the foundation for the NPT-related work to be undertaken until 2010 (the date of the next RevCon). These were:

1. The necessity for all States to spare no efforts to achieve universal adherence to the NPT, and the early entry into force of the CTBT;

2. Measures to address the proliferation threat posed by non-State actors;

3. Further reinforcing the IAEA safeguards norm as a means to prevent proliferation;

4. The special responsibility of States owning the capability that could be used to develop nuclear weapons to build confidence with the international community that would remove any concerns about nuclear weapons proliferation;

5. The requirement that all States must fully comply with commitments made to nuclear disarmament and nuclear non-proliferation and not to act in any way that may be detrimental to nuclear disarmament and non-proliferation or that may lead to a new nuclear arms race;

6. The necessity to accelerate the implementation of the 13 practical steps for the systematic and progressive efforts to achieve nuclear disarmament agreed to at the 2000 Review Conference;

7. The need for the nuclear-weapon States to take further steps to reduce their non-strategic nuclear arsenals, and not to develop new types of nuclear weapons in accordance with their commitment to diminish the role of nuclear weapons in their security policies;

8. The completion and implementation of arrangements by all nuclear-weapon States to place fissile material no longer required for military purposes under international verification;

9. The need to resume in the Conference on Disarmament negotiations on a non-discriminatory, multilateral and internationally and effectively verifiable fissile material treaty taking into account both nuclear disarmament and nuclear non-proliferation objectives;

10. The establishment of an appropriate subsidiary body in the Conference on Disarmament to deal with nuclear disarmament;

11. The imperative of the principles of irreversibility and transparency for all nuclear disarmament measures, and the need to develop further adequate and efficient verification capabilities; and

12. The negotiation of legally binding security assurances by NWS to NNWS.

Despite these proposed measures, the 2005 RevCon failed for several reasons which be discussed below.

6.3 The failure of the 2005 Review Conference

The 2005 RevCon failed to adopt a final document due to a lack of consensus. This had much to do with the prevailing political climate at the time of the conference (see section 6.1). Moreover, the 2005 RevCon highlighted historical positions on the NPT. The so-called "Grand Bargain" bestowed the NWS at the time of the entry into force of the Treaty with privileged rights. This institutionalised discrimination has resulted in a perception of insecurity on the part of the NNWS.

This perception was further entrenched by the slow compliance of the NWS with Article VI of the NPT's provision to disarm their nuclear arsenals, and by the nuclear ambitions of certain NNWS which are prohibited by Article II of the NPT. By 2005, the NPT had resulted in some success regarding non-proliferation. Complete disarmament remained an unfulfilled objective as treaty compliance, according to the NNWS, was only adhered to by them. However, the coherence of the normative non-proliferation regime established in terms of the Treaty was increasingly compromised (Müller 2005b: 36-41).

The failure of some states such as the NWS to implement the provisions of the NPT had considerable consequences for international security by contributing to the acceleration of nuclear weapons programmes and tests in some countries. Finally, the disintegration of the NAC (which played such a critical role at the 2000 RevCon by introducing the *Thirteen Practical Steps*) due to the reasons outlined above, affected the diplomatic process and the achievement of consensus (Johnson 2005). In 2000 the NAC's role as a bridge between the NWS and the NNWS proved to be critical in achieving a final document based on consensus and, as concerns this study, for South Africa's nuclear diplomacy.

The failed RevCon had two implications. Firstly, the 2005 RevCon did not contribute to a greater sense of international security. Instead it deepened divisions on nuclear disarmament, the peaceful uses of nuclear energy and nuclear non-proliferation. Secondly, it strengthened the already privileged position of the NWS by a failure to get the NWS to comply with the provisions of the NPT. Instead, the NWS selected compliance with the provisions of the NPT undermined the NNWS sense of security. Brazilian career-diplomat and unanimously elected President of the 2005 RevCon, Sergio Duarte (2005), referred to the deepening divisions between the NWS and the NNWS. Duarte observed: "There seems to exist a much deeper gulf between the aims and interests of those who possess atomic weapons and of those who took the decision to forgo the nuclear military option". According to him, some states maintained that the NPT could no longer provide security assurances.

For Duarte (2005), this position was already evident in his "round of consultations in several capitals prior to the opening of the Conference" where he noted a "high level of mistrust" in the RevCon's ability to achieve an outcome based on consensus. In his assessment of the 2005 RevCon, Duarte (2005) observed: "The result (or lack thereof), of the 2005 Review Conference indicates that the international community has reached a crossroads with regard to nuclear disarmament and proliferation". Kofi Annan, the UN Secretary General, described the RevCon as a failure which "sent a terrible signal - of waning respect for the Treaty's authority, and a dangerous rift on a leading threat to peace and prosperity" (*UN News* 21 June 2006), which did not bode well for the PrepComs for the 2010 RevCon and the 2010 Conference itself.

6.4 An assessment of South Africa's nuclear diplomacy at the 2005 Review Conference

Unlike previous RevCons, South Africa took an opposing stance on disarmament to NWS at the 2005 RevCon and publicly associated itself with the activist views of the NAM and the NAC (South Africa 2005d: 2). In this, South Africa's diplomatic strategy included confrontation (with NWS) and partnership (with the NAM and the NAC).

Egypt's activist role at the RevCon affected South Africa's position at the Conference. Egypt was successful in its efforts to put its national and regional interests on the agenda. This resulted, amongst other things, in South Africa's "unusual passivity" (Johnson 2005) so as not to alienate its fellow members of the NAM. Moreover, South Africa never presented any statement on behalf of the NAM at the RevCon. These statements were presented by Malaysia or Egypt. Thus, for South Africa's nuclear diplomacy, the 2005 RevCon could easily be described as one of its failures. The failure of the 2005 RevCon put an additional burden on South Africa's preparations for and participation in the 2010 RevCon.

7. The 2010 Review Conference

By the time South Africa prepared for the 2010 RevCon, some internal and international developments had occurred which set the scene for the Conference. Moreover, the failure of the 2005 RevCon loomed large over the preparations for the 2010 RevCon.

7.1 Events preceding the 2010 Review Conference

For South Africa, the most notable event was the "soft coup" in September 2008 which removed Thabo Mbeki from office and replaced him with Kgalema Motlanthe whose presidential tenure was very brief. By May 2009 and following the national elections, Jacob Zuma was inaugurated as South Africa's President. Zuma's former wife, Nkosazana Dlamini-Zuma, who served as Mbeki's Foreign Minister, was replaced by career diplomat Maite Nkoana-Mashabane. In addition to this, a South African campaign to get Abdul Minty elected as the Director General of the IAEA commenced (see Chapter 4).

As the date for the 2010 RevCon neared, renewed concerns were expressed about the outcome of the Conference. Two events prior to the RevCon raised expectations about a softer approach by the NWS to the Conference. The first event was President Obama's speech in Prague, the Czech Republic, on 5 April 2009. Unlike his predecessors, Obama outlined new directions in the US disarmament and non-proliferation agenda. Obama (2009) referred to "America's commitment to seek the peace and security of a world without nuclear weapons". He also outlined how his administration intended to achieve this. The US intended to reduce the role of nuclear weapons in its national security strategy; to commence with the reduction of its nuclear arsenal; to negotiate a new Strategic Arms Reduction Treaty (START) with Russia in 2009; to "immediately and aggressively pursue" the US ratification of the CTBT; to commence with negotiations on a new treaty that "verifiably ends" the production of fissile materials for use in nuclear weapons; and to 'strengthen' the NPT as a basis for cooperation on nuclear disarmament and non-proliferation. These commitments outlined in Prague were complemented with the publication of the *Nuclear Posture Review* of the Obama administration, which enhanced expectations on the outcome of the 2010 RevCon.

The second event which paved the way for greater expectations of the 2010 RevCon was President Obama's hosting of the NSS from 12 to 13 April 2010 in Washington, US. South Africa was one of more than 40 states invited to the NSS as a precursor to resolve tensions which may arise at the 2010 RevCon.[55] At the NSS, South Africa and Kazakhstan were commended for the termination of their nuclear weapons programmes. Obama met separately with President Zuma and Kazakh President Nursultan Nazarbayev prior to the NSS. Obama commented that South Africa "has special standing in being a moral leader" on nuclear issues and that the country:

> is singular in having had a nuclear weapon program; had moved forward on it, and then decided this was not the right path; dismantled it; and has been a

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[55] The following countries participated in the NSS: Algeria, Argentina, Armenia, Australia, Belgium, Brazil, Canada, Chile, China, the Czech Republic, Egypt, the European Union (EU), Finland, France, Georgia, Germany, India, Indonesia, the IAEA, Israel, Italy, Japan, Jordan, Kazakhstan, South Korea, Malaysia, Mexico, Morocco, The Netherlands, New Zealand, Nigeria, Norway, Pakistan, Philippines, Poland, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, the UAE, the UK, the UN, the US and Vietnam (US 2010a).

strong, effective leader in the international community around nonproliferation issues.

Obama also mentioned that South Africa could assist in guiding other countries "down a similar direction of nonproliferation" (US 2010b). Against the background of these developments, South Africa prepared to participate in the 2010 RevCon. The country's diplomatic successes in the 1995 REC and 2000 RevCons were overshadowed by the 2005 RevCon which failed to reach any consensus.

7.2   South Africa's pre-2010 Review Conference nuclear diplomacy

Reflecting on the 2010 RevCon, Abdul Minty (2010b) admitted that South Africa's approach to the RevCon was to "convey a kind of consensus approach" to the proceedings of the Conference. He also admitted that South Africa attended the RevCon realising that the country would face several challenges at the Conference, that, for South Africa, the NPT was at a crossroads and that the RevCon was regarded as a "critical litmus test" (Minty 2010b). Another challenge concerned the opposition of some states to the strengthening of the NPT and the inalienable right in the NPT of all states to develop nuclear energy for peaceful purposes. Minty (2010b) referred to the historical "North-South polarisation" on this issue but admitted that President Obama adopted a more conciliatory approach which reduced the polarisation at the RevCon.

