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SPECIAL ISSUE ON

NEW HISTORIES OF ANTI-NUCLEAR ACTIVISM IN AFRICA

GUEST EDITED by Anna-Mart van Wyk, Luc-André Brunet and Eirini Karamouzi

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IN THIS ISSUE

NOTE FROM THE EDITOR

The University of Johannesburg acquired *The Thinker* in April 2019 from Dr Essop Pahad. Over the last decade, *The Thinker* has gained a reputation as a journal that explores Pan-African issues across fields and times. Ronit Frenkel, as the incoming editor, plans on maintaining the pan-African scope of the journal while increasing its coverage into fields such as books, art, literature and popular cultures. *The Thinker* is a 'hybrid' journal, publishing both journalistic pieces with more academic articles and contributors can now opt to have their submissions peer reviewed. We welcome Africa-centred articles from diverse perspectives, in order to enrich both knowledge of the continent and of issues impacting the continent.

Prof Ronit Frenkel

Nedine Moonsamy is an associate professor in the English department at the University of Johannesburg. She is currently writing a monograph on contemporary South African Fiction and otherwise conducts research on science fiction in Africa. Her debut novel, The Unfamous Five (Modjaji Books, 2019) was shortlisted for the HSS Fiction Award (2021), and her poetry was shortlisted for the inaugural New Contrast National Poetry Award (2021).

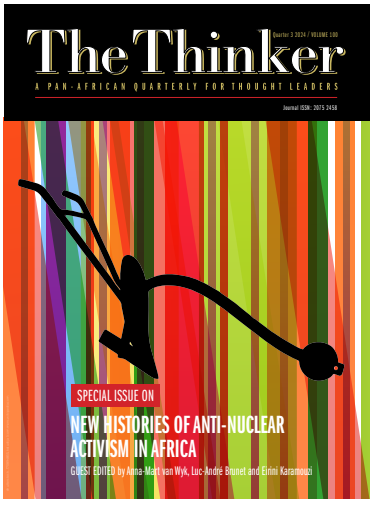
Nedine Moonsamy

Silindile Ngcobo is an English Literary Scholar with research interests spanning across Black feminist theory, Black radical thought, Critical Race Theory (CRT) and Gender Studies. Apart from being a scholar, Ngcobo works as a full-time high school English Home Language teacher under the Gauteng Department of Basic Education since 2019. In 2019, Ngcobo also dabbled in journalism and writing under the Rising Sun (Lenasia).

Silindile Ngcobo

ABOUT THE COVER IMAGE

Swords into ploughshares, South Africa's gift to the IAEA made from metal recovered from its weapons programme. *https://commons.wikimedia.org/wiki/File:Swords_into_ploughshares,_South_Africa's_gift_to_the_IAEA_made_from_metal_recovered_from_its_weapons_programme.jpg*



All contributing analysts write in their personal capacity

Luc-André Brunet is a Senior Lecturer in Contemporary International History at The Open University in the UK and Co-Director of the Peace and Security Project at LSE IDEAS. He earned his PhD in International History at LSE and has since held visiting fellowships at the University of Cambridge, Sciences Po (Paris) and the University of Ottawa. His research focuses on the dynamics between peace and anti-nuclear activism, on the one hand, and policymaking and diplomacy, on the other. He is the Principal Investigator of the AHRC-funded project 'Global Histories of Peace and Anti-Nuclear Activism' and is currently completing a book on Canada, the global nuclear order and the end of the Cold War. He is also the editor of NATO and the Strategic Defence Initiative: A Transatlantic History of the Star Wars Programme and, with Eirini Karamouzi, a forthcoming volume entitled Beyond the Euromissiles: Global Histories of Anti-Nuclear Activism in the Cold War.

Renfrew Christie spied on the Apartheid Nuclear Weapons Programme, for the African National Congress. Imprisoned as a terrorist for over seven years in Pretoria, he was in solitary confinement for over seven months; and on death row for two and a half years. He listened to some 300 hangings.

Christie is a Fellow of the Royal Society of South Africa; and a Member of the Academy of Science of South Africa. For 24 years, he was the Dean of Research at the University of the Western Cape. For ten years, he was cleared for Top Secret and was an Adviser to the South African Minister of Defence, on the Defence Force Service Commission. He was Professor of History in the University of Kentucky, Spring Semester, 2015.

Christie's 1979 Oxford DPhil treated the Electrification of South Africa. His handwriting was on the second draft of the South African Bill of Rights. He was Chair of the Board of Trustees of South Africa's premier Human Rights Law unit, the UWC Community Law Centre. He co-founded the Macro Economic Research Group and the National Institute for Economic policy, which helped set South Africa's economy right after Apartheid. He holds the *Certificate of Commendation* of the Chief of the South African Navy, for work "which helped to make the SA Navy the navy the people need."

Christie held visiting fellowships in the Woodrow Wilson International Center for Scholars, Washington D.C.; the Stiftung fur Wissenschaft und Politik, then in Ebenhausen; and the Indian Ocean Peace Centre, in Perth, Western Australia. He has addressed the Groupe Crises of the Institut de France on the Quai de Conti, Paris. He has twice addressed meetings in the Pentagon. He is co-author of *Doing Global Science: A Guide to Responsible Conduct in the Global Research Enterprise* (Princeton University Press, 2016), a book on scientific research ethics, which gained the imprimatur of almost all the Academies of Science on earth.

Nola Dippenaar completed a BSc and BSc Hons at the University of Stellenbosch, majoring in Chemistry and Physiology, followed by an MSc in Physiology. She earned a second Masters degree, this time in Biochemistry, from Cambridge University in the UK. On her return from the UK she commenced with her lecturing career at Medunsa, where she completed her PhD working in the field of essential fatty acids and cancer. She was appointed as Professor during this period. In 1999 she moved across to the medical school at the University of Pretoria, where she was responsible for the integration of Physiology and Biochemistry in the undergraduate and postgraduate medical courses.

She has been voted lecturer of the year by the UP medical and dental students on two occasions, and she has delivered many local and overseas papers at various conferences. She is presently the Chair of the SA National Pugwash Group – a division of the International Pugwash Conferences on Science and World Affairs. Her present main area of research and interest lies in the field of Insulin Resistance and Metabolic Syndrome, in the field of Functional Medicine. She consults privately to companies and individuals on the physiology and biochemistry of the human body; including health aspects, all of which empowers individuals to take responsibility for their health. To this end she has established a company called "Health Insight" in April 2006, and up to 2013 was an extraordinary Professor with the

Department of Physiology, School of Medicine, University of Pretoria. Presently as Professor Emeritus (UP), she has now also opened a second office in Cape Town, and a third office in Bettys Bay, dividing her time between these 3 locations.

Keith Gottschalk is an Adjunct Professor of Political Studies at the University of the Western Cape. He was a Fulbright Scholar in 2009-2010, and retired in 2011. He is an alumni of the University of Cape Town. He has over forty scholarly peer-reviewed publications. The latest is "African Integration: Six Decades of Successes and Failures", published in the Journal of the Institute for African Studies. In 2006, as HoD of the Political Studies Department at UWC, he hosted the annual conference of the South African Association of Political Studies. He frequently contributes commentary to the media and publishes analyses in *The Conversation*. He has also brought out two poetry collections: *Emergency Poems* (1992) and *Cosmonauts do it in Heaven* (2022). He helps run the literary magazine *New Contrast*, and the *Off-the-Wall* Monday night virtual poetry readings. In 2023, Keith was awarded the Order of Ikhamanga: Silver "for using his creativity to draw critical attention to oppressive and unjust laws through performative political poetry. His work provided strength and motivated many people to fight for liberation." He was detained without trial during the 1985 State of Emergency, and was an activist in several civil rights organisations during the twentieth century.

Mike Kantey graduated with majors in English and isiXhosa from the University of Cape Town in the early 1980s. He started out as an editor in the African languages for the schools' market, with what was then Longman Penguin (now Pearson Education), before joining David Philip Publishers in the late 1980s. During that time, he doubled up as an anti-nuclear activist, and was elected Chairman of the Tenants' Committee at Community House. In the 1990s, Mike started his own media & development company, Watercourse, which acted as a consultant for book publishing, magazines, and newspapers. At the same time, his work in the environmental sector brought him into research, strategic planning, evaluations, and fundraising for a range of sectors, including mining & energy; water & sanitation, solid waste management, safety & security; and food security.

After facilitating a delegation of Western Cape activists to the 2002 World Summit for Sustainable Development in Johannesburg as part of the Environmental Justice Networking Forum, Mike was invited by the European Greens to attend the P7 Summit in Nairobi, hosted by the late Wangari Ma'athai's Green Belt Movement. In 2009, he was a South African delegate to the founding conference of the African Anti-Uranium Mining Alliance in Tanzania, before being appointed National Chairperson of the South African Coalition Against Nuclear Energy (CANE).

In 2007, Mike moved to the coastal resort town of Plettenberg Bay, where he initiated the Watermark Press, a specialised service agency for self-publishing authors, limited to under 500 units at a time.

Eirini Karamouzi is Professor of Contemporary European History at the American College of Greece/University of Sheffield. She is the author of *Greece, the EEC and the Cold War: The Second Enlargement* (2014) and co-editor of *The Balkans in the Cold War* (2017). She has held fellowships at EUI, LSE, Yale University, and the University of Tampere. She has published extensively on issues relating to the Cold War, peace mobilization and civil society in Southern Europe. She co-directs an AHRC network grant on global histories of peace and anti-nuclear activism.

Chloë Mayoux is a global historian of technology and empire, currently serving as a Postdoctoral Fellow in History and Public Policy at the Harvard Kennedy School. She completed her PhD in International History at the London School of Economics, which included a Visiting Fellowship at Sciences Po Paris's Centre for History. Based on archival work in Europe and Africa, her dissertation examined the relationship between the nuclear age and decolonisation. Chloë holds a BA in European Studies from King's College London, a Certificate in International Affairs & Strategy from Sciences Po Paris, and a Master's in Global and Imperial History from the University of Oxford.

Abdul S. Minty was born in Hartebeesfontein on the 31st of October 1939, in what is now called the

Limpopo Province. He grew up in Johannesburg and left South Africa in 1958 for Britain to join the anti-apartheid movement and pursue his studies. He holds a BSc (Econ) degree in International Relations (University College, London) and a MSc (Econ) in International Relations from the same institution.

Minty was a stalwart of the anti-apartheid struggle, and he played an instrumental role in exposing the apartheid government's nuclear armaments programme. He was a leading figure in South Africa's unique role internationally as an exemplar of voluntarily dismantling its nuclear armaments in the interests of world peace (the first country in the world to have done so) and the use of science for human development, rather than destruction. He played a pioneering role in the development of South Africa's principled position on advancing the peaceful uses of nuclear energy and on the need for nuclear weapon states to disarm in a transparent and verifiable manner.

Between 1962 and 1994, Minty was the Honorary Secretary of the British Anti-Apartheid Movement, and he played a central role in exposing and isolating the apartheid state and supporting the struggle against apartheid. Amongst others, he worked for the International Defence and Aid Fund, which provided legal and humanitarian support for those fighting against the apartheid state.

Minty also led the lobbying of the International Olympic Committee (IOC), which was instrumental in securing South Africa's suspension from the Olympic movement, and the wider sports boycott against the apartheid state. As apartheid South Africa rapidly built up its military strength, he undertook research on its defence establishment and the support it received from external sources. His study of South Africa's Defence Strategy, published in 1969, attracted wide attention and helped develop the campaign by the Anti-Apartheid Movement for the abrogation of the Simonstown Agreement between Britain and South Africa and the ending of all military links with South Africa. Minty was called to give evidence as an individual expert on four occasions to the United Nations (UN) Security Council Arms Embargo Committee between 1977 and 1994. From 1979 to 1994, he was the Director of the World Campaign against Military and Nuclear Collaboration with South Africa. During this period, he worked closely with the African Group, the Non-Aligned Movement, and other members of the International Atomic Energy Agency (IAEA) over South Africa's nuclear programme and lobbied for sanctions against the regime. He was instrumental in the removal of South Africa from the designated seat for Africa on the IAEA Board of Governors.

In the post-apartheid period, Minty was a key advisor to South Africa's delegation at the 1995 Review Conference of the Non-Proliferation Treaty (NPT) and then led South Africa's delegation at the subsequent Review Conferences in 2000 and 2005. He played a pioneering role in the development of South Africa's principled position on advancing the peaceful uses of nuclear energy and on the need for nuclear weapon states to immediately disarm in a transparent and verifiable manner. In 2006, Minty was elected president of the IAEA's General Conference, which marked the beginning of activities commemorating the IAEA's 50th anniversary.

One of Minty's keen interests at the IAEA was nuclear safeguards, and he was drawn into re-establishing trust between the Agency, some of its key members and the Republic of Iran. At one point he was the only board member who could talk to both sides in this stand-off. In the post-apartheid period, Minty had a distinguished career in the public service in South Africa. He was the Deputy Director-General: Ambassador and Special Representative: Disarmament in South Africa's Department of Foreign Affairs. Ambassador Minty chaired the South African Council for the Non-Proliferation of Weapons of Mass Destruction, he was a member of the International Atomic Energy Agency (IAEA) Board of Governors as well as a member of the Board of the South African Nuclear Energy Corporation of South Africa (NECSA). He took a special interest in promoting programmes applying nuclear technology in development, for example in agriculture, public health, and hydrology. Minty further chaired the Space Council and the Non-Proliferation Council for several years, holding these positions because of his deep understanding of multilateralism and

his thorough knowledge of global security and its connections with trade. Minty was also the South Africa's Ambassador and Head of the South African mission to the United Nations in Geneva and the Personal Representative of the President to the New Partnership for Africa's Development (NEPAD) Steering Committee and the representative of the Department of Foreign Affairs on the National Conventional Arms Control Committee (NCACC). In recognition of his long-standing contributions to the struggle against apartheid, he was awarded an Honorary Doctorate Degree by the University of the Witwatersrand in 2023.

Joelien Pretorius is a Professor in the Department of Political Studies at the University of the Western Cape, South Africa, where she teaches International Relations and Security Studies. She holds a PhD from the University of Cambridge (UK) and is on the executive committee of the South African chapter of Pugwash. Her research focuses foremost on nuclear politics, but she also publishes more broadly on security and foreign policy.

Melanie Reddiar is Head of the Secretariat to the South African Council for the Nonproliferation of Weapons of Mass Destruction, which is the regulatory body responsible for implementation of South Africa's nonproliferation obligations. With over 20 years of experience in strategic trade controls, specialised knowledge in counter-proliferation mechanisms, and qualifications in Chemistry, Biotechnology and Management, Melanie leads the Secretariat in implementing South Africa's international and national nonproliferation of weapons of mass destruction obligations. In this role, she works closely with non-proliferation stakeholders both nationally and internationally. At the national level, Melanie facilitates technical and outreach activities for industry compliance with the regulatory systems that the Council oversees. At the international level, Melanie has represented South Africa in various roles at meetings of the different treaties and conventions and multilateral export control regimes covering nuclear, chemical, biological weapons as well as missile / delivery systems. Melanie is also a PhD student in the Department of Politics and International Relations at the University of Johannesburg.

Michaelan Sinnett is a master's student in the Department of Political Studies at the University of the Western Cape. She received her BA and honours degree in Political Studies at UWC. She has a deep-seated interest in non-proliferation, nuclear disarmament, and nuclear verification. Michaelan is passionate about exploring the role that civil society can play in advancing nuclear disarmament initiatives. Her current research focuses on developing effective strategies for nuclear disarmament verification to ensure global compliance with disarmament treaties.

Noël Stott is a Senior Researcher for VERTIC's Verification and Monitoring Programme with a current focus on harnessing and sustaining countries' capacity to contribute to nuclear disarmament verification (NDV). The project aims to support long term capacity-building and education and to help foster a new generation of nuclear experts in regions of the Global South by developing a network of research and innovation 'hubs' that will contribute to NDV nationally, regionally and internationally. For more than 14 years, prior to joining VERTIC. Noel worked for the African-based Institute for Security Studies' on the challenges facing African States by the proliferation of conventional weapons and items related to weapons of mass destruction. In 2007, he established and led the ISS' programme on 'Africa's Development and the Threat of Weapons of Mass Destruction.' This programme aimed to enhance Africa's role in international efforts to strengthen weapons of mass destruction disarmament and non-proliferation initiatives in the context of Africa's developmental imperatives through the provision of primary research, policy recommendations and training activities.

Anna-Mart van Wyk is a nuclear historian and Professor of International Relations at the University of Johannesburg, South Africa. Her doctoral thesis investigated the implementation of the 1977 United States arms embargo against South Africa and its impact on US-South African relations. She subsequently went on to specialise in South Africa's nuclear history, and teaches courses in international conflict and arms control and disarmament. Her multi-national archival research has been published in numerous international publications and she is a regular invited speaker at

international conferences. She is a former Public Policy Scholar of the Woodrow Wilson International Center for Scholars and a collaborator in various international research projects, including the Nuclear Proliferation International History Project (NPIHP), the Consortium on Rewriting the History of the Nuclear Non-Proliferation Treaty, and Global Histories of Peace and Anti-Nuclear Activism. She is also a member of the African Nuclear Disarmament Verification Hub.

Jo-Ansie van Wyk is a Research Professor in International Politics, Department of Political Sciences, University of South Africa, Pretoria, South Africa. She has published widely on South Africa's nuclear history and contemporary nuclear-related developments, as well as the country's nuclear diplomacy, and foreign policy. Her latest book is *Key Issues in African Diplomacy: Developments and Achievements* (Bristol University Press, 2024), co-edited with Sven Botha.

Rodney Wilkinson planted four bombs inside the Koeberg nuclear power station in Cape Town in 1982. It was a meticulously planned act of sabotage as part of ANC military wing uMkhonto weSize's struggle against apartheid. It was the only act of 'nuclear terrorism' ever carried out on the African continent. It caused damages of at least R500-million and pushed the start-up of the power station back with almost two years. uMkhonto weSize listed the event as one of its greatest triumphs, and it has been described as one of only a few successful attacks on nuclear facilities in world history. Wilkinson's identity as the so-called 'Koeberg bomber' was only made public in 1995. He was pardoned and worked for the National Intelligence Agency for much of his post-apartheid career.

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FOREWORD

By the Guest Editors, Anna-Mart van Wyk, University of Johannesburg,
Luc-André Brunet, The Open University, Eirini Karamouzi, University of Sheffield.

Africa's role in nuclear debates and in opposing nuclear weapons is at once consequential and overlooked. Since the 1996 Treaty of Pelindaba, the African continent has been a Nuclear Weapons Free Zone (NWFZ), providing a powerful example of opposition to nuclear weapons on the world stage. More recently, African governments have played leading roles in the implementation of the UN Treaty on the Prohibition of Nuclear Weapons (TPNW), with the aim of worldwide nuclear disarmament. Nuclear debates are becoming more pressing in a number of African countries, as Rosatom, Russia's state-owned nuclear power company, is building or plans to build new nuclear power plants in Egypt, Burkina Faso, Kenya and Rwanda, amongst others. In South Africa, plans are underway to increase nuclear energy to 2,500 megawatts, while the Koeberg Nuclear Power Station is undergoing refurbishment in order to extend its operating life to 2045.

Despite Africa's importance in these nuclear debates, the continent's nuclear history remains relatively unfamiliar. South Africa occupies an important place in the scholarly literature on nuclear history. It is the only African country to have developed its own nuclear weapons. It also remains the only country in the world that has chosen to unilaterally dismantle its own nuclear weapons, a landmark decision in the history of nuclear disarmament. It has also played a leading role in the history of nuclear power in Africa, with the Koeberg Nuclear Power Station being the first – and to date, the only – nuclear power plant on the continent.

While South African nuclear history is an exciting field, existing studies have largely focused on its

political, diplomatic and scientific dimensions. By contrast, the study of civil society and particularly of activism against nuclear weapons or nuclear power in South Africa has been largely overlooked. This is equally true of anti-nuclear activism elsewhere in Africa, which remains strikingly understudied.

Meanwhile, recent years have seen an exciting proliferation of studies of anti-nuclear and peace activism during the Cold War. The focus of these studies has overwhelmingly remained on Western Europe and the United States, however, with an emerging literature on anti-nuclear activism in the Pacific. Africa, by contrast, has received scant attention by historians of anti-nuclear activism. In his landmark three-volume study of the world nuclear disarmament movement, for example, Lawrence Wittner in *Toward Nuclear Abolition: A History of the World Disarmament Movement, 1971 to the Present* (Stanford: Stanford University Press, 2003), devotes a single paragraph to the continent, noting that "the movement had little presence in Africa" and suggesting "the nuclear arms race had less relevance and many other issues seemed more urgent" (Wittner, 2003: 13).

This special issue addresses these lacunae by exploring the history of anti-nuclear activism in Africa, with a particular focus on South Africa. In an effort to de-centre the history of anti-nuclear activism, the editors of this special issue and other academics around the world set up the research project 'Global Histories of Peace and Anti-Nuclear activism', funded by the British Arts and Humanities Research Council (AHRC). As part of this project, we organised a two-day workshop hosted at the Johannesburg Institute of Advanced Study at the University of Johannesburg in April 2023. The workshop marked what we believe is the first academic event in South Africa that brought together academics, activists, and policymakers, to discuss the issue of anti-nuclear activism. These fruitful exchanges between scholars and stakeholders were revelatory for those present, and we have sought to capture the diversity of views and methods in this special issue. As such, this special issue includes cutting-edge research by leading and emerging scholars, opinion pieces and personal reflections by activists, and the testimony of those involved in some of the continent's most consequential acts of anti-nuclear activism. This plurality of voices and approaches provides a multi-faceted and unprecedented analysis of anti-nuclear activism in Africa.

The special issue opens with four peer-reviewed articles by academics. Anna-Mart van Wyk and Jo-Ansie van Wyk explore the anti-nuclear weapons position and activism of the African National Congress (ANC) throughout the apartheid era. Chloë Mayoux explores the diplomatic ramifications of France's nuclear weapons testing in Algeria in 1960—tests which stoked the rise of anti-nuclear sentiment in Africa. Turning to the contemporary period, Micaelin Sinnett and Joelien Pretorius analyse the role of African transnational civil society in the International Campaign to Abolish Nuclear Weapons (ICAN) and the TPNW. Concluding this section, Melanie Reddiar reviews South Africa's non-proliferation policy and strategic trade controls. These four research articles all focus on the overlooked importance of anti-nuclear positions and activism in Africa since the beginning of the nuclear age.

The second section of this special issue consists of four eyewitness accounts by those with first-hand knowledge and experience of anti-nuclear activism in Africa. Nola Dippenaar and Joelien Pretorius discuss African involvement in Pugwash, the international and Nobel Peace Prize-winning organisation working for nuclear disarmament in an opinion piece. This is followed by Noël Stott's account of the development of the Treaty of Pelindaba, which established Africa as a NWFZ. Mike Kantey explains the formation and development of Koeberg Alert and the movement to stop nuclear power in South Africa since the 1980s. Keith Gottschalk analyses the changing dynamics of decision-making around nuclear policy in South Africa from the apartheid era to the present. Together, these accounts highlight the importance of African activism against nuclear weapons and nuclear power during and after the Cold War.

The final section features testimonies of those responsible for some of the most significant incidents of anti-nuclear activism in South Africa and indeed in Africa as a whole. Abdul S. Minty, a

distinguished diplomat, explains his work leading the World Campaign Against Military and Nuclear Collaboration with South Africa. Working in exile during the apartheid era, Minty worked through the UN, the IAEA and the Commonwealth, among others, to raise awareness of South Africa's covert nuclear weapons programme and to prevent countries from aiding the regime's military and especially nuclear programmes. Next, Renfrew Christie and Rodney Wilkinson share their recollections of how they bombed the Koeberg Nuclear Power Plant, then still under construction, in 1982. These fascinating oral histories provide unprecedented insights into the nature of anti-nuclear activism in South Africa, and particularly how this was inseparable from opposition to the apartheid regime.

Taken together, this special issue provides the most wide-ranging account to date of anti-nuclear activism in Africa. It should be of interest to scholars, activists and members of the public, and it is our hope that it encourages future research on this important topic.

The ANC and Apartheid South Africa's Nuclear Weapons Program

By Jo-Ansie van Wyk and Anna-Mart van Wyk

Abstract

The African National Congress (ANC) was established in 1912 and banned by the apartheid government in 1960. Many members of the organisation went into exile, and it continued underground. The organisation became synonymous with the anti-apartheid and liberation struggle in South Africa until its unbanning in 1990. The organisation had early on adopted an anti-nuclear weapons position and its awareness of, and resistance against, the apartheid regime's secret nuclear weapons program became one of the pillars of its global struggle to end apartheid. This paper traces the early development of the ANC's position on nuclear energy and nuclear weapons, before discussing its international anti-nuclear initiatives, including its armed struggle and attack against the Koeberg nuclear power plant close to Cape Town, during its construction.

Introduction

The National Party (NP) that came to power in South Africa in 1948 moved rapidly to entrench apartheid as a political, social, legal, and constitutional system. Early opposition to apartheid included, inter alia, the Defiance Campaign, eliciting government responses in the form of death sentences, incarceration, violence, terror, and further expansion of white privilege. In 1974, Prime Minister John Vorster approved the construction of a single peaceful nuclear explosive (PNE) device, mimicking the United States' Project Plowshare, which was aimed at developing techniques to use nuclear explosives for civil engineering purposes (Van Wyk, 2018; The Plowshare Program, n.d.). Four years later, following a perceived deterioration in its position of power in the Southern Africa region, and an escalating threat perception, the apartheid government (also referred to as Pretoria in this article) decided to embark on a top-secret nuclear

weapons programme as a deterrent, building on a strong civil nuclear base developed since the early 1960s. The African National Congress (ANC) followed these activities closely, and set out to influence international thought by framing or constructing the apartheid government and its nuclear weapons program as a threat to human rights and global security.

The focus of this article is the origins of the ANC's position on nuclear weapons and reaction to Pretoria's nuclear weapons programme. As a point of departure, it must be noted that the ANC's 'nuclear struggle' cannot be divorced from its larger liberation struggle. However, a pertinent focus on this aspect of the liberation struggle provides valuable insights into the transnational activism and anti-nuclear struggles of non-state actors, thus contributing to the historiography of the liberation struggle in South Africa. The organisation's tactics to express its anti-nuclear position, are discussed. These tactics include international pressure and an armed struggle, which included attacks on South African nuclear installations. A complete nuclear history of the ANC has not been published. However, archival research on South Africa's nuclear history is notoriously difficult (Fig, 2009, 56-87; Gould, 2009: 88-121) as documents were destroyed during the secret nuclear disarmament process, and there are considerable challenges in accessing surviving government documents, coupled with the ANC's banning and exile between 1962 and 1990. Consequently, this article is based on secondary sources and primary sources that are publicly available. It represents an ongoing attempt to contribute to South Africa's nuclear history in the context of apartheid, the liberation struggle, decolonisation, and the Cold War.

The ANC and the Cold War

The history of the apartheid government and of the ANC's international human rights struggle aimed at ending racial discrimination in South Africa are well-documented and therefore not detailed here.[1] However, the history of Southern Africa cannot be divorced from the bigger Cold War theatre. As Africa shook off the shackles of colonialism throughout the 1950s and 1970s, the anti-communist apartheid government feared a communist take-over of Southern Africa. All of this escalated after the ANC and other liberation organisations were banned on 4 August 1960, leading to many members of these organisations flocking into exile across Southern Africa. Pretoria's sense of insecurity further increased due to the rise of the newly independent and vocal Afro-Asian bloc in the United Nations, which supported South African liberation movements and isolated the apartheid state. To counter this sense of insecurity, the apartheid government expanded its techno-nationalist military-industrial complex. This complex was used for brutal suppression of anti-apartheid actors and states in South- and Southern Africa.

After its banning, the ANC realised that Pretoria's apartheid policies would increasingly subjugate the Black majority in South Africa. The immorality of apartheid, asymmetrical state-society relations, appeals to humanity, calls for equality, and the conceptualization of an armed struggle as a "just war" became moral justifications for the ANC to launch an armed wing, known as Umkhonto we Sizwe (meaning "Spear of the Nation", henceforth

> "In 1974, Prime Minister John Vorster approved the construction of a single peaceful nuclear explosive (PNE) device, mimicking the United States' Project Plowshare, which was aimed at developing techniques to use nuclear explosives for civil engineering purposes (Van Wyk, 2018; The Plowshare Program, n.d.)."

MK), on 16 December 1961. The choice of date was symbolic: it was an important date in Afrikaner nationalism, as it commemorated a victory over the Zulu nation in 1838.

Under Prime Minister John Vorster, the apartheid government's nuclear ambitions developed in response to Cold War threat perceptions, the ANC's armed struggle, and the Border War, which broke out in 1966 on the border between Angola and South African-administered Southwest Africa. After the June 1976 Soweto Uprising, young refugees fled to the Front-Line states (Walters, 1997; Shearar, 1993), where many joined MK. They received training by Cuban and Soviet instructors in Angola and later by ANC and MK instructors, while other operatives attended specialized courses in Algeria, Bulgaria, Cuba, the German Democratic Republic (GDR), Hungary, the Soviet Union, and the former Yugoslavia (Motumi, 1994). The ANC's closest relations was with the Soviet Union, which was also the major arms supplier to the ANC (Filatova & Davidson, 2013: 298-339).

During the 1970s and 80s, the South African Defence Force (SADF) conducted regular cross-border raids and attacks on ANC bases in neighbouring countries, and fought a Border War with Angola. The Cold War had arrived in Southern Africa, and the region had become a proxy theatre for conflict between the socialist and capitalist blocs. Soviet and Cuban support for liberation movements in Southern Africa, as well as Angola and Mozambique's independence from Portugal, became major security threats to the apartheid state. Pretoria's sense of insecurity and isolation deepened amidst these Cold War rivalries, and, coupled with perceived security threats made against the country (known as "Total Onslaught"), it embarked in 1978 on a secret nuclear weapons program as part of its so-called "Total Strategy" (Von Wielligh & Von Wielligh-Steyn, 2014). The question is – how did the ANC respond to this?

The Emergence of the ANC's Anti-Nuclear Weapons Position

As early as the 1950s, the Congress Movement, which consisted of a conglomeration of anti-apartheid organisations, including the ANC, arranged anti-nuclear peace and protest meetings in South Africa. Hence, the democratic movement in South Africa opposed nuclear proliferation long before there was any prospect of the apartheid government developing an atomic bomb (Minty, 1994). A 1958 ANC report confirms this early nuclear consciousness, noting that: "it is a matter of regret and great concern to all peace-loving people of the world that the great powers … have not found an answer to the question of disarmament and prohibition of the use of nuclear weapons" (ANC, 1958). Furthermore, in 1961, Chief Albert Luthuli, the President of the ANC (1952-1967) mused that if ever he became the Prime Minister of South Africa, he would seek to bring about the banning of nuclear warfare and work for some degree of disarmament (Luthuli, 1961).

Elsewhere on the continent, other events also impacted the ANC's early anti-nuclear position, including the independence of numerous Anglophone states, which endowed many African states, leaders, and liberation movements with greater confidence to assert African agency and Pan-African ambitions, interests, and norms on the international stage. In contrast, the Francophone states were still held in the geo-strategic and political grip of France, who continued with nuclear tests in the Sahara Desert. These tests became a catalyst for African states' positions on nuclear weapons (as discussed in detail by another paper in this special edition). On 25 May 1963, the Organisation of African Unity (OAU) was established. Its objectives included decolonisation, an end to apartheid in Southern Africa, and denuclearization across Africa (OAU, 2002). To achieve the third objective, African states, and liberation movements, including the ANC, supported the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which was signed in 1968 and entered into force in 1970 (Ogunbadejo, 1984). Besides these developments, the decade also saw the inauguration of South Africa's first nuclear reactor and considerable nuclear developments in the country. On 18 March 1965, South Africa's first nuclear reactor went critical, and on 5 August 1965, Prime Minister Hendrik Verwoerd, widely regarded as the 'father' of apartheid, inaugurated the South African Fundamental Atomic Research Installation (SAFARI-1), a nuclear research reactor operating on highly enriched uranium (HEU), at Pelindaba near Pretoria (Von Wielligh and Von Wielligh-Steyn, 2014). Pretoria skirted the NPT, only signing it in June 1991, after its secret nuclear arsenal was destroyed.

Redefining and Internationalising the Liberation Struggle

African support for South African liberation movements, the Ghana-led opposition to French nuclear tests in the Sahara Desert, and the OAU Cairo Declaration (1964) on the denuclearisation of Africa contributed to the ANC's redefinition of its liberation struggle and its position on nuclear weapons. Whereas the 1950s and 1960s can be described as the first phase of the ANC's international engagement on nuclear issues, the 1970s emerged as a second phase during which the ANC redefined its liberation struggle to include an anti-nuclear struggle. Moreover, the organisation increasingly internationalised its cause. During this time, the ANC adapted to global and regional Cold War realities. Given the apartheid state's closed nature, the ban on the ANC, limited press freedom, and South Africa's global isolation against the background of Cold War paranoia, information became a rare but especially important commodity in the ANC's international relations. To convince the international community of Pretoria's nuclear intentions, the ANC collected information and intelligence on the regime's nuclear development and its much-denied nuclear-related collaboration with Western countries, which continued despite UN arms embargoes against South Africa (SADET, 2010; SADET, 2015).

Pretoria's heavy-handedness prompted the ANC leadership to instruct some of its members in Britain to establish the Boycott South Africa Movement (BSAM) in June 1959. The BSAM changed its name to the British Anti-Apartheid Movement (AAM) in 1960, following the Sharpeville Massacre on 21 March 1960. The AAM became an important instrument in the internationalisation of the ANC's liberation struggle. This enabled the ANC to project and communicate their demands for democracy, as well as information about the ills of apartheid and South Africa's suspected nuclear weapons program, to a global audience, including state and non-state actors (See AAM Archives at the Bodleian Libraries, Oxford).

The ANC's information and intelligence gathering on South Africa's nuclear development started early. Following the bilateral cooperation agreement between the United States (US) and South Africa, signed under the Atoms for Peace program in

> "On 25 May 1963, the Organisation of African Unity (OAU) was established. Its objectives included decolonisation, an end to apartheid in Southern Africa, and denuclearization across Africa (OAU, 2002)."

1957, the ANC monitored collaboration and nuclear scientist and technologist visits between the US and South Africa, and between the latter and West Germany (Minty, 1994). The ANC's dissemination of information accelerated after Vorster announced in July 1970 that South African scientists had developed a secret and innovative process to create HEU concentrate – a crucial element in a nuclear bomb (DIRCO, 20 July 1970). In 1975, the pilot uranium enrichment plant that was built to test the process was announced as operational, and plans to build a fully commercial plant were also announced (NTI, n.d.). This prompted the ANC to publish a special issue of its official journal, *Sechaba,* in November 1975, which contained detailed accounts and copies of secret documents concerning nuclear collaboration between South Africa and West Germany, including assistance to build the commercial enrichment plant, as well as an agreement to provide pre-revolutionary Iran with uranium oxide in exchange for financial participation in the plant (*Sechaba*, 1975). West Germany, France, the US, the United Kingdom (UK), and Italy were also accused of complicity in South Africa's nuclear development since the 1960s (*Sechaba*, 1975). The ANC concluded that the apartheid government, "which has not hesitated to use the most ruthless terror against its own people, will not flinch, when driven to desperation,

> "there is now shocking news that the racist regime is about to test its own atomic bomb…"

from unleashing a holocaust upon the continent of Africa and the world" (*Sechaba*, 1975). Therefore, it petitioned the UN for action against Pretoria, as it posed a threat to international peace and security. A subsequent edition of *Sechaba* included a report by the UN Special Committee against Apartheid (established in 1962), which outlined international nuclear cooperation with South Africa, its uranium mining and enrichment and details pertaining to the construction of a nuclear power plant at Koeberg, near Cape Town (*Sechaba*, 1976).

Meanwhile, the ANC worked hard to harness support at the UN, which was deeply engaged with the question of apartheid through its Special Committee Against Apartheid and passed numerous resolutions aimed at sanctioning and isolating South Africa. The ANC was concerned about the Western states' veto power and decided to target international public opinion, especially in Western states known to support South Africa. The Special Committee supported this, and in 1966, the UNGA endorsed an international campaign against apartheid "involving governments and the public" (Reddy, 1994: xiii). Subsequently, the ANC established a permanent mission to the UN and leaders of the organisation were invited to all activities of the Special Committee. According to Enuga Reddy, the Principal Secretary of the Special Committee since 1963, and Head of the UN Centre against Apartheid, these leaders enjoyed "full rights of participation" and election as officers (Reddy, 1994: xiii). This was an unprecedented practice as no UN Committee had ever developed such "intimate relations" with a non-governmental organisation. He credited Abdul S. Minty (refer to the transcript of an interview with Minty in this special issue) for fostering these relations (Reddy, 1994: xiii). Minty was an exiled South African and prominent anti-apartheid activist who became Honorary Secretary of the British AAM in the 1960s, and later established the World Campaign Against Military and Nuclear Collaboration with South Africa in 1979. He did not have a formal affiliation with the ANC, but passed information on to them, and as such, supported the ANC's efforts (Onslow, 2013).

The UNGA requested the Secretary-General to produce annual reports on South Africa's nuclear capability. With links to the Special Committee and other UN entities established, the ANC fed the UN information unceasingly, through various means, including on nuclear developments in South Africa. Various senior ANC members also regularly addressed different UN forums. In one such address to the UNGA, on 26 October 1976, ANC President Oliver Tambo highlighted the Soweto uprising and the subsequent violent crackdown on protesting Black students. Tambo referred, inter alia, to international collaboration with South Africa to "fulfil its ambition to produce the atomic bomb" (Reddy, 1991: 68-69). Tambo also reiterated the ANC's call on the international community to terminate military collaboration with Pretoria, which constituted a threat to world peace and international security due to its violent domestic crackdowns and escalating cross-border raids into other countries in Southern Africa (Reddy, 1991: 68-69). A few months later, on 25 March 1977, the ANC's Special Representative to the UN, Johnstone Mfanafuthi (Jonny) Makatini, addressed the UNSC. *Inter alia*, he described the apartheid government of being equipped with a military nuclear capability (DIRCO, 2012). (It is not clear on what basis Makatini made this allegation, but it likely had to do with the uranium enrichment alluded to earlier). Makatini addressed the UN annually, and maintained his contention that, despite embargoes and sanctions, Western states continued to support and collaborate with the apartheid government on nuclear issues (DIRCO, 2012).

Meanwhile, the Atomic Energy Board (AEB) was preparing an underground nuclear explosive testing facility at Vastrap in the Kalahari Desert for a planned cold test of a PNE in August 1977. This was envisaged to be followed by a full test with HEU in 1978 (Albright and Stricker, 2016: 74) but these plans were abandoned in July 1977 when a Soviet satellite discovered the test site (Pabian, 2015: 37). Even before Moscow alerted Washington to the existence of the test site, Tambo announced at a World Conference for Action Against Apartheid in Nigeria on 3 August 1977 that "there is now

shocking news that the racist regime is about to test its own atomic bomb, thanks to the extensive scientific, technological and financial support given by Western imperial powers to the racists' nuclear programme" (Reddy, 1991: 80). It is not clear how Tambo knew about the impending test or the discovery of the test site, but it is highly probably that he was tipped off by the ANC's ally, the Soviet Union. In March 1978, at the launch of the UN International Year against Apartheid, Tambo reminded the international community that "the world is confronted by the reality that the racist regime has the capacity to produce nuclear weapons and has acquired the means of their delivery" (Tambo, 1978: 28).

On 4 November 1977, the UNSC passed Resolution 418, which imposed a permanent and binding arms embargo against South Africa under Chapter VII of the UN Charter. It was declared that the "acquisition by South Africa of arms and related material constitute[d] a threat to the maintenance of peace and security." It further noted that the UNSC was "gravely concerned that South Africa [was] at the threshold of producing nuclear weapons," amongst other concerns, and decided "that all States shall refrain from any cooperation with South Africa in the manufacture and development of nuclear weapons" (Van Wyk, 2005: 89). Subsequently, Tambo and Makatini continuously argued, with support from Minty, that some states assisted the apartheid regime in building up its military and nuclear complex, despite sanctions and the 1963 and 1977 arms embargoes. Makatini accused countries collaborating with Pretoria of becoming "active accomplices in all the crimes committed by that regime against the South African people and against neighbouring states" (DIRCO, 2012: 58-59).

In 1979, a US Vela satellite detected a suspected nuclear explosion close to South Africa's sub-Antarctic Prince Edward Island in the Indian Ocean. Pretoria denied any complicity, but the incident granted the ANC more ammunition. It recounted information received from a "former Russian spy in the South African Navy" (i.e. Dieter Gerhardt) that South Africa provided logistical support to Israel during the test (Albright, 1994: 149). The ANC also launched an extensive campaign to terminate South Africa's membership of the International Atomic Energy Agency (IAEA) (Minty, 1994). Their success was limited: the IAEA's only steps was to refuse to accept the South African delegation's credentials, and replacing South Africa's seat on the Board of Governors with Egypt (Minty, 1994).

The ANC's Armed and Anti-Nuclear Weapons Struggle

By the 1970s, the ANC had a clear position on nuclear weapons and had established a major transnational network. But it took 15 years of active lobbying, both at the UN and elsewhere, for the UNSC to institute the mandatory arms embargo, and for MK to gain new momentum. In 1978, following a visit by ANC leaders to communist leaders in Vietnam, the ANC released a Politico-Military Commission Report known as the Green Book (ANC, 1997; O'Brien, 2003: 44). The report signalled a new phase in the ANC's approach to the apartheid government, with a focus on using a combination of political and military action to weaken its grip on political, economic, social, and military power (ANC, 1997). Following the release of the Green Book, MK resumed operations in South Africa, known as "G5 Operations."

A related development was the 1979 establishment of the 19-member MK Special Operations Unit (SOU), which was also called the Solomon Mhlongo Unit (TRC, 2000). It had approximately 60 members and its own command structure, which reported directly to the president of the ANC. Details of operations were classified and only the SOU Command had full knowledge of them. According to Aboobaker Ismail, the purpose of the SOU was to attack "strategic targets of an economic and military designed nature to have maximum impact" (Ismail, 2013: 33). Attacks would be executed by small units consisting of between two and six MK members. In 1982, the SOU established the Dolphin Unit in Durban as an additional internal unit to operate in South Africa, under the general command of Aboobaker Ismail, who had the freedom to identify targets and recruit members (TRC, 2000). Meanwhile, a new MK military headquarters was established in Lusaka, Zambia. Additional facilities were also established in Angola, Mozambique, and Tanzania (Ismail, 2013: 33).

The establishment of the SOU resulted in an increase in sabotage incidents. It is estimated that 150 to 160 attacks took place between 1976 and 1982 (ANC, 1997; Lodge, 1983/4: 153-154), on targets including

police stations, fuel storage facilities, electric power stations, railroads, the Army Headquarters, the Air Force headquarters, and the Koeberg nuclear power station. For the ANC, these were "spectacular operations that would hit the economy hard" (ANC, 1997). Moreover, these attacks were regarded as evidence of a "new level in the armed conflict" between the apartheid government and the ANC and its allies (Tambo, 1983).

Of relevance to this contribution, is the 1982 attack on the Koeberg nuclear power station, which had been under construction near Cape Town (Van Wyk, 2015; ANC, 1997). As international suspicion towards South Africa's nuclear development increased, the construction of Koeberg became a focus area for the ANC's actions against Pretoria. It was suspected that Koeberg and other civilian programmes may have been a cover for a nuclear weapons program, and that Koeberg was geared to produce weapons-grade plutonium (Minty, 1994; Stam, 2016). These sentiments were shared by Renfrew Leslie Christie, who would play a major role in planning the bombing of Koeberg following observations during guard duty as a conscripted soldier of the SADF, at an ammunition dump east of Johannesburg, which convinced him that Pretoria was developing nuclear weapons (Smirnova, 2018; Anti-Nuclear Activism Conference, April 2023).[2] He subsequently started 'hunting' for "apartheid's nuclear bombs" (SAHO, n.d.) while completing his master's and doctoral studies on aspects of electrical power systems in South Africa (SAHO, n.d.; Stam, 2016). His studies stemmed from his suspicion that Pretoria was using these systems to enrich uranium. As the uranium enrichment process needs enormous quantities of cheap electricity, Christie figured that monitoring the facilities capable of producing such power was the best way to keep an eye on Pretoria's nuclear endeavours (Stam, 2016). He was allowed to do research for his postgraduate studies at South Africa's state-owned power utility, Eskom, which gave him an excuse to investigate Eskom's plans on uranium enrichment (SAHO, n.d.). He used his access to Eskom's libraries and archives to track the nuclear program's progress, by monitoring how much electricity was being used for uranium enrichment. He then used the information to calculate when there would be enough uranium for a nuclear bomb (Stam, 2016). Christie concluded that "the apartheid government ha[d] all it need[ed] to make nuclear weapons" (Smirnova, 2018).

After completing his doctoral studies at Oxford University, Christie returned to South Africa in 1979 and began spying on Pretoria's nuclear program for the ANC. Based on his calculations, which he proudly considered to be "very accurate" (Smirnova, 2018; Stam, 2016), he informed the ANC step-by-step of the progress being made at Koeberg. But, within three months of his arrival back in South Africa, a double agent outed Christie and he was arrested under the Terrorism Act. He was found guilty on multiple charges and spent seven years in prison. When he was arrested, he had sensitive documents in his possession, which pertained to a study of locations where nuclear weapons of diverse sizes could be detonated in South Africa without damaging physical property. The study looked at seismic effects and where an explosion would affect different ethnic groups (i.e., by apartheid-defined racial groups – White, Black African, Indian, etc.). According to Christie, the study could be read simply to find a place in the country where Pretoria could safely test bombs, but it could also be read as a potential strategy for ethnic cleansing (Stam, 2016; McDonald, 2013). It is unclear where he obtained the documents. He later revealed how, after he was arrested, he wrote a carefully crafted confession, in which he attempted to make public the information he had gathered on Pretoria's nuclear program. In the confession, Christie offered recommendations to the ANC on what to do about the program (Smirnova, 2018). He also "included as explicit instructions as he could on how to bomb the Koeberg nuclear power station" without endangering the people of Cape Town (Stam, 2016).

During Christie's trial, "in an effort to demonize [him] to the public, the judge read his full confession out loud" (Stam, 2016; Smirnova, 2018). This was exactly what Christie wanted, as it helped his recommendations to be printed and spread to the ANC, who used it two-and-a-half years later to blow up a part of Koeberg (SALO, 6 June 2016). The bombing fell on the shoulders of Rodney Wilkinson and his girlfriend, speech therapist Heather Gray (Smirnova, 2018). Wilkinson has stated that his sympathies lay with the ANC from the start, but Christie's arrest in 1979 inspired him to act

(Birch, 2015; Anti-Nuclear Conference, April 2023). Wilkinson was successful in gaining employment as a draftsperson at Koeberg, despite his anti-nuclear sentiments and a history of desertion from the SADF. After 18 months, he stole a set of Koeberg's building plans. These were presented to the ANC's Mac Maharaj during a meeting in Zimbabwe, with a proposal to use it to plan an attack on Koeberg (O'Malley, 2003).

Maharaj was suspicious of infiltration by the South African security establishment, and put Wilkinson and Gray through a vetting process. As part of the process, the building plans were passed on to SOU Commander Joe Slovo, with a warning that Koeberg would become operational in the next six months. The stolen plans were authenticated by both Soviet and Western nuclear scientists (Beresford, 2010: 103; Maharaj, 1998; ANC, 1996) and Wilkinson and Gray were vetted. Wilkinson subsequently agreed to carry out an attack on Koeberg (code-named Operation Mac). Maharaj had suggested that Wilkinson, rather than a trained MK soldier, take on the task because he "had a better chance than anyone else of gaining access to Koeberg's most vulnerable points" by virtue of his employment at the plant (Birch, 2015).

Concerned about radiation leakages, it was agreed that Koeberg had to be bombed before it was loaded with enriched uranium. According to Wilkinson: "the purpose was to make a political statement and to cause as much damage as possible. We didn't want to hurt anybody, and I completely didn't want to get killed" (Birch, 2015). Hence, when he returned to South Africa in 1978, Wilkinson successfully applied for re-employment at Koeberg without any background check whatsoever (SAHO, 2013). Dolphin Unit general commander Ismail was assigned to lead Operation Mac, and he regularly met with Wilkinson in Swaziland to plan the attack (O'Malley, 2003), under the pretence of enjoying a "dirty weekend" outside the borders of conservative South Africa (Beresford, 2010). Three possible targets were identified: the two reactor heads (the heart of the plant), a section of the containment building, and a concentration of electric cables under the main control room (SAHO, 2013). The 110-ton steel reactor head was deliberately chosen, as it would be used to control the nuclear reaction and maximize the propaganda effect (Beresford, 2010). As the day of

"Concerned about radiation leakages, it was agreed that Koeberg had to be bombed before it was loaded with enriched uranium."

the attack drew near, members of MK left various dead letter boxes containing four limpet mines for Wilkinson and Gray in the isolated Karoo, which they fetched and took back to Cape Town. The date for the attack was set for 16 December 1982 on a day very symbolic for both Black and White South Africans, as alluded to before.

Despite meticulous planning, a series of unexpected events almost derailed the operation. Several security-related incidents at Koeberg during 1982 raised concerns. In May 1982, four men entered the facility's security zone and attempted to break into a safe. A second incident occurred in July 1982 when a fire broke out. Because Operation Mac was already underway, the ANC prematurely accepted responsibility. However, this was dismissed by Eskom, the owner of Koeberg. A third incident occurred in August 1982 when two men entered the security zone and were able to come within a few meters of the nuclear reactor before they were arrested (*Die Burger*, 20 December 1982: 1). In response to these breaches, security at Koeberg was tightened. However, Wilkinson was able to circumvent these security protocols. He managed to smuggle limpet mines through the perimeter of the security fence one by one in a hidden compartment of his car. He stored them in a desk drawer in his prefabricated office and then smuggled them, hidden in his overalls, through a security gate into the main building (Beresford, 15 December 1995). However, Wilkinson did not manage to install the mines to explode on the target date; he only finished planting them on

17 December, a Friday. The fuses were set with a 24-hour delay so that they would explode on 18 December, a Saturday, when the plant would be deserted (SAHO, 2013; Beresford, 1995). As planned, the mines were planted on the two reactor heads as well as at strategic points under the plant's control rooms (Beresford, 1995).

Ultimately, four explosions occurred, but not as planned. Because the springs on the firing mechanisms were brittle, the devices exploded over a period of several hours between 18 and 19 December instead of simultaneously (*Die Burger*, 20 Dec 1982). By then, Wilkinson had fled to Mozambique via Johannesburg and Swaziland. He met Gray and Tambo in Mozambique, and "the two men cried in each other's arms at their triumph" (Beresford, 1995). Wilkinson and Gray then proceeded to Britain, where they married and lived in exile for more than a decade.

The ANC accepted responsibility for the Koeberg attack on 19 December 1982. In a statement issued in Dar es Salaam, the organisation stated that the attack was meant as a "salute to all our fallen heroes and imprisoned comrades, including those buried in Maseru," referring to 42 ANC members killed in a SADF raid on 8 December 1982 (*Independent Online*, 11 March 2006). Maharaj later described the attack as a carefully planned propaganda operation designed to avoid casualties while "send[ing] a message to the apartheid regime that the ANC had the capacity to strike anywhere in the country" (McDonald, 2013). Indeed, the attack on Koeberg caused major damage (around 500 million Rand) and delayed construction for a year and a half (McDonald, 2013). It was a major propaganda victory for the ANC.

In the late 1990s, the Wilkinsons applied for amnesty at South Africa's Truth and Reconciliation Commission (TRC) for the bombing of Koeberg (TRC, 1999). In its submission to the TRC, the ANC emphasized that Koeberg was not operational at the time of the bombing and that they went to the trouble of employing reliable nuclear experts in Europe to determine without any shadow of doubt that there would be no danger to civilians because of the explosions (ANC, 1996). The TRC found that "the proposed attack was part of the overall strategy of attacking apartheid and its installations" (TRC, 1999). Considering it a "successful act of sabotage," which "was clearly politically motivated," the TRC granted amnesty to the Wilkinsons on 31 May 1999 (TRC, 1999).

Besides the Koeberg attack, an incident listed in MK's submission to the TRC involves an arson attempt at the Pelindaba nuclear research facility in February 1983 (ANC, 1997). Unfortunately, details on this attempt could not be found during the research for this paper.

Towards Nuclear Disarmament in South Africa

By the beginning of the 1980s, the ANC noted that perceptions in the West towards South Africa were changing (*Sechaba*, 1984: 12), especially following the Vastrap and Vela incidents of 1977 and 1979, which confirmed what, for example, the international community and the Carter (US) and Callaghan (British) administrations already knew, i.e., that South Africa was developing nuclear weapons (Spence, 1981: 441-452). In 1981, Makatini noted the "limited but positive steps" of direct contact being established, and bilateral relations with the ANC being strengthened, by an increasing number of countries. He also hailed the progress towards authorisation of ANC offices in Vienna, Bonn, Brussels, and Paris, in addition to Rome, London and Stockholm (DIRCO, 2012). Yet, Minty admitted that he experienced tremendous opposition to his efforts to convince the international community that South Africa was developing nuclear weapons. He stated that, "despite having access to all the information," the exiled ANC "had very little opportunity" to engage major Western powers on the issue. For instance, British Prime Minister Margaret Thatcher refused to meet with ANC leaders if their armed struggle continued. However, junior British officials such as Robin Renwick, Geoffrey Howe and Lynda Chalker were at the time in contact with the ANC (Renwick in Kandiah & Glencross, 2014: 20-21). Tambo's first-ever official meeting with representatives of Western governments did not occur until 1987 (Minty, 1994).

By May 1988, the Angolan Border War had reached a stalemate, leading to renewed concerns about Pretoria's nuclear capability and its possible employment. The parties to the Border War finally agreed to negotiations to discuss an end to the

conflict and grant independence to Southwest Africa (Namibia) (*The New York Times*, 14 August 1988; Massie, 1997: 494-495). The talks bore fruit on 22 December 1988 when representatives of Angola, Cuba and South Africa signed the New York Accords. It ended the direct involvement of foreign troops in the Angolan Civil War, and granted independence to Namibia (Saunders & Onslow, 2019: 240-241). Meanwhile, new Soviet leader Michael Gorbachev's progressive politics, coupled with the ongoing political protests across East Germany, and the fall of the Berlin Wall in November 1989, resulted in the withdrawal of Soviet support from Southern Africa (Saunders, 2007: 740-742). The Cold War in the region was ending abruptly, leading to an improvement in Pretoria's external security situation. Internally, P.W. Botha was replaced as state president by the more progressive F.W. de Klerk, after suffering a stroke. De Klerk embarked on fundamental domestic political reforms aimed at bringing full democracy to South Africa, which included, *inter alia*, talks with the ANC, the unbanning of the liberation movements, the relaxation of apartheid laws, and releasing Nelson Mandela and other political prisoners (Stumpf, 1996: 6; Shearar, 1993: 171-186; BBC, 11 February 1990).

De Klerk's reforms also required a re-assessment of the nuclear weapons program. In his memoirs, De Klerk stated that from the mid-1980s he had moral qualms about the nuclear weapons programme and believed nuclear weapons to be a burden, as it had lost its deterrence purpose following the end of hostilities in Angola (De Klerk, 1999: 274). He ordered the secret termination of the program in November 1989. All the nuclear bombs were dismantled, the uranium enrichment plant closed, the enriched uranium downgraded to make it unsuitable for weapons, and the blueprints and related documents destroyed. The relevant Armscor facilities were decontaminated and converted to conventional weapons work and non-weapon commercial activities (DIRCO, 14 November 1989; Van Wyk & Botha, 2009; Albright, 1994; Liberman, 2001: 56; Stumpf, 1996: 6).

The existence of the top-secret nuclear weapons program was only revealed publicly for the first time at a joint session of Parliament in March 1993. The ANC suspected an attempt to cover up important evidence and questioned the quick disposal of nuclear documents and materials (AAM Archives, MMS AAM 1550; *The Independent on Sunday*, 26 March 1993: 13). Very few ANC members who were destined for high office questioned the dismantling decision, except for future Minister of Defence, Joe Modise, who expressed that "we wanted a bomb for Africa" (Hartley, 2014). However, such opinions were never the mainstream opinion of the ANC leadership, and in particular not Nelson Mandela, who unambiguously agreed that nuclear weapons would not be a part of South Africa's future (Jackson, 2017).

Meanwhile, preparations were underway for the first fully democratic elections in the history of South Africa. After the ANC defeated the NP in the April 1994 elections, Deputy President Thabo Mbeki announced at the UNSC in May 1994 that South Africa would forthwith fulfil all its commitments resulting from its international agreements, including the NPT (Pretorius & Swart, 1994: 1; Swart, 1994: 4). Subsequently, South Africa emerged as a world leader that promoted nuclear non-proliferation and disarmament among non-aligned nations. Indeed, within a year of the inauguration of the new government, in April 1995, South African diplomacy at the NPT Review Conference played a major role in forging a consensus to extend the treaty indefinitely, by outlining a plan for indefinite renewal of the NPT and acting as a bridge to the non-aligned nations (Crossette, 1995: A1; Onderco & Van Wyk, 2019). The ANC was also eager to see the rapid establishment of a treaty on a nuclear-weapons free Africa (Jackson, 2017) – an objective that became a reality on 11 April 1996, when the African Nuclear-Weapon-Free-Zone (ANWFZ) Treaty (or Pelindaba Treaty) opened for signature (NTI, n.d.). South Africa also passed the Non-Proliferation of Weapons of Mass Destruction Act (Act 87 of 1993) (Government Gazette, 1993) and ratified the Treaty on the Prohibition of Nuclear Weapons (TPNW) in February 2019 (ICAN, n.d.).

Conclusion

One of the ANC's main objectives was to convince the international community on the exact meaning and consequences of apartheid to maintain international pressure on Pretoria. It operated in a domestic and international environment of asymmetry. Therefore, access to power and limited resources meant that it had

to use the "power of ideas." By redefining and internationalising the anti-apartheid liberation struggle, ANC leaders influenced international opinion by framing the apartheid government and its nuclear weapons program as a threat to human rights and global security. This became one of its most successful strategies. An example is the ANC's cognitive framing of the discovery of the Vastrap nuclear test site. Through so-called frame alignment, the ANC reiterated the grave importance and meaning of the discovery of the site. In this regard, the ANC also, as indicated earlier, employed frame resonance, i.e., framing the discovery as a confirmation of its years of campaigning to convince the international community of South Africa's nuclear ambitions, hence rendering South Africa's nuclear denial untrue (Keck & Sikkink, 1998). Anti-communist Washington and London were often not eager to entertain the ANC's ideas and norms. The ANC prevailed, however, and was able to attract some international goodwill and to influence policies and international action against South Africa, particularly in the UN, which was a major target for the ANC's transnational efforts. In addition to enjoying special status at the UN, the ANC was able to elicit transnational financial, ideological, and political support from sympathetic governments and civil society actors, often with the assistance of Minty and others. These efforts resulted in the almost complete isolation of apartheid South Africa in the UN, OAU, the Non-Aligned Movement (NAM), and the IAEA, in addition to the mandatory arms embargo introduced by the UN in 1977.

Endnotes

[1] The authors wish to acknowledge funding from the University of Johannesburg and Open University for the article processing fees.

[1] See, for example, the ten -volume series of the South African Democracy Education Trust (SADET), *The Road to Democracy in South Africa* (Pretoria: UNISA Publishers). Available from: http://www.sadet.co.za/.

[2] No indication could be found in the numerous publications consulted, of what Christie saw that alerted him to the apartheid government's nuclear plans.

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Britain's Safety Arguments: French Nuclear Testing in Algeria during Nigerian Decolonisation (1959-60)[1]

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By Chloë Mayoux

Abstract

France's decision to hold its first nuclear tests in the Algerian Sahara, at a time when the question of the health effects of radioactive fallout was a matter of scientific controversy, gave Africans political as well as scientific arguments to oppose French policy. In 1959, as African anti-nuclear sentiment grew, Britain suddenly faced the unique situation of having to preserve its relationship with France whilst securing post-independence ties with Nigeria, who was soon to become independent. In its attempt to overcome this dilemma, and in the absence of precise information about what the French were planning, Britain produced original technical arguments suggesting that tests in the Sahara would be safe. When fallout from *Gerboise Bleue,* the first French nuclear test, reached Nigeria in February 1960, Britain attempted to consolidate the narrative on the safety of French nuclear tests *ex post facto,* without however furthering its political interests in Africa or Europe. Based on multinational archival documents, this article offers a comparative and connected history of *Gerboise Bleue*, with particular attention to the context of African decolonisation.

Introduction

With its plans to test nuclear weapons near Reggane, in the Algerian Sahara, France positioned itself against several international trends at the end of the 1950s. First, all existing nuclear powers (the United States, the Soviet Union, and Great Britain) began observing a voluntary moratorium on nuclear testing in 1958. Second, despite the proliferation of expert committees on radiation risk since the mid-1950s, knowledge about the effects of ionising radiation remained limited when set against the questions raised by radioactive fallout (Boudia, 2007: 161; Higuchi, 2020). Finally, the choice of Reggane as a testing site, as published in the *Journal Officiel de l'Algérie* on 24 May

1957, was particularly unfortunate in light of the Algerian War and the strength of anti-colonial sentiment in Africa more generally (Archives Nationales, AG 5(F)/1088-89, 10 September 1959). All this gave Africans political, but also scientific, arguments against French tests. The recurrence of the Saharan tests as a theme in political debates in Africa around this time is all the more striking considering their relative marginalisation in historiographies of decolonisation.

In 1959, as African opposition to French plans grew, Britain was suddenly faced with a unique situation: it had to preserve its relationship with France without sacrificing the prospects of friendship with Nigeria, soon to be independent. In French-speaking circles, the British were accused of seeking to undermine France's atomic programme (CADLC, 60QO16, July 1961; O'Driscoll, 2009: 28-56). Contrary to this belief, however, Britain facilitated the start of French atomic tests.

It is impossible to fully grasp the significance of this episode through the lens of Franco-British, or even Europe-African relations only (See O'Driscoll, 2009; Hill, 2019: 274-289; Vaïse, 1993: 41-53; Pô, 2001; Allman, 2008: 83-102; Gerits, 2023; Skinner, 2015: 418-438; Panchasi, 2019: 84-122; Osseo-Asare, 2019; Cooper, 2022). One must also consider the diplomatic support that France itself sought in French-speaking Africa by co-opting African elites, alongside inter-African dynamics, and the domestic contexts of African countries. Based on multinational archival work in Britain, Nigeria, France, and Senegal, as well as documents from atomic institutions, international organisations, parliamentary debates, press articles, and radio broadcasts, inter alia, this article compares and connects African and European actors, as well as francophone and anglophone ones.

By taking a closer look at the context of African decolonisation, the article reveals the extent and implications of Britain's diplomatic, scientific, and political support for the French as they prepared to conduct their first atomic tests. Most notably, but perhaps also quite peculiarly, British support materialised in the form of arguments suggesting that French tests would be safe. In this respect, the British went beyond what their knowledge of French plans allowed, without however furthering their interests in Europe or Africa. British security

> "France's decision to hold its first nuclear tests in the Algerian Sahara, at a time when the question of the health effects of radioactive fallout was a matter of scientific controversy, gave Africans political as well as scientific arguments to oppose French policy."

arguments in favour of French tests emerged from rapid developments on the African scene, from diverging interests within Whitehall, but also from African dissatisfaction with France's own safety guarantees. When fallout from the first test, *Gerboise Bleue*, reached Nigeria in February 1960, the British attempted to consolidate their narrative on the safety of French nuclear tests *ex post facto*.

Through a reconstruction of the tight timeline of the months surrounding the *Gerboise Bleue* test of 13 February 1960, the article follows the evolution of an awkward push-and-pull, from the peak of grassroots anti-nuclear sentiment in the Summer of 1959 and concurrent European attempts to co-opt African elites into reassuring their respective constituencies, to the production of new "technical" safety arguments in September 1959 in response to wavering elite support, to the negotiation around the narrative which would eventually emerge from the finding of radioactive fallout in Nigeria in February 1960. Coming right before the "Year of Africa", 1959 was the year when radio-anxiety (which can be seen as a precursor to today's eco-anxiety) lent the most momentum to anti-nuclear sentiment in Africa. Thereafter,

the critique of French tests, which continued in the Sahara until 1966, was leveraged mostly on geopolitical grounds, and through a more generalised critique of the nuclear order. Whilst developments in African politics go a long way to explain this shift, the report on French fallout, which was eventually published by the Nigerian government after *Gerboise Bleue*, represented a missed opportunity to carry African anti-nuclear momentum forward at such a defining moment for Africa's role in international politics.

Spring-Summer 1959: Managing African Protests

The Scale of Anti-Nuclear Sentiment in Africa

From Moshi to Ibadan, via Cairo, condemnations of French nuclear plans began multiplying from 1958. Protests were led by independentist organisations such as the Pan African Freedom Movement for East and Central Africa, by actors of the Nigerian diaspora such as the Nigerian Union of Great Britain and Ireland, by women's trade associations such as the Accra Market Women's Association, by political parties such as the Moroccan Istiqlal, and, of course, by trade union, pan-African and nationalist leaders such as Tom Mboya in Kenya or Gamal Abdel Nasser in Egypt (National Archives of the United Kingdom, FCO 141/14223; Gerits, 2023; CADLC, 1809INVA 303, 5 July 1958; Kaduna Archives Nigeria, ASI 165).[2] Opposition to the tests was broadcast on *Radio Cairo* and in the pages of the Algerian newspaper *El Moudjahid*. For instance, in the first declaration of the Provisional Government of the Algerian Republic (GPRA), the President of the Council, Ferhat Abbas indicated that the GPRA "[...] will welcome any initiative which seeks to [...] prohibit anywhere nuclear experiments that France wants to extend to Algerian soil" (*El Moudjahid,* 10 October 1958: 2).