Minty (2010b) provided valuable insight into the diplomatic negotiations around the 2010 RevCon by describing the diplomatic process as a series of diplomatic interactions, which included several diplomatic actors:

- Prior to the 2010 RevCon, the P5 (the five permanent members of the UNSC) engaged with South Africa. At the time, South Africa served its first term as a non-permanent member of the UNSC.
- South Africa was invited to and participated in President Obama's NSS.
- South Africa met on the margins of meetings with representatives such as the New Zealand Minister of Disarmament. Like South Africa, New Zealand is a member of the NAC.
- South Africa had bilateral discussions with the US representatives in Pretoria when a delegation of 30-40 US government officials visited South Africa.

Apart from this delegation, the Obama Administration dispatched Special Envoy Susan Burk to Pretoria in February 2010 for consultations with Minty. According to Burk, South Africa's relinquishment of its nuclear weapons put it in "a special position to advance the goals of the upcoming [2010 NPT] conference" (*Global Security Newswire* 23 February 2010). Burk also observed that states party to the NPT, including South Africa, "have been frustrated by the slow pace" at which NWS eliminate their nuclear arsenals (*Global Security Newswire* 23 February 2010). In response to President Obama's speech in Prague in 2009, Minty welcomed the US commitment to multilateralism with regard to the NPT but warned against raising expectations and not meeting them (*Global Security Newswire* 23 February 2010).

- South Africa held bilateral discussions with Russia.
- During the RevCon informal dinners were held with the delegates of other states.
- Regular consultations were held with Pretoria on major decisions and positions.

Minty (2010b) also described South Africa's diplomatic strategies to the NPT. These included diplomatic engagements with states on:
- common doctrines pertaining to the pillars of the NPT;
- their deterrence mindset by delegitimizing nuclear weapons as a source of security;
- states' security concerns; and
- How to terminate nuclear weapons programmes and give up nuclear weapons.

Against the background of South Africa's preparation for the 2010 RevCon, it is evident that South Africa wanted the conference to achieve a consensus outcome. Moreover, the conference also preceded Ambassador Minty's election campaign for the position of the IAEA Director General and thus wanted to make a good diplomatic impression.

7.3   South Africa's nuclear diplomacy at the 2010 Review Conference

The first session of the PrepCom took place in Vienna in May 2007. In his address to the PrepCom, Abdul Minty (2007b: 2) observed that the NPT was 'tested' during the preceding years, but that South Africa maintained that the NPT "has and can continue to make a significant contribution to international peace and security" and that the NPT "remains as relevant as ever". He also reiterated South Africa's position on the "complete elimination" of nuclear weapons. Minty also took issue with the selective compliance to the provisions of the NPT, most notably Article VI, by some NWS and reminded delegates of the agreements reached at the 2000 RevCon which should be adhered to by all.

Similar to previous statements at NPT-related gatherings, Minty (2007b: 2) also reminded delegates of South Africa's unique identity as a state that has destroyed its nuclear weapons. He also referred to the discriminatory nature of the NPT, an issue which South Africa regards as "incompatible with our common objective" of a nuclear weapon free world and with the obligations of the NPT. Minty also called on all NNWS states with nuclear weapons programmes, or with intentions of having similar programmes, to adhere "unconditionally and without delay" to the NPT. He also called on states that have ratified the CTBT to do so as a matter of urgency.

During the RevCon Minty (2010c) contributed a number of important points outlining South Africa's position on the NPT and its agenda on non-proliferation. These included an emphasis upon:

- the continued relevance of the NPT due to the positive recent developments in disarmament and non-proliferation;
- the need for step-by-step processes to eliminate nuclear weapons;
- hope for renewed interest and an undertaking by NWS to dismantle their nuclear arsenals, as outlined in Article VI of the NPT;
- support for the IAEA as the only competent and internationally-recognised authority responsible for versifying and assuring compliance to the Treaty;
- the recognition of the potential of the currently voluntary Additional Protocol as an indispensable instrument of the new strengthening of IAEA safeguards; and

- Support for the peaceful uses of nuclear energy (Minty 2010c).

In its practice of niche diplomacy in the NPT context, South Africa employed various diplomatic strategies, including cooperation and confrontation. For example, South Africa often quoted Article IV of the NPT which provides for the "inalienable right of all State Parties to nuclear technology for peaceful purposes" to explain its support of Iran. South Africa's resort to nuclear sovereignty has often resulted in some form of conflict with certain NWS such as the US and the UK. During the proceedings of Main Committee I (on nuclear disarmament) state parties called on the NWS to respect their commitments under Article VI and to work towards the total elimination of nuclear weapons. While South Africa stressed the need for the NWS to engage in accelerated negotiations in this regard, both the Ukraine and South Africa - countries which unilaterally dismantled their nuclear weapons programmes - called on the NWS to ensure that the disarmament process is irreversible and verifiable.

During the Main Committee I debate on a "time bound framework" for implementing disarmament commitments most delegates at the RevCon supported it. During the 2010 RevCon, South Africa (a member of the NAM) supported Egypt who, on behalf of the NAM (2010), submitted a working paper. This paper, *Elements for a plan of action for the elimination of nuclear weapons*, proposed a three-phased approach to eliminate nuclear weapons within a specified timeframe (see *Table 19*).

Table 19: The Non-Aligned Movement's timeframe for nuclear disarmament

2010-2015	2015-2020	2020-2025 and beyond
Reducing the nuclear threat and nuclear disarmament	Reducing nuclear arsenals and promoting confidence between States	Consolidation of a nuclear free world

NAM (2010: 2-4)

In response to the NAM proposals, South Africa's Ambassador to the UN in Geneva, Jerry Matjila (2010) stated that the provisions of the NPT; the 1995 Principles and Objectives; and the practical steps for nuclear disarmament agreed to in 2000 provide "a blueprint for a step-by-step process that would reduce the threat of nuclear weapons, de-emphasize their importance and lead to their elimination". In an

oblique reference to the British decision to build new submarines for a future generation of nuclear weapons, Matjila warned that such a move would be interpreted as a clear signal that some NWS are determined to maintain nuclear weapons indefinitely.

France, a NWS, argued that setting a timeline would undermine the non-proliferation regime since timelines have not been adhered to before and, therefore, such time limits should not be imposed as they risk the chances of not being met again. France, a major investor in South Africa's nuclear industry, was backed by the US and Russian delegates on this issue but faced strong opposition from Brazil, Iran, South Africa, Indonesia, Mexico, Libya, Cuba and Canada. New Zealand pointed out that France's proposal was unacceptable. South Africa argued that there was a sense of desperation on the part of the NNWS because of the lack of progress on Article VI by the NWS (Institute of Peace and Conflict Studies 2010).

Although a comprehensive discussion on the issue of nuclear terrorism was expected during the 2010 RevCon, the topic was not on the primary agenda. Out of 78 working papers presented during 2007 PrepCom for the 2010 RevCon, only one paper was dedicated to nuclear terrorism. In the wake of President Obama's NSS in April 2010 where nuclear terrorism was a major concern, much was expected on this issue at the RevCon, as addressed in UNSC Resolutions 1540 (2004), 1673 (2006) and 1810 (2008). The issue of nuclear terrorism was also absent from the draft reports of Main Committee II and Main Committee III. In the first draft report of Main Committee II, paragraph 50 welcomed the establishment of the *Global Initiative to Combat Nuclear Terrorism*. To the disappointment of many states, the final draft did not make any reference to the *Global Initiative to Combat Nuclear Terrorism*. Speaking at the first session of the PrepCom for the RevCon in May 2007, Minty (2007b: 5) reiterated that South Africa "remains concerned" about the operations of "illicit clandestine nuclear networks" which poses a serious threat to the NPT:

> It is imperative that all countries that have been affected by the network closely co-operate to eliminate this threat. Our own experiences with the illicit network for the transfer of and trade in nuclear material, equipment and technology have clearly shown that States need to provide their pro-active and full support to the Agency in its verification obligation.

Iran, which is avidly developing its nuclear capability, if not an arsenal, was one of the prescient issues addressed at the May 2010 RevCon. During the proceedings, Iranian President Mahmoud Ahmadinejad reiterated the country's position on nuclear weapons proliferation. He also charged the NWS with the non-compliance of their treaty obligations. During RevCon, much emphasis was put on Iran and the security threat posed by its suspected nuclear weapons programme. Apart from differences on disarmament, the issue of Iran's uranium enrichment programme also caused divisions. The NWS demanded that Iran and all other NNWS surrender their right to produce HEU, which can be applied in the peaceful uses of nuclear power and the manufacture of nuclear weapons. At the time, India, Pakistan and North Korea, as the NNWS in terms of the NPT, admitted their manufacturing of nuclear weapons contrary to the provisions of the NPT. South Africa defended Iran's right to develop nuclear energy for peaceful purposes (*Independent Online* 4 May 2005).

While South Africa stood firm in its commitment to nuclear non-proliferation *vis-à-vis* Iran's weapons capability, it supported the sharing of knowledge and development of nuclear capability for the peaceful uses of nuclear energy. Yet the former issue took centre stage at RevCon 2010. Thus, as part of the NAC, at RevCon 2010 South Africa affirmed its commitment to the NPT and non-proliferation, supporting Egyptian Ambassador Hisham Badr's (2010) statement on behalf of the NAC that the NAC "firmly wished to reiterate their belief in the NPT and its tenants of global disarmament and non-proliferation, and 40 years after the entry into force of the Treaty", and felt that "all nations should fulfil their Treaty commitments and obligations". Moreover, the NAC reaffirmed the belief that under Article VI all the NWS states should comply with disarmament commitments, so as to achieve the NPT universally.

Similarly, as a member of the African Group, South Africa emphasised the statements made by Ambassador Tommo Monthe (2010) of Cameroon on behalf of the African Group that Africa calls for the "total, universal, verifiable and irreversible elimination of nuclear weapons as provided by" the NPT, and that the continent believes in the three pillars of the NPT, namely nuclear disarmament; nuclear non-proliferation; and the peaceful uses of nuclear energy. The African Group also reaffirmed the need for a renewed commitment of NWS to all *Thirteen Practical*

Steps, including the necessity to diminish the role of nuclear weapons outlined in their security policies. This would secure the non-use of these weapons during the time pending their complete elimination, precisely reflecting South Africa's policy. Against the background of these deliberations, the next section assesses South Africa's nuclear diplomacy at the 2010 RevCon.