But it is not all to note the scale of these protests, for each had its own political logic. While the attitudes of many African leaders towards French nuclear tests were perhaps more ambiguous than historians (who often subsume anti-nuclear discourse under anti-colonial sentiment) have so far acknowledged, ruling classes were rapidly drawn in, even after independence, by issues which linked their political legitimacy to their anti-imperialist agendas. Be it in Ghana, Morocco, Nigeria or Algeria, the ability of opposition parties and civil society organisations to capitalise on the problem of French nuclear tests encouraged newly independent governments to sometimes take spectacular measures. Thus, the chronology of the Saharan tests strangely mirrors the diplomatic timeline of Euro-African relations. After the first Saharan test (13 February 1960), Accra froze French assets, and Rabat recalled its Ambassador in Paris whilst also declaring obsolete the Rabat agreement of 28 May 1956, which stipulated that France and Morocco should align their foreign policies (UK National Archives, FO 371/149551, 13 February 1960; Osseo-Asare, 2019: 19-48; Adamson, 2023: 131-55; *Le Monde*, 29 May 1956). After the third test (27 December 1960), Lagos expelled the French Ambassador to Nigeria (CADLC, 60QO16, 5 February 1961; Bach, 1978: 17-23). After the seventh test (18 May 1963), Algiers requested a revision of the Evian Accords (CADLC, 29QO63, 20 March 1963; Byrne, 2010; Zia-Ebrahimi, 2012: 23-44).

Co-Opting the Elites

Nigeria was still a colony when the issue of Saharan tests was brought for debate at the House of Representatives in February 1959 (Nigeria House, February 1959). Whilst registering the House's discontent, Nigerian Prime Minister Abubakar Tafawa Balewa reminded representatives that the country's external affairs still lay in the hands of the British. London would therefore have to communicate Nigerian opposition to the French on their behalf. This request put London in an awkward position. As O'Driscoll (2009) points out, the British government had by this time accepted French nuclear testing as inevitable. At this early stage of the controversy, the British decided to simply relay protests to Paris, taking care to distance themselves from the feeling in Nigeria. In the months that followed, however, London would be forced to abandon this default wait-and-see line.

On 3 July 1959, Ghana officially asked the French to abandon their nuclear testing projects (UK National Archives, FO 371/140617, 3 July 1959). A leading pan-Africanist figure, Kwame Nkrumah claimed to thereby represent the interests of all Africans (Kaduna Archives, ASI 165: n.d.). The French reaction to this provocation was almost immediate. Following the Executive Council of the French Community held in Madagascar a few days later, francophone African representatives

condemned Nkrumah's intervention, accusing Ghana and Guinea of meddling in their affairs (Kaduna Archives, 10 July 1959). They publicly defended French nuclear testing plans, arguing that a French bomb would also be theirs (UK National Archives, DO 968/700, 10 July 1959). The notion of a francophone African A-bomb may seem strange, but the Constitution of the Fifth Republic stipulated that within the French Community, defence issues were technically part of a set of shared competences (Archives Nationales, AG5(F), May 1959).[3] At Tananarive, General Paul Ely, Chief of Staff of National Defence, played on this spirit of unity to encourage African and Malagasy state leaders to champion the French nuclear testing project (Service Historique de la Défense, GR 1 K 233/70, 7 July 1959; Cooper, 2014).[4] As francophone ranks closed, Nkrumah could no longer claim to speak on behalf of a united Africa – let alone a continent united against French atomic testing. Beyond the issue of nuclear testing, therefore, the apparent consensus of the French Community around the French bomb posed an existential problem for post-colonial projects in Africa because it presented France's reformed empire as a viable alternative to pan-African projects.

In response, Ghana belatedly recognised the Provisional Government of the Algerian Republic (UK National Archives, DO35/9339, 13 July 1959). By August, protests had resurfaced from all sides. Morocco tabled an item on French nuclear tests at the next UN General Assembly (O'Driscoll, 2009: 43). More significantly, the governing party of French Sudan (Mali) joined African opposition to Saharan tests (UK National Archives, FO371/140620, 21 August 1959). This undermined the Community' consensus around the bomb. The French Ministry of Health had previously expressed concerns about the geographic vulnerability of French Sudan in case of fallout in the Sahara (CADLC, 1809INVA 303, 23 Oct 1958). But dissent within the Community followed a political logic primarily. Resurging anti-nuclear sentiment within francophone Africa was a sign that aspirations to full independence had survived the September 1958 referendum establishing the French Community (Bibliothèque François Mitterrand, PH911008972, 27 July 1958; Murphy, 1995: 174). Indeed, the tests had already been condemned in July 1958, by the Constitutive Congress of the *Parti pour le Rassemblement Africain* (PRA), when Senegal's Léopold Sédar Senghor had called for immediate independence before backtracking in favour of the "Yes" campaign (Bibliothèque François Mitterrand, PH91100897227, July 1958).

This new wave of criticism against French nuclear plans had a knock-on effect on London. In the British Parliament, African protests were relayed by opposition figures such as anti-imperialist activist Fenner Brockway, at a time when African issues already constituted the government's weak point on the eve of elections (Murphy, 1995: 174). In Nigeria, the British were accused of complicity with the French in their testing project. This prompted Balewa to announce a protest visit to London. Within months, therefore, the same African elites whom Europeans had relied on to contain anti-nuclear sentiment began representing a threat, not merely to French atomic plans, but more generally to British and French policy in Africa.

Popular Protests: "Emotional" and "Irrational"? (UK National Archives, FP371/140625, 3 Nov 1959)

The impression in Britain and France that the support of African elites was no longer guaranteed revived European anxieties regarding their loss of control over colonised populations. In August, a Nigerian radio presenter travelled to neighbouring Niger to ask the inhabitants of Maradi what they *really* thought of French nuclear testing in the Sahara. Fearing that this act of subversion might amplify francophone opposition to the tests, the French consul in Kano raged: "There is no use trying to whiten a [N*****], one would only lose their soap", in reference to racist adverts for cleaning products (CADLC, 60QO10, 20 Aug 1959). The British too rendered Africans culpable of their scepticism when they interpreted Nigerian radio-anxiety as a function of irrationality, emotionalism, and superstition (McDougall, 2005: 119-20). British officials prepared to warn Nigerians of forthcoming solar eclipses, which they feared would be attributed to French nuclear tests and create panic (UK National Archives, FO371/140620, 25 Aug 1959).

In short, the British were much more concerned about public order than public health. They broadcast French security assurances without really questioning them – including in Algeria, through the BBC's Arabic service (UK National Archive, FO371/140620, 7 Sep 1959; BBC Written

Archives Centre, 29 Sep 1958).[5] Rather than addressing the true basis of anti-nuclear sentiment, therefore, the British approached the issue as one of public relations and in effect did much work on behalf of the French. The truth however was that British colonial officials who repeated France's vague safety assurances did not in fact have more information on French plans than the people they were trying to reassure. Sir Hilton Poynton (Under-Secretary of State for the Colonies) admitted as much when he stated that French guarantees were not sufficient to completely rule out a health risk in Nigeria. He urged for the French to present more convincing safety arguments (UK National Archives, FO 371/140620, 14 August 1959).

Meanwhile, the lack of scientific consensus on the exact effects of ionising radiation opened a space for scientists based in West Africa to contribute to the public's understanding of radiation hazard. An article published in the Nigerian press by anonymous scientists based at the University of Ibadan emphasised meteorological factors (Kaduna Archives, ASI 165, 12 July 1959). By pointing out that winds would carry particles hundreds of kilometres away from the testing site, these scientists challenged one of the main arguments of the French defence, which relied on Reggane's remoteness. In addition to bringing scientific authority to African arguments against Saharan tests, this article is significant because it adapted contemporary knowledge about nuclear risk to the geographical and ecological conditions of Nigeria at a time when African data about nuclear risk were underrepresented in the international literature.

"By pointing out that winds would carry particles hundreds of kilometres away from the testing site, these scientists challenged one of the main arguments of the French defence."

The upsurge in Nigerian protests in the Summer of 1959 was therefore fuelled both by *political* and *scientific* arguments. It would be a mistake to adopt the European interpretation according to which African anti-nuclear sentiment was the result either of the sanitary anxieties of an ignorant population, or of the demagogy of political elites who capitalised off popular emotion. Considering the context of decolonisation, the political undertone of protests should not surprise us, nor was it confined to political elites. As for scientific arguments, these also caught colonial officials off guard.

September-December 1959: The Production of Scientific Arguments in Favour of French Nuclear Policy

The Harwell Notes

In September 1959, initiatives were launched on both sides of the Channel to rekindle support among African elites. This parallelism was not so much the fruit of close consultation between Paris and London, as it was the result of a shared analysis: the controversy surrounding the Saharan tests was a public relations issue, and the racial factor was important. And so, the British encouraged the French in their pursuit of a "black emissary" who would publicly defend the nuclear test project (UK National Archives, FO 371/140620, 19 Aug 1959).

The Summer's experience in attempting to contain anti-nuclear sentiment suggested that successfully co-opting elites now implied consolidating the scientific basis of reassurances about French tests. In Whitehall, this solution emerged from Departments' diverging interests, more than it aligned with a clearly defined political objective (Hill, 2019: 274-89; O'Driscoll, 2009: 28-56). On the one hand, the Colonial Office worried about the impact of Nigerian anti-nuclear sentiment on their postcolonial hopes for this important country (Lynn, 2001: xxxv-lxxxviii). For the Foreign Office, on the other hand, it was inconceivable that Britain should become "a letterbox for Nigeria's unreasonable approaches" to the French (UK National Archives, FO 371/140620, 18 Aug 1959). So, instead of asking France not to conduct their tests, Britain began to produce safety arguments on behalf of the French.

When Balewa made his protest visit to England in September 1959, his delegation was handed a

document which finally took Nigerian arguments into consideration, only to conclude more forcefully in favour of French safety assurances. Regarding the Harmattan (which blows from the Sahara to West Africa in the Winter), the Harwell Notes argued that this wind could not possibly interfere with any French fallout. Yet, the document ignored the advice of the Ministry of Defence, for whom it was impossible to pronounce oneself on the safety of French tests. In the absence of French information, the British relied on their own experience of nuclear testing in Australia, even though their safety record there was dubious (Arnold & Smith, 2016; Tynan, 2016). Based on this experience, the British assumed that the first French test would yield between 10 to 30 kilotons. Shortly after the Nigerian visit, however, the British learned from a French source that this figure would be closer to 80. By finally sharing information with the British, the French had hoped to present a European front against the 'sombre friends' – an expression which once again implied racial connivence (UK National Archives, CO 968/701, 29 Sep 1959). But the British did nothing with this new information, for factoring in a higher yield would lead Nigerians to "rightly" reject the reassuring conclusions of the Harwell Notes (UK National Archives, FO 371/140624, 22 Oct 1959). The Ministry of Defence had indeed indicated that if the French explosion yielded more than 25 kilotons, fallout might pose a risk to health in neighbouring countries (UK National Archives, DO 35/10482, 7 Aug 1959).

The technical arguments contained in the Harwell Notes were intended to disarm anti-nuclear opposition in Nigeria at the cost of intellectual honesty. Yet Balewa confided in the British that he would rather avoid bringing to his visit more attention than was necessary (UK National Archives, CO 968/701, 22 Sep 1959). The French, on the other hand, were delighted to receive a copy of the Harwell Notes (CADLC, 60QO10, Dec 1959). They found British safety arguments even more convincing than their own.

Guillaumat's Presentation

In parallel to the Harwell visit, the French Minister of the Armed Forces, Pierre Guillaumat, gave a presentation on the 'technical aspects' of the French tests during the September meeting of the Executive Council of the French Community. Guillaumat laid out before his audience a series of maps which would become a staple of the French defence. These maps compared population density around American, Soviet and French testing sites to suggest that French atomic experiments would be *even safer* than those of the Cold War superpowers. There was in fact little of technical substance about Guillaumat's presentation. Just like in Tananarive, the French government aimed to secure Community leaders' acceptance of their arguments even if this meant misleading them. Prime Minister Michel Debré asserted that he had been presented by previous governments with a "*fait accompli*" and that therefore, he had no choice but to go ahead with the tests (Archives Nationales, AG 5(F)/1104-06, 10 Sep 1959). President Charles de Gaulle added that he was proceeding with such plans with a "heavy heart", given how "expensive" and "lamentable for humanity" this whole affair was. Nevertheless, he said, African leaders "should realise that nuclear research was necessary" for progress in nuclear science (Archives Nationales, AG 5(F)/1104-06, 10 Sep 1959). Thus, the French misleadingly suggested that the Saharan tests would support socio-economic development in the Community.

The minutes of this September Executive Council meeting betray increased resistance from the Community's heads of state. Several took the floor to say that if the tests had to take place in the Sahara, it would be better not to give them any publicity. This was a similarly ambiguous attitude to Balewa's. Others questioned the validity of French safety arguments more directly. For instance, Modibo Keita from French Sudan noted that Guillaumat's assertions about the Harmattan wind were false. There is indeed surprisingly contradictory information about this wind in the French archive. This in itself suggests yet again that so-called technical responses to African arguments were produced mainly to stifle opposition. At the September Council, de Gaulle's patience for deliberation quickly ran out. He ended the debate on the Saharan tests in typical paternalist fashion, by "accepting" as an ultimate argument that of Maurice Yameogo (representing Burkina Faso), who had spoken in favour of French nuclear tests (Archives Nationales, AG 5(F)/1104, 10 Sep 1959).

Technical Arguments at the United Nations

Cynical as they might have been, Guillaumat's presentation and the Harwell Notes foreshadowed Jules Moch's recourse to technical arguments when he defended the Saharan test project in front of the United Nations (UN) General Assembly in November 1959. At the previous year's General Assembly debate on nuclear tests, the French delegate had expressed his unease to France's chief diplomat in the following terms: "But even if I cannot state on Monday that there will be no explosion in Africa, *as I would have liked to do* in order to improve our situation here, it is my duty to draw your attention to my deep conviction that *we cannot conduct tests on this continent*" (CADLC, 1809INVA 303, 17 Oct 1958, own emphasis). The territorial, political, and moral issues which arose from the Saharan tests were therefore perfectly understood in the highest circles of French diplomacy.

Like Guillaumat two months earlier, Jules Moch insisted on the remoteness of Reggane to defend French plans at the UN. Scholars have already highlighted the colonial trope of the *terra nullius* in the history of nuclear testing. (For the Sahara in particular, see Panchasi, 2019: 84-122 and Henni, 2022). But it is important to note here too that few French administrators and politicians thought that these spaces were empty. From the outset, France drew on local labour to develop its first test site at Reggane. When the French decided to transfer their site to In Ecker (still in the Algerian Sahara), they took stock: "the region [...] apparently empty is in fact inhabited by 2,000 people" (Service Historique de la Défense, GR 1 H 4767, 24 Jan 1961). The French army estimated that the terrain around In Ecker would have to be purchased from the Hoggar Touareg for a sum of 50,000 new francs. Pierre Messmer, Guillaumat's successor by that time, eventually offered a mere 5,000 new francs to the traditional leader of the Touareg. The cash was slipped to him discreetly during a ceremony for his award of the French Cross for Military Valour (Service Historique de la Défense, n.d.). Again, the French solution to the controversy they had created was to co-opt elites without considering the harm their tests could cause.

Privately, the British acknowledged that the French overstated how empty the desert was (UK National Archives, DO 35/10482, 15 Sep 1959). They nevertheless went out of their way to avoid alienating France at the UN. While Prime Minister Harold Macmillan hoped that Britain could abstain from voting, the British ultimately proposed an alternative resolution to that which Morocco had initially tabled. The British argued that their resolution was more constructive, since it called for global disarmament instead of using France as a scapegoat[6] (CADLC, 1809INVA 304, 1 Sep 1959). The British also justified themselves by saying that a resolution which presupposed the danger of French tests was unacceptable to them – this implied that Britain thought French tests would be safe. In truth, the British had little hope that their resolution would attract many voters; it was purely tactical (O'Driscoll, 2009). The French thanked the British for their efforts, but London's underhanded UN strategy drew criticism from the Parliament and Commonwealth (CADLC, 231QO9, 11 Nov 1959).

After *Gerboise Bleue:* Consolidating the Narrative of the Safety of French Tests

The Surprise at French Fallout

As noted earlier, France's first atomic explosion, *Gerboise Bleue,* took place on 13 February 1960 in the Algerian Sahara. Representatives of the French Community were present at Reggane during the test. This went against the advice of the French Atomic Energy Commission's Directorate for Military Applications (CADLC, 1809INVA 304, 7 Sep 1959). Once again, public relations took precedence over the reality of health risks. In the National Archives of Senegal, one can find a document sent out after the test to governments of the French Community. It states that *Gerboise Bleue* could not have had "any kind of harmful effect on the inhabitants of the Community" (National Archives in Dakar, FM 117, 22 March 1960).[7] But there is reason to doubt these categorical assertions given the haste in which the French device was tested (Ailleret, 2011: 9). Perhaps De Gaulle was impatient to see France officially become a nuclear power before Nikita Khrushchev's visit to Paris in March (Buffet, 1989; Gloriant, 2018: 1-19; Hesler, 2006: 33-63).[8] In any case, Guillaumat's promise to leaders of the Community to only fire the device in ideal weather conditions was not kept.

The Canberra planes which London had sent to Libya to gather information on the French device returned empty-handed (UK National Archives, AIR

> “Indeed, no one knew at the time how many tests France was still planning.”

20/11701, 13 Feb 1960). Instead of a radioactive cloud, they spotted American bombers. Thanks to the radioactive fallout monitoring stations installed in Nigeria following Balewa's visit to Harwell, however, the British realised that fallout was greater than expected. Pierson Dixon, head of the British mission at the UN, was disturbed to find that the safety arguments which he had presented in November could now be invalidated (UK National Archives, DO 35/9342, 21 March 1960). Panic in Whitehall only increased when Balewa learned about the fallout in private. Balewa realised that British scientists had been wrong, and he vowed to tell Nigerians the truth about French fallout (UK National Archives, FO 371/149554, Feb 1960).

Exceptional Weather Conditions or Risk of Cumulation?

The publication of a report on the fallout from *Gerboise Bleue* stalled on a disagreement between the British and Nigerian-based scientists who formed the Joint Scientific Committee charged with sampling and analysing French fallout. This disagreement centred on the formulation of the document's conclusion (UK National Archives, FO 371/149554, 26 March 1960). On the one hand, scientists based in Britain were keen to emphasise the exceptional weather circumstances in which *Gerboise Bleue* had been conducted. Privately though, the Ministry of Defence and British atomic scientists acknowledged that regardless of circumstances, the level and pattern of fallout were surprising. But they feared that admitting this publicly would draw attention to their Australian tests, as well as hike insurance costs in the nuclear industry (UK National Archives, EG 1/685, 31 March 1960). This shared interest between nuclear powers encouraged the British to downplay the hazards arising from French nuclear tests. Another reason to insist on the exceptional weather circumstance of *Gerboise Bleue,* of course, was the difficulty to acknowledge that Nigerians had been misled.

On the other hand, the scientists based in Nigeria (which included one Nigerian physicist only) insisted on the risk of radioactive cumulation in case France conducted further tests. Indeed, no one knew at the time how many tests France was still planning. The very existence of fallout in Nigeria suggested that, depending on the frequency and power of the next explosions, radioactivity in the vicinities of the testing site could in theory exceed the permissible dose defined by international bodies. The respective conclusions offered by the two parties had opposite implications for the French nuclear testing programme: whereas the British side tried to consolidate its narrative on nuclear safety, the Nigerian side urged for the cessation of French tests.

So, the real stake in these negotiations around the report's formulation lay less in the raw data than in the narrative which surrounded it. It should be noted, however, that a shift had occurred since *Gerboise Bleue,* since the debate was no longer about the mere existence of fallout, but rather about the relativity of radioactivity levels to a permissible dose. In addition to legitimising the idea that there could be an acceptable level of radiation, this shift represented a victory for France over African arguments based on sovereignty, and which suggested that the very existence of fallout outside French territory represented a breach of international law.

The division of labour within the Joint Scientific Committee gave the British side a better chance of having the last word on the matter. Whilst the data was collected in Nigeria, samples were analysed at the Atomic Weapons Research Establishment in Aldermaston. The British had chosen this facility over Harwell because, in addition to Aldermaston's military specialisation, scientists were anxious to exclude from their mandate any biological interpretation of French fallout – another sign of the political, as opposed to sanitary, approach to Nigerian protests (Aldermaston Archives, 9 Oct 1959). Following *Gerboise Bleue,* British atomic scientists encouraged the Nigerian party to edit their draft report and accept the British line (Aldermaston Archives, KB1724-U, 18 March 1960).

J.A.T. Dawson, the main British scientist involved in the Joint Scientific Committee accused the Nigerian side of politicising the report, but he downplayed his own complicity with Georges Dando, from the French Army's Technical Section. Together, Dawson and Dando pushed the narrative on the exceptional weather circumstances which had supposedly coincided with the French test. To his partners based in Nigeria, however, Dawson explained that the language barrier had prevented him from communicating properly with his French colleague. All that he had been able to understand was that the French had not expected the wind to bring radioactive particles to Nigeria (Aldermaston Archives, D17/KB1724-U, 18 March 1960). In this way, the British helped to undermine the real question of French responsibility and mistakes in managing the risk of fallout from *Gerboise Bleue*. By the same token, they ruled out the possibility of future mistakes, and suggested that French tests could continue safely.

A Fortunate Combination of Circumstances: Consolidating the Nuclear Safety Narrative

Whilst negotiations about the report were ongoing, African and Asian states called for an emergency session at the UN in light of France's violation of the 1959 resolution condemning its testing project. These states had until 15 April 1960 to gather a minimum of 42 signatures. *Gerboise Bleue* also gave Nkrumah the opportunity to organise a new pan-African summit in Accra. The British began to fear that Nigerians might leak information about the fallout at Nkrumah's conference. London had to act quickly. Macmillan proposed to take advantage of the situation to put pressure on the Americans in Geneva, where talks had come to a halt because Washington thought that Moscow could defy a ban on nuclear testing by conducting small-scale atomic experiments which would go undetected in the current state of seismological science (this was the 'big hole' theory) (Divine, 1979; Walker, 2010).

But pressure from Whitehall prevailed over the Cabinet's views. Whilst it remained out of question to suggest to the French that they should abandon their tests, the British finally resolved to ask them to postpone any test until 15 April – the deadline for collecting signatures at the UN (UK National Archives, DO 35/10482, 30 March 1960). But it was too late: on 1 April 1960, France launched a second test. This risked compromising actions taken since *Gerboise Bleue* by British diplomats, scientists and colonial officers to limit the collateral damage from that first test.

And yet, by a stroke of luck, the second test turned out to have the opposite effect to what the British feared. *Gerboise Blanche* took most press services in Africa by surprise. At the conference in Accra, the question of French nuclear tests became less urgent after the Sharpeville massacre which had taken place in South Africa on 21 March 1960. In yet another fortunate turn of events for the British, the relatively small yield of the second French test contributed to reinforcing the narrative on the exceptional circumstances of *Gerboise Bleue,* the first test.

The Nigerian report on French fallout was eventually published without mention of the risk of cumulation which the Nigerian side had emphasised (UK National Archives, EG 1/685, 1960). In the official summary of the report, it was stated: "in conclusion, the amount of fallout in Nigeria is far less than that which is likely to be dangerous." One astute British observer commented in the margin: "But any increase in radiation is potentially harmful". Like the Nigerian-based scientists before him, he pointed out that the effects of ionising radiation were cumulative. But, the observer concluded, to add a touch of cynicism to an already cynical affair, there was no point in disputing the report's conclusion since Nigerians seemed to be happy with it (UK National Archives, EG1/685, 1960).

Conclusion

By acting as a diplomatic buffer at the UN and in Africa, the British facilitated the launch of France's Saharan testing programme perhaps more than any other country.[9] Even more striking than its diplomatic and political support, Britain produced arguments that suggested that French tests would be safe, and the French thanked them for it. This finding may seem surprising given British and American apprehensions at the prospect of a fourth country entering the atomic club. In the case of French nuclear tests, British unease seems to have come from circles closer to colonial policy than nuclear policy. Britain's attitude was largely the contingent result of divergent assumptions

within Whitehall; for the Foreign Office, making representations to the French on Nigeria's behalf was a non-starter, whilst for the Colonial Office, African interests prevailed over European ones.

Following the discovery of fallout from *Gerboise Bleue,* British scientists, officials and diplomats found themselves in the awkward position of having to consolidate their narrative on the safety of French tests *ex post facto*. The report's reassuring conclusions on French fallout in Nigeria impacted Whitehall's bureaucratic memory. By offering an unambiguous and condensed moral to the story, the report's conclusions short-circuited negotiations which had taken place between Nigeria and Britain around the question of radioactive cumulation. Nevertheless, after the first test, the British were increasingly disposed to distance themselves from Paris. On the African level, British policy suffered directly and indirectly from the hypocritical attitude which London had shown towards French nuclear testing. On the European level, British hopes for closer association were also met with De Gaulle's negative response. Perhaps it is in these political failures on both the European and African fronts that the greatest paradox of this whole episode lies.

Endnotes

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[2] The author wishes to thank Yasmina Martin for sending her PAFMECA resolutions she found in the National Archives of the United Kingdom. A special thanks also to Nafiu Olatunji Salawu.

[3] Refer to documents relative to the 3rd Executive Council meeting of the French Community of May 1959.

[4] In reality, the *"domaine commun"* allowed Paris to curb the devolution of competences, and therefore the true autonomy of African members of the Community.

[5] In September 1958, BBC Arabic announced a new series titled 'A.B.C. of Atomic Energy', which garnered much interest amongst arabophone listeners. Reassuring information about French nuclear tests might have been broadcast in a similar programme aimed at popularising nuclear science in Algeria. Many thanks to Alex White.

[6] Britain's alternative resolution was redundant given India's item on disarmament, which had been kept separate from the Moroccan item. In addition, Latin American states watered down the initial Moroccan draft, rendering it more acceptable to voters like Britain.

[7] The author thanks Etienne Badji.

[8] The USSR might have played a double-game here. On the one hand, Moscow supported African opposition to French tests and said these were proof of the West's bad faith at Geneva. On the other, Khrushchev failed to criticise de Gaulle when he had the opportunity to do so in Paris, and in 1963, the Soviet regime violently suppressed African students' anti-nuclear protests in Moscow.

[9] Italy's attitude seems worth looking into.

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Democratising Nuclear Governance: The Role of African Civil Society in the International Campaign to Abolish Nuclear Weapons (ICAN)

By Michaelan Sinnett and Joelien Pretorius

Abstract

The entry into force of the Treaty on the Prohibition of Nuclear Weapons (TPNW) on 22 January 2021 presented a turn in nuclear politics. It is a unique instrument in the governance of nuclear weapons, because its advocacy was led and managed by non-nuclear weapon states and transnational civil society organisations. It is widely acknowledged that transnational civil society plays a democratising role in international governance and that the International Campaign to Abolish Nuclear Weapons (ICAN) did exactly that for nuclear governance through its facilitation of the Humanitarian Initiative that unfolded into the negotiation of the TPNW. This article elaborates on this role, guided by Scholte's (2002) framework of the assessment of transnational civil society's democratising role in global governance, to map ICAN's role in six criteria: awareness, participation, contestation, transparency, accountability, and legitimacy. However, the extent of broad-based representation of civil societies across the world is equally important to ICAN's role. It is in this respect that the article turns specifically to African civil society participation as part of ICAN. Although several African civil society organisations partnered with ICAN, the question goes beyond the quantitative side of their participation, to its quality. Although challenges were experienced in the leadership and decision-making structures around racial and regional diversity, African campaigners see their role in ICAN as transformative and empowering.

Introduction

The contribution by African states in crafting the nuclear order through participation in negotiations of international instruments and membership of organisations that govern the nuclear issue area has received increasing scholarly attention (see, for example: Möser, 2020; Ogunnubi 2022; Onderco, 2016; Onderco and Wyk, 2019; Pretorius 2011, 2013; Swart, 2015; A. van Wyk, 2010, 2018, 2019; and J. van Wyk 2013, 2022). Drawing on Barnett et al. (2021: 4),

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we understand global nuclear governance to be "the institutional arrangements used to identify problems, facilitate decision-making, and promote rule-based behaviour on a global scale" when it comes to nuclear non-proliferation, disarmament, safety and security. Global nuclear governance includes governmental and non-governmental organisations, but little is known about the role of African civil society in global nuclear governance.[1]

Since the atomic bombing of Hiroshima and Nagasaki on 6 and 9 August 1945 respectively, civil society organisations (CSOs) have been active on nuclear issues, raising awareness around nuclear testing, the dangers of nuclear weapons, and campaigning for nuclear arms control and disarmament (see, for example, Acheson, 2021; Eschle, 2017; and Evangelista, 2002). In the past, states promoting arms control and nuclear disarmament have worked with non-governmental organisations, but mostly in the background, for example the informal diplomacy of the Pugwash Conferences on Science and World Affairs (Kraft, 2022), and Costa Rica, Malaysia and several CSOs' collaboration on the Model Nuclear Weapons Convention (Nuclear Threat Initiative, n.d.). The Humanitarian Initiative that unfolded in the negotiation, conclusion and entering into force of the Treaty on the Prohibition of Nuclear Weapons (TPNW) showcased civil society's involvement explicitly in a way that resembled the Ottawa and Oslo processes to ban antipersonnel landmines and cluster munitions, respectively (Borrie, 2010). The Ottawa process involved states collaborating with advocacy non-governmental organisations (or what we refer to as CSOs here), which set the normative mode of global institution building (Flowers, 2013). CSOs participated in the Humanitarian Initiative and the TPNW negotiations through the International Campaign for the Abolition of Nuclear Weapons (ICAN). ICAN is a coalition of non-governmental organisations (NGOs) that creates awareness of the humanitarian impact and risks of nuclear weapons use, and lobbies governments individually and collectively to support the TPNW (Acheson, 2022: 2).

In this article, we explore the participation of African CSOs as partner organisations of ICAN. Any NGO that endorses ICAN's partnership pledge, can apply to become a partner organisation. Partner organisations receive updates and briefings, are eligible to join the ICAN delegation to United Nations (UN) and other meetings, and may apply for small grants to promote activities that lead to the universalisation of the TPNW (ICAN, n.d.). We ask if African civil society participation confirms or detracts from the claim that supporters of the TPNW often make with respect to the democratising impact of ICAN on global nuclear governance. We do this by drawing on the theoretical framing of the role of transnational civil society in democratising global institutions proposed by Jan Aart Scholte (2002) to guide our analysis. In this way, we hope to contribute to the literature on the role of African civil society in nuclear governance through a case study of African civil society in ICAN.

Methodology

The research can be framed as a retrospective case study intended to describe and interpret the actions of African CSOs to bring about nuclear weapons abolition as partner organisations of ICAN.

Our data collection methods included a combination of primary and secondary sources. These sources included interviews, reports, and documents on the Humanitarian Initiative, ICAN, and the TPNW. Seven in-depth interviews with individuals from transnational groups like the International Physicians for the Prevention of Nuclear War (IPPNW), ICAN, the World Council of Churches, SALAM Institute, and the International Action Network on Small Arms were conducted in 2023. Participants of the study were individuals from CSOs partnered to ICAN, who have played a critical role in creating awareness about the TPNW in Africa and abroad. These interviews shed light on the operations of African transnational CSOs in

this issue area, their aim towards achieving greater participation in nuclear abolition activities, how they situate themselves in ICAN, and importantly, their own evaluation of their role in the campaign. Interview questions aimed to operationalise the democratising effect of ICAN on global nuclear governance in relation to African civil society, especially their agency and representation in ICAN.

ICAN, the Humanitarian Initiative, and the Ban Treaty

ICAN was founded after the 2005 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Review Conference failed to reach a consensus outcome, largely due to the lack of any substantive progress on nuclear disarmament. The NPT entered into force in 1970 and distinguishes between nuclear weapon states (the five states that tested nuclear weapons by 1968) and non-nuclear weapon states (all other states). Non-nuclear weapon states agree not to acquire nuclear weapons, while nuclear weapon states commit in Article Six to cease the nuclear arms race and negotiate nuclear disarmament in good faith. To many anti-nuclear activists, 2005 was the turning point, especially for leaders from the International Physicians for the Prevention of Nuclear War (IPPNW), a federation of health practitioners campaigning for the elimination of nuclear weapons. The idea of ICAN came from IPPNW and sought to reinvigorate nuclear disarmament advocacy outside the NPT framework (Gibbons, 2018).

The campaign founders believed that the campaign "needed to be global, to engage young people, and to be rooted in the unacceptability of nuclear weapons – the catastrophic indiscriminate consequences that would inevitably follow any use" (Ruff and Hawkins, 2017). The aim of the campaign was to mobilise public opinion around the world to oblige state leaders to negotiate a legal instrument that would lead to the elimination of nuclear weapons. The campaign resolved to work with non-nuclear weapon states not in extended deterrence relationships with nuclear weapon states in the NPT forum, and the resultant transnational advocacy movement became known as the Humanitarian Initiative (Ritchie and Egeland, 2020).

In 2010, the NPT Review Conference's final document stated: "The Conference expresses its deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons and reaffirms the need for all states at all times to comply with applicable international law, including international humanitarian law" (NPT, 2010: 19). Three conferences on the humanitarian impact of nuclear weapons followed, respectively in 2013 in Oslo, in February 2014 in Nayarit, and in December 2014 in Vienna. It helped ICAN establish itself as a greater coalition – its partner organisations, researchers, academics and hibakusha (atomic bomb survivors), attended the conferences and provided scientific evidence of the catastrophic humanitarian consequences of nuclear weapons use. The Humanitarian Pledge was drafted in 2014 and signed by more than 125 states, calling for renewed commitment to disarmament obligations by NPT member states and measures "to fill the legal gap for the prohibition and elimination of nuclear weapons and we pledge to cooperate with all stakeholders to achieve this goal" (Kmentt, 2022).

The mandate to negotiate such a legal instrument was sought from the United Nations General Assembly (UNGA), which established an open-ended working group to "develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons" (UNGA, 2013). A second open-ended working group in 2016 recommended that a UN conference be convened to negotiate a legal instrument to prohibit nuclear weapons and would lead to their elimination. In 2017, after being negotiated in record time, the Treaty on the Prohibition of Nuclear Weapons (TPNW) was adopted and opened for signature, entering into force on 22 January 2021 (Kmentt, 2022). It prohibits possessing, use, threat of use, testing, and hosting nuclear weapons, in Article 1. It includes clauses on victim assistance and environmental remediation where nuclear weapons use or testing have led to suffering and damage.

Several analysts and proponents of the TPNW remark that the Humanitarian Initiative and the treaty itself had a democratising effect on the governance of this issue area (Thakur, 2022; Ritchie and Egeland, 2020). For example, Kmentt (2022: 20-21) outlines three aspects of the TPNW that bolster democracy: firstly, making use of the UNGA, the key democratic body of the UN; secondly, equalising the playing field by banning nuclear weapons for all

states, including the five nuclear weapon states that have used the NPT to legitimise their possession of nuclear weapons; and thirdly, the reframing of nuclear weapons as a humanitarian issue, which allows more stakeholders to partake in the nuclear weapons conversation than security experts using technical language that is inaccessible to most people. It is this last point that is especially relevant for the purposes of this article, namely investigating the role of African civil society in ICAN. In the next section, we operationalise the relationship between CSOs and democratic global governance with a special focus on ICAN and its aim to establish a ban treaty through the Humanitarian Initiative.

Democratising Global Nuclear Governance

Jan Aart Scholte (2002: 293-295) identifies six ways in which transnational CSOs can contribute to democratic global governance. First, CSOs may increase participation on an issue by giving voice to a greater variety of stakeholders. Second, they can create awareness through public education activities, including drawing the attention of the mass media and making information on the issue available to the public and other stakeholders. Third, CSOs can encourage contestation by providing sites for robust debate where a variety of views can be aired, and consent is secured through discussing objections, rather than ignoring or circumventing them. Fourth, civic engagement on global governance issues can enhance transparency by asking critical questions and demystifying international regulatory frameworks seemingly far removed from local stakeholders. Fifth, CSOs can play a role in monitoring policies and operations of global governance authorities, thereby enhancing their accountability. Civil society can therefore push towards greater responsibility from global authorities for their policies and actions. Finally, through these factors, transnational CSOs can improve the legitimacy of global governance institutions and processes in an issue-area. ICAN arguably scores high on all these indicators.

Ray Acheson, a member of ICAN's steering group and director of disarmament for the Women's League for Peace and Freedom (WILPF), an ICAN partner organisation, explains that some in ICAN wanted to mobilise "a broader, and more diverse constituency of activists" for nuclear abolition (2021: 133). A key lesson from the Ottawa process was to ensure geographical balance and inclusiveness, which in turn encouraged ownership of the process by all participants, and the process being (and perceived as) "representative, transparent, and credible" (Acheson, 2021: 133). With more than 650 partner organisations in 110 countries, ICAN had an objective to build a diverse and broad coalition of partner organisations that have worked on the prohibition of biological and chemical weapons, cluster munitions and landmines. They recruited atomic bomb survivors and provided a platform to share their stories. (Ruff and Hawkins, 2017).[2]

The Campaign also draws many state and non-state actors from states not normally assertive in this issue area. The cross-regional core group of states that advocated for the negotiation of the Ban Treaty included states such as Thailand, Malaysia, Costa Rica, and Nigeria, for example (Acheson, 2018: 247). Actors from the Global South were able to share their experiences, e.g. of nuclear testing in Africa and the Marshall Islands.[3] Notably, participation in ICAN is not limited to formal civil society associations, but includes independent activists, academics, diplomats, scientists, doctors, and other interest groups (ICAN, 2020). ICAN also emphasises intergenerational participation in their campaign; many of the partner organisations include youth groups like Youth for TPNW, and its African chapter, Nyuklia Eureka, which are youth led groups for the abolition of nuclear weapons. In addition, ICAN drew in members from the LGBTQ+ community, and a spin-off of ICAN called itself IQAN (International Queers Against Nukes) (Acheson, 2022: 140). This intergenerational and intersectional approach served ICAN well, because it found support from other CSOs sharing its humanitarian, human rights, and environmental values, but not necessarily its focus on nuclear weapons.

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ICAN launched a website in 2007 to reach a global audience with an intent to engage those with a limited understanding about the humanitarian, environmental and security threats posed by nuclear weapons. ICAN's online content offers explanations on what nuclear weapons are, why they pose an existential threat, the Hiroshima and Nagasaki bombings, global nuclear stockpiles, and the resistance of nuclear armed-states to work towards a ban treaty. The *hibakusha*[4] and victims of nuclear weapons testing became powerful advocators of the human impact of nuclear weapons, which have formed the foundation of the campaign (Hawkins, Sweeney and Ruff, 2019). Stimulating public knowledge about the international regulatory instruments and institutions that govern nuclear weapons aims to encourage an informed citizenry with an interest in changing norms and laws to serve broader humanitarian interests. Here, ICAN worked, as Scholte (2002) suggests, by exposing nuclear injustice and risks to public criticism.

ICAN was successful at contesting the discourses of nuclear weapons possession. They used discursive dynamics and "resistance rhetoric" to shape the information politics of nuclear weapons (Ritchie and Egeland, 2020). Their campaign was formulated and strengthened by using scientific research to spotlight the effects and consequences of a nuclear war. By fostering a humanitarian discursive framework, they presented "novel" research that showcases the consequences of the accidental use of nuclear weapons and its illegality in terms of International Humanitarian Law (Reynaldi, 2020: 890). By means of advocacy, ICAN shifted the discourse on nuclear weapons through stigmatising these weapons, as opposed to seeing them as tools of strategic stability (Reynaldi, 2020). In addition, ICAN's advocacy for the TPNW, emphasising victim assistance and environmental remediation, reflects how CSOs hold states accountable (Article 6 and 7) (ICAN, n.d.; UNODA, 2022).

The nuclear armed states and their allies resisted the TPNW process by arguing that a ban treaty will undermine the NPT and create divisions that will delay nuclear disarmament. They questioned the Ban's efficiency, because nuclear armed states did not participate in its negotiation and refused to join the Ban (Kmentt, 2022). Nevertheless, the TPNW received support from an overwhelming majority of states in the UNGA and a vast and diverse coalition of CSOs. ICAN therefore succeeded in a key goal: to canvas for a treaty that counter-balances one-sided practices in global nuclear governance geared to serve the interest of nuclear armed states (Acheson, 2018).

The relationship of CSOs and democratic global governance does not always correlate positively, though. Scholte (2002: 298) outlines several challenges to the democratising role of transnational civil society. For example, he warns that, "civil society associations that deal with global governance issues can in some cases actively constrain discussion and suppress dissent. After all, civil society is not an intrinsically virtuous space" (Scholte 2002: 298). Indeed, ICAN's insistence to pursue a nuclear ban treaty without the participation of nuclear armed states and their allies was not received positively by all CSOs. As ICAN opened space for debate vis-à-vis supporters of nuclear deterrence, these CSOs felt that ICAN also closed space for internal dissent about different ways to achieve nuclear abolition. Acheson (2021: 148) ascribes blame to a lack of broad consultation and debate to get buy-in from these CSOs by the ICAN leadership and a procedural shift away from consensus-based decision-making in ICAN, but also describes efforts to mend bridges with these organisations later.

The challenge that is more relevant to this article is the extent of equal participation in ICAN. Scholte (2002: 296) notes, "if civil society is to make a full contribution to democratic rule of global spaces, then all interested parties must have access and preferably equal opportunities to participate. Otherwise, civil society can reproduce or even enlarge structural inequalities and arbitrary privileges... Hierarchies of social power can operate in civil society just as in other political spaces." According to Tallberg and Uhlin (2011), although transnational civil society gives *a* voice to the marginalised, they can sometimes fall short of providing an *equal* voice for all relevant stakeholders. Surveying transnational CSOs, Scholte (2002: 296) remarks that "Western styled, Western funded NGOs led by Westernized elites" can pervade sites of CSO participation (see also Scholte, 2011 and Bruhl, 2010).

In addition to its partner organisations, ICAN consists of an international steering group and staff complement. It is registered as Swiss non-for-profit organisation and receives funding from governments (e.g. Norway, Ireland and new Zealand), private donations (like the Gould Family Foundation) and organisations (like the Ploughshare Fund).[5] In a frank evaluation by an insider, Acheson (2021: 141-144) notes that despite efforts to diversify the steering group and include more voices in decision-making, the campaign continues to suffer from White dominance in its leadership. Despite a general feeling of support among campaigners from all regions, racial and regional disparities in ICAN prevail. These disparities are especially with respect to leadership and staffing positions, the way some campaigners from non-Western regions felt treated and their ideas received, and how resources have been distributed among partner organisations and campaigners. Compounding the participation challenge is a tendency of top-down decision-making in ICAN, what Acheson (2021: 144) partly attributes to "a constant underlying-and sometimes overt-tension between democracy and efficiency in the campaign's operations". These detractions to the democratic impact that ICAN has on global nuclear governance are not unique. In the next section, we explore African CSO participation in ICAN and how members of these organisations perceive their contribution to democratic global nuclear governance.

The Role of African CSOs in ICAN

At the start of 2024, the number of partner organisations in ICAN from Africa stood at 95 (see Table 1 below). The geographic representation of these organisations across the continent varies, e.g., there are 13 partner organisations from the Democratic Republic of the Congo and 12 from Nigeria, but none from 21 other African states, including prominent states, such as Algeria and Namibia. Some partner organisations are branches and representatives of professionalised transnational groups like the IPPNW, WILPF, and the World Council of Churches, while others are smaller independent groups like Association Salam. See Table 1 om page 45.

To explore the role of African civil society in ICAN, we approached individuals from ICAN partner organisations in Africa who have played a significant role campaigning for the TPNW. Our aim was to understand how they saw the nature and extent of their involvement in the campaign. We kept Scholte's operationalisation of the democratic potential and challenges of CSOs for global governance in mind as a guide, but do not force findings into the six points that he raises. As is evident below, in practice, some of his points are sometimes so intertwined that we address them together.

Advocacy and Awareness

ICAN is a single issue-based campaign (nuclear abolition) and its focus and strategies are well-defined. Different partner organisations may cover different issue-areas and are not expected to work permanently on ICAN issues, but they come on board, because they agree with ICAN's strategy and objectives. African CSOs saw their participation in the context of African politics and priorities and what they can bring to the campaign. The continent's diverse political systems, different priorities, and different contexts mean that each respective partner adopt approaches and create relationships that will work in their context.

This is probably one of the most important benefits of ICAN's decision to include regional diversity and support CSO events in African states. One respondent from an African civil society partner organisation in ICAN was asked about its role in creating awareness in and out of the campaign. He noted that African CSOs played a crucial role in campaigning for the TPNW because many governments in Africa do not consider the TPNW a priority due to other pertinent issues on the continent, like poverty, food security and lack of electricity. Compounding issues on the continent have made it difficult for some African governments to prioritise nuclear abolition and the TPNW. This is not unique to Africa. Acheson (2021: 141) also notes that nuclear weapons were seen as a "minority issue" in the Global South more generally and campaigners from these regions wanted to see a greater diversity in ICAN's material and speakers to reflect different power lines than North and South. African CSOs saw themselves as intermediaries that could translate information on the humanitarian impact of nuclear weapons and convey its importance to local politicians and communities in ways they would grasp.

Table 1: African Partner Organisations in ICAN (ICAN, 2024)

Countries	CSOs	Total
Angola	– Angola 2000	1
Benin	– Réseau d'Action Sur Les Armes Légéres au Benin	1
Burkina Faso	– Réseau d'Action Sur les Armes Légéres en Afrique de l'Ouest section du Burkina	1
Burundi	– The Centre for Training and Development of Ex-Combatants (CEDAC) – Alliance for the Observatory of Action on Armed Violence in Burundi – Colonie des Pionniers de Développement (CPD) – Terre des Jeunes du Burundi – Transnational – Women's Right to Education Programmes – Nduwamahoro le non violent Actif	6
Cameroon	– Cameroon Youths and Students Forum for Peace (CAMYOSFOP) – Association Internationale pour la paix et le Développement en Afrique – Cameroon for a World Beyond War	3
Comoros	– Association SALAM (Support, Help, Fight For, and Act for Migrants and States in Difficulty)	1
DRC	– Congolese Campaign to Ban Landmines – Congolese Physicians for Peace – CRISPAL(Cri de Secours contre la Prolifération des armes légères)-Afrique – Centre for Peace, Security, Development and Armed Violence Prevention (CPS-AVIP) – Femmes des Medias Pour la Justice au Congo – Standing Green "SG" – Foundation Alain Lubamba (FAL) – Women Concern (WOCO) – Comité d'Appui au Développement Rural Endogéne (CADRE) – Union pour la Promotion/Protection, la Défense des Droits Humains et de l'Environnement – UPDDHE – Youth for Peace Grands Lacs – Africa Reconciled – Femme en Action pour Le Progrés Social "FAPROS"	13
Ethiopia	– Survivors Recovery and Rehabilitation Organization	1
Gambia	– Youth Centre for Peace and Development – Child and Environmental Development Association	2
Ghana	– Abibimman Foundation – Community and Family Aid Foundation – Foundation for Security and Development in Africa (FOSDA) – Global Media Foundation – Presbyterian Church of Ghana – Youth in Action Ghana	6
Kenya	– Africa Peace Forum – African Council of Religious Leaders – Religions for Peace (ACRL-Rfp) – Inter-Religious Council of Kenya – Kenya Association of Physicians and Medical Workers for Social Responsibility – Kenya Pastoralist Journalist Network	5
Liberia	– Liberians United to Expose Hidden Weapons – Assist Children Education, Inc	2
Madagascar	– Mediator and Observer Group of Madagascar	1

Countries	CSOs	Total
Malawi	– Centre for Human Rights and Rehabilitation (CHRR) – People's Federation for National Peace and Development (PEFENAP)	2
Mali	– Association Timbuktu Center for Strategic Studies on Sahel	1
Mauritius	– Action Civique pour le Progrés et le Développement – Mauritius Trade Union Congress	2
Mozambique	– Mozambican Force for Crime Investigation and Social Reintegration (FOMICRES) – Mozambican Force for Crime Investigation and Social Reintegration	2
Nigeria	– Achievers University Owo – Christian Council of Nigeria – Cultural Youth Initiative Movement of Nigeria – Global Network for Human Development Nigeria – Kairos Nigeria – Lastborn Humanity and Development Foundation – Poverty and Associated Maladies Alleviation Initiative (PAMAI) – Smiles Africa International – Society of Nigerian Doctors for the Welfare of Mankind – Social Welfare Network Initiative – Women's Right to Education Programme – ScienceSquad Africa	12
Rwanda	– Global Initiative for Environment and Reconciliation (GER) – Association des Jeunes de Saint Charles Lwanga (AJECL) – LA GALOPE Rwanda – PAX Pres	4
Senegal	– Association Senegalese des Victimes de Mines (ASVM) – Senegalese Campaign to Ban Landmines – Reseau des Anciens Jecistes d'Afrique/Senegal (RAJA/S)	3
Seychelles	– Seychelles First Movement	1
Sierra Leone	– Advocacy Initiative for Development – Christian Outreach Justice Mission Sierra Leone – Campaign for Human Rights and Development International – Peace Drive	4
Somalia	– Somalia Coalition to Ban Landmines (SOCBAL)	1
South Africa	– Africa's Development and Weapons of Mass Destruction Project – The Ceasefire Campaign – International Action Network on Small Arms	3
South Sudan	– South Sudan Action Network on Small Arms	1
Tanzania	– Human Rights Education and Peace International (HUREPI-Trust)	1
Togo	– Centre de Recherche et d'etude sur la securité et le developpment (Cresed) – Visions Solidaires	2
Tunisia	– Tunisian-Euro-Mediterranean Association of Youth – Youth without Borders – Model of the African Union	3

Countries	CSOs	Total
Uganda	– Holistic Operations for Rural Development – Ugandan Association of Medical Workers for Health and Environmental Concerns – Uganda Landmine Survivors Association (ULSA) – Facilitation for Integrated Community Rural Development (FICRD) – Rafusai Charity Organisation	5
Zambia	– Southern African Centre for Constructive Resolution of Disputes – Zambia Health workers for Social Responsibility	2
Zimbabwe	– Zimbabwe United Nations Association – Women's International League for Peace and Freedom (WILPF) Zimbabwe – Virtual Planet African	3
	Total	**95**

A participant stated that African CSOs are often considered a third power in Africa because they have a voice. Without the involvement of civil society in their respective countries "it would have been difficult for ICAN to receive a single signatory or ratification". He stated that African CSOs would face ministers, or MPs, to explain and negotiate at the table, to discuss the importance of ratifying the TPNW.

The moral drive of the campaign was expressed by an ICAN campaigner from Nigeria. As a member of the local affiliate of the IPPNW known as the *Society of Nigerian Doctors for the Welfare of Mankind*, he emphasised that, as medical doctors they have a responsibility to lobby the government to ratify the TPNW. This was achieved by organising seminars with key officials from the Ministry of Foreign Affairs and the Federal Ministry of Justice in Nigeria. Additionally, key delegates from the Economic Community of West African States (ECOWAS) were invited to the seminar, where civil society had the opportunity to speak to them as a regional bloc about the strategic benefits of signing and ratifying the TPNW (ICAN, 2019). A respondent to the study is convinced that West African states have started committing to signing and ratifying the TPNW, because CSOs provided expertise and information, thus raising awareness about the devasting humanitarian and environmental consequences of nuclear war and nuclear testing (ICAN, 2019). After Nigeria ratified the treaty and deposited its instrument on 6 August 2020, the CSOs organised meetings with other West African states. More specifically, they met with delegates from Benin, Sierra Leone and Liberia. Among the countries visited, Benin was the first to ratify the treaty on 11 March 2021.

An ICAN representative also emphasised the influence of faith-based groups like the African chapters of the WCC, which used ethical imperatives to mobilise their governments and draw attention to this issue (World Council of Churches, 2016). Faith-based organisations have taken an interest in nuclear weapons issues on the continent long before ICAN existed. For example, the All-Africa Conference of Churches (1977) spoke out against nuclear weapons generally, and South Africa's suspected nuclear weapons programme specifically in a 1977 publication, and the WCC worked with other African CSOs to promote the African Nuclear Weapons Free Zone (ANWFZ) Treaty (ISS, 2009). To bring nuclear abolition closer to home and raise its urgency for an African audience, these organisations emphasised the impact of nuclear weapons use anywhere in the world on human security and development in Africa, for example, how food security and refugee flows will be affected. This argument was compelling to many African government officials.

At a continental level (the African Union [AU] and its predecessor, the Organisation of African Unity [OAU]), African states had already taken a principled commitment to nuclear abolition, so signing the TPNW was described by some CSO members as a "small step to take". Many African states, for example, South Africa, Algeria, Egypt, and Kenya took a strong position in the lead up to and during the negotiation of the TPNW, and civil society support was essential to justify the spending of these diplomatic resources.[6] One

respondent to the study mentioned that African civil society was driven by the principles governing nuclear disarmament in Africa, and the ANWFZ (or Pelindaba) Treaty that entered into force in 2009 itself was a major influence, facilitating their participation and contribution as members of a continental nuclear weapon free zone.

Participation

Replacing a strategic and technical narrative of nuclear disarmament and non-proliferation with a humanitarian focus gave agency to a new spectrum of actors in Africa. A representative from ICAN mentioned that, by reframing nuclear weapons as a humanitarian issue, civil society had the ability to contribute, which is something completely novel in this area. It opened the door for other constituencies like youth groups, faith groups, doctors, scientists and trade unions to play a role in advocating for the treaty, including city officials and parliamentarians.

One participant from an African partner organisation stated that once they joined ICAN, campaigners were encouraged to read the TPNW, and they used local advisors to help them understand the treaty holistically. He stated that as the director of his organisation, he took the lead in lobbying his government to ratify the TPNW. Together he worked with ICAN and proposed a seminar that later took place at the National Assembly of the Comoros. All deputy speakers of the three islands were present, along with members of parliament and the Ministry of Foreign Affairs. He stated that, "We presented members of parliament with scientific reason and scientific answers, not political answers because this issue has nothing to do with politics. This is the reality, and this is the science, we used Hiroshima as a reference." By the end of the session, the deputy speakers vowed to push for the ratification of the TPNW. Their organisation published their findings, had a press conference with journalists, and could explain the importance of the TPNW on the radio and national television. The participants also used Facebook to educate citizens in the Comoros about the TPNW, and continues to work with regional blocs in Africa, as well as educate other CSOs of states in the region, like Madagascar, Rwanda, Burundi, Sudan, and Somalia. These regional blocs, states, their CSOs, and communities are not normally associated with nuclear weapons activism.

One respondent shared that out of 54 member states of the AU, there are 40 countries that are actively being lobbied or already participating in this issue. Even in countries where democracy is defined by a few elite, there are CSOs active in nuclear disarmament discussions, for example in Uganda (ICAN, Uganda profile, n.d.). The energy and commitment from civil society indicates the intent to influence the status quo of nuclear disarmament. With respect to African CSOs' participation in ICAN's decision-making, the respondent noted, "... as African civil society we can still influence what ICAN does through its existing structures. We need to better organise ourselves and have our own campaign meetings, but it should also include how we can get more member states to ratify the treaty, which is our priority. Civil society in Africa, those that are part of ICAN, have many networks across Africa. We have mobilised our own networks across the continent – and I can say that ICAN is Africa." The participant continued to emphasise that a large percentage of partner organisations in ICAN are from the African continent; some have not joined formally but are working within their own capacity.

The participation of civil society in these different arenas reflects a form of empowerment, providing African campaigners with the practical experience of being involved in collective action to push governments to support the Ban Treaty. Their activities and initiative indicate transformative participation in the campaign, rather than simply nominally being in ICAN. Essentially, empowerment is an agenda that comes from below, because it involves action from below (see White's discussion on transformative and empowering participation, 1996: 8-9). ICAN's international steering group facilitated this kind of activism, but the campaign also acquired a life of its own in some African spaces.

Agency and Representation

ICAN has influential networks like the WCC in the faith-based sphere and the IPPNW in the medical sphere. These organisations have many partners, chapters, and local affiliates in different countries and regions, also in Africa. These organisations enhanced the agency of some African states in the Humanitarian Initiative and the TPNW process by supporting governments at the conferences in Oslo, Mexico, and Vienna, and the UN meetings in New

“There is a new generation of African campaigners that have taken ownership of the campaign on the continent, like the African chapter of *Youth for TPNW* known as *Nyuklia Eureka*.”

York. African civil society also assisted governments in official forums by drafting talking points and encouraging them to advocate for the TPNW from a principled position and a point of activism. A respondent to the study stated that a delegate would stay in the room and help African officials and diplomats take the floor and make statements.

When questioning individuals from African partner organisations in ICAN about their sense of agency or representation in the campaign, one participant mentioned that he made a video to congratulate his president after his country ratified the TPNW. The video was shared by ICAN on the UN social media platform, and posted to the President of the Comoros who was the chair of the AU at that time.[7] This motivated the campaigner to work harder and “be a voice for Africa”. Additionally, he felt that campaigners were able to share their views and concerns equally in ICAN and felt adequate representation of their concerns and goals.

Another African representative in ICAN states, “Representation of civil society is there. Even if we are not physically in those meetings, there were platforms being used that made it possible to join conferences virtually in Vienna and Geneva; we could virtually participate in these conversations. ICAN have mobilised civil society engagement in the continent, but civil society in Africa has an upper hand in these conversations, but we struggle with technical language. But we see our representation in the campaign. We have African members in the governing structures of ICAN, the African Council of Religious Leaders (ACRL).[8] This forum is made [up] of religious organisations in Africa, and I am one of the leaders that represents civil society in the governing structures of ICAN.”

There is a new generation of African campaigners that have taken ownership of the campaign on the continent, like the African chapter of *Youth for TPNW* known as *Nyuklia Eureka*. Nyuklia is a Swahili term, meaning ‘nuclear’ and Uzo Ohanyere, a founding member, explains the organisation was “born from a moment of realization and urgency” when he attended the First Meeting of States Parties to the TPNW and saw how under-represented Africa was at the event (Swedish Doctors Against Nuclear Weapons, 2023). Many African youth campaigners come from climate change activism and started looking at the nexus between nuclear weapons and climate change. Youth activism also intersects with campaigns against systemic racism in the context of Achille Mbembe’s (2019) notion of necropolitics, or who gets to decide how people live and die; who are disposable. Discourses that expose the long racist and imperialist histories of uranium mining, nuclear testing and nuclear use have gained traction in the broader debate of nuclear weapons and speak to a younger African audience that wants change (Hecht 2014; Pretorius 2020).

A participant to the study noted that in January 2023, the Department of International Relations and Cooperation (DIRCO) in South Africa, together with ICAN, arranged a regional seminar on the universalisation of the TPNW (DIRCO, 2023; IFOR, 2023). Many ICAN partners, academics, diplomats, and researchers across the continent attended. Many directors of organisations and those involved in multilateral affairs were now younger people in their thirties (these roles were traditionally taken by senior diplomats). This tie into the fact that the campaign has mobilised youth groups and a new generation of activists and young diplomats in this issue-area.

Challenges and Recommendations to African Civil Society

As was mentioned above, a challenge for ICAN’s role in democratic global governance has been distributing resources equitably amongst partner

organisations. One African representative of ICAN stated that, lobbying from civil society in Africa was limited when compared to their European counterparts. The lack of resources were one of the challenges and continues to be. This is not only limited to movements in disarmament, but across other African transnational movements. However, the lack of resources did not stop CSOs from lobbying their governments at a capital level, often using personal resources.

There is only a handful of CSOs in Africa that focus solely on disarmament issues, let alone nuclear disarmament. The majority are organisations that work on peace, development, gender, and climate issues. Having a lack of organisations that focuses on nuclear disarmament can hinder organising activities in a sustained manner. African civil society partners to ICAN overcome this challenge by engaging with their networks in other countries to add their voice to this issue. For example, ICAN's Comorian partner meets regularly with other NGOs in different countries to motivate the need to join ICAN and lobby governments to ratify the TPNW. His organisation is not funded for these regional outreach and networking initiatives, but he integrates it into his work out of commitment to the campaign.

A recommendation from one respondent to strengthen the TPNW universalisation campaign in Africa is to create strategies for the five regional blocs – North, South, East, West and Central Africa. Although each state has its own procedural processes to facilitate the signing and ratification of the TPNW, and campaigning processes cannot be standardised throughout the continent, one participant stated that if African civil society mobilises together, it will apply pressure on their governments. The African regional seminar to universalise the TPNW jointly hosted by DIRCO, ICAN and the International Committee of the Red Cross and Crescent (ICRC) intended to do just that. This participant was also excited that African CSOs have the potential to lead the campaign against nuclear weapons in terms of statistics. African states have more signatories than any other continent, indicative of its continued anti-nuclear sentiment.

Conclusion

Africa's involvement in ICAN, the Humanitarian Initiative and the TPNW is but another in a long history of encounters in the nuclear issue-area. In this article we narrowed our focus to the role that African CSOs play in ICAN, particularly to their experience of their role in the TPNW campaign and what this means for democratising global nuclear governance. Guided mostly by Scholte's operationalisation of the potential of transnational civil society in democratic global governance, we describe African CSOs' efforts in terms of raising awareness and civic engagement in their local context about nuclear weapons and the TPNW. Participating in ICAN, the Humanitarian Initiative and the TPNW is generally perceived as transformative and empowering in the democratic sense – and participants felt that they shared in ICAN's achievements to contest nuclear deterrence narratives and to create new narratives that hold global governance authorities to account. Despite the acknowledged shortcomings related to racial and regional representation in ICAN's steering group and top-down decision-making hierarchies, African CSO participation has gone beyond the nominal. Although the sheer number of African CSOs listed as partner organisations on ICAN's website[9] is significant, it does not say much about the quality of their participation. However, the respondents we interviewed gave a sense that the campaign gained a life of its own in and across African states where CSOs are active, which provided them with agency and increased Africa's representation quantitatively and qualitatively in this issue-area.

The nuclear weapons issue does not receive the priority it did in the 1960s when Kwame Nkrumah organised the *Accra Assembly against the Bomb* and African states imposed sanctions on France for its nuclear tests in the Sahara desert under the banner of nuclear imperialism, or, when suspicions of South Africa's nuclear weapons programme under apartheid infused awareness about the connection between racism and nuclear weapons. However, ICAN's approach to draw in a broad coalition of CSOs reignited African civil society's interest in these debates and opened sites for their participation nationally, regionally and alongside their governments in international forums. African CSOs raised issues of funding and representation as challenges to their role in the campaign, but in general they could work with ICAN or use their initiative and own resources to overcome these challenges to an extent that they felt they contributed significantly to the campaign and continue to do so.

Endnotes

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[1] The work of Jean Allman (2008) on the role of pacifist movements against 'nuclear imperialism' and particularly the nuclear weapons tests in the Sahara desert in the 1960s is a welcome exception.

[2] See the comprehensive list of ICAN Partner Organisations at https://www.icanw.org/partners.

[3] See https://reachingcriticalwill.org/images/documents/Disarmament-fora/nuclear-weapon-ban/statements/28March_MI.pdf & https://www.nucleartestimpacts.org.

[4] See Hibakusha testimonies at https://www.icanw.org/hibakusha.

[5] See ICAN's annual reports at https://www.icanw.org/ican_annual_reports.

[6] See Reaching Critical Will's reporting on the 2016 Open-ended Working Group on Nuclear Disarmament discussions, at https://www.reachingcriticalwill.org/disarmament-fora/oewg.

[7] Congratulatory video to the President of the Comoros for ratifying the TPNW. https://www.facebook.com/watch/?v=342332650543896.

[8] See more on the work of the African Council of Religious Leaders for Peace https://www.icanw.org/african_council_of_religious_leaders_religions_for_peace.

[9] See https://www.icanw.org/partners.

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Reviewing South Africa's Non-Proliferation Policy and Strategic Trade Controls

By Melanie Reddiar

Abstract

The prohibition of Weapons of Mass Destruction (WMDs) in South Africa is governed through the implementation of an integrated and robust non-proliferation and arms control policy, legislative and regulatory framework, which has been revised and improved over time to address global developments; scientific and technological developments; and advancement of the threat landscape in terms of illicit trafficking of restricted goods and technologies as well as terrorism. Nonetheless, deficiencies in the regulatory framework and legislation became apparent over the years, especially after the infiltration of the South African industry by the A.Q. Khan nuclear smuggling network. Although some of these deficiencies have been addressed, others are more challenging and require further work to be concluded in order to improve regulatory processes and strengthen the non-proliferation system, and to ensure that the proliferation strategies of non-state actors can be combatted. It is also aimed at South Africa maintaining its image as a reliable and responsible supplier, recipient and end user of strategic goods and technologies, while contributing meaningfully to global efforts of disarmament and non-proliferation of WMDs as a responsible member of the international community, as an advocate for global disarmament, and as a leader in efforts to prevent the proliferation of WMDs, in general.

Introduction

Developments in science and technology have been advancing at a significant rate in the recent past, raising concerns about the increase in access to dual-use goods and technologies by proliferators. Such concerns are valid in the context that the technological base and capabilities of illegitimate non-state actors and countries of concern have advanced considerably over the years to produce and supply sensitive dual-use technologies. The

advancement of Weapons of Mass Destruction (WMD) programmes has decreased the confidence of the international community on the efficacy of the international treaties, conventions and multilateral export control regimes tasked with the implementation of such obligations. Although these mechanisms are effective, it has not been able to stem proliferation significantly enough to minimise or prevent proliferators access to advanced technologies in the nuclear, chemical, biological and missile technology sectors. There has been success in the disarmament and non-proliferation of chemical weapons with relatively few states remaining outside the Chemical Weapons Convention (CWC). However, the biological mechanisms are currently insufficient, as there is no verification mechanism or internationally agreed list of biological goods and technologies under the Biological and Toxin Weapons Convention (BTWC). Improving such instruments requires, inter alia, enhanced multilateral cooperation, further communication between international organisations and national regulatory structures, as well as between states.

South Africa's non-proliferation mechanisms have advanced significantly from a state that had developed a limited nuclear deterrent capability to now being nuclear weapons free, which has enabled it to be an advocate for global nuclear disarmament and a leader in efforts to prevent the proliferation of WMDs. As a responsible member of the international community, South Africa plays a critical role global role by promoting disarmament and non-proliferation, while also prohibiting all WMDs, especially preventing the re-emergence of a nuclear weapons programme. It implements an integrated and robust non-proliferation and arms control policy, and legislative and regulatory frameworks. The primary goal of this policy, adopted in August 1994, is to reinforce and promote South Africa as a responsible producer, possessor, and trader of advanced goods and technologies in the nuclear, biological, chemical, missile, and conventional fields (Department of Foreign Affairs, 1995: 7). These goods and technologies are crucial for South Africa's economic growth and advancement as a country with advanced nuclear capabilities.[1] South Africa thus also promotes disarmament, non-proliferation, and arms control to contribute to increasing socio-economic development and strive towards international peace and security. This approach is continually being evaluated and is evolving and advancing through cooperation and collaboration amongst relevant stakeholders. There are constant enhancements and improvements in the legislative framework and regulatory mechanisms to ensure that South Africa continues to contribute significantly to global disarmament and non-proliferation efforts and to prevent the proliferation of WMDs, in general. This paper provides an overview of the current system of control and makes some recommendations for the enhancement thereof.