7.4 An assessment of South Africa's nuclear diplomacy at the 2010 Review Conference

For South Africa, according to Abdul Minty (2010b), the outcome of the 2010 RevCon was 'satisfactory' and achieved in a much better atmosphere than before. Several explanations for this can be offered.

Firstly, Conference President, Ambassador Libran Cabactulan of the Philippines, convened a Focus Group very early during the RevCon, which served as the main arena for debating contentious issues before presenting them to the RevCon for reaching agreement. Consisting of 16 states including the five NWS, Germany, Spain (representing the EU), Japan, Norway, Indonesia, Mexico, Cuba, Iran, Brazil, South Africa and Egypt (the only African states included in the group), the Focus Group on some occasions also included diplomats from Argentina, Arab states, Uruguay, other EU members and the League of Arab States (Hubert, Broodryk & Stott 2010: 2). Similar to the President of the 1995 REC, Ambassador Jayantha Dhanapala's "Friends of the Chair" model, the Focus Group contributed to the success of the RevCon by deliberating on contentious issues in a small group prior to its referral to the Conference (Potter *et al.* 2010: 6, 20). The Focus Group initiative was complemented by the establishment of three subsidiary bodies; one for each Main Committee to focus on practical disarmament issues. This also served to enhance decision-making and consensus.

Secondly, the single largest political grouping of the NPT review conferences, the 116 members of the NAM, which historically focused on disarmament issues and issues relating to the peaceful uses of nuclear energy, proposed a timeframe for disarmament. Although the NWS did not agree to this, the question of disarmament schedules will become more pertinent in subsequent RevCons as the NWS have to report on their progress on certain benchmarks for disarmament by the 2015

RevCon. The mere fact that the issue of timeframes elicited much debate indicated, according to Potter *et al.* (2010: 8), that the idea is already under consideration. More importantly, the NAM was not as disruptive as at previous conferences. Egypt as the NAM and the NAC chair and as a leading state in the League of Arab States was courted by the US in efforts to garner Egypt's support for the nuclear objectives of the US (Potter *et al.* 2010: 4).

African states make up almost a third of all NPT state parties, therefore representing an influential group. The Pelindaba Treaty shares many common features with the NPT and has created the world's largest NWFZ. The Treaty of Pelindaba is regarded as a major reinforcement of the NPT through its ban on the deployment of nuclear weapons within the territory covered by the Treaty; its prohibition on research or development of nuclear explosive devices; its Protocol for binding negative security assurances from NWS; and its physical security and environmental controls. Following the entry-into-force of the Treaty of Pelindaba on 15 July 2009 (see Chapter 5), African support for a nuclear weapons free world has gained momentum; evident in the significant role that some African states played in the RevCon, both individually and as members of regional groupings. Zimbabwe along with the Ukraine, Austria, Ireland and Uruguay chaired various committees and subsidiary bodies and contributed by facilitating on-going negotiations in the wider conference.

In the third instance, unlike previous RevCons, the 2010 RevCon was not undermined by procedural issues and attention could be paid to substantive issues. In the fourth instance, the NWS security assurances to the NNWS resulted in less disputes on the issue. In its *Nuclear Posture Review*, the US undertook not to attack a NNWS party to the NPT. A similar option is under consideration by the UK. Finally, the agreement reached on the implementation of the 1995 Middle East NWFZ Resolution constituted a major achievement of the 2010 RevCon (Hubert, Broodryk & Stott 2010).

8.   An assessment of South Africa's nuclear diplomacy in the context of the Treaty on the Non-Proliferation of Nuclear Weapons

Speaking at the first session of the PrepCom for the 2010 RevCon of the NPT in Vienna, Austria, in May 2007, Abdul Minty (2007b) reiterated that South Africa

regards the NPT as "the foundation of the nuclear non-proliferation and disarmament regime", while the country "remain(s) convinced that this instrument has and can continue to make a significant contribution to international peace and security". However, upon South Africa's accession to the NPT in 1991, the country:

> accepted the inherently discriminatory nature of the NPT, whereby some states are recognised as nuclear-weapon states and all other states are recognised as non-nuclear-weapon states. However, all non-nuclear-weapon states, including South Africa, believe that maintaining this indefinite discriminatory approach is incompatible with our common objective of a world free of nuclear weapons, and indeed also with the obligations contained in the NPT (Minty 2007b).

More importantly, South Africa has not limited itself to rhetoric on the issue as was illustrated by its stand-offs with France, China and North Korea on their nuclear tests; by their involvement in resolving the impasse over Iraq's WMDs in 2003; and by its initiation and maintenance of norms on nuclear energy. Closely related to these norm-related activities was the self-ascribed and acquired identity in the international nuclear arena as a roll-back state, a bridge-builder, a problem-solver (especially at the 1995 RevCon) and a good international citizen.

South Africa has acted almost as a textbook example of middle power behaviour *á la* Cooper's (1997: 1-24) extended framework of middle power behaviour. Firstly, the form of state behaviour (heroic or routine approach): In the context of the NPT, South Africa had repeatedly engaged in bridge-building, problem-solving and sometimes also in confrontational behaviour with the NWS and the NNWS alike if these states contravened the normative foundations of the NPT. This heroic behaviour of South Africa was recognized by one observer prior to the 2010 RevCon in anticipation of a positive outcome:

> Traditionally the review conference operates using international consensus rules, allowing all members to contribute if they so wish; however there are certain states that have traditionally been more successful in brokering new discussions in the past, such as the key players of the nuclear weapons states, include: the United States, Russia, United Kingdom, France, and

China; and those of the non-nuclear weapon states include, Egypt, the chair of the Non-aligned Movement, concerned itself with forming a statement representative of all these states, and South Africa who has traditionally played an important role in bridging the gap between nuclear-weapon and non-nuclear weapon states (Deepti 2010).

Secondly, the scope of state activity (discrete or diffuse): South Africa has consistently displayed discretion in negotiation fora by maintaining its consistent stance in compliance with the NPT.

In the third instance: the focus or target of state diplomatic activity (multilateral or regional): South Africa has consistently employed both multilateral (which includes regional diplomacy) and bilateral diplomacy in the conduct of its nuclear diplomacy.

Finally, the intensity of state diplomatic style (combative or accommodative): In carving its niche role in nuclear diplomacy, South Africa repeatedly used a combination of diplomatic strategies. In the context of the NPT, South Africa had predominantly employed confrontation and cooperation strategies. South Africa's employment of parallelism is relatively scant in respect of the NPT and is limited to the Iraqi case and its multiple membership of the NAC, the NAM and the African Group at NPT conferences.

9. Conclusion

The NPT rests on three major norms, namely nuclear disarmament; nuclear non-proliferation; and the peaceful uses of nuclear energy. Since the NPT entered into force a large number of states had been socialised in these norms and subscribe to the notion of a "nuclear taboo". However, due to its inherently discriminatory nature and the nuclear ambitions of states, the NPT has come under severe pressure since the end of the Cold War.

South Africa has come full circle on the NPT. A reluctant signatory of the NPT at first, South Africa secured a niche role for itself in the NPT regime. It has repeatedly expressed its unequivocal support of the norms espoused by the NPT. Since signing the NPT in 1991, the country has actively participated in the NPT review conferences. South Africa's first attendance of a RevCon was in 1995 at the REC.

Whereas the country was once accused of contravening the NPT, South Africa has successfully constructed a role for itself in the nuclear non-proliferation regime. Through the construction of new norms or through the entrenchment of existing norms, South Africa has crafted a unique brand of diplomacy and established a new state identity.

South Africa's overall compliance with the provisions of the NPT is a major departure from its stance at the time the Treaty entered into force. This has improved the country's status and prestige and has contributed to an understanding of the concepts of niche diplomacy, nuclear diplomacy and nuclear roll-back.

CHAPTER SEVEN

EVALUATION AND RECOMMENDATIONS

1. Introduction

The South African NP-led government commenced with the termination of its nuclear weapons programme in 1989; a process which, once completed, was verified by the IAEA in 1993. Thus, by the time the ANC came to power as the first democratically-elected governing party after the April 1994 elections, South Africa no longer possessed nuclear weapons and a nuclear weapons programme. However, the country maintained some of its nuclear-related capabilities through the operation of the country's research reactor, SAFARI-1.

From 1990, following President FW de Klerk's announcement on 2 February 1990, until 1994, negotiations on South Africa's constitutional future dominated the country's domestic political agenda. These negotiations culminated in the adoption of the Constitution of the Republic of South Africa, Act 106 of 1996. Parallel to these constitutional negotiations were the changes in South Africa's international relations and diplomacy. Sanctions and embargoes - many related to the country's nuclear capabilities - were lifted; new bi- and multilateral relations established; and old relations rekindled. Relations pertaining to South Africa's nuclear diplomacy are pertinent to this study.

Whereas South Africa's international isolation was one of the hallmarks of its pre-1990 diplomacy, the country's post-1990 diplomacy signifies a major departure in terms of focus, scope, intensity and diversity. Consequently, the country's nuclear diplomacy was also transformed. Prior to 1990, the "Janus-faced" nature of South Africa's nuclear diplomacy included, on the one hand, international condemnation and reactions to these condemnations and, on the other hand, secret diplomatic interactions in an effort to either pressurise the South African government to dismantle its nuclear weapons programme, or to by-pass bi- and/or multilateral sanctions against the country.

Post-1990, South Africa's nuclear diplomacy was a direct departure from previous practices. As an instrument of foreign policy, South African diplomacy reflected these changes. One of the illustrations of this departure is South Africa's role and influence in international nuclear diplomacy at multilateral institutions such as the AU, the IAEA and the UN. Bilaterally, a similar trend is evident.

This study concerned itself with one major question: Why and how did South Africa became such an influential former nuclear weapons state and developing country in nuclear diplomacy? As outlined earlier, the main thesis of this study is that since 1990 South Africa has conducted its nuclear diplomacy by constructing certain norms and its identity in a particular way to serve its national and international interests. Consequently, this has created both a practical and normative reality by bestowing on the country a particular state identity as a state that has relinquished its weapons programme to secure and maintain a certain moral high ground in nuclear-related negotiations and fora. This was achieved through the skilful conduct of niche diplomacy in specific areas and issues identified in this study.