Non-Proliferation Policy and Control System

A former South African Minister of Foreign Affairs, Alfred Nzo, was a key player in the development of South Africa's disarmament and non-proliferation and policy positions. On 31 August 1994, the South African Cabinet approved, in principle, a proposal from Nzo that South Africa continues

"The advancement of Weapons of Mass Destruction (WMD) programmes has decreased the confidence of the international community on the efficacy of the international treaties, conventions and multilateral export control regimes tasked with the implementation of such obligations."

implementing a policy of non-proliferation and arms control and actively participate in the various non-proliferation regimes and suppliers groups; that South Africa adopt positions supporting the non-proliferation of WMDs with the goal of promoting international peace and security; that South Africa utilises its position as a member of the suppliers regimes and of the Africa Group/Non-Aligned Movement (NAM)[2] to promote the importance of non-proliferation, whilst ensuring that these controls will not prevent the developing countries from obtaining access to the advanced technologies which they require for their development; that South Africa continues in its objective to become a member of all of the non-proliferation regimes and suppliers groups; and that the best interests of South Africa in regard to the use of technology in the nuclear, chemical, biological and missile spheres for civil and peaceful purposes, be effectively protected at all times (Department of Foreign Affairs, 1995). In implementing this policy, South Africa actively participates in meetings of the various non-proliferation treaties, conventions and regimes, promoting disarmament and non-proliferation and ensuring that the best interests of developing countries, and more specifically, the African countries, are promoted at all times.

In addition, to ensure that South Africa remains a responsible producer, possessor, and trader of advanced goods and technologies in the nuclear, biological, chemical, missile, and conventional arms fields, it has a regulatory control system in place. This system is guided by South Africa's obligations under the various non-proliferation treaties, conventions and multilateral export control regimes, which includes, inter alia, the Nuclear Suppliers Group (NSG), the Missile Technology Control Regime (MTCR), the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (Chemical Weapons Convention or CWC), the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (Biological and Toxin Weapons Convention or BTWC), the Treaty on the Prohibition of Nuclear Weapons (TPNW), the Comprehensive Nuclear Test Ban Treaty (CTBT), and the Wassenaar Arrangement (WA). The control lists established under some of these instruments, such as the guidelines of the NSG, the technical annex of the MTCR, the WA list and the Schedules of Chemicals of the CWC are utilised in the implementation of a strategic trade control regulatory mechanism. Participation in these instruments assists South Africa in fulfilling its policy objectives. South Africa has the ability to supply certain dual-use items covered by these instruments, which are goods and technologies that have the capability to be used in the development or production of WMDs, but also have commercial applications. (Nuclear Suppliers Group, 2023: 1-2; Nuclear Threat Initiative, 2023: 1). It should be noted that the BTWC does not have a prescribed list of biological goods and technologies that should be subject to strategic trade controls. South Africa has therefore developed a national list that is used to regulate relevant industry and exports.

An effective control system consists of five main elements. The first element is full compliance with international non-proliferation obligations. South Africa adopts a multi-disciplinary control system, with the aim to sign, ratify or accede to all disarmament and non-proliferation treaties, regimes and conventions relating to WMDs. The second element entails the establishment and maintenance of a comprehensive policy framework that addresses all dimensions of the country's disarmament and non-proliferation objectives. The third element is a legislative framework that includes the international obligations and policy principles, which facilitates the responsible trade in strategic goods and services. The fourth element is regulatory mechanisms to suit the legislative framework, including compliance mechanisms, strategic trade control mechanisms, customs and border control mechanisms, and law enforcement mechanisms. The fifth element entails the inclusion of all relevant stakeholders in a consultation process when designing such non-proliferation control mechanisms so as to form the basis for future collaboration, partnerships and co-ordination. South Africa has all these elements in place, and they are being implemented and are continually reviewed.

Being an active participant in the various treaties, conventions and multilateral export control regimes and adopting positions supporting the non-

> “…to ensure that South Africa remains a responsible producer, possessor, and trader of advanced goods and technologies in the nuclear, biological, chemical, missile, and conventional arms fields, it has a regulatory control system in place.”

proliferation of WMDs, with the goal of promoting international peace and security, reinforces South Africa's primary goal to promote the state as a responsible producer, possessor and trader of advanced goods and technologies in the nuclear, biological, chemical and missile fields (Department of Foreign Affairs, 1995; Markram, 2004).

In order to domesticate the international treaties, conventions and regimes, the control authorities have to create a governance mechanism that adequately regulates strategic goods and technologies that could contribute to the proliferation of WMDs in South Africa. According to the World Customs Organisation's Strategic Trade Control Enforcement (STCE) Implementation Guide, 'strategic goods' refers to WMDs, which includes nuclear, chemical, biological and radiological weapons and their delivery systems (ballistic missiles, cruise missiles and unmanned aerial vehicles), as well as conventional weapons and related items involved in the development, production or use of such weapons and their delivery systems. Goods may also be identified as strategic by their inclusion on national control lists or by being destined for WMD end use, or for use by a WMD-related end user (World Customs Organisation, 2023).

Due to historical reasons, which are described below, the current South African system entails the use of various departments to control the different areas. This arrangement results in some overlaps between the various areas. The entity playing a role in the total non-proliferation and arms control structure is the South African Council for the Non-Proliferation of Weapons of Mass Destruction (the Council), which controls Part 2 (dual-use items) of the NSG, the MTCR, CWC, and the BTWC. The Council has also reviewed the Australia Group list of goods and technologies and added additional goods to the list of chemical goods and biological goods controlled to enhance domestic controls. The Department of Electricity and Energy (DEE; formerly, the Department of Mineral Resources and Energy) is responsible for regulation of the NSG Part 1 (nuclear fuel, certain nuclear and related material and related equipment), but non-proliferation decisions are made in consultation with the Council in terms of Section 33(2)(e), Section 34(2)(a), and Section 35(2) of the Nuclear Energy Act, 1999 (No. 46 of 1999). The National Conventional Arms Control Committee (NCACC) is responsible for all Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies[3] (WA) military lists as well as WA dual-use list controls in terms of the National Conventional Arms Control Act, 2008 (No. 73 of 2008). The current overlaps result in certain permits being required from both the Council and the NCACC systems, or the Council and DEE.

There have been many questions over the years about the fragmentation of the system and division of the non-proliferation and arms control responsibilities amongst the different departments, especially regarding the non-proliferation controls being housed under the Ministry of Trade, Industry and Competition, and not the Ministry of International Relations and Cooperation, or the Ministry of Science and Technology, or the Ministry of Defence. In 1995, a submission was made to Cabinet to consider the rationalisation of responsibilities between the non-proliferation, nuclear and arms control local players. It was then decided that the Department of Foreign Affairs (now the Department of International Relations and Cooperation) would be responsible for international negotiations and communication on all treaties and agreements, with advice from

the other ministries and departments, and to demarcate the controls of conventional arms and WMDs amongst the Departments of Trade, Industry and Competition; Mineral Resources and Energy (now the Department of Electricity and Energy); and Defence and Military Veterans[4] (Reddiar, 2021). The Council therefore continued with the implementation of the treaties, conventions and regimes, as assigned. The NCACC was responsible for conventional arms control issues. The NSG Part 1 controls of nuclear items and safeguards continued to be the responsibility of the Minister of Minerals and Energy Affairs (now the Minister of Electricity and Energy).

Non-Proliferation and Arms Control Legislation

Interestingly, the Non-Proliferation and Arms Control Policy was only formally adopted in 1994, after the promulgation of the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (No. 87 of 1993, Non-Proliferation Act), which was done subsequent to the dismantling of South Africa's nuclear weapons programme in 1991 (Department of Foreign Affairs, 1995; Grobler, 1996). South Africa therefore controls strategic goods, which have the potential to be used in the manufacture of a WMD, but also has commercial applications, through a strategic trade control mechanism, which is implemented by the Council in terms of the Non-Proliferation Act. The Council ensures that all appropriate non-proliferation controls are implemented, thereby assisting South Africa to promote the peaceful application of advanced goods and technologies in the nuclear, biological, chemical and missile fields. Furthermore, in terms of the Nuclear Energy Act, the Minister of Electricity and Energy (formerly, the Minister of Mineral Resources and Energy) regulates the acquisition and possession of nuclear fuel, certain nuclear and related material and related equipment, as well as the import and export and other activities related to fuel, material, and equipment. The regulation of conventional arms, as listed in the WA, remain the responsibility of the NCACC in terms of the National Conventional Arms Control Act (No. 41 of 2002), as amended by Act No. 73 of 2008.

In 2004, subsequent to the United Nations Security Council (UNSC) adopting Resolution 1540 (2004) under Chapter VII of the United Nations (UN) Charter, the Council decided to initiate a comprehensive review of all non-proliferation policies, guidelines, legislation, control mechanisms, processes and procedures, infrastructure and human resources to bring South African controls in line with national interests and international obligations and best-practice. The Non-Proliferation Review Committee was tasked with the review, which ended in 2012 with a revised Non-Proliferation Act (or Non-Proliferation Amendment Bill). This was an intensive benchmarking process that attempted to identify areas of improvement and address the deficiencies and threats as a result of the evolving international threat landscape, for example, the AQ Khan network, which utilised South African companies to manufacture a nuclear gas-feed and withdrawal system for a centrifuge-enrichment plant to be supplied to Libya (Corera, 2016: 117; Boureston and Lacey, 2007). Although the amendments have not yet been adopted, there is an acknowledgement of the importance of continuously evaluating the control mechanisms in response to new challenges, such, as inter alia, new and emerging technologies; disruptive technologies; more countries being in possession or control of strategic goods that could result in illicit trade; and proliferators continuously developing new mechanisms to circumvent current non-proliferation controls, to ensure that the country is in keeping with international developments. Such international developments include, for example, the periodic updates of export control lists as agreed to by participating governments of the various multilateral export control regimes and domestication of all international obligations that the country subscribes to. This is done in the secondary legislation. The amendment process is still under discussion, but has not progressed much due to the legal advice received that the Minister of Trade, Industry and Competition should consult with the Minister of Mineral Resources and Energy on such amendments. The consultations were initiated; however, this process has been delayed. The NCACC promulgated a dedicated Arms Control Policy in 2008. A review of the non-proliferation and arms control policy of 1994 was therefore initiated by the Council in 2023, to amend the policy to address non-proliferation of WMDs specifically. Once concluded, this will lead to the amendment to the Act being finalised.

Secondary Legislation

The Non-Proliferation Act, in terms of Section 13, provides for the promulgation of secondary legislation in which the Minister of Trade,

Industry and Competition may declare goods that may contribute to the design, development, production, deployment, maintenance or use of WMDs, to be controlled goods. This provision in the Non-Proliferation Act therefore allows for the strategic goods identified during international discussions, as having the potential to be used in the development or production of a WMD, to be controlled in terms of domestic legislation. Furthermore, Section 24 of the Non-Proliferation Act provides for the promulgation of regulations to address various regulatory aspects enabling the efficient and effective implementation of the international non-proliferation obligations as deemed necessary by the Council, in consultation with the relevant stakeholders and according to international best practice, through advice to the Minister.

The secondary legislation has been amended on numerous occasions to maintain alignment of the South African control system, with national interests, international obligations and best practice. However, developments in the country, which included the contraventions of the non-proliferation legislation by non-state actors, were also initiating factors. Besides South African companies being involved in the A.Q. Khan network, there were additional incidents which included the supply of triggered spark gaps by Asher Karni of Top Cape Technologies to Humayun Khan (no relation to A.Q. Khan), a Pakistani businessman and Chief Executive Officer of Pakland PME Corporation, for use in the Pakistani nuclear programme (Chiahemen, 2004; Fabricius, 2004; Gearity, 2005; Laslocky, 2005; Schapiro, 2005; South African Broadcasting Corporation, 2004). A.Q. Khan was a Pakistani engineer, who was considered the father of Pakistan's nuclear weapons programme. He was also a supplier of advanced nuclear technology to the programmes of Iran, Libya and North Korea (Dahlkamp et al., 2006; MacCalman, 2016: 104). Khan obtained access to blueprints for uranium enrichment and centrifuge design technologies from the European Uranium Enrichment Centrifuge Corporation (URENCO) while working in The Netherlands. As a result of his desire to assist his country to develop nuclear weapons capabilities after rival India had successfully tested a nuclear weapon in 1974, Khan illicitly trafficked the uranium enrichment designs and related technologies to Pakistan to develop Pakistan's nuclear weapons capabilities. After the success of the Pakistani programme in the 1980s, Khan decided that every country, especially Muslim countries that could afford a nuclear bomb, should have its own, and so he started his clandestine, transnational import and export supply network for countries that had the desire to develop nuclear weapons, in 1987 (Albright and Hinderstein, 2005: 112; Fitzpatrick, 2007: 65; Von Wielligh and Von Wielligh-Steyn, 2015: 343).

The network of countries with which Khan concluded supply agreements and those countries which were involved in his illicit network included, inter alia, France, India, Iran, Iraq, Israel, Italy, Malaysia, Singapore, South Africa, South Korea, Switzerland, Taiwan, Turkey, United Arab Emirates, and the United Kingdom. South African companies Tradefin Engineering and Krisch Engineering were involved in the manufacture of components and providing flow-forming and balancing equipment, vacuum pumps and non-corrosive pipes and valves for export to Libya (Tertrais, 2008; Von Wielligh and Von Wielligh-Steyn, 2015: 343). The managing directors of Tradefin Engineering and Krisch Engineering, Gerhard Wisser, a German mechanical engineer, and Daniel Geiges, a Swiss mechanical engineer, respectively, initially pleaded not guilty and they insisted that the plant was a water purification system. However, they were successfully prosecuted and convicted under South African legislation, i.e., the Non-Proliferation Act and the Nuclear Energy Act. The charges were supplemented by contraventions of the Riotous Assemblies Act, 1956 (No. 17 of 1956). Johan Meyer, a South African engineer, who was involved in the manufacture of the components turned state witness shortly after being arrested. He assisted the investigations and prosecutions by providing documentation related to the involvement of the companies.

According to lead prosecutor Macadam (2022), the wording of relevant statutes in the South African non-proliferation legislation placed limitations and created challenges for the prosecutors, which hindered the extent of the charges that could have been laid on the convicted. Firstly, technology is neither defined in the Nuclear Energy Act, nor is it an offence to import, export, design or possess such technology. The regulations under the Non-Proliferation Act however did provide a definition

> "All the non-proliferation legislation should be reviewed to ensure that the provisions meet the requirements of the South African Constitution."

of technology, with elaboration on applicability, i.e. exclusions were mentioned. In addition, the Nuclear Energy Act specifically refers to "especially designed or prepared"; however no provision was made for 'intention' of use thereof in a nuclear weapons programme. Due to the ambiguity, further expert knowledge was required to prove the "especially designed or prepared" nature of the goods confiscated, and to decide on definitions not specifically included in the legislation. It should be noted that according to South African law, words in legislation have their ordinary meaning unless it is specifically defined by the law maker. Also, if the legislation is not sufficiently clear in itself, the courts could rule that the legislation is "vague or embarrassing". The Non-Proliferation Act does not include provisions for lesser violations or administrative fines, and the Catch All legislation has to be reworded according to international best practice. All the non-proliferation legislation should be reviewed to ensure that the provisions meet the requirements of the South African Constitution. The prosecutors in the case however resolved the challenges by phrasing the indictment according to the goods seized and managed to proceed with the prosecution (Macadam, 2005; Macadam, 2022). However, it would be preferable that the legislation be less ambiguous to enable seamless prosecutions of such cases in future.

In 2022, a Regulation issuing Codes of Conduct was promulgated. It is anticipated that this regulation, adopted in terms of Section 7(1) of the Non-Proliferation Act, would assist in the prosecution of those contravening the non-proliferation legislation, especially in cases of lesser offences, which were previously identified as negligence, and where intent could not be proven.

The Non-Proliferation Secretariat is reviewing all secondary legislation due to updates in international lists for the missile and nuclear controls. The chemical and biological regulations have also been reviewed and amendments have been suggested to enhance implementation.

The current list of secondary legislation is as follows:

1. Government Notice No. R.16 of 03 February 2010 refers to Registration and indicates that any person that is in control of any activity with regard to controlled goods or who have controlled goods in their possession or custody or under their control, shall be required to register with the Council.
2. **Catch-All**: Government Notice No. R.75 of 29 January 2004 enables the Council to declare goods that are mentioned in the controlled lists but do not comply fully with the specifications mentioned in either the Regulations or Notices, to be controlled. The Council can declare any item of equipment, technology, materials, chemicals, biological agents or toxins, production facilities or components that do not appear on the lists of goods declared, to be controlled goods as mentioned above, but which fall outside the range of specifications stipulated in the said list, or lists of goods to be controlled in terms of section 13(1) of the Non-Proliferation Act. This measure can be applied by the Council if it is determined that the item is, or may be, intended in its entirety or in part, for use in the development, production, handling, operation, maintenance, storage or dissemination of chemical or biological warfare agents, or of nuclear weapons, or of systems capable of delivering such agents or weapons. In this instance, the Council can prohibit the import, export, re-export or transit of such an item, unless a permit is issued by the Council.
3. **Code of Conduct**: Government Notice No. R.1919 of 25 March 2022 was promulgated as the Codes of Conduct for persons involved in controlled non-proliferation activities to state the principles of non-proliferation and describe procedures and methods to be followed during the execution of certain activities related to non-proliferation. All legal persons registering with the Council therefore have to sign the

Code of Conduct upon registration. As the Non-Proliferation Act does not contain provisions for the imposition of penalties for minor offences, this Government Notice improves the controls.

4. **Biological**: The Presidential Proclamation in Government Notice No. R.16 of 26 February 2002 made the Biological Weapons and Toxins Convention (BTWC) part of South African legislation. In addition, Government Notice No. 4978 of 14 June 2024 was promulgated declaring a list of biological goods, technology and related equipment as controlled goods, along with the control measures applicable to such controlled goods, technology and related equipment. The promulgation of a national list of biological goods and technologies, in the absence of an international list by the BTWC, has enabled South Africa to include controls on biological goods and technologies into the strategic trade control mechanisms implemented.
5. **Chemical**: Government Notice No. R. 754 of 02 May 1997 made the Chemical Weapons Convention (CWC) part of the South African legislation. The Regulation regarding the Application of Provisions of the CWC (Chemical Weapons Regulations) was promulgated under Government Notice No. R.17 of 03 February 2010. Government Notice No. R.4975 of 14 June 2024 contains the various lists of chemicals, which are declared as controlled goods along with the control measures applicable to such goods. The list of chemical goods as listed in the CWC is included in national legislation but is strengthened through supplementation of the lists by additional chemicals, including riot control agents, anti-plant agents and other toxic chemicals, which could be used as precursors to chemical weapons, or be used directly in a harmful manner.
6. **Missiles**: MTCR equipment, technology and related items are declared as controlled goods along with the control measures applicable to such controlled goods in Government Notice No. R. 4976 of 14 June 2024.
7. **Nuclear**: Government Notice No. R. 4977 of 14 June 2024 lists the nuclear-related dual-use equipment, materials and software, and related technology of the NSG Part 2, which are declared as controlled goods, along with the control measures applicable to such controlled goods. Furthermore, certain nuclear-related dual-use equipment, materials and software, and related technology for the isotope separation of other elements that could be used for uranium isotope separation, are declared as controlled under Government Notice No. R. 4979 of 14 June 2024.

South African Council for the Non-Proliferation of Weapons of Mass Destruction

Section 4 of the Non-Proliferation Act provides for the establishment of the Council, to be appointed by the Minister of Trade, Industry and Competition. The Act indicates that the Council should consist of persons from DIRCO; the Department of Trade, Industry and Competition; the Department of Defence and Military Veterans; the chemical, biological, nuclear and aerospace sectors of industry; and the Nuclear Energy Corporation of South Africa (NECSA). The Act also provides for the appointment of additional members, as the Minister deems necessary, who have applicable knowledge and experience with regards to non-proliferation matters. The Minister therefore requests the Minister of Mineral Resources and Energy, and the State Security Agency, to designate persons to be appointed as members of the Council. The Chairperson and Vice-Chairperson of the Council are appointed based on "applicable knowledge and experience with regard to matters connected with the objects of the Council" (Non-Proliferation Act, 1993).

The Council is supported technically and administratively by the Non-Proliferation Secretariat, which is a Chief Directorate within the Trade Branch of the Department of Trade, Industry and Competition. The Council is also supported by a dynamic inter-governmental stakeholder engagement mechanism comprising various working groups and committees.

In brief, these are:

– The Non-Proliferation Control Committee, an inter-governmental committee comprised of various governmental stakeholders that convene on a bi-weekly basis to consider applications from industry for permits to transfer strategic goods and technologies and make recommendations to the Council on whether

to approve or deny such transfers. Applications are evaluated based on non-proliferation risk factors taking into consideration, *inter alia*, the item to be transferred, end use, end user, destination and related non-proliferation factors. Members of this Committee are from relevant governmental stakeholders and are able to assess applications based on non-proliferation risk;

- The Chemical Weapons Working Committee (CWWC), which is comprised of experts from government and industry and advises the Council on matters related to the implementation of the CWC;
- The Biological Weapons Working Committee (BWWC), which is comprised of experts from government and industry and advises the Council on matters related to the implementation of the BTWC;
- The Nuclear and Missile Dual Use Committee (NMDUC), which is comprised of experts from government and industry and advises the Council on matters related to the implementation of the NSG, the MTCR and the TPNW;
- The Comprehensive Nuclear-Test-Ban Treaty Coordinating Committee (CTBT CC), which is comprised of experts from government and industry and advises the Council on matters related to the implementation of the CTBT;
- The Non-Proliferation Review Committee (NPRC), which is comprised of experts from within the Council structures with vast expertise on non-proliferation and Council matters. They are tasked with the review of the Non-Proliferation Policy and Act;
- The Non-Proliferation Secretariat / South African Revenue Service Coordinating Committee (NPS/SARS CC), which has oversight of the implementation of the Memorandum of Understanding between the South African Revenue Service (SARS) and the Department of Trade, Industry and Competition, on behalf of the Council, for the enforcement of the non-proliferation legislation at South African ports of entry and exit. The Committee is comprised of officials from the Non-Proliferation Secretariat and SARS.
- The Programme Management Committee for the Service Level Agreement (SLA) between the Department of Trade, Industry and Competition, on behalf of the Council, and Protechnik Laboratories, is mandated with the oversight of the implementation of the SLA. Protechnik Laboratories provides specialised chemical laboratory services to the Council in terms of the Single Small Scale Facility, which is the only facility in South Africa allowed to store Schedule 1 chemicals for defensive purposes, in terms of the CWC.
- The Programme Management Committee for the Service Level Agreement (SLA) between the Department of Trade, Industry and Competition, on behalf of the Council, and the Council for Geoscience (CGS) is mandated to oversee the implementation of the SLA. The CGS provides specialised services to the Council in terms of the maintenance and operation of stations forming part of the International Monitoring System of the CTBT.

These Committees convene regular meetings and report to the Council in the form of reports or minutes and provide advice as necessary. Delegations participating in meetings or negotiations of international treaties, conventions and regimes receive guidance and support from these committees through review and preparation of proposals and position papers. Issues requiring consideration from varying perspectives are usually referred between committees for discussion to ensure thorough analysis and effective advice to the Council. The current structure enables effective communication, cooperation and collaboration between stakeholders enabling informed decisions to be made on non-proliferation matters.

The organisational structure of the Council is illustrated in Figure 1.

Coordination between Regulatory Authorities

While the current system of 'non-proliferation' and 'arms control' is segregated for historical reasons, there is co-ordination and a continuous attempt to synergise controls between the regulatory institutions through stakeholder liaison and regular engagements.

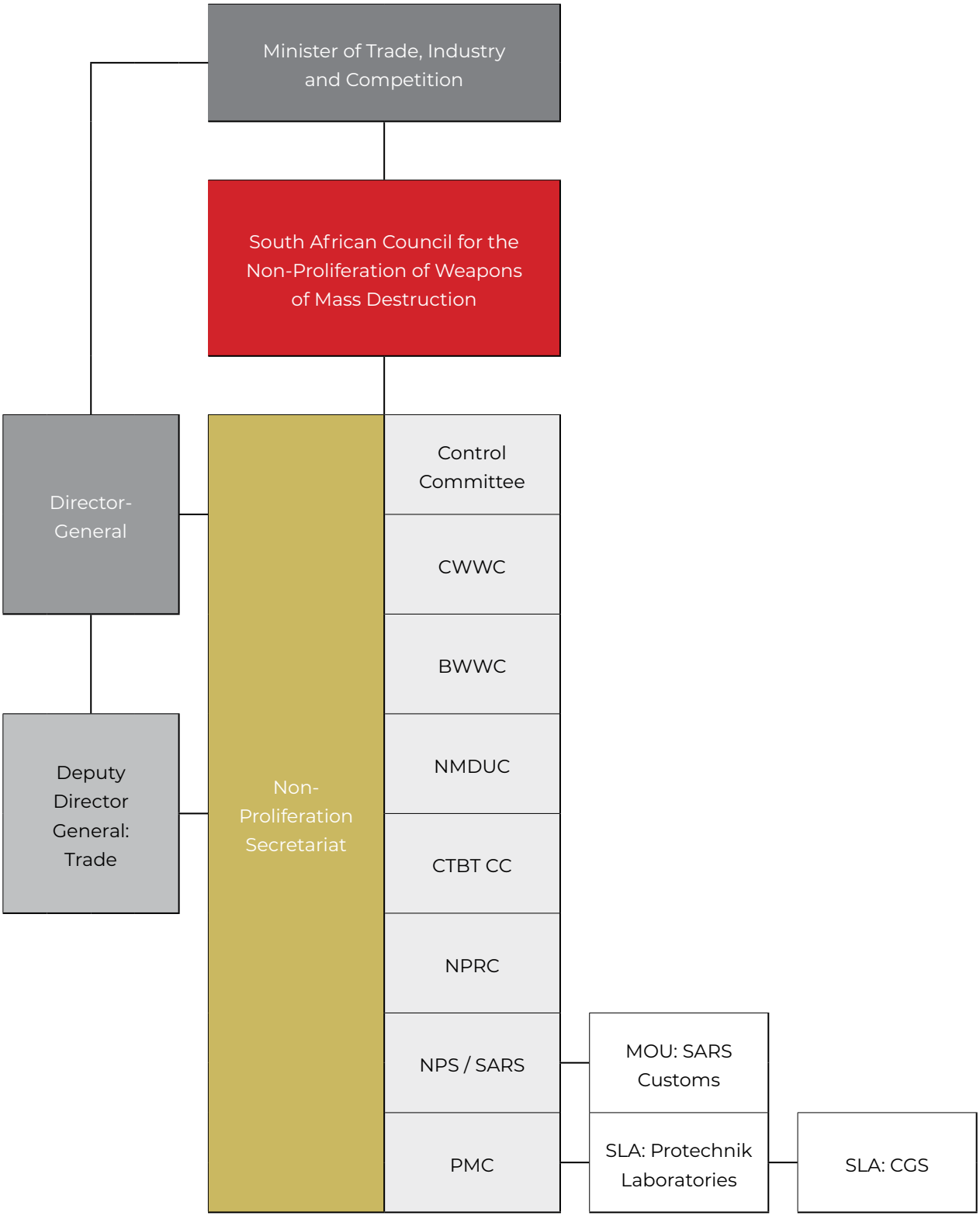

Figure 1: Organogram of the South African Council for the Non-Proliferation of Weapons of Mass Destruction (Reddiar, 2023)[5]

The DEE has the Nuclear Energy Policy of 2008, which "presents a policy framework regarding prospecting, mining, milling and use of nuclear materials as well as the development and utilisation of nuclear energy for peaceful purposes" by South Africa. This includes the nuclear fuel cycle focusing on all applications of nuclear technology for energy generation, but excludes non-energy related applications of nuclear technology. The primary legislation that guides the regulation of non-proliferation matters at the DEE is the Nuclear Energy Act, 1999 (No. 46 of 1999), which requires that the Minister of Electricity and Energy consult with the Council on all non-proliferation matters.

The Chief Directorate: Nuclear Non-Proliferation and Radiation Security liaises closely with the Non-Proliferation Secretariat and refers certain non-proliferation related matters to the Council for consideration as part of the consultation process. This includes applications received from industry for authorisations to acquire or possess, or for certain activities relating to nuclear material, restricted material and nuclear-related equipment and material, and for the export of source, special nuclear or restricted material, or nuclear-related equipment and material. These are presented by the DEE to the Council for consideration and recommendation prior to issuance to the nuclear industry. Such consultation enhances the proliferation risk assessment process due to the multi-stakeholder consideration of the authorisations through the Council structures.

The National Conventional Arms Control Committee (NCACC) has the Policy for the Control of Trade in Conventional Arms for the Defence-related Industry,[6] which was published in 2004. The NCACC controls are implemented in terms of the National Conventional Arms Control Amendment Act, 2008 (No. 73 of 2008).

The Council invites the NCACC structures to Control Committee meetings where applications for permits for transfers of strategic goods are considered. This ensures that the applications are considered from both a non-proliferation and arms control perspective and also ensures that the NCACC is aware of the applications in the Council system, so that there is a co-ordinated approach to applications. Similarly, the Non-Proliferation Secretariat participates in the Scrutiny Committee of the NCACC and reviews applications in the NCACC system to enhance co-ordination. Such coordination and cooperation also assists the Non-Proliferation Secretariat with compliance activities and identifying companies that may be in possession of strategic goods without the necessary authorisations.

Capacity Building Initiatives and African Relations

It is important to recall one of the fundamental objectives of the Non-Proliferation and Arms Control Policy of 1994, which stipulates that South Africa, at all times, must protect the interests of developing countries in such forums. South Africa is the only African country that is a member of the MTCR, or a participating government in the NSG. South African positions at related meetings considers all changes to the guidelines and technical annexes of the regimes, as well as adoption of decisions in multilateral meetings related to the non-proliferation of WMDs, against the perspective of not hindering the development of the South African industry or access to such goods and technologies by other developing countries.

Furthermore, in an effort to promote the non-proliferation and arms control policy imperative that South Africa utilises its position as a member of the suppliers regimes and of the Africa Group/ Non-Aligned Movement (NAM) to promote the importance of non-proliferation, the Council has partnered with various national and international stakeholders to work towards increasing non-proliferation capacity in the country and on the African continent. The Council, therefore, together with national and international partners, presents courses for various national and international stakeholders. These include training of customs and border control authorities on the identification of strategic goods; development of the analytical chemistry skills of African countries through the Organisation for the Prohibition of Chemical Weapons (OPCW); development of assistance and protection skills for first responders in Africa to be able to address toxic chemical spills and other related incidents through the OPCW; training to the experts nominated by various countries on the United Nations Secretary-General's Mechanism through the UN Office for Disarmament Affairs (UNODA); and presentation of workshops or

participating in events as experts on various topics convened by international organisations such as the OPCW, BTWC Implementation Support Unit, Technical Secretariat to the Preparatory Commission of the CTBT, amongst others. Such efforts aim to contribute to international activities to develop the skills and competencies of developing countries, especially in Africa.

Conclusion

South Africa has committed itself to a framework that is reflective of disarmament, non-proliferation and peaceful uses of advanced strategic goods. South Africa's continued participation in discussions and negotiations at various expert meetings, working groups and conferences of the multilateral export control regimes, treaties and conventions reiterate the country's commitment to disarmament and non-proliferation. Furthermore, the need to engage actively and promote the best interests of the South African industry, especially with the rapid advancements in science and technology for civil and peaceful purposes, as well as protecting the interests of developing countries, remain one of the driving factors for delegations during international negotiations. These are factors that display South Africa's determination to promote disarmament internationally and remain nuclear weapons free. In this regard, it would be important for certain legislation to be updated without delay to domesticate international obligations and also adopt international best practice in certain areas.

In the case of A.Q. Khan, who was using South Africa as part of his transnational network, the South African authorities were able to investigate and prosecute the guilty parties within the prescripts of South African legislation, with intelligence received from international counterparts. Prosecutors were also able to overcome deficiencies in the legislation through interpretation and the use of complementary legislative prescripts, such as the Riotous Assemblies Act for the penalisation / punishment of the offenders. However, certain pertinent issues still need to be interrogated and deliberated on to further improve efficacy, such as the inclusion of certain additional prescripts, assessing whether the penal provisions in the primary legislation that was contravened is sufficient for the prosecution of such cases in future; whether it would be necessary to elaborate on such provisions to ensure that prosecution is not hindered; and whether there is a necessity to include provisions for lesser offences.

It should also be noted that some of the components and systems manufactured in South Africa did not follow the typical design of gas centrifuge enrichment plants. Certain of the components had different specifications due to some commercial goods being used, and the configuration of some items differed from conventional items that are normally used in such systems (Macadam, 2005). Therefore, proliferators may decide to illicitly procure or sell components and technology that differs slightly from international and national controls, in an effort to mislead regulators and enforcers of non-proliferation controls. Furthermore, prosecutorial actions could have been taken against freight forwarders, financial institutions and other actors that took part in the illicit trafficking operations (Spector, et al., 2006). It is therefore imperative that such issues be addressed.