2.   Analytical and theoretical framework of the study

This study addressed the transformation of South Africa's state identity and norm construction pertaining to its nuclear diplomacy by applying constructivism as the preferred theoretical approach. This theoretical approach to South African diplomatic practice and international relations is significantly neglected in scholarship on these issues. Constructivism's utility lies in its focus on the role of ideas, identity and interests for a state in the conduct of its international relations and diplomacy. Constructivism's utility is also rooted in its focus on norms in international relations and diplomacy. In essence, constructivists argue that ideas and norms inform a state's identity, which, in turn, informs a state's interests. This results in a perpetual cyclical process where construction and re-construction follow upon one another.

When applied to South Africa's post-1990 nuclear diplomacy, this cyclical process remains prevalent. South Africa's rhetorical adherence to the norms of non-proliferation, disarmament and the peaceful uses of nuclear energy - the normative foundation of the NPT - had been consistent and repetitive. Informed by these norms, as well as the norms espoused by the ANC-led government's domestic and

foreign policies, South Africa constructed a state identity as a unique nuclear state, which, in compliance with international norms, has terminated its nuclear weapons programme, subscribes to export control regimes and strongly supports the inalienable right of all states to use nuclear energy for peaceful purposes. From this flowed another state identity, namely that of a good international citizen.

Analytically, the study focused on the concept nuclear diplomacy as diplomacy *sui generis*. For this purpose, a conceptual analysis of nuclear diplomacy was conducted. This study benefitted from this approach as the concept nuclear diplomacy as a particular type or brand of diplomacy, namely niche diplomacy, could be explored. Predominantly but not exclusively associated with middle powers, niche diplomacy refers to a specific brand of diplomacy characterised by a high-level of expertise and speciality which aims to utilise the diplomatic, scientific and technical expertise of a state to advance a state's national interests. This enables a state to focus its resources on specific issues where its diplomatic return is estimated to be the highest. Therefore, constructivists' claim that a state's power derives from non-material rather than material resources is aligned with the conduct of niche diplomacy. Due to their lack of abundant material resources to strengthen themselves as superpowers, middle powers typically specialise in one or more diplomatic fields in which they have often achieved significant successes.

3.   Summary of chapters

Four main case studies were selected for examination. These were South Africa's nuclear diplomacy on the nuclear non-proliferation export control regimes; the IAEA; the Pelindaba Treaty; and the NPT. This section outlines the objectives and main preliminary findings of the chapters on each of these case studies.

3.1   South Africa and the nuclear non-proliferation export control regimes

Given South Africa's pre-1990 history of "sanctions busting" of the nuclear non-proliferation export control regimes, these regimes were selected as a case study to indicate South Africa's departure from non-compliance to compliance with the norm of nuclear non-proliferation.

The nuclear non-proliferation export control regimes are, in Krasnerian terms, a set of internationally-accepted norms, laws, rules, principles and institutions which regulate the export, sharing and transfer of components, materials, services and technologies which can be utilised for dual-use purposes. Institutionally, these regimes consist of the WA; the MTCR; the NSG; and the ZC. Despite the existence of these regimes, illicit nuclear proliferation continues.

Chapter 3 outlined the historical record pertaining to South Africa's "sanctions busting" prior to an analysis of the country's behaviour subsequent to 1990. It also analysed South Africa's involvement in multilateral nuclear export control regimes against the background of the country's nuclear diplomacy to establish a niche role for itself as a FNWS. As a former illicit importer and exporter of nuclear-related equipment, South Africa was determined to project itself as a rehabilitated nuclear state. Despite this, the South African government's efforts were undermined by a series of contentious nuclear proliferation-related incidents, most notably the involvement of South Africans in the AQ Khan network. This chapter also analysed South Africa's identity, roles and interests in the Khan network in South Africa and nuclear exports.

South Africa's membership of some of these institutions reflects its socialisation of the norms of non-proliferation; disarmament; and the peaceful uses of nuclear energy; more so as membership of these organisations is voluntary. Moreover, South Africa has incorporated aspects of this regime in its nuclear export trade policies and institutions such as the NCACC and the NPC. With this, South Africa has, since 1990, constructed a state identity as a norm compliant good international citizen. More importantly, the country has enhanced its international influence, status and prestige.

3.2   South Africa and the IAEA

In 1957, South Africa was a founder-member of the IAEA, the primary international multilateral institution which prevents nuclear proliferation; oversees the peaceful uses of nuclear energy; and secures the safety of nuclear material and facilities. The IAEA is also regarded as the "implementing agency" of the NPT. Despite South Africa's privileged position in the IAEA due to South Africa being the only African

state with a nuclear weapons capability at that time, the country came face-to-face with the international community at the IAEA in the 1970s. By the early 1970s, the international campaign against apartheid paid increasing attention to South Africa's nuclear programme. Consequently, under the leadership of Abdul Minty, nuclear disarmament and nuclear non-proliferation became the major focus areas of the international anti-apartheid movement.

One of the consequences of this campaign was opposition to South Africa in the IAEA Board of Governors and the GC. Diplomatic actions in this matter included attempts to suspend the credentials of South African delegates and efforts to suspend the country from the Board. In 1976 South Africa lost its designation as a member for the African region on the Board and in 1977 Egypt became the country designated to represent Africa. Once it became clear that the IAEA attempts to influence South Africa to terminate its nuclear weapons programme had failed, the confrontation between the IAEA and South Africa were elevated to the higher organs of the UN. Moreover, at three of its GCs (1987, 1989 and 1990), the IAEA met to decide on South Africa's suspension as a member of the IAEA. In each case, the IAEA deferred its decision. Subsequent to the post-1990 changes in the country, its relations with the IAEA stabilised. In 1995 South Africa returned to the Board to resume its position as the most advanced African nuclear state. This presented a major development in South Africa's post-1990 nuclear diplomacy.

South Africa's diplomatic relations with the IAEA and its members revealed insights into the country's post-1989 nuclear diplomacy. In constructivist terms, it has not only constructed a new state identity and role, but it also constructed and advanced its national interests in its diplomatic relations with the IAEA. South Africa's niche diplomacy in this case displays middle power characteristics. It was strengthened by its expertise in nuclear issues, which was advantageous to South Africa compared to other states. These advantages were locational, traditional and consensual. South Africa is the only African state to have acquired and given up its nuclear weapons (locational), the country has a nuclear history (traditional) and South Africa's non-proliferation commitment is reflective of the country's post-1990 non-proliferation commitments (consensual).

3.3   South Africa and the Pelindaba Treaty

The Pelindaba Treaty entered into force on 15 July 2009; almost five decades after the idea of ANWFZ originated from the OAU in the 1960s. Since 1990, South Africa has conducted its diplomacy with African states in such a manner as to convince the continent of its commitment to the continent. The same applies to its nuclear diplomacy with Africa. By ascribing to the continental norm of a denuclearised Africa, South Africa constructed its identity accordingly to serve its national and international interests. For South Africa, it has not only created a practical reality (no more nuclear weapons), but it has also resulted in the normative reality of the country elected to the position of custodian of the Pelindaba Treaty by chairing the Treaty's instrument of compliance, namely the AFCONE. This illustrates not only the life-cycle of norms as indicated previously, but also South Africa's completion of this cycle from norm emergence, norm cascade and norm internalisation. Chapter 5 traced this norm cycle through an analysis of the origins of the norm of nuclear weapons free zones, as well as South Africa's involvement in the treaty-process. Characterised by a combination of normative innovation; norm maintenance; coalition building; confrontation; independence; partnerships; and parallelism, South Africa's nuclear diplomacy with other African states has soon developed into a diplomatic niche for the country.

South Africa also attempted to undo existing global nuclear-related power structures by working towards a denuclearised African continent. In addition to this, South Africa's state identity as a domestic reformer proved to be a diplomatically useful identity to export to its diplomatic relations by advocating African and global reforms pertaining to the country's status as a denuclearised territory.

Typically, states practicing niche diplomacy focus on a specifically selected issue, organisation or activity. South Africa is no exception in this regard. The sources of South Africa's niche diplomacy in Africa is located in the tenets of middle power diplomatic behaviour, which therefore provides a strong normative foundation, emphasises the country's entrepreneurial flair and technical expertise. Other key features of South Africa's niche diplomacy are its focus on consensus and coalition building in Africa; cooperation on nuclear issues; adopting the role of bridge-builder (between Africa and the NWS); mediator (between African states on the

headquarters of the AFCONE); facilitator (of African gatherings on nuclear issues such as the Johannesburg meeting referred to earlier); or catalyst (changing its nuclear posture) in African nuclear issues. The latter involved South Africa's planning, convening and hosting meetings, prioritising for future meetings on a particular issue and drawing up declarations and manifestos.

South Africa has attempted to construct a "new conception" of the country's foreign policy identity with the 'other' being its apartheid past, rather than another international actor. South Africa has also managed to construct a nuclear identity in Africa through "positive approximation" by associating or identifying itself with the positive nuclear norms and identities of other African states. This nuclear identity has also been achieved through "negative approximation" by distancing the country from its historical nuclear actions, capabilities and posture.

The implications of South Africa's nuclear diplomacy in Africa have been wide-ranging. Not only did it contribute to the entry into force of the Pelindaba Treaty but also to enhancing the country's status and prestige. South Africa, which no longer has nuclear weapons, continues to yield considerable soft or normative power on the African continent.

South Africa's hosting and leadership of the AFCONE will test the country's normative power. Its maintenance of its normative power pertaining to nuclear non-proliferation on the continent and elsewhere is dependent on the legitimacy of the country's nuclear diplomacy. This legitimacy is dependent on the country's persuasive actions to promote nuclear non-proliferation on the continent and the AFCONE's activities.

3.4   South Africa and the Treaty on the Non-Proliferation of Nuclear Weapons

The NPT which entered into force on 5 March 1970 rests on three major pillars or norms, namely nuclear disarmament; nuclear non-proliferation; and the peaceful uses of nuclear energy.