Although South Africa's disarmament, non-proliferation and arms control regulatory and legislative framework has evolved over the years to keep up with international best practice, changes in the international control lists, updates in regulatory processes due to contraventions, as well as certain compliance violations, it is imperative that it be improved further to address lessons learned from contraventions. It is noted that the current review processes are aimed at ensuring that South Africa is not party to the development of WMDs at the national level, as well as for South Africa to maintain its reputation as a responsible member of the international community, as an advocate for disarmament, and as a leader in efforts to prevent the proliferation of WMDs, in general. However, changes need to be invoked before there are further attempts like the A.Q. Khan network, circumventing controls. In this way, South Africa can continue to play an active role in advocating for the dismantling of existing WMD programmes, and in preventing the emergence of new nuclear weapons programmes by both state or non-state actors, with strengthened national control systems. If, and when, a world without nuclear weapons is reached, South Africa's approach, and its evolving control systems, may also contribute to preventing the re-emergence of such weapons.

Endnotes

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[1] The Nuclear Suppliers Group (NSG) is a group of 48 nuclear supplier countries that seek to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of guidelines for nuclear exports (Part 1) and nuclear-related exports (Part 2). South Africa has the ability to supply items covered by the annexes to Parts 1 and 2 of the NSG Guidelines. These items could either be items that are material and equipment, as well as technology especially designed or prepared for nuclear use; or nuclear related dual-use items and technologies, i.e., items that can make a major contribution to a nuclear fuel cycle or nuclear explosive activity, but which have non-nuclear uses as well, for example in industry (Nuclear Suppliers Group, 2023: 1-2; Nuclear Threat Initiative, 2023: 1).

[2] As one of the goals of re-joining the international community at the end of apartheid, subsequent to the inauguration of the new Government in 1994, South Africa joined the Non-Aligned Movement (NAM), which is an international organisation consisting of about 120 countries that is dedicated to representing the interests of developing countries. It was formed at the Bandung Conference in 1955 and called for developing countries to "join together in support of national self-determination against all forms of colonialism and imperialism" and abstain from aligning with the two superpowers at that time, the USA and the Soviet Union (Encyclopaedia Britannica, 2024).

[3] The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies is a multilateral export control regime that was established to promote transparency and greater responsibility in the transfer of conventional arms and dual-use goods and technologies. In addition, it aims to contribute to regional and international security and stability, prevent the acquisition of these items by terrorists, and prevent destabilising accumulations of such goods and technologies (Wassenaar Secretariat, 2023).

[4] Current names of the departments are referenced, and not the names in 1995.

[5] Briefing on Non-Proliferation Controls in South Africa, dated 01 August 2023, prepared for the Minister of Trade, Industry and Competition (unpublished).

[6] It should be noted that this policy replaced the arms control component of the 1994 Non-Proliferation and Arms Control Policy.

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African Activism Through Pugwash

By Nola Dippenaar and Joelien Pretorius[1]

Introduction

The Pugwash Conferences on Science and World Affairs grew from the Russell-Einstein Manifesto initiative in 1955 to become an amorphously structured transnational movement of natural and social scientists with a primary focus on the dangers of nuclear weapons. Pugwash, together with Sir Joseph Rotblat, a founding member and long-serving secretary-general and later president, won the Nobel Peace Prize in 1995 for its role in highlighting these dangers. It did so through its annual conferences that brought together scientists, government officials and observers from across the world, as well as its workshops and publications, and behind-the-scenes interventions towards conflict resolution. The history and role of Pugwash has been the subject of many publications, but none of them pay adequate attention to Africans' participation in Pugwash, if at all. And yet, a preliminary review of the quinquennial annals and newsletters that summarise the activities of Pugwash suggests that African scientists' involvement in the annual conferences was significant. Africans also organised regional workshops on issues of special interest to the continent and jointly published with other Pugwash members. National chapters were established in several African countries and over the course of two decades, a Pan-African Pugwash group held at least six meetings and published some of these meetings' proceedings. This opinion piece is based on a preliminary exploratory effort to highlight how Africans engaged the Pugwash movement, to know more about the impact that Africans had in Pugwash and Pugwash had in Africa, and to look to the future—to encourage science activism and youth participation in peace and anti-nuclearism on the continent. We start off with a short introduction of Pugwash, telling its origin story and then proceed to Africans' participation in and adoption of Pugwash to exercise peace activism.

Overview of Pugwash

The first Pugwash meeting was convened in a small town called Pugwash in Nova Scotia, Canada in July 1957. Amid the Cold War, it offered a rare channel of communication between scientists from the East and the West. The lead up to this historic meeting was the following: post-Hiroshima, there was a growing concern amongst western scientists, that they have a morally compelling role to play in shaping public policy regarding nuclear weapons and nuclear energy. Within months of Japan's surrender in August 1945, several organisations were founded – the Federation of American Scientists, the Atomic Scientists Association of Britain and the Bulletin of the Atomic Scientists in the United States – all with the view to influencing public policy in preventing a nuclear arms race, while promoting the peaceful uses of atomic energy.

In 1955, in response to the testing of ever larger nuclear devices by both the United States (US) and the Soviet Union, the world-renowned scientist, Albert Einstein and the British mathematician and philosopher, Bertrand Russell, issued a statement on nuclear weapons, now universally known as the 'Russell-Einstein Manifesto'. Besides discussing the destructive power of the bomb with its deadly radiation, the manifesto also asked: "Shall we put an end to the human race or shall mankind renounce war?" To this end the manifesto called on scientists worldwide to gather, discuss and deliberate the perils of weapons of mass destruction (WMDs). This led to the first Pugwash meeting organised by Joseph Rotblat and Eugene Rabinowitch, a Russian-American physicist and activist against nuclear weapons. Joseph Rotblat, a Manhattan Project[2] physicist, left the project in 1944, because he came to know that Nazi Germany would not be able to develop the bomb and the US intended to use the bomb in Japan. Cyrus Eaton, a well-known industrialist and billionaire, offered to host the meeting at his vacation lodge in Pugwash, Canada, as he was all for establishing friendly relations between the US and the Soviet Union.

Twenty-two scientists (70% physicists) attended this first meeting – seven from the US; three from the Soviet Union; three from Japan; two from Britain; two from Canada and one each from Australia,

> "… to look to the future —to encourage science activism and youth participation in peace and anti-nuclearism on the continent."

Austria, China, France and Poland. Despite the arms race at the time, the hostile propaganda between East and West, and the sharp division amongst western scientists over Cold War issues, this meeting was not confrontational at all. This was most likely due to mutual respect for one another's scientific integrity and due to the fact that many knew each other personally or through their scientific publications. A resolution followed this meeting to hold regular conferences of western and eastern scientists, aimed at preventing the use of nuclear weapons. The following year, in 1958, the second (Canada) and third meetings (Austria) were held with several scientists from the Soviet Union playing a significant role. The Soviet leadership was in favour of widening this organisation considerably on the model of the World Peace Council, in contrast to western participants, including Rotblat and Russell, who favoured regular small 'closed' meetings of scientists, allowing more concrete steps to be debated in solving one or other international problem.

It is worth noting that at the fourth Pugwash meeting in 1959, scientists proposed to conclude the Treaty on the Non-Proliferation of Nuclear Weapons. It is also worth noting that the sixth Pugwash meeting took place in Moscow in 1960. Only after the tenth anniversary in 1967 at the 17th Pugwash meeting in Sweden, was there a major reorganisation in the structure of this movement, with the election of a Pugwash President, new continuing and executive Committees, and the decision taken to hold symposia on special issues several times a year, in additional to its annual meetings. By the mid-sixties, a new world

movement, The Pugwash Conferences on Science and World Affairs, had been formed.

The first decade of the Pugwash movement made a significant contribution to the conclusion of a number of international treaties on disarmament and arms control. Pugwashites[3] proposed the immediate cessation of nuclear tests as one of the first steps to disarmament. In the 1970s and 1980s Pugwashites took active part in preparing the Chemical Weapons Convention. Since then, scientific-technological and political discussions within the Pugwash Movement, infused with social responsibility for future generations, often functioned as "ice-breakers" and have helped create a favorable climate for the signing of many different international treaties – nuclear, chemical and biological. In essence, over the years Pugwash has provided a forum for second track nuclear diplomacy.

In 1995, on the 50th anniversary of the use of the atom bomb on Hiroshima and Nagasaki, Pugwash and Rotblat received the Nobel Peace Prize, "for keeping the vision of a nuclear-free world alive, while working unwearyingly for specific arms-limitation measures in the short term".

The annual Pugwash conferences brought scientists together from across the world to promote understanding and provide a forum for discussing issues related to nuclear weapons and many other global issues. The venue changed each year and the conference typically lasted three to five days. The program always included discussions of papers given by delegates, and sessions given to debate on topical issues. Due to the reputation of Pugwash (attended by many Nobel Laureates), each annual conference was regularly opened by the prime minister or ambassador or some prominent figure of the hosting country. The personal networking that ensued from these meetings was invaluable and also aided in recruiting new Pugwashites. Discussions were held in private, but with a record of each meeting published in the form of a statement, including key findings and broad recommendations made available to both politicians and the broader public. The portfolio of Pugwash activities was also carefully expanded over the years. In addition, there were smaller regional meetings held to foster closer analysis of key issues, and local meetings organised by national Pugwash groups in various countries.

At one such regional meeting in Berlin in the late 1980s, the then secretary-general of Pugwash, Prof Francesco Calogero, met Prof Marie Muller, a political scientist from the University of South Africa (UNISA). He encouraged Marie to establish a local South African National Pugwash group, which Marie then set about doing. The authors, respectively a physiologist/biochemist and a political scientist, became involved in Pugwash through the link with Marie Muller. Attendance at annual conferences was by invitation only and nominations were made by local heads of the national groups. Participants were selected by the Pugwash Head Office continuing committee. In this way each year Prof Muller would nominate both social and 'hard' scientists from South Africa, including young student scientists to join Student Pugwash.

African Participation in Pugwash Conferences and Meetings

The table below lists the number of African participants in Pugwash activities for each five-year period from its inception in 1957 to 2007. In the first five years no Africans participated, likely because African states were in the process of decolonising and Pugwash was still making a name for itself. However, as time went by, African participation slowly started to take off and in 1967, the Pugwash continuing committee (later referred to as the Council) explicitly included engagement with developing countries as a sub-theme on their agenda. See Table 1 on page 67.

Participants, who attended these meetings, and became the driving force behind national and regional groups, were of a high calibre and could see the benefits for African activism in Pugwash. A few examples serve to illustrate this point. Ambassador Ahmed Haggag from Egypt was the Former Assistant Secretary-General of the Organisation of Africa Union. Prof J Yanney-Ewusie was an ecologist and Former Vice-Chancellor of the University of Cape Coast in Ghana. Essam Galal of Egypt was professor of medicine and president of the African Union of Pharmacologists. He later became adviser to the Egyptian government and was the convenor of Pan-African Pugwash, which we discuss below. Ambassador Ochieng Adala from Kenya, who served on the Pugwash Council from 2002-2012, was a career diplomat,

Table 1: African participation in Pugwash meetings (1957-2007), compiled from the Pugwash Newsletter (2007)

Quinquennium	Participants states	Number of participants
1957-1962		0
1962-1967	South Africa, Nigeria, Ghana, Egypt, Uganda, Kenya, Sierra Leone, Tanzania	36
1967–1972	Nigeria, Tanzania, Togo, Ethiopia, Ghana, Egypt, Kenya, Madagascar, Zambia, Senegal	31
1972–1977	Nigeria, Sierra Leone, Ghana, Egypt, Congo, Zambia, South Africa, Cameroon, Tunisia, Madagascar	22
1977–1982	South Africa, Tanzania, Ethiopia, Sierra Leone, Madagascar, Morocco, Egypt, Zambia, Ghana, South Africa, Nigeria, Kenya, Tanzania, Sierra Leone, Cameroon	35
1982–1987	South Africa, Nigeria, Kenya, Cameroon, Sierra Leone, Senegal, Egypt, Zambia	28
1987–1992	Nigeria, Kenya, Cameroon, Egypt, Zambia, Sierra Leone, Algeria, Ghana	48
1992–1997	South Africa, Algeria, Nigeria, Kenya, Sierra Leone, Egypt, Zambia, Zimbabwe, Algeria, Ghana	45
1997–2002	South Africa, Algeria, Nigeria, Sierra Leonne, Ghana, Egypt, Tanzania, Zimbabwe, Kenya, Uganda, Malawi, Botswana, Zambia	53
2002–2007	South Africa, Nigeria, Kenya, Egypt, Zambia, Mozambique, Somalia	65

serving as ambassador in several African states and as permanent representative of Kenya to the United Nations. He is currently the acting executive director of the African Peace Forum. Prof Noel Manganyi from South Africa attended several Pugwash meetings (from 1978 through 1981). He was South Africa's first black clinical psychologist and set up the Department of Psychology at Transkei University. Manganyi's books *Being Black in the World* (1978) and *Looking Through the Keyhole* (1981) are recognised as key texts in Psychology to understand Black Consciousness (BC) and in the BC Movement. He was also Director of Education in Nelson Mandela's administration. Attending the Pugwash Conference must have been quite an act of dissidence for Manganyi in the face of apartheid and the South African nuclear weapons programme. The papers he presented at the Pugwash Conferences are still highly regarded. Willem Oltmans quotes extensively from a "fascinating" paper Manganyi presented at a Pugwash meeting.

Pugwash Conferences in Africa

Three Pugwash Conferences were held in Africa. The 1966 conference in Ethiopia got coverage in the *New York Times*. At its inception Pugwash was seen by the Western governments as too left leaning. However, this changed during the 1960s when Pugwash became established as a site for dialogue and through the Secretary General's official persona as politically neutral. The *New York Times* (January, 28, 1966) article reads, "...an unusually large number of distinguished Africans gathered in Addis Ababa joined by physical and social scientists from the industrial communist

and non-communist countries to discuss problems of common interest." The report continued to say that it is encouraging that both Soviet and African participants took moderate and responsible positions and that the Soviets did not use the conference for propaganda on Vietnam.

The second conference held in Africa was in 1999 in Rustenburg, South Africa. Nola Dippenaar and Marie Muller were the local organisers, while Motumisi Tawana, an early-career South African diplomat at the time, and Joelien Pretorius helped to organise the Student Pugwash side of the conference. The third Pugwash conference held in Africa was in 2006 in Cairo, Egypt.

What makes hosting a Pugwash conference a powerful site of activism is that more local participation is allowed, and that panel sessions are organised around issues of special concern to the host country and its region. At the South African conference, Prof Waldo Stumpf, then CEO of the Atomic Energy Corporation of South Africa was invited to give a talk on South Africa's nuclear disarmament, and then Vice President Jacob Zuma and Director General of the Department of Foreign Affairs, Jackie Selebi[4], gave talks on South Africa's position on arms control. On the morning of their talks, Patricia de Lille's dossier that implicated Jacob Zuma in large scale corruption during arms procurements made headline news and a number of Student Pugwash participants decided to boycott the session.

There were several local and regional meetings held in Africa over the years. Table 3 presents some of them. At these smaller meetings, as the topics covered indicate, Africans could focus on issues closer to home.

Table 2: List of Pugwash Conferences held in African states

Year	Place and state	Title of conference
1966	Addis Ababa, Ethiopia	Science in Aid of Developing Countries
1999	Rustenburg, South Africa	Confronting the Challenges of the 21st Century
2006	Cairo, Egypt	A Region in Transition: Peace and Reform in the Middle East

Table 3: List of workshops held in African states

Year	Place and state	Title of workshop
1975	Cairo, Egypt	Peace and Development in Africa: The Twenty First African Pugwash Symposium.
June 1975	Tanzania, Dar es Salaam	Pugwash 24th Symposium: The Role of Self-Reliance in Alternative Strategies for Development.
April 1978	Rabat, Morocco	The 1979 UN Conference Science on Science and Technology for Development
October 1984	Cairo, Egypt	Pugwash 46th Symposium: African Security
March 1990	Cairo, Egypt	6th Pan-African Pugwash Regional Conference, "Development and Security — Crises Resolution in Africa"
June 1998	Halfway House, South Africa	Pugwash Symposium on Human Security in the Southern African Context

Year	Place and state	Title of workshop
April 2001	Alexandria, Egypt	7th workshop on the Middle East: Palestine, Israel and the Middle East Peace Process
February 2004	Betty's Bay, near Cape Town, South Africa.	Cape Town workshop on the security aspects of HIV/AIDS
June 2004	Pretoria, South Africa	Threats without enemies: the security aspects of HIV/AIDS A second exploratory workshop
April-May 2005	Gordon's Bay, South Africa	Meeting on the Security Aspects of HIV/AIDS
March 2006	Nairobi, Kenya	Nairobi meeting on Security Architecture in the Horn of Africa

The Pan-African Pugwash Group

The Pan-African Pugwash group existed between 1972 to 1990, as far as we can establish. As the name suggests, African scientists infused their performance of activism through Pugwash with a regional political ethos. At the time of its formation, Pan-African Pugwash was the first regional iteration of the Pugwash movement. Some preliminary archival[5] research indicates that the idea of a regional African Pugwash group was first discussed by African participants at the Ronneby Pugwash Conference in 1967 and subsequently at other meetings. The Africans wanted to launch Pan-African Pugwash in 1971, but it was only after the 1972 Cambridge conference, where the African participants emphasised the importance of linking the problems of development to Pugwash's concern for peace, that it was formally established. A preparatory meeting in Cairo in 1974 was followed by its first symposium in 1975 in Cairo on Peace and Development. The group had an office in Cairo and one of its most prominent convenors was Essam Galal. It held at least six meetings during this time (in addition to regular business meetings). Proceedings of at least two of these meetings were published and could be obtained. The first was a symposium on food security in Africa that was held in 1978 in Ghana and the second on African security and Namibia, which was held in 1984. At the latter meeting, apartheid South Africa was especially singled out for its destabilisation of the region, and states cooperating with South Africa were castigated for enabling the apartheid state. The group agitated for greater representation on the Pugwash Council and at business meetings discussed substantive issues, such as West German nuclear cooperation with South Africa that was taken up with German Pugwash members. South Africa's incursion into Angola in 1987 was raised with the Pugwash Council by the group and the group also showed solidarity with Palestine and supported the formation of Palestinian Pugwash groups.

Pugwash and Apartheid South Africa

In addition to Pan-African Pugwash's activism with respect to apartheid South Africa and Pugwash, other questions can be raised. Did South African scientists from the apartheid establishment attend Pugwash conferences? What did the apartheid government make of Pugwash? And did Pugwash have a back channel to engage in diplomacy with the apartheid government? T.E.W. Schumann was invited to attend the 1962 annual conference, which he did. He was the deputy chair of the South African Atomic Energy Board and in 1962 also published a book called *The Abdication of the White Man*, which has been described as a white supremacist text not unique for its time. We deduce, and future archival research may confirm this, that Schumann reported back to the apartheid government that Pugwash was not a worthwhile forum. Apart from Prof Manganyi, there was almost no South African participation until Marie Muller got involved towards the end of apartheid. In 1977, the Pugwash Council highlighted South Africa's possible nuclear programme as a great peril for the security of the peoples of southern Africa and the world at large

in its statement. It urged intense surveillance of the programme and the cessation of all collaboration (governmental, commercial and scientific) with the apartheid regime.

Personal Networks in Pugwash and Africa

A vignette related by Gordon Barrett[6] illustrates how personal networks that were so vital to the big role in back-channel diplomacy that Pugwash was known for, also played out in an African context. Dorothy Hodgkin, a Nobel Laureate in Chemistry, was a Pugwash member who would later become the organisation's longest-serving president. From 1960 to the mid-1980s, Chinese participation in Pugwash halted, because of domestic issues in China, animosity between China and the Soviet Union and China's perception that Pugwash was losing its leftist orientation to curry favour with Western governments. To re-engage Chinese scientists, Hodgkin, whose husband, Thomas Hodgkin, worked for Kwame Nkrumah, tried to organise a meeting hosted by the Ghana Academy of Science where Pugwash members would be present.[7] Ghana at the time had good relations with China and Nkrumah supported her efforts. Unfortunately, the meeting never took place because of the 1966 coup in Ghana that deposed Nkrumah.

African Students and Pugwash

Pugwash provides a special place for student activism. Each Pugwash conference is preceded by a student conference and students go on to participate and present their papers at the main conference. Pugwash participants usually identify students to participate in Pugwash conferences, who are then encouraged to apply to attend the conferences. In this way a number of African students have attended Pugwash conferences. The Italian Pugwash group annually and in the past biannually hosted the International School on Disarmament and Research on Conflicts (Isodarco), which provides a student-Pugwash interface. Over the years, a great number of students from Africa have benefited from attending these schools. In addition, International/Student Young Pugwash (ISYP) created in 2000 helps organise and facilitate student participation in the movement. ISYP also has an Africa Project that plans to provide capacity-building and community-building activities for young Africans in the field of nuclear disarmament and peaceful nuclear applications.[8] Chapters of Student Pugwash can be formed at universities.

Conclusion

Pugwash has played a valuable role for decades in creating linkages among scientists, raising awareness about the ethical application of science, and impacting policy towards nuclear disarmament and conflict resolution. It approaches peace and nuclear activism from the pragmatic approach that is characteristic of scientific efforts, i.e. that most problems can be solved through their study, informed decision-making, and dialogue. African Pugwashites played a valuable role in Pugwash, gaining a voice on the Council, presenting papers at Pugwash meetings, orienting the Pugwash agenda to include issues of concern to Africans (e.g. development), jointly publishing with others in the movement on issues of concern, and importantly appropriating Pugwash through establishing national groups and Pan-African Pugwash. It is a great pity that the latter is no longer active. In the world today with its many challenges – stagnation in disarmament negotiations, the risk of new nuclear states, a spike in geopolitical tensions and bloody conflicts, environmental threats amidst climate change, and global pandemics – there is still a serious role for Pugwash in solving these global problems and for Africans in Pugwash.

Endnotes

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[1] Prof. Nola Dippenaar is the chair of the South African Pugwash chapter and Prof Joelien Pretorius serves on its executive committee.

[2] The Manhattan Project was the codename for the development of nuclear weapons in the US during World War II.

[3] The name that regular attendees and individuals active in the movement assumed.

[4] Selebi, while permanent representative of South Africa to the UN in Geneva, had chaired the Oslo conference that gave rise to the Mine Ban Treaty.

[5] Some documents from Joseph Rotblat's papers, held at the Churchill Archives Centre at Cambridge University, have been obtained.

[6] Gordon Barrett. (2019). Minding the Gap: Zhou Peiyuan, Dorothy Hodgkin, and the Durability of Sino-Pugwash Networks. In Science, *(Anti-)Communism and Diplomacy*, Edited by Alison Kraft and Carola Sachse. Brill Publishers.

[7] Hodgkin was awarded an honorary doctorate from the University of Cape Coast. She was in Ghana when the announcement was made that she had won a Nobel Prize for Chemistry and Nkrumah proceeded to organise a celebration function for her.

[8] See: https://isyp.org/africa-project/.

The African Nuclear-Weapon-Free Zone Treaty: A Reflection on the Role of Activism[1]

By Noël Stott

We in Africa wish to live and develop ... we are not freeing ourselves from centuries of imperialism and colonialism only to be maimed and destroyed by nuclear weapons.

Kwame Nkrumah.[2]

Abstract

It took 45 years between when the First Ordinary Session of the then Organisation of African Unity (OAU) [now the African Union] declared Africa a denuclearized zone in July 1964 and when the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) entered-into-force on 15 July 2009. This article briefly describes the provisions of the Treaty and then provides some examples of how activism assisted this process, before concluding on the possible reasons for the long delay for the Treaty of Pelindaba to be inscribed into international law.

Introduction

The African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) declares Africa and its associated islands[3] a zone free from nuclear weapons; i.e., nuclear weapons are prohibited from being developed, produced, tested or otherwise acquired or stationed anywhere on the African continent or its associated islands. The Treaty, also and uniquely, prohibits armed attacks on nuclear installations, including nuclear research or power reactors, and promotes the peaceful application of nuclear science and technology. As of July 2024, of the 55 African States, 44 are States Parties, having deposited their instruments of ratification or accession with the African Union (AU). Only 11 States are yet to do so (See Table 1 later in the discussion). Taken together with the other four nuclear-weapon-free zones (Latin America and the Caribbean; South Pacific; Southeast Asia; Central Asia) and the national status of Mongolia as a zone

free of nuclear weapons, 114 UN Member States are party to regional nuclear weapons-free treaties, presenting almost 40% of the world's population (Van Wyk, 2012; Adeniji, 2002; Stott, 2020).

It took thirty-one years between when the First Ordinary Session of the then Organisation of African Unity (OAU) [now the African Union] declared Africa a denuclearized zone, in July 1964, and when the final draft of the text of the Treaty of Pelindaba was adopted during the Thirty-First Ordinary Session of the OAU Summit, on 23 June 1995. It then took another 13 years before the Treaty was signed by all African States in 1996 in Cairo, Egypt. It entered into force on 15 July 2009, after Burundi's ratification on 22 June 2009.[4] It thus took 45 years (from 1964 to 2009) to be inscribed into international law.

The declaration of Africa as a denuclearized zone, and the subsequent entry-into-force of the Treaty of Pelindaba was a result of different actors, each of whom came from diverse points of view: Africa's unwillingness to be party to the [nuclear] arms race during the Cold War; the struggle against imperialism and colonialism; the French nuclear tests in the Sahara desert in the 1960s;[5] the need to prevent the continent from being used for storing or transporting nuclear weapons; and, the (then suspected) South African nuclear weapons programme. Each actor and their activism to ensure that Africa was nuclear weapon-free and that the Treaty of Pelindaba entered into force reflected their slightly different perspectives or starting points: nuclear imperialism and colonialism; the economic and social cost of both the development and explosions of nuclear weapons; ethical and moral (religious) concerns; international and continental security; and the quest for a world without nuclear weapons.

This article describes and reflects on examples of these actors and their activism in the context of their starting perspectives. It should be noted that in the case of the Treaty of Pelindaba, it was not only civil society groups that attempted to bring about political or social change through activities such as campaigns, fasts, boycotts, petitions, marches, and sit-ins; it was also applied policy research institutes, religious groupings, political organisations and academics that attempted to influence policies and legislation and recommend how best, in their view, implement such policies and regulations. Equally, politicians, government officials and diplomats can—and often do—engage in 'activism' and interact with activists and civil society organisations.

Activism and the Treaty of Pelindaba

Early Campaigns Against the French Tests and Nuclear Weapons

Ghana's independence in 1957 marked the beginning of Africa's efforts to pursue the goal of disarmament and a world free of nuclear weapons (Saxena, 1998). The April 1958 conference of independent African states that was held in Ghana was one of the first attempts for state representatives and civil society actors to deliberate on nuclear weapons. Convened by Ghana's first Prime Minister and President, Kwame Nkrumah, participants included anti-colonialism movements and supporters of African non-alignment and nuclear disarmament.

The conference's mission statement included the pledge "to persuade the Great Powers to discontinue the production and testing of nuclear and thermonuclear weapons" (Conference of Independent States, 1958). However, in July 1959, France announced that it would conduct nuclear weapons testing in the Sahara, resulting in public demonstrations between December 1959 and April 1960. The Sahara Protest Team, which was established in 1959 and tried to raise awareness internationally about the dangers of nuclear testing and to pressure the French government to stop the tests, organised public demonstrations in Africa, Europe and the United States and offered a "direct link" with the African struggle for independence (Bennett, 2003: 231). Individuals such as Pierre Martin and Hilary Arinze held a fast outside the French Embassy in Accra and the French Consulate in Lagos respectively; pickets were held at French government buildings in London, New York and Hamburg, while rallies were held in Tunisia, Libya and Morocco. In Paris, 500 African students were arrested (Lacovsky, 2023).

The Sahara Protest Team also enhanced co-operation between European anti-nuclear groups, African liberation forces, and the United States' (US) Civil Rights Movement, with the support of the government of Ghana (International Team

Campaigns Against Nuclear Testing in Africa, n.d.; Ghana: Workers Protest at French Nuclear Tests in Pacific, n.d.). In December 1959, Michael Scott, a French member of War Resisters International, Pierre Martin, and US peace campaigner and civil rights activist, Bayard Rustin, as well as veteran US pacifist A.J. Muste and others, attempted to access the military base at Reggane in Algeria, the site of the impending French nuclear weapons tests (Skinner, 2015). Then, in the early 1960s, the government of Ghana sponsored a series of anti-nuclear conferences, after which eight African states proposed to the United Nations (UN) that a nuclear-weapon-free zone (NWFZ) be established in Africa (Allman, 2008).

In April 1960, a Conference of African States was called to discuss the French nuclear tests, which it called "the new form of colonialism and its attempt to Balkanize the continent and destroy African unity" (Skinner, 2015: 418-419). At this event, Nkrumah stated: "We in Africa wish to live and develop … we are not freeing ourselves from centuries of imperialism and colonialism only to be maimed and destroyed by nuclear weapons" (Al Jazeera, 27 October 2020). In 1961, 14 African states formally proposed to the UN General Assembly, a resolution for preventing the extension of the nuclear arms race to Africa and for making Africa a 'denuclearised zone' (Epstein, 1987). This resolution was approved and called on all UN Member States to refrain from conducting nuclear tests in Africa, or to use the area for storing or transporting nuclear weapons (Epstein, 1987). In 1962, the Accra Assembly on 'The World Without the Bomb' was held. After the conference, a small organisation was established in Ghana, headed by a government official, Frank Boaten, to continue disarmament efforts (Skinner, n.d.). In 1963, the annual Aldermaston CND march in the UK included national delegations from forty African and Asian states.

According to Skinner (2015: 418), the struggle for nuclear disarmament in Africa and more generally was linked to questions of racial discrimination and liberation from colonialism and tied to the reduction of military spending to "saving resources for [economic] development." Interestingly, this argument continues to be utilised by states from the Global South at various United Nations nuclear disarmament and non-proliferation fora, such as meetings of States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the Treaty on the Prohibition of Nuclear Weapons (TNPW).

Programme for the Promotion of Nuclear Non-Proliferation

The Programme for Promoting Nuclear Non-Proliferation (PPNN), was founded in 1986 by Ben Sanders, a former senior UN official, and Professor John Simpson at the University of Southampton (UK), in order provide a platform for diplomats who enter the field to find a one-stop-shop of information about the NPT and meet their counterparts from other countries (Onderco, 2020: 815). The PPNN organised a series of conferences in advance of the 1995 NPT Review Conference, to bring diplomats from numerous countries up to date with matters related to the forthcoming conference.

PPNN also played a key role in getting South Africa included in the negotiations and drafting of the text of the Treaty of Pelindaba and in acting "as an agent of confidence-building between the rest of Africa and South Africa" (Adeniji, 2002: 60). Fortuitously, the PPNN had scheduled a meeting from 1–4 April 1993 in Harare, Zimbabwe. South African President F.W. de Klerk's March 1993 announcement of the existence and termination of South Africa's limited nuclear deterrent programme provided the PPNN with an opportunity to issue an invitation to the Chief Executive Officer of the Atomic Energy Commission of South Africa (AEC), Dr Waldo E. Stumpf, to address the meeting. Stumpf accepted and subsequently emphasised South Africa's "determination to be transparent and its acceptance in principle of a NWFZ for the continent" (Africa and Nuclear Non-Proliferation, 1993; Adeniji, 2002). Participants of this meeting included the OAU/UN expert team mandated "to draw up a draft treaty or convention on the denuclearization of Africa". South African representatives from government as well as the two main liberation movements—the African National Congress (ANC) and the Pan-Africanist Congress of Azania (PAC)—attended. However, South Africa only became a fully-fledged participant in the Group of Experts meeting in Johannesburg and Pelindaba from 29 May to 2 June 1995, where the finalised text for submission to the OAU Council of Ministers' Sixty-second Ordinary Session, to be held in Addis Ababa from 21 to 23 June 1995, was

drafted. At the meeting in Johannesburg, South Africa's then Director-General of the Department of Foreign Affairs, delivered the keynote address. When the meeting relocated to the Pelindaba site for the closing session, both the Chairman of the AEC, Dr J.W.L. de Villiers and its Chief Executive, Dr Stumpf—key players in the development of South Africa's nuclear weapons programme and its subsequent dismantlement, made statements.

South Africa signed the Treaty on 11 April 1996 and deposited its instrument of ratification on 27 March 1998. Today, South Africa is host to the African Commission on Nuclear Energy (AFCONE), the body responsible for ensuring that the Treaty of Pelindaba is complied with under Article 12(I) and that its provisions are implemented; including, but not limited to, ensuring that each States Party enacts legislation prohibiting the research, development, manufacture, acquisition, stationing and testing of nuclear explosive devices. AFCONE is also mandated to ensure that non-African States Parties to the Protocols attached to the Treaty comply with their obligations regarding the prohibition of the use of, or threat to use, nuclear weapons against African States Parties to the Treaty; the testing, assisting or encouraging of the testing of nuclear explosive devices in the Zone; as well as, the obligations of these States that are *de jure* or *de facto* internationally responsible for territories within the Zone.

World Council of Churches

Since its establishment, the World Council of Churches (WCC) has considered its promotion of peace as inseparable from international, regional, and national measures for disarmament. The WCC raises ecumenical concerns and advocates at various levels of national and international governance for nuclear disarmament, control of the spread of other Weapons of Mass Destruction (WMDs), accountability under the international rule of law, and fulfilment of treaty obligations (World Council of Churches - What We Do, n.d.).