South Africa came full circle on the NPT. At first a reluctant signatory of the NPT, South Africa has constructed its niche role in the NPT regime. It has repeatedly expressed its unequivocal support of the norms of the NPT. Since South Africa

signed the NPT in 1991, it has actively participated in the Treaty's review conferences. South Africa's first attendance at these RevCons was in 1995 when it attended the REC. Whereas the country was once accused of contravening the NPT, it successfully constructed a niche role in the nuclear non-proliferation regime. Through the construction of new norms or through the entrenchment of existing norms, South Africa has crafted a unique brand of diplomacy and established a particular new state identity.

4.   Main findings of study

Although preliminary findings were included at the end of each chapter, this section elaborates on these findings. This research supports the main thesis of this study, namely that from 1990 South Africa has in its practice of nuclear diplomacy, skilfully secured a niche role for itself through norm construction and state identity

4.1   South Africa's practice of nuclear diplomacy

South Africa's practice of nuclear diplomacy cannot be divorced from its general practice of diplomacy as one of the instruments of the country's foreign policy. Consistent with its post-1994 foreign policy, the South African government has maintained its preference for multilateralism; focusing on Africa and the developing world; and maintaining its status as a good international citizen with regards to its nuclear diplomacy.

South Africa has acted almost as a textbook example of middle power behaviour in its practice of nuclear diplomacy. Middle power behaviour is characterised by the form of a state's behaviour. South Africa has repeatedly displayed heroic behaviour in its bridge-building; its problem-solving; and its sometimes confrontational behaviour to NWS and NNWS alike. As a middle power, the scope of South Africa's activities pertaining to its nuclear diplomacy has consistently displayed discretion in negotiation fora by maintaining its consistent stance in compliance with the norms of the NPT. Thirdly, with regards to the focus and targets of South Africa's diplomatic activity, it has consistently employed both multilateral (which here includes regional diplomacy) and bilateral diplomacy in the conduct of its nuclear diplomacy. Finally, a middle power's niche diplomacy is also characterised by the intensity of its diplomatic style. In carving its niche role in nuclear diplomacy, South Africa

repeatedly used a combination of confrontation, parallelism and cooperation as diplomatic strategies.

As indicated previously, conceptual confusion with regards to the concept of nuclear diplomacy prevails. An analysis of a concept in terms of its meaning is, according to Guzzini (2009: 12), "part of the social construction of knowledge". The definition of a concept is an exercise of power and therefore "part of the social construction of reality". Thus, in defining nuclear diplomacy a particular reality is constructed. The implications of the practice of nuclear diplomacy are wide-ranging. It illustrates the existence of a particular type of diplomacy to determine and apply internationally-agreed safeguards and principles of verification of states' nuclear facilities and intentions; it entails the safety and security of nuclear material, scientists; and it entails the enforcement of norms relating to the development and application of nuclear science and technology for peaceful purposes.

Based on the findings and conclusions of this study, nuclear diplomacy is defined as a political entity's intentions and interactions with other political entities on matters pertaining to the behaviour, norms and practices relating to nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy. The use of the concept "political entity" rather than state is deliberate. Notwithstanding the fact that this study focuses on a state's (South Africa) nuclear diplomacy, it contends that increasingly, non-states actors are conducting various forms of nuclear-related international relations and interactions. This is evident in the social construction of the discourse on the dangers of non-states actors' acquisition of nuclear weapons. In an effort to address this, intersubjective understandings of the threat posed by non-state actors' use of nuclear weapons have manifested in practices such as compliance with UN resolutions on the matter. This has resulted in, amongst others, nuclear diplomacy which contributed to normative innovation pertaining to the concept and phenomenon of nuclear terrorism, and the subsequent adoption of the UNSC Resolution 1540 (2004) on the non-proliferation of WMDs (UNSC 2004). In South Africa, the Wisser *Affaire* and its link with the Khan network had highlighted this intersubjective understanding of the role of non-state actors in nuclear proliferation.

Therefore, this study concludes that South Africa's post-1990 nuclear diplomacy has maintained a normative foundation, employed various diplomatic strategies and was conducted in compliance with the set objectives of the country's foreign policy. In this, the analysis of the nuclear diplomacy of a state such as South Africa, which discontinued its nuclear weapons programme, provided insights into nuclear diplomacy in general and the nuclear diplomacy of states similar to the South African situation. Firstly, nuclear diplomacy continues to be conducted bi- and multilaterally. Secondly, schisms prevail between NWS and NNWS. Thirdly, as a roll-back state, South Africa was catapulted to certain positions of influence due to its historical nuclear past.

4.2   South Africa's power and nuclear diplomacy

A number of observations about the practice of nuclear diplomacy can be made. Firstly, it is a particular type of diplomacy, or a diplomatic niche. Secondly, it is a "Janus-faced" diplomatic practice. Actors, on the one hand, attempt to prevent the spread and use of nuclear weapons and, on the other hand, attempt to acquire nuclear-related capabilities. Thirdly, more diplomatic instruments and initiatives need to be developed to accommodate non-state nuclear actors, as the existing export and trade regimes are not sufficient to address pertinent questions in relation to nuclear non-proliferation. Finally, the so-called "nuclear taboo" persists whereas the civilian use of nuclear energy has increased substantially with scientific developments in medicine and physics.

The conduct of nuclear diplomacy includes a variety of practices focussing on various aspects of controlling the use of nuclear energy. As indicated previously, it entails arms control, non-proliferation and deterrence. These antecedents of nuclear diplomacy prevent a comprehensive understanding of states' relations on the issue of nuclear power. The concept nuclear diplomacy provides a comprehensive approach to states' practices to prevent a nuclear catastrophe, but also to secure nuclear energy for peaceful purposes.

Constructivists' preoccupation with power was discussed previously and is elaborated upon in this section. A significant implication of South Africa's nuclear diplomacy is that it is an instrument of the country's power, authority and influence.

Pre-1990, South Africa yielded some authority, influence and power due to its nuclear weapons capability. However, South Africa, which no longer has nuclear weapons, continues to yield considerable power; specifically soft or normative power. The country no longer conceptualises its power pertaining to nuclear matters in terms of power's institutional and productive dimensions. Instead, a departure from "power as resources" to "relational power" reiterated South Africa's social rather than material construction of power. This is clearly evident in South Africa's construction of its power in the 1995 REC and subsequent RevCons of the NPT.

South Africa's soft and normative power in nuclear diplomacy is evident in the various dimensions of power. Firstly, the scope of South Africa's power in nuclear diplomacy varies from one issue to another. With the establishment of the NAC, South Africa flexed its muscle as part of a multilateral arrangement whereas in the case of the 1995 REC, it acted alone.

Domain is another dimension of a state's power. Here, it refers to the number of actors under South Africa's influence in nuclear diplomacy. The domain of a state's power also implies that it can have considerable influence in one area, and almost none in another. South Africa's influence in global nuclear affairs indicates its considerable influence in this area and over other actors compared to its influence in other domains.

Weight as a dimension of a state's power determines the probability that South Africa's behaviour is or could be affected by one or more actors. South Africa's weight in nuclear matters has affected the nuclear-related behaviour of states which supported its position on the extension of the NPT.

Means as a dimension of power refer to the ways South Africa exercises influence. These ways can be categorized as symbolic, economic, military and diplomatic means. South Africa repeatedly employs its unique identity as a roll-back state to symbolically flex its diplomatic muscles. Economically, it expresses its power in nuclear diplomacy through its relative success related to the export regimes based on the country's production of, for example, medical isotopes. The country's non-use of its military power reinforces its power in nuclear diplomacy as South Africa opted to employ diplomacy, rather than military means, to enhance its nuclear interests.

The performative aspects of South Africa's nuclear diplomacy refer to what the country's nuclear diplomacy does, namely what is achieved. This includes South Africa's official and voluntary representation at bi- and/or multilateral conferences, meetings and negotiations on nuclear-related issues. This is evident in South Africa's voluntary involvement in various organizations related to the nuclear non-proliferation export regime. It is also evident in the country's formal involvement in organizations such as the IAEA and the AFCONE.

The second performative aspect of South Africa's nuclear diplomacy refers to the country's establishment and maintenance of nuclear-related relations with other states and multilateral organisations such as the cases selected for this study.

Thirdly, the performative aspects of South Africa's nuclear diplomacy include the initiation and maintenance of ideas relating to the peaceful uses of nuclear technology. This is particularly evident in South Africa's advocacy of all states' inalienable right, especially in terms of the NPT and the Pelindaba Treaty, to use nuclear energy for peaceful purposes.

A final performative aspect of South Africa's nuclear diplomacy refers to the country's norm entrepreneurship and the socialisation of non-proliferation norms in order to entrench nuclear-related norms in international relations. This is closely related to the country's intersubjective understandings of the "nuclear taboo" and the peaceful uses of nuclear power.

4.3   South Africa's construction of norms, identity and interests

The skilful construction of South Africa's post-1990 nuclear identity and interests coincided with the country's norm entrepreneurship and its socialisation of nuclear non-proliferation norms. The political process whereby South Africa was socialised into norm construction, enactment and compliance on nuclear non-proliferation norms corresponds with the socialisation processes identified earlier. In following Koh (1997: 2598-2599) South Africa's socialisation process relating to the norm of nuclear non-proliferation included interactions with like-minded states and multilateral organisations and its interpretation and internalisation of the meaning of norms such as nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy. In addition to this, South Africa also subscribed to Finnemore and

Sikkink's (1998: 894-905) three stages of the life-cycle of norms. The first stage in this cycle entailed the emergence of a norm through the initiative of norm entrepreneurs in governments that call attention to a particular issue. In the case of post-1990 South Africa, this role was played by Presidents De Klerk and Mandela, and South African diplomats, most notably Abdul Minty.

The second stage in this cycle involved norm cascade. This occurred when South Africa attempted to publicise the need for the entrenchment of a norm by socialising with governments and organisations. The final stage involved the internalisation of the norm of nuclear non-proliferation; an issue which manifested in its legislation and institutions such as the NPC and the NCACC.

Therefore, South Africa's compliance with nuclear non-proliferation norms provided for the standard(s) for its appropriate behaviour as a nuclear roll-back state with a given identity. Secondly, South Africa's norm compliance in ordering, prescribing and regulating its diplomatic action on nuclear matters enabled its diplomatic interactions with other actors. Nuclear non-proliferation norms were constitutive as they provided South Africa with an understanding of its own, and of other states', mutual or individual interests that could affect South Africa's diplomatic stance and/or behaviour on a particular nuclear-related issue.

Therefore, South Africa's repeated support of nuclear non-proliferation norms played a constitutive role in the formation of its nuclear-related identities and interests. South Africa's consistent voluntary compliance with International Law and adherence to settled norms on nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy contributed to its predictability, trustworthiness, credibility, status and prestige. South Africa's voluntary membership of organisations and initiatives such as the NSG, the WA and the ZC serves its long-term interests as it derives benefits from the stability and predictability of the international order. Therefore, the logic of South Africa's nuclear diplomacy is to comply with settled norms on the use of nuclear power. South Africa's norm compliance rests on a number of considerations. Firstly, norms express the dominant ideas of society. Non-compliance may result in detrimental sanctions and therefore actors comply in order to avoid such actions. Secondly, compliance with norms may be beneficial to an actor's national interests.

All states strive to achieve and advance four national interests, namely physical survival, autonomy, economic well-being and collective self-esteem. South Africa is no exception in this regard. In its conduct of nuclear diplomacy, it strove to advance these interests which emanate from its identity. This study followed the typology of state identities put forward by Wendt (1990 & 1992). A state's identity performs various functions: it indicates 'who' a state is, it is the driving force behind a state's foreign policy, it indicates what motivates a state, and explains its intentions and interactions. More importantly, a state's identity ensures predictable patterns of behaviour. When applied to South Africa's conduct of nuclear diplomacy, its identity included multiple state identities.

In this study, South Africa's personal or corporate identity was revealed as constituted by the self-organizing structures (norms, beliefs and resources) that make it a distinct political entity that advances its national interests. This identity is particularly evident in its construction of internal self-organising structures such as the NCACC, the NNR and the NPC to comply with norms on the use of nuclear energy and the nuclear non-proliferation export control regime.

Another significant aspect of South Africa's corporate identity refers to the international recognition it received since 1990 for its nuclear roll-back. In various diplomatic arenas, such as its bi- and multilateral relations, South Africa's role was recognised. South Africa's nuclear roll-back and its proposals for the 1995 REC and subsequent NPT conferences are only two of several examples of international recognition.

South Africa's type identity refers to the country's commonly-shared characteristics with other states. Its type identity was clearly evident in its membership of nuclear non-proliferation organisations such as the NAC, the NSG, the WA and the ZA. Its type identity also refers to the historical commonalities it shares with other states such as the members of the NAM and other African states. More importantly, it also includes South Africa's identity as one of the few states which historically had a nuclear weapons programme, but had dismantled it.

Another type of state identity of South Africa is its social identity which consisted of a set of meanings it attributed to itself. This identity refers to South Africa's identity of

the 'self' relative to the 'other'. This type of state identity is clearly evident in the country's social identity in its reference to its unique identity as a country which terminated its nuclear weapons programme compared to other states that continue with theirs. Moreover, in terms of its nuclear diplomacy, the construction of South Africa's post-1990 social identity revolved around its identity as a state that has socialised nuclear non-proliferation norms indicative of its departure from a country with nuclear weapons to a completely nuclear disarmed state. South Africa has repeatedly referred to its self-image in this regard. Its identification with the 'other' is another aspect of its social identity. Since 1990 it has identified itself not only with roll-back states, but also with the position of NWS and developing countries on the right to develop nuclear energy for peaceful purposes. This identification is evident in South Africa's support for the NAM and the NAC at NPT RevCons.

South Africa's construction of a niche role in nuclear diplomacy evolved from the deliberate attempts by foreign policy decision-makers of the NP-led government, the subsequent GNU and the ANC-led government. South Africa's niche role resulted in policy-makers' own definition or role conception of the country's obligations towards external actors and these actors' expectations of South Africa (role prescription). In this study, South Africa's ascribed and prescribed roles in its nuclear diplomacy is clearly evident. The country's return to the IAEA Board of Governors is one example of this as is its accession to the NPT and the Pelindaba Treaty.

South Africa's social identity as a middle power was also outlined in this study. Employing several strategies by focusing on the specific area of nuclear issues, South Africa has employed its expertise pertaining to nuclear issues to carve a middle power role. Its ability to initiate proposals to prevent deadlocks, such as the deadlock that occurred at the 1995 REC and its participation in such initiatives as the nuclear non-proliferation export regimes and the NAC also reflected South Africa's middle power identity.

For South Africa an important function of its newly constructed state identities is often imposed or self-imposed international leadership. This is clearly evident in its nuclear diplomacy. It served in various leadership positions, hosted international nuclear-related meetings, proposed solutions at conferences and is a voluntary

member of various export regimes. Moreover, this is also clearly evident in the country's preference for multilateralism as a form of global interaction.

In its practice of niche diplomacy, South Africa employed a number of diplomatic practices which had provided some material and non-material rewards such as status, prestige and trade opportunities. Employing confrontation as a diplomatic strategy, South Africa often confronted NWS such as the US, the UK, China, Russia and France. This has been the case at various NPT conferences.

South Africa's employment of parallelism as a diplomatic strategy is illustrated in its parallel diplomatic actions alongside superpowers and its coalition partners. This was the case in its involvement in the NAC at the NPT RevCons. However, South Africa predominantly preferred partnership and cooperation as its preferred diplomatic strategies.

Closely related to its leadership role is South Africa's social identity as an accommodator, mediator or bridge-builder in nuclear matters. This is evident in its involvement in various NPT conferences and at the IAEA where it often articulated and advanced the interests of NNWS and developing countries.

The third type of South Africa's state identity refers to its collective identity. This identity is constructed when a state's social identity generates collective interests. Expressions of solidarity, community and loyalty emerge from these collective interests. South Africa's collective identity is a combination of role and type identities to overcome collective action problems (such as nuclear proliferation) as defined by international actors. This identity merged the previous types of identity in order to establish a single identity. This is clearly evident in South Africa's nuclear diplomacy with African states in the context of the Pelindaba Treaty.

4.4   The future of South Africa's nuclear diplomacy

Apart from the findings derived from the main thesis of this study, the study also offers some preliminary findings on the future of South Africa's nuclear diplomacy. The dangers of speculation notwithstanding, several aspects pertaining to this matter can be identified.

The most pertinent question relating to a roll-back state is the possibility that a state would return to developing its nuclear weapons capability. South Africa constructed its roll-back credentials over two decades. Despite this, these efforts were at times undermined by several events. Firstly, the IAEA's initial verification was incomplete which resulted in questions on South Africa's commitment to nuclear non-proliferation and disarmament. Once the verification was completed in 1993, the country's credentials were accepted.

Secondly, South Africans' involvement in the Khan network also undermined the country's status and prestige as a roll-back state. Moreover, as a voluntary member of various nuclear non-proliferation export regimes, the involvement of South Africans here raised concerns over the possibility of other similar instances.

In the third instance, South Africa is blatantly ambitious to carve a unique position in the global nuclear arena. This was clearly illustrated in its campaign for Abdul Minty's election as the IAEA Director General. However, South Africa underestimated the interests of the NWS, who went ahead to appoint a Japanese Director General, a citizen from the only country to have suffered the devastation of atomic bombs.

In the fourth place, South Africa's nuclear intentions remain in question; especially against the background of the South African government's declaration that it is a responsible producer, possessor and trader of nuclear expertise, products and services. In April 2011, the South African government's adopted the *Integrated Resources Plan* (IRP) which paves the way for the expansion of the country's nuclear power generation capacity. Dipuo Peters (2011: 4), South Africa's Minister of Energy, confirmed that "nuclear and renewable energy will have a significant contribution" to the country's future energy supply. Subsequent to this decision, the South African Cabinet approved the establishment of the National Nuclear Energy Executive Coordination Committee (NNEECC) and its Nuclear Energy Technical Committee (NETC) to "implement a phased decision making approach to the nuclear programme" (South Africa 2011b).

Finally, South Africa's nuclear intentions are also questioned due to the announcement by the Minister of State Security, Siyabonga Cwele (2011: 4). Referring to the country's forthcoming *National Security Strategy,* Minister Cwele

alluded to the country's nuclear future. According to Cwele (2011:4), Government has identified dual-use technologies as involving "major aspects of our country's competitiveness and innovative capacity for commercial market access and national security". He also announced that an Inter-Departmental Task Team is conducting an "assessment of resources and activities of the peaceful programs related to the field of nuclear, biological, chemical, aerospace and missile technologies". Cwele further announced that the Task Team will develop a national strategy to promote research, technological development, innovation, coordination, integration and oversight in the field of these dual-use technologies in South Africa. These developments will undoubtedly influence South Africa's future nuclear diplomacy.

5.   Ontological contributions of study

This study makes several ontological contributions. Its main ontological contribution relates to the theoretical approach employed in this study: constructivism.

Constructivist ontology engages with three main components, namely inter-subjectivity, context and power. With regards to intersubjectivity, the study emphasised the interactions between nuclear-related structures and agents. Agents' intersubjective understandings of the norms of nuclear non-proliferation; nuclear disarmament; and the peaceful uses of nuclear energy constructed identities, interests, role and meanings, and *vice versa*. This resulted in the mutual constitution of agents and structures. This explains the descriptive narrative presented in this study as narratives highlight the agency of states. For constructivists, once these intersubjective understandings and meanings manifest in settled norms, institutions or structures are established. South Africa's intersubjective understanding of the settled norms mentioned earlier contributed to its decision to comply with these norms and accede to the Pelindaba Treaty and the NPT.

Context is another ontological dimension of constructivism. South Africa's nuclear diplomacy is contextually linked to the Cold War (historical context); the nuclear arms race (social context); its domestic policies (social context); and its regional threat perception (spatial context). Developing nuclear weapons for deterrence, South Africa's nuclear diplomacy is linked with this past and its future to undo this legacy as its context changed.