While the WCC member churches have been united in their opposition to nuclear arms for more than 60 years, the initiative on the Treaty of Pelindaba started in 2006 with a WCC Assembly recommendation to support Nuclear-Weapon-Free Zones (Frerichs, 2009). A programme for nuclear disarmament was established with a member of the Evangelical Lutheran Church in America, Jonathan Frerichs, as the programme's executive. The programme included visits by WCC delegations to a number of African States, including to Namibia in 2008 to urge ratification of the Pelindaba Treaty, and significantly to Burundi in March 2009. The visit to Burundi helped to spur its ratification and thus, the entry-into-force of the treaty (Africa Nuclear Weapon Free Zone, n.d.; African Nuclear Treaty is as Step toward a Safer World, n.d.).

On 1 September 2009, the WCC Central Committee adopted a Statement of Hope in a Year of Opportunity, which contained the following prayer:

> *God of all times and seasons, You have presented us with a season of hope and a time of opportunity for a nuclear-weapon-free world. May we not squander this opportunity but find ways of working together to make a difference for the whole global family. Fill us with the vision of your kingdom, where the lion lies down with the lamb, and weapons are turned into farming tools. Empower us to declare that authentic security is found in enhancing our human interdependence in your one creation. Enable us to live this declaration in our relationships with neighbours, near and far, and to You be all glory and praise, now and forever* (WCC, 2009).

The Role of the Institute for Security Studies (ISS)

In 2007, with funding from the Royal Norwegian Government, the South African-based Institute for Security Studies (ISS) started a project, 'Africa's Development and the Threat of Weapons of Mass Destruction' (WMD), under the leadership of the author and Amelia Broodryk. The project was geared towards strengthening the engagement of Africa in international efforts to prevent the spread of WMDs and to bring about disarmament, especially prioritising that the Treaty of Pelindaba enter into force prior to the 2010 NPT Review Conference. It was felt that this would contribute positively to global disarmament and international non-proliferation efforts. Another important aim

of the WMD project was to provide a platform whereby relevant stakeholders can begin to discuss the establishment of the African Commission on Nuclear Energy (AFCONE), as specified under Article 12 (Mechanism for Compliance).

When the project started in May 2007, only 22 African States had ratified the Treaty, and it was clear that the Treaty had fallen off Africa's (and the AU's) agenda. At the time, despite 'political' pronouncements, the AU Secretariat seemed to have had no plans to galvanise its members to ratify and thus facilitate Pelindaba's entry-into-force. The UN Regional Centre for Peace and Disarmament in Africa (UNREC) also did not have a programme on the Treaty of Pelindaba, although its stated aims were to advance the cause of nuclear, chemical and biological disarmament. The WMD Project thus developed an intensive research and engagement strategy with African governments who had not yet ratified the Treaty of Pelindaba, as well as with the AU's Peace and Security Council. This strategy entailed:

- Developing partnerships with, *inter alia*, the James Martin Center for Nonproliferation Studies, based in Monterey; Groupe de Recherche et d'Information sur la Paix et la Sécurité (GRIP); the WCC; and the International Campaign to Abolish Nuclear Weapons (ICAN).
- Establishing a 'Friends of the Pelindaba Working Group,' which included Parliamentarians for Nuclear Non-proliferation and Disarmament (PNND), a non-partisan forum for parliamentarians nationally and internationally, to develop co-operative strategies, including on nuclear non-proliferation and disarmament issues.
- Producing English and French guides to the Treaty (Stott, Du Rand and Du Preez, 2008), and distributing these Guides extensively in New York, Geneva and Vienna as well as in national capitals and at international and regional conferences.
- Meetings with the Africa Group in New York.
- Field trips to a number of African countries.
- Presentations at international conferences, and
- Publishing numerous articles and briefing documents through ISS and in other media outlets.[6]

After the announcement that Burundi ratified the Treaty on 22 June 2009 and had deposited its ratification instrument with the AU on 15 July 2009, the ISS staff immediately set themselves the task of getting the news out to the press, international organisations, embassies and diplomatic missions in order to explain the significance of the event and the Treaty itself. It was felt that the entry-into-force of the Treaty of Pelindaba was both long overdue and timely, as it sent a clear message ahead of the NPT Review Conference, that Africa is totally committed to nuclear disarmament and non-proliferation both globally and on the African continent. The Statement elicited numerous queries and requests for information and interviews, as well as many congratulatory messages.

ISS continued to publish articles and speak at conferences on the Treaty after entry-into-force (Broodryk and Stott, April 2010; Foy, Broodryk and Stott, June 2010; Stott, July 2010; Stott, Du Randt and Du Preez, March 2010; Stott, June 2011; Stott, October 2011; Stott, March 2011; Stott et al., June 2012; Stott, May 2012; Stott and Broodryk, May 2012; Broodryk and Stott, n.d.; Horovitz, 2009).

As stated by the Centre for International Governance Innovation, "the Treaty of Pelindaba was a long time in the making; a process that was kept alive at least in part by persistent civil society attention. The South African Institute for Security Studies and the Monterey Center for Nonproliferation Studies maintained a continuing watch on and encouraged the Treaty's slow progress" (Centre for International Governance Innovation, n.d.).

Lalit de Klas [The Class Struggle]

The Indian Ocean island Diego Garcia, falls within the territory of the Treaty of Pelindaba. It is a British possession used by the United States as a major military base but is claimed by Mauritius. Between 1814 and 1965, it was in fact a territory of Mauritius. It then became part of the Chagos Archipelago, which belonged to the newly created British Indian Ocean Territory. In 1970, the island was leased to the United States, and developed as a joint U.S.-UK air and naval support station during the Cold War. During the 1991 Persian Gulf War, and during Operation Desert Fox, it served as a base for B-52 bombers, which on 17 December 1998 launched nearly 100 long-range cruise missiles aimed at Iraq. In 2001, the United States again used Diego Garcia when it launched B-2 and B-52 bombers in attacks against Afghanistan. It was also used, according

to Sand, during the American-led war against Iraq (Sand, 2009).

The Mauritian political party *Lalit de Klas* [The Class Struggle] has been campaigning to: a) close the US military base on the Chagos Archipelago; b) return displaced Chagossians to their home; and c) for Mauritius to regain sovereignty over Diego Garcia and the rest of Chagos (Collen, 2009). *Lalit* unites three struggles: the right to return, sovereignty, and closure of the US base. They regard these struggles as intertwined and to be pursued together. They promote decolonization, oppose militarism, support environmental and ecological issues, and the gender struggle (women have been at the forefront of this struggle in Mauritius for decades), the anti-war movement, the 'No Bases' movement, anti-imperialism, and, of course, they are anti-nuclear (Vine and Jefferey, 2009; Vine, 2006).

Post entry-into-force, *Lalit* continues to advocate for nuclear disarmament in the context of the military base on the Chagos Archipelago. When the Treaty entered into force in 2009, they met with the then Minister of Foreign Affairs, as part of an initiative to get the International Atomic Energy Agency (IAEA) to inspect Diego Garcia (Lalit Calls For Action To Respect Nuclear Arms Treaty On Diego Garcia, 3 December 2009; Sand, 2019: 323-47; Sand 2021; Sand, 2009; Lutz, 2009). They wanted Diego Garcia to be "inspected for illegal stocks of nuclear materials as … failure to do so may cause Mauritius to be in contravention of a binding Treaty. The UK and USA are, we believe, right now in contravention of the Pelindaba Treaty" (Lalit Calls For Action To Respect Nuclear Arms Treaty On Diego Garcia, 3 December 2009). The Minister of Foreign Affairs obliged by agitating for a nuclear inspection of the island in 2010, with the then President Cassam Uteem issuing an open letter to AFCONE, which called for an IAEA investigation on Diego Garcia, based on Annex IV [Prevention of Stationing of Nuclear Explosive Devices] of the treaty (Mpofu-Walsh, 2020).

In 2016, following the Second International Conference on Diego Garcia held on 1 and 2 October, the 160 participants, representing civil society organisations in Mauritius, and including the Chagos Refugees Group, sent another request to AFCONE, "for an investigation on Diego Garcia [under the Pelindaba Treaty for a Nuclear Arms Free Africa]." They stated their belief that "nuclear materials are being stored on Diego Garcia, that nuclear submarines are serviced there, and that nuclear arms may be stocked there… in violation of this Treaty" (Diego Garcia: First-Ever Call for Inspections under Pelindaba Treaty for Nuclear Arms Free Africa, 2016). According to a UK statement in 2010, their general policy is to "allow the United States to store only what we ourselves would store" (Hansard: 2010).

Possible Reasons for Why It Took So Long for the Treaty of Pelindaba to Enter-Into-Force

Table 1 shows the number of deposits of instruments of ratification or accession to the Treaty of Pelindaba per year, 1996 – 2024.

Table 1: Ratification or Accession to the Treaty of Pelindaba, 1996-2024

Year	Number of deposits	Country
1996	2	Mauritius; Gambia
1997	–	–
1998	6	Mauritania; South Africa; Burkina Faso; Algeria; Tanzania; Zimbabwe
1999	3	Botswana; Mali; Côte d'Ivoire
2000	3	Guinea; Eswatini; Togo
2001	2	Nigeria; Kenya

Year	Number of deposits	Country
2002	1	Lesotho
2003	2	Equatorial Guinea; Madagascar
2004	–	–
2005	1	Libya
2006	1	Senegal
2007	3	Rwanda; Benin; Gabon
2008	2	Ethiopia; Mozambique
2009	3	Malawi; Burundi; Tunisia
2010	2	Zambia; Cameroon
2011	1	Ghana
2012	4	Namibia; Chad; Guinea-Bissau; Comoros
2013	1	Congo (Republic of)
2014	3	Sahrawi Arab Democratic Republic; Seychelles; Angola
2015	–	–
2016	–	–
2017	1	Niger
2018	–	–
2019	–	–
2020	1	Cape Verde
2021	–	–
2022	2	Democratic Republic of the Congo; Morocco
2023	–	–
2024 (January – March)	–	–

During workshops hosted by the ISS and CNS, and from the literature more generally, the following were identified as factors that may have been (at the time) hindering entry-into-force of the Treaty of Pelindaba—some may still be applicable today in terms of its universalisation. These include:

- A lack of awareness of the Treaty itself.
- A lack of political will.
- Preoccupation with the proliferation of landmines, small arms and light weapons and other priorities such as intra-state conflict, poverty, the provision of health and educational facilities, etc.
- The different domestic bureaucratic and political procedures required for completing Treaty ratification or accession processes.
- Perceived financial implications of being a States Party.
- A lack of knowledge of the socio-economic and other benefits of being a States Party.
- Lack of expertise, capacity and infrastructure to implement its provisions, including to 'domesticate' Treaties into national legislation.
- The multiplicity of treaties to implement and report on, which causes human resource constraints within the relevant department(s) responsible for continental and international treaties and 'reporting fatigue'.
- The perception of the threat from nuclear weapons being a 'Northern' problem and (another) example of a Northern-driven agenda [non-proliferation vs disarmament].
- The lack of assurance from nuclear armed states that they will not threaten any African country with a nuclear device.
- Controversies relating to non-African states having *de jure* or *de facto* international responsibility for a territory situated within the Zone—the Canary Islands, Ceuta, and Melilla as well as Chagos Archipelago (Diego Garcia), and,
- The linkage to the quest for a Middle East Nuclear-Free Zone or, more accurately, a Middle East free of WMDs. One example here, is Egypt's position that it will not ratify the Treaty of Pelindaba until its concerns about Israel's nuclear status and Iran's nuclear intentions are addressed (Einhorn, 2004: 43-82).

The lack of assurance from nuclear armed states that they will not threaten any African country with a nuclear device, is also an important factor. For example, when the Russian Federation ratified Protocols I and II of the Treaty, it made the following statement:

> … the Russian Federation finds it necessary to state the following: In accordance with the Article 1 of the Treaty 'African Nuclear-Weapon-Free Zone' means the territory of the continent of Africa, island States-members of OAU and all islands considered by the Organization of African Unity in its resolutions to be part of Africa. Meanwhile until [sic] the military base of the nuclear State is situated on the Chagos archipelago islands they cannot be regarded [as] meeting the requirements put forward by the Treaty for the nuclear-weapon-free territories. Besides, from the statements made during the signing of the Protocols [it] follows that certain territories, including in particular the mentioned islands, cannot be regarded [as] meeting the requirements put forward by the Treaty for the nuclear-weapon-free territories and that the States, which made these statements, consider themselves to be free from the obligations under Protocols to the Treaty regarding the aforesaid territories. Proceeding from this, the Russian Federation cannot consider itself to be bound by the obligations under Protocol I in respect of the aforesaid territories. Obligations under Article 1 of Protocol I to the Treaty will be interpreted by the Russian Federation in the following way: the Russian Federation will not use nuclear weapons against a State which is a party to the African Nuclear-Weapon-Free Zone Treaty excluding the cases of invasion or any other armed attack on the Russian Federation, its territory, its armed forces or other troops, its allies or a State towards which it has a security commitment, carried out or sustained by a non-nuclear-weapons State party to the Treaty in association or alliance with a nuclear-weapon State (Letter from the Russian Ambassador to the Secretary-General of the Organization of African Unity, 5 November 1996).

The US, while having ratified two of the Protocols, has held back from the third, noting that the Treaty "will not limit options available to the United

States in response to an attack by an ANFZ party using weapons of mass destruction … or restrict [its] freedom of the sea or other navigation and overflight rights guaranteed under international law" (Press Briefing by Robert Bell, 11 April 1996).

In its statement attached to its ratification instrument, the United Kingdom made it clear that it "does not accept any legal obligations in respect of that Territory by their adherence to Protocols I and II" (Statement made by the United Kingdom and attached to its ratification instrument, 19 March 2001).

Regarding the controversies relating to the non-African States having *de jure* or *de facto* international responsibility for a territory situated within the NWFZ: Spain regards the Canary Islands, Ceuta, and Melilla (coastal cities in North Africa) as an integral part of the European Union (EU) and part of their territory. Therefore, Spain insists that these three territories should not be included within the African Nuclear Weapons-Free Zone.[7] The continued existence of the two enclaves has been an issue of contention between Spain and Morocco. Morocco claimed them and brought the issue before the UN Decolonization Committee in 1975. The situation regarding Diego Garcia is described above.

Another important reason may have been the perceived economic benefits of *not* ratifying by uranium producing countries. Article 9(c) [Verification of Peaceful Uses] requires 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 for peaceful purposes to any non-nuclear weapon state, unless subject to a comprehensive safeguards agreement concluded with the IAEA. This requirement was the first legally binding obligation for nuclear exporters to require from their customers comprehensive or full-scope IAEA safeguards on all nuclear activities as a condition of supply (Muller, 1996). Hence, African states are not able to supply non-NPT countries such as India (or those who have not yet concluded safeguards agreements with the IAEA) with fissile material. It should be remembered that when the Treaty of Pelindaba was drafted, it was envisaged that by the time it entered into force, universality of the NPT and comprehensive safeguards agreements would have been achieved. This has not yet happened. However, it is also true that India has in fact now brought into force its own specific safeguards agreement with the IAEA.[8] The question is whether this specific and perhaps unique safeguards agreement satisfies the legal requirements of the Pelindaba Treaty, and in particular Article 9c.

Conclusion

The Treaty of Pelindaba took some 45 years (from 1964 to 2009) to be inscribed in international law. The examples of activism in relation to the Treaty of Pelindaba described above each came from slightly different perspectives or starting points—the Cold War and the nuclear arms race, nuclear imperialism and colonialism, proliferation concerns, the financial and economic costs of such weapons and the lack of resources for socio-economic development in Africa, ethical and moral (religious) imperatives; the struggle for international and continental security and ultimately, the quest for a world without nuclear weapons.

Going forward, there are perhaps many lessons that could and should be learned from the experience of establishing Africa as a nuclear-weapon-free zone and for how activism in its many different forms is best organised, if we are to influence international and continental policies and national legislation, especially in the quest for a world without nuclear weapons.

Endnotes

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[2] From the Positive Action Conference for Peace and Security in Africa, Accra, Ghana, 7 - 10 April 1960.

[3] The Treaty of Pelindaba covers the entire African continent as well as the following islands: Agalega Islands, Bassas da India, British Indian Ocean Territory (commonly referred to as the Chagos Archipelago, including Diego Garcia), Canary Islands, Cape Verde, Cardagos Carajos Shoals, Comoros, Europa Island, Juan de Nova, Madagascar, Mauritius, Mayotte, Prince Edward and Marion Islands, Réunion, Rodrigues Island, Sao Tome and Principe, Seychelles, Tromelin Island and the Zanzibar Archipelago.

[4] In accordance with the provisions of Article 18(2), the Treaty "shall enter into force on the date of deposit of the twenty-eighth instrument of ratification."

[5] From 1960 to 1966, France conducted 13 underground tests in the Hoggar mountains in Ekker and four atmospheric nuclear tests 50 km South-West of the city of Reggane in the Sahara Desert Highlands in Algeria.

[6] See: The Role of the African Nuclear Weapons Free Zone Treaty in Strengthening the Disarmament Objectives of the non-Proliferation Treaty (NPT): A Southern African Regional Seminar: Summary by the Co-Chairs, Pretoria, South Africa, 31 March-April 2008; Jean du Preez, The Race Towards Entry Into Force of the Pelindaba Treaty: Mozambique Leading the Charge, CNS Feature Story, 31 March 2008; African Nuclear Weapon-Free Zone Treaty (Pelindaba Treaty) Resources, James Martin Center for Nonproliferation Studies, International Organizations and Nonproliferation Program (IONP); Jean du Preez, The Potential Role and Functions of the African Commission on Nuclear Energy: Assessing the Benefits for Africa, James Martin Center for Nonproliferation Studies website; Noel Stott, Entry-Into-Force of the Treaty of Pelindaba: Establishing the African Commission on Nuclear Energy (AFCONE), Presentation at the Nuclear Proliferation and Nuclear Energy Forum, Aman, Jordan, 22 June 2009.

[7] The Canary Islands form an archipelago made up by seven main islands, located in the Atlantic Ocean, near the African coast of Western Sahara. The Canary Islands have been an integral part of Spain for more than 500 years, and form an 'Autonomous Community' within the Kingdom of Spain. Ceuta and Melilla are two small Spanish-ruled enclaves on the north coast of Morocco, the last remnants of Spain's 600-year-old African empire. Administratively, they are part of the autonomous government of Andalucia.

[8] For the text of the agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities, see: https://www.iaea.org/publications/documents/infcircs/agreement-between-government-india-and-international-atomic-energy-agency-application-safeguards-civilian-nuclear-facilities

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'Fission Chips': An Activist's View on Anti-Nuclear Activism in South Africa from the 1980s to the 21st Century

By Mike Kantey

Abstract

In the following article, based partly on the excellent work of Dr David Fig, South Africa's energy policy is examined from the euphoria of the Reconstruction and Development Plan (RDP) to the nadir of the Accelerated and Shared Growth Initiative for South Africa (ASGISA). We further review the successive infiltration by the global nuclear industry from the German Pebble Bed Modular Reactor (PBMR) through the French company AREVA to the advent of the Russian VVER. Evidence of the decisive role played by Eskom is presented, while we show how energy policy became implacably skewed in favour of nuclear power by means of a 'policy-adjusted' IRP2010, which became the unchallenged justification for the nuclear fleet.

While much has been made of 'State Capture' and the alliance between the South African Presidency and the Gupta family through Oakbay Resources' interest in uranium[1], we will not include it here because it has been so well rehearsed in other publications. What we consider far more important to grasp is that 'State Capture' is not an entirely new phenomenon since what we call the 'Putsch of Polokwane' in 2007. From the time of General Jan Smuts to PW Botha, from Mandela to Zuma, the insidious relationship among international arms dealers, globe-trotting Mafiosi, and beneficiaries of the military-industrial global nexus, has remained a constant refrain: only names and places have been changed. As we see, parliamentary democracy is a very fragile bird, and it remains to pay tribute to a very rare, courageous, and determined South African civil society that can hold their elected leaders to account.

Introduction

South Africa's only nuclear power station at Koeberg, 28 kilometres north of Cape Town, was first mooted by the Apartheid government under

> In the late 1980s, Koeberg Alert gave birth to the Cape Town Ecology Group, while Earthlife Africa was born in Johannesburg, with later branches in Cape Town, Durban, Pietermaritzburg and Pretoria.

Prime Minister B.J. Vorster. In the wake of Three Mile Island, the near nuclear disaster in Harrisburg, Pennsylvania in 1979, a few property owners under the leadership of Geoffrey Seeff formed a Non-Profit Organisation (NGO) called 'Stop Koeberg' (Arnold Abramowitz, personal comment, 1982). With the realisation that private lobbying and media activity would be ineffective against the determination of the Apartheid State, the name was changed to 'Koeberg Alert' in 1983. As the Anti-Apartheid struggle intensified in the early 1980s, however, and the deadline for commissioning Koeberg-1 approached, the author was part of a small group of progressive graduates from the University of Cape Town who formed a Nuclear Issues Group at the Cape Town Art Centre in Green Point. In 1983, at the suggestion of Dr Derek Yach and Professor Arnold Abramowitz, we formed a voting bloc and took over Koeberg Alert at which point the author was elected General Secretary and held that position until the late 1980s.

Largely drawn from the suburban middle-class, the organisation quickly swelled to over 100 active members in branches throughout the Cape Peninsula. Unable to penetrate the National Party's policy defences, we quickly chose to affiliate both to the United Democratic Front and the End Conscription Campaign. Similar groups were formed in the urban centres of Pietermaritzburg (the Society Against Nuclear Energy, or SANE) and Johannesburg. Without benefit of the Internet at that stage, researchers for Koeberg Alert, such as the late Peter Wilkinson, David Fig, and Thomas auf der Heyde, soon began to map a larger project: the overall uranium fuel chain and the clandestine development – with unofficial US, Israeli, French, and German support – of all the necessary ingredients for an Apartheid bomb (Moss & Obery, 1987).

At times, Koeberg Alert's various members and sympathisers were bombed, arrested, detained without trial, and tortured. In the late 1980s, after sharing offices with the End Conscription Campaign in Observatory, Cape Town, an office for Koeberg Alert was established at Community House in Salt River, a stronghold for the Mass Democratic Movement in Cape Town. The author was then elected as the Chairman of Tenants Committee. As activists we began to work more closely with the National Union of Mineworkers (who provided the bulk of nuclear workers), and affected communities in Atlantis (a dormitory worker suburb near Koeberg) and Namaqualand (where the nuclear waste began to be dumped). Both buildings were bombed by security forces, indicating the increasingly hostile relationship between the State and its opponents.

It was also during this dark period that State utility Eskom chose four sites, other than Koeberg, for the commissioning of future nuclear power stations:

Thyspunt, on the western side of Cape St Francis and Jeffreys Bay, near Oyster Bay, in what is now the Eastern Cape Province

Bantamsklip, past Hermanus and Gansbaai, next to Pearly Beach in the Overstrand, in what is now the Western Cape Province

Brazil & Schulpfontein on the Namaqualand coast, west of Kommagas and south of Hondeklipbaai, in what is now the Northern Cape Province (Hallowes & Munnik, 2007).

The complex built at Pelindaba near Pretoria in the early 1960s also grew in strength during the mid-1980s, a capital-intensive, highly polluting nuclear complex. Later, more sites were added, which included the infamous uranium enrichment plant, or "Z-plant", and Advena/Kentron Circle Facility, where research and the secret development of nuclear weapons took place (Fig, 2005).

In the late 1980s, Koeberg Alert gave birth to the Cape Town Ecology Group, while Earthlife Africa was born in Johannesburg, with later branches in Cape Town, Durban, Pietermaritzburg and Pretoria. With the advent of democracy in the 1990s, many activists were absorbed into the now unbanned African National Congress (ANC), and later into government administration. Others assumed leadership positions in various environmental and development service organisations, such as the Environmental Monitoring Group and the Development Action Group in Cape Town. At a national workshop in February 1994, veteran anti-nuclear activists in the ANC came together once again to make their objections to the nuclear industry clear (Environmental Monitoring Group, 1994). By 1995, the friendlier Reconstruction and Development Programme (RDP) had been replaced by the more controversial GEAR (Growth through Economy and Redistribution) when macro-economic policy became the sole determinant of industrial strategy, including the principles of "mineral beneficiation" and the importance of "foreign direct investment" (FDI), leading to the encouragement of energy-intensive large smelters and metal-working plants (Marais, 1998).

One of the major industries that benefitted from sanctions-busting had been the weapons production company, the Armaments Corporation of South Africa (Armscor), responsible not only for conventional weapons production but also the clandestine nuclear weapons industry. During the period known as the "the Government of National Unity," Foreign Minister Roelof "Pik" Botha had made sure that the jobs for veterans of Armscor and the bomb factory at Advena might be secure. According to Rob Adam (then CEO of the Nuclear Energy Corporation of South Africa, or NECSA), "when the Government had shut down the nuclear programme … there had been serious infrastructure, hot cells, fuel-testing centres and skilled staff, which had threatened to become redundant. It was for this reason that they had decided to employ this technological muscle in other ways and on other programmes, which allowed them to preserve the national skills base in the nuclear domain" (Parliamentary Working Group – PMG, 2007).

One of the earliest appearances of this initiative is described in a subsequently deleted internet site, "Chronology of the Pebble Bed Modular Reactor (PBMR)," written by a former South African Atomic Energy Corporation (AEC) employee, Dr Johan Slabber. Slabber claimed that, after meeting Professors Rudolf Schulten and Kurt Kugeler at Aachen University in 1988, they had discussed the potential of the PBMR. When Slabber joined the Armscor electronic systems supplier Integrated Systems Technology (IST) in 1989, he had suggested the reactor technology to Eskom. Slabber further alleged that – soon after the unbanning of the ANC, in April 1990 – Armscor had appointed IST to do a preliminary design and feasibility study on the PBMR as a potential source of propulsion in a nuclear submarine and that the project had been headed up by Chris Oberholzer. In March 1992, IST apparently received Armscor approval to investigate the commercial potential through the offices of Dieter Matzner and this was when it was brought before Eskom. According to the Nuclear Regulatory Commission (NRC), Eskom had been investigating the PBMR option since 1993, under the auspices of its Integrated Electricity Plan (IEP) (NRC, n.d.).

Eskom's website claims that "by 1993 it had become clear that building a new traditional Pressurised Water Reactor (PWR) such as Koeberg would be prohibitively expensive" (Eskom, n.d.). Slabber maintains that, over the following five years, "the South African government was kept up to date on all Eskom's findings" (Kantey, 2017). At the very same time, then, that the Department of Minerals & Energy under Minister Penuell Maduna of the Mandela-led Cabinet was conducting an extensive and fully inclusive, energy-policy consultation, which led to the White Paper on Energy being released in 1998, elements inside Eskom – with the full and active participation of CEO Reuel Khoza – were engaging in "discussions with potential local and overseas partners … and it was found that the PBMR would be a cost-effective option" (Kantey, 2017).

Meanwhile, macro-economic policy changes in central government were moving to meet Eskom and the nuclear industry half-way. Soon after the inauguration of Nelson Mandela in April 1994, the progressive economic policy of the post-Apartheid Reconstruction and Development Programme (RDP), which included a massive commitment to electrification for the masses, had given way to powerful World Bank and the International

Monetary Fund influence (Marais, 1998). Alec Erwin, who would become Minister of Public Enterprises in the Mbeki government, understood well the industrial strategy necessary to implement this policy, especially following the time he spent in the National Union of Metalworkers (NUMSA). Erwin soon became a champion of the PBMR. This shift in attention coincided with a global resurgence in the nuclear industry, which quickly and astutely hijacked the global warming debate to support its ailing cause in the aftermath of the 1986 disaster at Chernobyl (Kantey, 2017). Nevertheless, given the strong participation of anti-nuclear activists in the Mandela Government's Energy Policy process, it was hard to see any shift in official policy in the South African Government's 1998 White Paper on Energy. We see in the section on nuclear energy, for example, a well-defined call for a re-appraisal of the South African nuclear industry (Department of Minerals and Energy, 1998).

At the very close of the Mandela era, therefore, one may argue that the stage was set for fierce, but muted debates within the Tripartite Alliance with regard to the production of electricity. The older guard, who had cut their teeth on the old Soviet school of Marxism, were clearly in favour of retaining those State assets which were the crown jewels of the Apartheid State; the younger, aspirant and wildly Neo-Conservative African elites saw lucrative opportunities in the prospect of "corporatisation" (the translation of a State-owned enterprise into a quasi-corporate structure with equally fat salaries) or outright privatisation (the selling off of the State asset to private investors, usually with a proviso that paid positions had to be reserved for Black African directors) (Kantey, 2017). Given the tremendous pressure that activists had put on the energy policy-formation process, however, the White Paper was understandably cautious: "Whether new nuclear capacity will be an option in the future will depend on the environmental and economic merits of the various alternative energy sources" (DME, 1998).

Despite the wide consultative process leading up to the Energy White Paper of 1998, however, Eskom was determined to engage in a nuclear build programme, regardless. In 1999, the PBMR (Pty) Ltd was constituted as a separate company, owned by the South African Government, through the State-owned Industrial Development Corporation, the State-owned Eskom and the UK-based company, British Nuclear Fuels Limited (BNFL). In 2001, the new Cabinet under Thabo Mbeki decided to pursue a pro-nuclear power reactor policy, without any broader consultation (Fig, 2010). During this time, an equally fierce opposition arose within the major cities and at the proposed coastal sites within South Africa. The Koeberg Alert organisation in Cape Town no longer existed as such, but had morphed into a more loosely held Koeberg Alert Alliance, with Earthlife Africa's Cape Town branch having assumed the reins, while supported by fraternal branches in Pretoria, Johannesburg, and Durban. This network had led, in turn, to the birth of the national Environmental Justice Networking Forum.

Given the long-established cordial relationships with the National Union of Mineworkers, a resolution was successfully passed at a Congress of South African Trade Unions at their 7th Annual Congress, as follows: "... we call on government ... to make South Africa a nuclear-free zone, ending its funding of the Pebble-Bed Modular Reactor and ensuring that the nuclear waste from Koeberg is not dumped in other parts of Africa" (COSATU, 2000).

Black Economic Empowerment in the Nuclear Power Sector

Despite popular opposition, however, the counter-thrust was provided by sectional bourgeois interests, who were benefiting directly from their affiliation to the ANC. Eskom's non-executive chair, Reuel Khoza, was at that time also the founding chair of investment holding company Co-ordinated Network Investments, which held a 29% stake in Integrated Systems Technology (IST), one of the main beneficiaries of the R90m spent on the reactor's research and development (*Business Day,* 29 November 1999). The proponents then tried to rush through a nominal Environmental Impact Assessment, signed off in June 2003 with a positive Record of Decision by – ironically – former End Conscription Campaign member Crispan Olver, then Director General of the Department of Environment and Tourism. They were stopped in their tracks, however, by a successful legal challenge from Earthlife Africa, which finally threw out the Environment Impact Report in January 2005. Another setback to the PBMR project arose when United States shareholder Exelon unexpectedly withdrew in April 2003 and one cannot help speculating that popular pressure in

both South Africa and the United States had driven them away, as well as the suppressed information that the project was not commercially viable without massive taxpayer support.

Enter AREVA and the French Connection

It was also at this time that the traditional suppliers of the Koeberg Nuclear Power Station, the French nuclear industry giant AREVA (now called Framatome), was offered "industry technology rights and cooperation" in the PBMR reactor programme. AREVA said the deal might include fresh fuel supply, waste management and power transmission and distribution. AREVA CEO Anne Lauvergneon was promptly appointed to Thabo Mbeki's Presidential Economic Advisory Committee.

Since the PBMR had been abandoned in the short term, tenders were issued for either a Toshiba-Westinghouse AP1000 or an AREVA EPR, then under stuttering construction in Finland. Projected costs of these reactors were then about R120-billion each. Long-standing spokesman Tony Stott indicated that Eskom would no longer be driving the programme: "The future of nuclear is bigger than just Eskom now … the government will now play a bigger role in taking it forward, because the nuclear build is important for the development of the country's capabilities" (Kantey, 2018). By 2010, the PBMR company said that it needed a minimum of an extra R31 billion to complete the demonstration plant. The State, however, having already devoted R9 billion with nothing to show for it, became impatient, and put an end to the programme (Kantey, 2018).

Taking the Struggle to Parliament Once More

The actual experience of participation in the Environmental Impact Assessments, however, and the failure of civil society and the labour movement to make any real impact of their own on decision-making, forced the alliance of anti-nuclear forces on to the offensive, largely led by Earthlife Africa members still sympathetic in principle to the cause of the Tripartite Alliance. Thus, by staving off the easy passage of the EIA and the haphazard launch of the PBMR, those progressive forces opposing nuclear power began to have an influence beyond civil society and the labour movement and began to stir the long-dormant consciousness of the parliamentarians. What was most curious, however, is that the debate seldom centred on the substantive issues of public health, possible catastrophic accidents and the unsolved problems of nuclear waste, but strictly on economic questions. This emphasis – almost by default – forced the anti-nuclear movement to shift their focus to economic arguments and the financial media, especially the influential newspapers, *Business Day* and *Business Report,* and the august financial magazine, the *Financial Mail,* as well as *Engineering News*.