The third dimension of constructivists' ontology is power. For decades one of the dominant intersubjective understandings of South Africa is that it has been a country with a nuclear weapons capability and internationally unacceptable policies that violated the human rights of the majority of South Africans. South Africa derived its power from a material, rather than an immaterial, base. Once it terminated its nuclear weapons programme, acceded to the NPT and had successfully undergone the IAEA verification process, it was able to construct a new identity due to the changed nature of its interests. This newly won identity as a roll-back state reversed the dominant intersubjective understanding of South Africa and bestowed it with significant normative power. In this study, South Africa's power in nuclear diplomacy was analysed in terms of its nature as a middle power state.

6.   Epistemological contributions of this study

Constructivists share the notion of the mutual constitution of reality. This undermines the notion of objective facts as intersubjective understandings that constitute these facts. Therefore, constructivists maintain that what is defined as 'facts' and 'reality' is subjectively rather than objectively constructed. Therefore, norms as "social facts" are mutually constituted based on inter-subjective understandings.

South Africa's niche role and state identity in nuclear diplomacy can be interpreted in several ways. Knowledge about South Africa's nuclear past only became known with President De Klerk's 1993 announcement. The South African government, which denied the existence of its nuclear weapons programme prior to 1989, constructed a regime of truth (*i.e.* knowledge in service of power) to support this. Similarly, the ANC-led government constructed a similar regime of truth; now to perpetuate its stance on nuclear non-proliferation, nuclear disarmament and the peaceful uses of nuclear energy.

This study makes several epistemological contributions. It provides insights into state behaviour relating to a state's decision to terminate its nuclear weapons programme and its reconstruction of identity, power and interests in the absence of these instruments of power. The study also contributes to insights into nuclear diplomacy as a particular diplomatic practice emanating from a state's foreign policy. In addition

to this, the study contributes to an understanding of middle power behaviour as it relates to a middle power from the developing world.

Only a small number of countries have completely terminated their nuclear weapons programmes. These countries include Brazil, South Africa and Libya, all developing countries and NNWS. Their commitment to the norms of nuclear disarmament, nuclear non-proliferation and the peaceful uses of nuclear energy signify normative entrepreneurship by middle to small powers. Moreover, it also refers to the role of regional powers in regional and international security.

7.   Practical implications of the study

The main findings of this study have several implications. The study raises further ontological and epistemological questions about the implications of agency, identities and interests. If norms and identities are constructed, they can be reconstructed, giving rise to their fluid nature. Constructivists agree on mutual constitution as a common ontological claim. For this study, it raises questions about the fluidity of South Africa's roles, norms and identities in nuclear diplomacy. Essentially, it raises the question whether South Africa will restart a nuclear weapons programme. Given its current context, *ceteris paribus*, it is not in the country's current interests to reverse its nuclear roll-back.

A second implication relates to the conduct, content and scope of South Africa's diplomacy in general and its nuclear diplomacy specifically. The implications of South Africa's nuclear diplomacy are wide-ranging. It illustrates the existence of a particular type of diplomacy to determine and apply internationally-agreed safeguards and principles of verification of states' nuclear facilities and intentions; it entails the safety and security of nuclear material, scientists and installations; and it entails the enforcement of norms relating to the development and application of nuclear science and technology for peaceful purposes.

A more significant implication of nuclear diplomacy is that it is an instrument of power, authority and influence. States with a nuclear capability wield significant power, authority and influence. However, South Africa, which no longer has nuclear weapons, continues to wield considerable soft or normative power.

8. Recommendations for future research

The main findings of this study were presented above. Given the limited scope of the study, various issues related to South Africa's nuclear diplomacy necessitate further exploration in the future.

Firstly, apart from the necessity of more analytical and theoretical research on nuclear diplomacy, several empirical issues require further attention. Secondly, more empirical research on South Africa's nuclear diplomacy should be conducted. The focus could be on the role of emerging powers' nuclear diplomacy; South Africa's nuclear diplomacy in the context of President Obama's NSS; and South Africa's nuclear diplomacy in respect of the AFCONE.

Thirdly, an assessment of the role of South African diplomat Abdul Minty in the country's post-1990 nuclear diplomacy is required. This will provide valuable insights into the role of agency in nuclear diplomacy.

A fourth recommendation for future research is to conduct research on the training required for South African diplomats in order to conduct the country's nuclear diplomacy.

The nuclear diplomacy of the ANC and the AAM prior to 1990 remains an under-researched area. Therefore, the fifth recommendation of this study is that future research on the legacy of the ANC and the AAM in respect of South Africa's nuclear diplomacy should be conducted.

A final recommendation is to conduct research on South Africa's bilateral nuclear diplomacy with countries such as Iran, Pakistan and India.

9. Final observations

In the first address by a South African delegate representing a democratically elected government to the GC of the IAEA, South Africa's first post-apartheid Foreign Minister, Alfred Nzo (1994), reflected on its transformation as a nuclear weapons producer into a country that has terminated its nuclear weapons programme and has "changed the nuclear sword into a nuclear ploughshare". Nzo's reference to the prophet Isaiah's oft quoted and often paraphrased passage from

Isaiah 2:4 is apt as South Africa spent decades wielding a "nuclear sword". South Africa's nuclear history and diplomacy is among the most unique since the dawn of the nuclear era in international relations. It has skilfully constructed a niche in nuclear diplomacy through the construction and maintenance of the norms of nuclear disarmament, nuclear non-proliferation and the peaceful uses of nuclear energy; and a unique state identity.

On 7 April 1994, Pik Botha, Nzo's predecessor, presented the IAEA with a sculpture of a ploughshare made of non-nuclear material from a dismantled South African nuclear device. The inscription on the sculpture, exhibited in Block A of the Vienna International Centre, Vienna, Austria, which is the location of the IAEA's headquarters, reads: "The sculpture made from non-nuclear material from a dismantled nuclear device symbolises the commitment of the Republic of South Africa to the non-proliferation of nuclear weapons". For more than the past two decades, this sculpture continues to symbolise this commitment.

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APPENDIX 1

MEMBERS OF THE INAUGURAL AFRICAN COMMISSION ON NUCLEAR ENERGY[56]

Mr Messaoud Baaliouamer, Algeria: Mr Baaliouamer has been serving as the Director for Foresight Studies and Nuclear Applications at the Algerian Atomic Energy Commission (COMENA) since 1999. He has also been a member of the African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology (AFRA) Field Management Committee since 2000 and the AFRA Programme Management Committee since 2009. He coordinated the AFRA National Programme from 1999 to 2006.   From 1995 to 1998, he served as the Chair of the Scientific Committee at Birine Nuclear Research Centre as well as directed the Center from 1991 to 1992.   From 1988 to 1998 he was the Head of the Nuclear Instrumentation and Control Department. He actively contributed to the commissioning of the AURES 1 Subcritical Assembly in 1986, the 1 MW NUR Nuclear Research Reactor in 1988 and the 15 MW Multi Purpose Heavy Water (MPHW) Reactor Es Salam and associated Laboratories (1992-1996). In 2000, Mr Baaliouamer was awarded the scientific grade 'Maitre de Recherche (MR)' or Senior Fellow. He was awarded a Master of Sciences in Nuclear Engineering in 1980 and has thirty years of experience in the field of nuclear research and development.   Since 2007, he has been leading the team in charge of the creation and implementation of the Algerian Institute of Education and Training in Nuclear Engineering (IAGN/ COMENA). In January 2007, he chaired the Scientific Committee of the African Regional Conference on Nuclear Energy (Contribution to Peace and Sustainable Development), held in Algiers, whose declaration and plan of action have been adopted by the African Union Head of States Summit in January 2007, in Addis Ababa.

Dr Baidori Outtara, Burkina Faso: Dr Outtara, holder of a Masters Degree in AgriPedology, and has been serving as the Permanent Secretary of the Technical Secretariat for Atomic Energy and National Liaison Officer for Technical Cooperation

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[56] This was taken *verbatim* from AU (2011b: 3-8).

with the IAEA and National Coordinator of AFRA since 2007. He previously served as Director General for the Improvement of Life Setting at the Ministry of Environment and Life Setting from 2005 to 2007, and Chief of Environmental Research at the Center for Environmental research, Agriculture and Training (CREAF) from 1995 to 2003. At the regional and sub-regional levels, Dr Outtara served as Chairman of the Steering Committee of the West and Central Africa Sorghum Research from 1995 to 2000, national coordinator of the sub regional research project on the survey of the aggregation mechanism of tropical poorly swelling clays soils from 1990 to 1994, and national coordinator of the research project on the optimization of rainfall resources at the international network for research on drought tolerance in western and central Africa from 1985 to 1989.

Dr Augustin Simo, Cameroon: Dr Simo is currently the Director General of the National Radiation Protection Agency, and has served as the Head of the Energy Research Laboratories at the Institute of Geological and Mining Research since 1980. He is also currently the National Liaison Officer for the IAEA and National Coordinator for AFRA as well as a Member of the AFRA Programme Management Committee. He served as the AFRA Chairperson from 2009 to 2010, as well as Member of Cameroon's delegation to the IAEA's Board of Governors from 2009 to 2011. From 2007 to 2010, he served as the Permanent Secretary of the National Committee for Technology Development. In 1982, Dr Simo was awarded a Doctorate in Energy from the University of Aix Marseille III in France. He taught at the Center of Atomic Physics, Molecular and Quantum Optics at the University of Douala and at the Department of Physics at the University of Yaoundé. He was a Research Fellow at the Energy Research Laboratories of the Institute for Geological and Mining Research from 1980 to 2009.

Mr Atnatiwos Zeleke Meshesha, Ethiopia: Mr Meshesha has been serving as Director of the Inspection & Enforcement Directorate and Head of the Regulatory Control Department at the Ethiopian Radiation Protection Authority (ERPA) since 2007. From 2004 to 2006, he was Acting General Manager of the Ethiopian Radiation Protection Authority and prior to that he served for over four years as Senior Expert and Head of the Regulatory Control Coordination Unit of the Authority. He is currently serving as the Acting Director General of ERPA and the Deputy

Secretary of the Forum of the Nuclear Regulatory Body in African (FNRBA). In 2000, Mr Meshesha was awarded a Post Graduate Diploma in Radiation Protection from the University of Witwatersrand, Johannesburg, Republic of South Africa and an MSc in Radiation and Environmental Protection by Surrey University, UK.

Professor Shaukat Abdurazak, Kenya: Since 2008, Professor Abdurazak has been serving as the Executive Secretary of the National Council for Science and Technology at the Ministry of Higher Education Science and Technology. He is also currently the National Liaison Officer for the IAEA and National Coordinator for AFRA as well as the Chairman of its Programme Management Committee. Professor Abdurazak is a Board Member of various national institutes, including: the Radiation Protection Board, Kenya Agricultural Research Institute, Kenya Institute of Research and Development, Kenya Medical Research Institute, Kenya Marine and Fisheries Institute and Kenya Forestry Research Institute. He is also a Board Member of the Inter-University Council of East Africa. Professor Abdurazak was awarded a PhD in 1995 by the University of Aberdeen, UK, and a Post Doctorate certificate in 2001 by Shimane University, Japan. He has been a Professor at the Egerton University since 2005 and served as Deputy Vice-Chancellor for Research and Extension at Egerton University from 2002 to 2007.

Dr Bulgasem Hammouda Ali El Fawaris, Libya: Dr El Fawaris has been a member of the Central Steering Committee of the Libyan Atomic Energy Establishment since 2008 and a member of the Network Operation Center Environmental Surveillance Committee related to oil and gas NORM contamination since 2007. In 2007 he was appointed national representative in the IAEA Radioactive Waste Management Technical Committee for a three-year term. In 1982, he joined the Libyan Atomic Energy Establishment as Head of Radiation Control and Health Physics at which he served for eight years. Dr El Fawaris was awarded a Master of Science degree in Ecology and another one in Nuclear Science and Radiation Protection from Louisiana State University, USA, in 1980 and 1981, respectively. In 1990 he joined the Department of Radioecology at Uppsala University, in Sweden, for a doctorate programme which he was awarded in 1995. He served as Associate Professor at Tajoura Nuclear Research Center from 1995 to

2004, and has been serving as Full Professor at the Renewable Energy and Water Desalination Research Center from 2005 to date.

Mr Tezana Coulibaly, Mali: Mr Coulibaly has served at the National Directorate of Energy of Mali since 2000 as Chief of the Energy Saving Section and later as Chief of the Energy Management Division. He has also been serving as the National Coordinator for AFRA since 2008. Prior to that, Mr Coulibaly served for five years as Deputy General Manager of the Regulation Office of Traffic and Uurban Transport of the district of Bamako.

HE Mr Anund P Neewoor, Mauritius: Mr Neewoor, a career diplomat, has been serving as Secretary for Foreign Affairs since 2005. From 1999 to 2001, he served as the Permanent Representative and Ambassador Extraordinary and Plenipotentiary of the Republic of Mauritius to the United Nations. From 1993 to 1996, he served as Ambassador to the United States and High Commissioner to Canada and Guyana and, from 1983 to 1993, as Ambassador to Russia, Thailand, Myanmar and Nepal, and High Commissioner to India, Bangladesh, Malaysia and Sri Lanka. He concurrently served as Dean of the Diplomatic Corps in India, from 1990 to 1993, and Dean of the African Ambassadors Corps in New Delhi, from 1988 to 1993. Mr Neewoor also served for varying periods in other high level diplomatic positions including Ambassador to the Islamic Republic of Pakistan and Ambassador at the Ministry of Foreign Affairs in charge of Multilateral Affairs. He was decorated by the Government of Mauritius as Commander of the Star and Key of the Ocean in 2003 and Grand Officer of the Order of the Star and Key of the Indian Ocean in 2008.

Dr Christian Sina Diatta, Senegal: Dr Diatta is a member of the AFRA High-Level Steering Committee on Human Resource Development and Nuclear Knowledge Management. He served as Minister for eight years in charge of Bio-fuels and Renewable Energy Scientific Research. In 1988, he founded and directed the Laboratory of Plasma Physics and Interdisciplinary Research at the University of Cheikh Anta Diop, in Dakar, as well as directed, from 1988 to 2001, the Institute of Applied Nuclear Technology and the Research Institute on Teaching Mathematics in Physical Sciences and Technology from 1985 to 1993. Dr Diatta has extensive experience in the field of scientific research. From 1984 to 1986, he was visiting

researcher at the Joint Institute for Laboratory Astrophysics in Colorado, US; visiting researcher at the Laboratory of Organic Chemistry of Wroclaw, Poland, in1975; and researcher at the National Centre of Scientific Research in France, from 1969 to 1977. Dr Diatta was awarded a Doctorate degree in Science by the University of Orleans, France, in 1977.

Mr Abdul Samad Minty, South Africa: Mr Minty currently serves at the South African Department of International Relations and Cooperation as Ambassador and Special Representative for Disarmament and NEPAD, as well as the Personal Representative of the President on the NEPAD Steering Committee. Mr Minty served as Deputy Director General for Multilateral Affairs in the South African Department of Foreign Affairs, from 1995 to 2004, and acting Director General of the Department for over two years. He is currently the Convener of the Council of the South Centre. Mr Minty has been serving as the chairperson of the South African Council for Non-Proliferation of WMD since 1995 and the representative of the Department of International Relations and Cooperation on the South African National Conventional Arms Control Committee, as well as a member of the Board of the South African Nuclear Energy Corporation. He has been South Africa's Governor in the IAEA Board of Governors since 1995 and was President of the IAEA Conference in 2006. Mr Minty was also a member of the UN Secretary-General's Advisory Board on Disarmament Matters for two years. Mr Minty served as an Honorary Secretary of the British Anti-Apartheid Movement from 1962 to 1995 and Director of the World Campaign against Military and Nuclear Collaboration with South Africa from 1979 to 1994. He was awarded a Masters degree in International Relations by the University College of London in 1969, and was Senior Research Fellow at the International Peace Research Institute at Oslo from 1994 to 1995.

Lieutenant-Colonel Manzi Pidalatan, Togo: Lt-Colonel Pidalatan is a member of the National Authority on Weapons of Mass Destruction and is responsible for matters of nuclear, biological and chemical weapons. He is also Head of Office for the Training of General Staff. Lt-Colonel Pidalatan also received several decorations, including Knight of the National Mono, Officer of the Order in Central Africa, Medal of the African Union, Medal of Peace of the United Nations and Medal of the French National Defense.

Dr Mourad Telmini, Tunisia: Dr Telmini is presently the Director General of the National Centre for the Nuclear Science and Technology, full Professor of Physics at the Faculty of Science of Tunis, Head of the Research Group in Atomic and Molecular Physics at the Faculty of Science of Tunis, Vice-President of the Tunisian Physical Society, Fellow of the Institute of Physics, Liaison Committee representative of Tunisia in the International Union of Pure and Applied Physics (IUPAP), member of C13 IUPAP commission on Physics for Development and member of the Tunisian delegation in the IAEA Board of Governors. Dr Telmini served as Senior Scientific Advisor at the National Centre for Nuclear Science and Technology from 2008 to 2010, Associate Professor of Physics at the Faculty of Science of Tunis, from 2004 to 2009, and President of the Tunisian Physics Society from 2005 to 2007. Dr Telmini was awarded a Doctorate degree in Atomic Physics in 1993 by (Université Paris-Sud) 11, France.

SUMMARY

SOUTH AFRICA'S NUCLEAR DIPLOMACY, 1990-2010: SECURING A NICHE ROLE THROUGH NORM CONSTRUCTION AND STATE IDENTITY

by

Jo-Ansie Karina van Wyk
Supervisor: Professor Anton du Plessis

The main thesis of this study is that since 1990 South Africa has conducted its nuclear diplomacy by constructing certain norms and its identity in a particular way to serve its national interests. A constructivist analysis of South Africa's nuclear diplomacy concerning the nuclear non-proliferation export control regimes; the International Atomic Energy Agency (IAEA); the Pelindaba Treaty; and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) suggests that South Africa's application of three typical middle power diplomatic strategies, namely confrontation, cooperation and parallelism have enabled the country to secure a niche role for itself that has provided the country with some material and non-material rewards.

South Africa's membership of some of the major nuclear export control regimes reflects its socialisation of the norms of non-proliferation, disarmament, and the peaceful uses of nuclear energy. South Africa has incorporated aspects of this regime in its nuclear export trade policies and national nuclear-related institutions. Despite this, the South African government's efforts were undermined by a series of contentious nuclear proliferation-related incidents, most notably the involvement of South Africans in the AQ Khan network.

South Africa was a founder member of the IAEA in 1957. Despite this early role in norm construction, South Africa's relations with the IAEA deteriorated as international opposition to its apartheid policies escalated. Defying international isolation, the country embarked on a nuclear weapons programme that produced six atomic devices. South Africa returned to its designated seat for Africa on the IAEA Board of Governors in 1995. A vocal opponent of the discriminatory nature of the

IAEA Statute and supporter of all countries' right to the peaceful uses of nuclear energy, South Africa's influence in the Agency expanded. Despite this, the country's candidate for the position of IAEA Director General was not elected.

Africa's position on nuclear non-proliferation originated in the 1960s. Once South Africa's domestic policies became known and suspicions of its nuclear weapons programme grew, the Organisation for African Unity (OAU) turned its focus to condemnation of South Africa. As a result of the political transition in South Africa; its ratification of the NPT; and the IAEA's verification process, South Africa joined Africa to establish the African nuclear weapons free zone in terms of the Pelindaba Treaty. As a result the country was elected to chair and host the AFCONE.

Despite its historical opposition to the NPT, the country ratified the Treaty in 1991 and has constructed its niche role in the NPT regime through its problem-solving and bridge building roles at various NPT conferences.

Therefore, this study concludes that South Africa's post-1990 nuclear diplomacy has maintained a normative foundation; employed various diplomatic strategies; and was conducted in compliance with the set objectives of the country's foreign policy. In this, the analysis of the nuclear diplomacy of a state such as South Africa, which discontinued its nuclear weapons programme, provided insights into nuclear diplomacy in general and the nuclear diplomacy of states similar to the South African situation.