Loyal Support from the Administration is Gathered

While President Mbeki made a clear commitment to building a fully-fledged nuclear industry in his State of the Nation Address on 8 January 2007, the Draft Nuclear Energy Policy and Strategy for the Republic of South Africa was only approved by Cabinet on 8 August 2007, after a desultory round of public participation whose contents were never acknowledged, nor made public (ANC Daily News Briefing, 23 August 2007). As Deputy General Secretary of the South African Communist Party, ANC MP and National Executive Committee member, Jeremy Cronin, noted in an interview: "The structures of the bureaucracy remain hostile to public participation and pressure … Increasingly policy is formed by directors general of government departments and their senior management, or even worse still, by external and very often private sector consultants from the European Union or North America" (HBS, 2014).

Having committed to the furtherance of the nuclear industry, an official Nuclear Energy Policy was approved by Cabinet on 8 August 2007. The lack of adequate consultation led in turn to the founding of the Coalition Against Nuclear Energy (CANE), whose founder members included the Namaqualand community, the Pelindaba Working Group, and the Koeberg Alert Alliance, among others.

As 2008 proceeded, discussions were equally far advanced for the awarding of a contract for either a Toshiba-Westinghouse AP1000 Pressurised Water Reactor (PWR), similar to those at Koeberg, or the AREVA-led European Pressurised Reactor (EPR), then under stuttering construction in Finland. Projected cost of these reactors was about R120-

billion each (Hill, 2008). In his 2007 Budget Speech, however, Finance Minister Trevor Manuel had warned that "in an economic discussion, it is not appropriate to throw numbers around without a sense of rigour or without some interrogation" and this had long been recognised by such luminaries as the *Financial Times* (Taylor, 2001): "Nuclear generation will remain *uneconomic unless electricity prices rise or it receives state financial help*, according to forecasts compiled by the government's energy review team. It concludes that by 2020, nuclear power will remain more expensive than wind generation and about the same cost as electricity produced from power stations burning specialist green energy crops"*[emphasis added]*.

Despite a failed attempt to artificially inflate electricity prices, however, it was this economic question which put paid to the State's larger ambitions, but the bureaucracy seemed unperturbed by the cancellation of the "Nuclear-1" bid for the larger stations. Director-General of the Department of Public Enterprises, Portia Molefe, stated that a "nuclear task team" would develop "a framework for procuring a nuclear technology partner to support both the nuclear power station build programme, and the associated industrialisation process" (Van der Merwe, 2008). The hunt was now on for a strategic partner that would "co-develop the nuclear industry in South Africa, and assist in the introduction of broadening of the nuclear base" (Kantey, 2018). As long-standing spokesman Tony Stott indicated: Eskom would no longer be driving the programme: "The future of nuclear is bigger than just Eskom now …The government will now play a bigger role in taking it forward, because the nuclear build is important for the development of the country's capabilities" (Kantey, 2018).

The Final Emergence of 'State Capture'

In late 2007, however, President Thabo Mbeki was replaced by Jacob Zuma as head of the ANC, in the 'Putsch of Polokwane'. In December 2008, following the Global Financial Crisis and with Anglo-American's Bobby Godsell installed as chairman of Eskom, the entire "Nuclear-1" deal was stalled: "Eskom announced that it would not proceed with either of the bids from AREVA and Westinghouse, due to lack of finance, and the government confirmed a delay of several years. The revised projection for nuclear increase is that the next plants will come online in 2019, and 6000 MWe might be operating by 2025" (The World Nuclear Association, 2010).

In October 2010, the Department of Energy released its draft Integrated Electricity Resource Plan (IRP) for 2010-2030. Although nuclear was included in the energy mix only from 2023, a decision on this "must be finalized as quickly as possible" and a procurement process set up. At least 9.6 MWe new nuclear capacity by 2030 was included in the plan, significantly less than the 2007 target (World Nuclear Association, 2010). For the following seven years, up to the present, this became the rallying cry for pro-nuclear apologists in government, in the parastatal companies, and in the body of the new (Revised) Draft Environmental Impact Reports for Nuclear-1.

During the course of 2010, the South African Civil Society Energy Caucus, in conjunction with the Coalition Against Nuclear Energy, made well over 400 submissions in the public participation process leading up to the publication of the Integrated Resource Plan for the production of electricity (the IRP2010). In every single submission – whether from the Labour Movement, the Churches, NGOs, or Community-Based Organisations – these well-informed members of civil society rejected out of hand the employment of nuclear energy for electricity production. Yet, within two weeks of the nuclear catastrophe at Fukushima, and before Germany and Switzerland had turned their backs completely on nuclear energy, Minister of Energy Dipuo Peters had declared her support for six new nuclear reactors in South Africa. At a conference in Cape Town, she further trumpeted the development of a nuclear-export market to the rest of Africa, and this call was supported by both the International Atomic Energy Agency (IAEA), and the African Union (Greenpeace, 2021).

Is there Life after Fukushima?

In March 2011, the author was visiting a friend in Port Elizabeth when disaster hit Japan: first the devastating tsunami and then immediately following on, the sustained crisis at the Fukushima-Daichi series of four nuclear power plants. Glued to the television set for 48 hours, the author was astounded to see one reactor blow up like a small-

scale atom bomb in front, with bits of broken fuel-rod elements cascading from the explosion, like so many radioactive black-wattle seed pods on the screen. Nevertheless, at the end of that year, then Minister Peters was standing firm in justifying a nuclear future for South Africa (*Mail & Guardian*, 9 December 2011).

The first Environmental Impact Report for Nuclear-1 having been released, the author had been privileged to attend hearings throughout the country. The opposition had been particularly fierce at the designated site of Thyspunt. One of the further highlights of the tour had been a visit to the Agri at Bredasdorp in the Overberg region, where a farmer had sidled up to the author in the car park and muttered, *"Laat hulle kom: ons sal die Semtex uithaal"* ("Let them come [to Bantamsklip]: we'll haul out the plastic explosive"). Earlier in the process, there had been a meeting in Kimberley, the provincial capital of the Northern Cape, where nuclear power stations had been mooted for the coast of Namaqualand at Brazil and Schulpfontein. A community leader had stood up and said publicly, *"Dis baie maklik, menere: as julle aan die kus kom, gaan ons julle net skiet"* ("It's very simple, gentlemen: if you come to the coast, we'll just shoot you"). The sites mysteriously disappeared from discussion further on, and only the three southern coastal sites remained.

It was at this point that the national Coalition Against Nuclear Energy (see www.cane.org.za) held a summit in Plettenberg Bay, not so much to generate a "top-down" response, but rather (given its non-hierarchical nature) to "meet-and-greet" and exchange notes. This was followed later by the emergence of the anti-nuclear campaign itself, TSUNAMI, with strong affiliation to the Civil Society Energy Caucus, and other, related structures among the civil-society, NGO, and faith-based social movements.

At the predicted "end of the world" in 2012, however, then Energy Minister Dipuo Peters proclaimed yet again that the South African Government was still committed to a nuclear future as "part of the move to cleaner energy" (Reuters, 2 March 2012). The magic figure of 9,600 MW nuclear was repeated, a refrain that characterised all propaganda from 2007 onwards, and – in the light of the original calculation made in consort with the French company AREVA – it would make sense in the light of three coastal sites carrying two EPRs of 1600 MW each. "R300-billion was allocated to the energy sector over the next three years" (Kantey, 2017). A National Nuclear Energy Executive Coordination Committee (NNEECC) would "oversee" the roll-out of the nuclear build programme and review the decision about the procurement of the stations (Kantey, 2017).

Zooming Forward to the Nice Big Present

It was at this crucial time that the name of Rosatom first reared its head. South Africa had applied to join the Brazil-India-China-Russia bloc in 2010, and was admitted at the end of that year, while the new South African president, Jacob Zuma, joined the 2011 summit in Sanya, China. It has been alleged that the relationship between Zuma and Russian President Vladimir Putin goes all the way back to the 1980s when both men were working for their respective intelligence agencies. What is far more important to note, however, is that Rosatom Overseas, the international arm of Russia's State-owned nuclear energy group Rosatom, signed a memorandum of understanding (MoU) with the South African Nuclear Energy Corporation (Necsa; Campbell, 2012). One of the aspects of that MoU was "the manufacture of nuclear fuel and the fabrication of power equipment" (Campbell, 2012).

Meanwhile, the local opposition to the expansion of the nuclear industry in South Africa was in full flight. Under the able leadership of Peter Becker, the Cape Town-based Koeberg Alert Alliance was able to organize a global anti-nuclear conference, where a number of important Indian, African, and

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Russian activists were able to meet and share insights, and which served to boost the already active alliances and coalitions across regional and international borders.

Meanwhile, the national Coalition Against Nuclear Energy continued with a constant barrage of commentary in the local and national media, especially the financial media. In July 2012, the Coalition convened a well-attended meeting in Port Elizabeth to launch the NoPEnukes campaign in sympathy with the nearby Thyspunt Alliance, incorporating not only activists from Jeffreys Bay and Cape St Francis, but also academics and members of the Eastern Cape Environmental Justice movement. The counter blast was immediate from Energy Minister Dipuo Peters at a Black Business Dinner, held on 6 July 2012: "I am getting more and more convinced that the whole nuclear debate is coming from communities that don't want to see this country growing … I also want to make an appeal to you to partake in this debate, since one of the first nuclear sites under consideration is that at Thyspunt, in the Kouga area. At this stage only the anti-nuclear groups have been lobbying the news media and business in this part of the country, and that with wrong information and unfounded claims" (Peters, 2012).

A few months previously, the Minister had promised the completion of the fatally flawed Environmental Impact Report "by the end of the year" (Creamer, 2012), but another barrage of high-quality comments and inputs from members of the national anti-nuclear coalition, as well as intense lobbying of the key stakeholders, delayed the final report by another five years.

In the first quarter of 2013, then Deputy President Kgalema Motlanthe addressed a Nuclear Africa conference in Midrand, between Johannesburg and Pretoria, and painted a rosy future for the industry (Campbell, 2013). Without any indication of what type of technology would be commissioned, the contenders were all lined up: the Toshiba-Westinghouse AP1000 from the United States, the Rosatom VVER-1000; the AREVA EPR from France; and South Korea Electric Power Corporation's (Kepco) APR-1400. Although it was alleged that Motlanthe was 'close to China', they only appeared as contenders for the projected spend in 2014. At the end of 2013, however, the "Update" for the Integrated Resource Plan for Electricity (the IRP 2010-2030) dropped a bombshell, when it suggested that, largely founded on a sluggish demand for electricity, no nuclear base-load capacity would be required until after 2025, and possibly even later, after 2035 (Update to IRP 2010-2030, 2013: 8).

The next bombshell dropped on 23 September 2014 by the local *Mail & Guardian* and Agence-France Presse (AFP), and seemingly introduced contradictions: "Russia's Rosatom State Atomic Energy Corporation said on Monday it will provide up to eight nuclear reactors to South Africa by 2023, in a $50-billion strategic partnership between the two countries." According to Rosatom, the delivery of the reactors would enable the foundation of the first nuclear power plant based on Russian technology on the African continent (*Mail & Guardian*, 23 September 2014). Rosatom Director-General Sergey Kirienko estimated the value of the deal at around $50-billion, given that one reactor costs around $5 billion. Subsequently, the inter-governmental agreement, signed in Vienna on the margins of the 58th IAEA conference, called on Russia to help build infrastructure in South Africa and to train African specialists at Russian universities (*Mail & Guardian*, 23 September 2024).

Later, *TimesLive* published the following: "On Friday, the *Mail & Guardian* quoted an ANC source saying that Zuma took control of the deal, ironed out the details with Putin on the sidelines of the BRICS (Brazil, Russia, India, China and South Africa) summit in Brazil in July, and finalised it in Moscow last month." Sources told the newspaper Zuma subsequently instructed Joemat-Pettersson to sign the deal on the sidelines of the IAEA conference in Vienna. It was furthermore reported that Zuma did not take the ANC's national executive committee into his confidence on the matter, and only gave details to his most trusted Cabinet ministers and MPs (*TimesLive*, 26 September 2014).

As one can imagine, such a massive bombshell had equally massive repercussions, some of which are still being felt today. The anti-nuclear movement were overjoyed at the amount of publicity and solidarity it received from unexpected quarters: from the right-wing parties, through the official liberal Parliamentary opposition, all the way to the more traditional supporters on the left. The

author perceives that there is no need to delve comprehensively into the extraordinary success of Earthlife Africa and SAFCEI in overturning once again a necessarily flawed and over-hasty pro-nuclear decision on the part of the South African Government.

Conclusion

This article sufficiently shows that, while activists have long opposed nuclear power for economic, political, environmental, worker- and public-health reasons, elements within the ANC-led Government have consistently pursued a nuclear path for private gain among the more favoured elites.

To what extent truly popular movements, or the still active and militant grassroots social movements, may find each other once again in a Mass Democratic Movement against corruption and self-enrichment in the name of 'the people', and to what extent the dead-weight of advanced capitalism and out-and-out bribery and corruption may ultimately triumph over a less sophisticated population, remains to be seen. Having fought this battle without interruption or distraction since 1982, the author can only quote the late Paul Jacobs, who died of cancer while campaigning for the rights of US soldiers deliberately exposed to radiation in the south-western deserts of that country. In a 1980s documentary, entitled *Paul Jacobs and the Nuclear Gang,* he quotes from the Jewish Talmud, even while he shows the bald signs of radiation and chemotherapy himself: "You have no obligation to persist, but you have no right to desist."

Endnotes

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[1] See, for example Pieter-Louis Myburgh. (2017). *The Republic of Gupta – A story of State Capture*, Penguin, 81.

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Nuclear Policy and the Changing Dynamics of Decision-Making

By Keith Gottschalk

Abstract

Under the apartheid regime nuclear policy was decided by the president, with most of the cabinet being in the loop. The African National Congress (ANC) in exile sought to discover the facts, and to campaign against the apartheid regime acquiring nuclear weapon capabilities. Between 1991 and 1994, the ANC's Science and Technology Policy group played a role in lobbying on nuclear policy issues, alongside some NGOs, culminating in the February 1994 conference on nuclear policy.

After the came to power in April 1994, inaugurating democracy, the nuclear lobby within the bureaucracy and parastatals influenced the relevant ANC directors-general, cabinet ministers and one president. Statutory and regulatory agencies were compromised. Civil society organisations alone took the lead in opposing nuclear energy, and were partly successful.

Introduction

Under the apartheid regime nuclear policy was decided by the president, with most of the cabinet being in the loop. The ANC in exile sought to discover the facts and to campaign against the apartheid regime acquiring nuclear weapon capabilities. Between 1991 and 1994, the ANC's Science and Technology Policy group played a in lobbying on nuclear policy issues, alongside some non-governmental organisations, culminating in the February 1994 conference on nuclear policy. With the dawn of democracy in April 1994, the nuclear lobby within the bureaucracy and parastatals influenced the relevant ANC directors-general, cabinet ministers and one president. Statutory and regulatory agencies were compromised. Civil society organisations alone took the lead in opposing nuclear energy, and were partly successful. This paper reflects the author's observations and his research of press reports.

Pre-1990

Former apartheid president F.W. de Klerk wrote how he only learnt about the nuclear bomb project, which started in 1974 as a peaceful nuclear explosive (PNE), by chance, in his capacity as deputy minister of mining. The project was kept secret from most of the cabinet and the State Security Council (De Klerk, 1999: 273). Nuclear policy was made by the president. Subsequently, as State President, De Klerk in late 1989 ordered the country's six and a half nuclear bombs to be dismantled.

Under apartheid, the nuclear censorship went much further than just the six and a half nuclear bombs. It was, for example, a crime punishable by imprisonment to reveal that South African uranium was exported to the United Kingdom, where it was used to manufacture their atomic bombs during the Cold War (Williams, 1994: 73).

This author did spot a one sentence news report in either the *Cape Times* or the *Cape Argus*, in the late 1960s or 1970, where the mining industry announced that they had started to convert uranium oxide into uranium hexafluoride (this is corroborated on 19 August 1970, by a *New York Times* report[1]). He assumed that the sole industrial use of uranium hexafluoride is for uranium isotope enrichment, and that therefore a nuclear bomb project had started. Also, after the Koeberg nuclear power station project was announced in 1974, the author assumed that these two nuclear reactors were to act as camouflage for the primary military destination of the enriched uranium.

Opposition to the nuclear power project became organised as 'Stop Koeberg', later changed to the NGO 'Koeberg Alert' (Koeberg Alert, n.d.). It was founded in 1983. Koeberg Alert affiliated to the United Democratic Front. This indicated the broad sympathies of its founders towards the liberation movement. Equally significant, it indicated that the UDF was sympathetically disposed to NGOs opposing nuclear power stations. Around the same time, two playwrights wrote the satirical musical *Up 'n Atom*, which performed to a sold-out season at the provincial-owned theatre today called Artscape, and then went on a further run at the Baxter Theatre, which required re-designing of the stage set to fit onto a smaller stage.

1990 – 1994

After its unbanning in 1990, the ANC set up a number of policy groups, which ran until they were replaced by parliamentary portfolio committees after the April 1994 election. Their role was to advise on drafting policy. The author joined the ANC Science & Technology Policy (S&T) Group towards the end of 1991. While the ANC intended to found S&T Policy groups in each province, in practice they were only founded in Johannesburg and Cape Town. The Johannesburg group soon faded out, leaving the S&T Policy group in the Western Cape as the only one standing. The majority of scientists who joined the S&T group lobbied only to get their discipline included in the list of those meriting government support. As soon as they had achieved this, they dropped out, and did not come to further meetings. They had no interest in S&T policy as a whole. One praiseworthy exception was Professor Iqbal Parker of the UCT Medical School.

In February 1994, 240 delegates participated in a conference to debate nuclear policy for a democratic South Africa. This was co-hosted by the Western Cape sections of the Environmental Monitoring Group (EMG) and the ANC Science & Technology Policy Group. In brief, its main recommendations were that South Africa should:

- Oppose nuclear weapons and strengthen the Nuclear Non-Proliferation Treaty
- After historic over-investment, give no further subsidies to the atomic industry, but let those parts of it which make a profit, continue
- Research electricity generation through solar, hydro, wind, and other renewables (EMG & ANC, 1994: 228, 231, 234).

The second and third of these recommendations were not only rejected by the ANC, but simply vanished without a trace. There seems to be four reasons that lay behind this result. The first is formalistic. The recommendations from a conference had no standing within the ANC, unless they were subsequently adopted by its national policy conference or by the National Executive Committee or other structure. But even then, governmental backing was possible only with the approval by a Director-General or cabinet minister.

Secondly, before 27 April 1994, the bureaucracy of Afrikaner nationalists was considered hostile to the ANC. What civil society did not realize was that, after

April 1994, ANC ministers, deputy ministers, and other political appointees, would grant daily access to existing civil servants who wished to advise them on policy issues. By contrast, intellectuals and activists in ANC support groups and the NGOs were marginalized. They were treated as outsiders, who had to request an appointment to see any political appointees, and even then, they were more frequently turned down, or ignored, than granted an appointment. Even when the new decision-makers granted activists occasional space and time to make presentations, the results were minimal, as incoming ministers slowly meshed with the bureaucracy, which used its insider status to counter activist proposals.

The third reason is illustrated by the fact that within a month, the *Financial Mail* published a half-page 'nuclear feature', which concluded: "The ANC is doing its best to be polite to all past allies. But the case for sending the nuclear nutters packing after the April general elections is unanswerable" (*Financial Mail*, 11 March 1994: 43). By 'nuclear nutters' the *Financial Mail* meant not the nuclear industry, but those opposed to it, who advocated renewable electricity generation. In short, the atomic industrial lobby had already won over most of the mainstream media, including editors, columnists, and journalists. Newspapers repeatedly, after 1994, uncritically published Eskom's pro-atomic articles verbatim, but their editorial and other pages were often rationed to those advocating renewable sources of grid electricity. When Eskom's nuclear division paid for a series of full-page adverts across all major newspapers, for example (*Cape Argus,* 2003; *ThisDay*, 2003; *Sunday Argus*, 2004; *Cape Argus*, 2005), grateful media responded accordingly.

The fourth reason is that a public relations firm hired by Eskom in 1994 recommended setting up a Koeberg Task Team; that Eskom's Nuclear Division should engage with ANC officials outside the conference; and that it should lobby members of the ANC National Executive Committee. All of this they diligently did, with success.

The former atom bomb team, now incarnated as the Pebble-Bed Modular Reactor (PBMR) team, and all kept on the state payroll, fought hard for two decades to claw-back from this reversal of their fortunes. They all worked to steer the thinking of the Parliamentary portfolio committee on energy.

Post-1994

In the 21st century, Koeberg Alert was re-organised as Koeberg Alert Alliance, predominantly a Facebook group (https://koebergalert.org/about). It was joined by the Southern African Faith Communities Environment Institute, founded in 2005, (https://safcei.org/about-us/) and the Coalition Against Nuclear Energy, founded before 2007 (https://cane.org.za/about).

The nuclear division within Eskom paid for a major and extensive advertising campaign. With this campaign, the atomic industry lobby in South Africa achieved two world records. This was the first time in the history of advertising, and in corporate history, that a company paid for full-page advertisements in mainstream newspapers to publicly marginalize and denigrate the research and development work of its renewables division in favour of the nuclear division of the same company. This clearly illustrated the power of the atomic division within Eskom, and the powerlessness and defencelessness of its renewables division. Simultaneously, the Department of Minerals and Energy (DME) created an additional post: Deputy Director-General for Nuclear Energy, which it swiftly filled.

Along with the media campaign, the atomic industry lobby extensively lobbied cabinet ministers, deputy ministers, ANC members of parliament and National Executive Committee members. One such example was the 'highly confidential' South Africa Power Project Strategic Implementation Proposal of 2007, which recommended that spending on nuclear power stations should be ten times higher than on all renewables combined (TSAPRO, 2007). In fact, their spending on nuclear power research was in the end four hundred times higher than their budget for all renewable electricity modes combined (Greyling, 2014).

After seventeen years, from 1993 to 2010, the PBMR team admitted that they would need a further thirty billion rand. The then Minister for Public Enterprises, Barbara Hogan reacted by terminating the project. Her reasoning was that the PBMR team: consistently missed deadlines; failed to find any customers for their reactor; failed to get an opportunity to participate in the United States Nextgen nuclear plant round of research and development funding; and failed to secure private

sector financing (bar miniscule shareholdings of Westinghouse, 4.9%, and, Exelon, 1.1%, before it withdrew). Within months, President Jacob Zuma dismissed Hogan from the cabinet, and her political career was over.

Since democracy started in 1994, South Africa has had eleven ministers responsible for energy.[2] With the exception of Roelof 'Pik' Botha, the rest of the politicians had no previous record or any interest in the atomic industry. Yet, each minister, within a week or fortnight of appointment, issued a statement reaffirming the government's commitment to atomic power stations. This implies first, that this strategy is considered more important than any other policy under their domain; and, second, that someone invisible to the public has the power to pressure each new minister to issue such statements. Such a bureaucrat is unlikely to be lower than the rank of a Deputy Director-General.

The roll-back offensive against the 1994 ANC Science and Technology Policy conference resolutions steadily mounted. The Government's 1998 White Paper on Energy Policy pledged it would investigate atomic power. In 2007, the DME published a Draft Nuclear Energy Policy for comment, and the cabinet promulgated the final version in 2008. Principle 1 was that nuclear energy shall be used (DME, 2008: 7). The Government was again committed to the re-development of an end-to-end nuclear industry, which would entail: the development of a fuel fabrication capacity; investigating the re-establishment of a uranium enrichment capacity; and starting the construction of nuclear power plants between 2011 and 2015 (DME, 2008: 26-29).

One key strategy was for the atomic lobby to set up a National Nuclear Energy Executive Co-ordinating Committee (NNEECC), headed by the Deputy President, to drive it at the highest level and to ensure a majority of atomic power station supporters from the DME, the Department of Trade and Industry, and others could outvote the Minister of Finance. The political strength of the atomic lobby soon became tangible. Renewable energy managers in the DME publicly announced at a 2010 solar energy conference that they would found a 5 000 MW Solar Park in Upington, which later morphed into a 5 000 MW "solar corridor". But when the Integrated Resource Plan 2010-2030, endorsed by cabinet, was published in 2011, it proposed 9 600 MW of atomic power (DME, 2013). The Upington solar park or solar corridor was never built; there is no trace of it thirteen years later.

The competing nuclear companies escalated their lobbying in South Africa. A vice-president of the French firm AREVA (now Framatome) in South Africa joined the ANC, and stood as an ANC ward candidate in municipal elections. The AREVA president and chief executive officer oversaw their corporate sponsorship of the 2012 and 2013 'French seasons', which paid for extensive cultural events throughout South Africa (www.france-southafrica.com). Their business rival, Westinghouse, appointed a former AZAPO president, subsequently a Director-General of the then Department of Arts, Culture, Science and Technology Department, Itumeleng Mosala, as its regional vice-president for South Africa (Westinghouse, 2010).

The Gaby Shapiro branch of the ANC, and other branches, submitted policy motions to the ANC 2017 national policy conference, calling for nuclear power, including disposal of high-level radioactive waste, to be costed and compared with the cost of other sources of electricity. All such resolutions were suppressed at the national level (author observation). Only litigation by NGOs stopped President Zuma's intention to spend one trillion Rand on purchase of Russian VVER nuclear power stations (Earthlife Africa vs. Minister of Energy, 2015).

Time and time again, the atomic industry's choices, instead of being cost-effective and simple, ended up more complex and expensive. For instance, the most cost-effective production of medical radio-isotopes is by using a cyclotron, as the 200MeV cyclotron at the iThemba lab at Faure has done for decades. The same choice predominates overseas. The 2013 decision to build another reactor at Pelindaba for increased production of medical radio-isotopes, instead of a second cyclotron, was not cost-optimal, but could only be explained as part of a stratagem to rebuild a large atomic establishment. Similarly, global practice is to use lead containers for shipping industrial radio-isotopes. The Valindaba choice of depleted uranium for radio-isotope containers can only be explained by the intention to build capacity for producing both depleted and enriched uranium.

Intra-Institutional Conflict Of Interests

Nuclear safety in South Africa is intrinsically flawed. It is entrusted to the National Nuclear Regulator (NNR), which is answerable to the DME — not the Departments of Health or Environmental Affairs. This is a clear conflict of interest. The conflict was aggravated when the minister appointed a former senior employee of the PBMR as the chief executive of the NNR. Similarly, the NNR makes provision for one NNR representative to represent civil society. At the start of democracy, the civil society representative was in fact an ex-Eskom employee who had worked at Koeberg (Fig, 2005: 60). When all civil society organizations active in nuclear-related issues nominated a delegate, the cabinet rejected this and instead appointed someone in 2012, from the ANC-allied SA National Civics Organization (SANCO).

In 2021, the Minister of Mineral Resources and Energy (now the Minister of the new Electricity and Energy department) appointed Peter Becker from Koeberg Alert, to the NNR, as representative of civil society organisations. He dismissed Becker around his first meeting at the NNR, explicitly on the grounds that Becker expressed opposition to nuclear power. The High Court ruled in 2022 that the Minister had acted illegally (Becker vs. Minister of Mineral Resources and Energy, 2022).

When secrecy legislation is applied to nuclear safety, public concern is more than merited. The NNR refused to release its emergency plans when asked by NGOs. It even rejected two Promotion of Access to Information (PAIA) applications for their release. When the plans finally came to light after an appeal in 2011, the reasons for the NNR defensiveness became apparent: the emergency plans were both inadequate and out of date. Subsequently, the NNR has adopted the procedure of refusing *all* information as a matter of principle, so compelling the public to submit laborious, time-wasting and sometimes expensive PAIA applications for any data on anything (Becker, 2013).

The environmental legacy of uranium mining is another concern evaded by the NNR. This has been investigated by the Water Research Commission, focusing on Gauteng Province, and written up in the Coetzee Report. The NNR suppressed the 2006 Coetzee Report, because this Water Research Commission team proved that the level of radioactive contamination throughout the Wonderfonteinspruit catchment area (it flows through the richest gold mining region in the world) posed a significant threat to the health of all who lived there or consumed its produce: there are 2 200 tons of uranium in its sediments. It took two years of 'relentless pressure' from environmentalist Mariette Liefferink to get this report published. All told, the highveld mine dumps contain 600 tons of uranium dust blowing in the air when dry, and leaching into streams and groundwater when wet (*Noseweek,* 162: 11-12).

The NNR has a severely inadequate budget and human resources for its current tasks, such as tracking all radio-isotopes used industrially, and remediation of radioactive mine dumps. Its then head, advocate Boyce Mkhize, described it as 'mickey mouse' and then resigned. Since the NNR is so under-resourced for even current needs, it lacks the capacity and capability to ensure safety for the proposed three extra atomic power stations containing six nuclear reactors, plus the concomitant re-building of an end-to-end atomic industry.

The safety functions of the NNR are compromised by its very statutory and institutional structures. The International Atomic Energy Agency's visiting team recommendations of 2013 were that the NNR must be transferred to fall under the Environmental Department, not the Mineral Resources and Energy Department, because the mandate of the latter is to promote nuclear electricity. In 2022, the IAEA expressed concern that their decade-old recommendations had been ignored. More alarmingly, the explicit cabinet performance agreements for the Minister of Mineral Resources and Energy are that he must procure an extra nuclear power station, and secure the twenty-year life extension of Koeberg before 2024 - and he will be judged to have failed in his job if he does not. This is the minister whose duties include hiring and firing all members of the board of the National Nuclear Regulator (Becker, 2013). The NNR chair (i.e., the minister) expressed concern about the anti-nuclear perspective of civil society representative

Peter Becker. That he could be outvoted eleven to one on the board was not sufficient for the chair. This indicates a chillingly authoritarian mindset, reminiscent of the apartheid regime. It is also unconstitutional, because Article 24 of the Bill of Rights requires that a safe environment be maintained for future generations.

This compromising of nuclear safety entities is an international problem. The Japanese Diet investigation into the Fukushima disaster, recommendation 5, was that the regulatory entity had become captured by the industry, and this needed to be remedied. South Africa has signed the 1996 International Convention on Nuclear Safety, and so is legally obliged to comply with its requirements.

Conclusion

The nuclear bomb project, which was a commitment of financial and engineering resources against the wishes of then General Constand Viljoen, shows how the prestige of nuclear bombs mesmerised politicians, even when it detracted from contemporary military priorities.

The nuclear power project all too often appeals to politicians regardless of the fact that the nuclear electricity's overall costing in South Africa is higher than alternative sources of power. It is a textbook case of an industrial lobby capturing the state, both bureaucrats and politicians. Opponents of nuclear electricity had to resort to NGOs and civil society outside the state, and resort to the law, for their cause to survive.

Endnotes

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[1] The author's is indebted to Professor Anna-Mart van Wyk for this reference.

[2] Pik Botha, Penuel Maduna, Phumzile Mlambo-Ngcuka, Lindiwe Hendricks, Buyelwa Sonjica, Dipuo Peters, Ben Martins, Tina Joemat-Petterson, Mmamolobo Kubayi, David Mahlobo, Gwede Mantashe.

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Excerpts from a Conversation with Renfrew Christie and Rodney Wilkinson, during the Conference on 'Anti-Nuclear Activism in Africa: A Historical Perspective', held at the Johannesburg Institute for Advanced Study, 3 April 2023.

Key:

JvW: Jo-Ansie van Wyk (Session Chair).
RC: Renfrew Christie (Responder).
RW: Rodney Wilkinson (Responder).

JvW: **The focus of the conference is on anti-nuclear activism as part of the anti-apartheid struggle. We are curious to know of the international links during this period and the engagement with the government of the day. We are also curious to know the kind of actions that have been taken in the anti-apartheid struggle and engaging nuclear energy as part of that struggle.**

Professor Christie, you have been very active in the anti-apartheid struggle since your student days. Can we start with how you became aware of the link between nuclear energy and the anti-apartheid movement?

RC: I come from a family of World War 2 heroes, and I learnt from them very early that what one does with Nazis is kill them. I am not a pacifist and from a very early age I knew what one did with Nazis: one went to war. When Nelson Mandela gave his, "I am prepared to die for this" speech at the end of the Rivonia trial, I was fully sympathetic. My grandmother and my mother and her

sisters were on the 9 August 1956 Women's March in Pretoria, when [the apartheid regime] extended 'the pass' to woman. So that tells you where I was coming from. My father died in Helen Joseph's arms, the great determined women's leader of the struggle. So, I understood without problem what had to be done.

I was conscripted as a child soldier into the South African Army. This was before it was possible to boycott under the 'End Conscription Campaign', which came 20 years later. I went to the army, and I guarded SASOL, the oil from coal programme, and I later proved in my doctoral thesis in Oxford, that SASOL as early as 1952, was producing heavy water. In my mind, SASOL was a target and indeed, eventually SASOL was blown up on the day of my trial. There were great plumes of smoke, 150 000 feet into the air. My lawyer came into my cell and said, showing me a colour photograph of the *Rand Daily Mail*, of SASOL burning. He said, "you are going to get at least 30 years."

I was conscious as a child already. I was anti-racist as a child. I remember as a 5-year-old, having an argument with the street gang — the little boys, there weren't any girls in this — and they were assuring me that the way to call a Black man in the street if you wanted him to do something, was to call him John. To them all Black men were John. I was saying, "this was nonsense, all Black men have names, they've even got surnames." Unusually for the time, my family made sure I knew the surnames of our servants.

I went into the army, and I guarded SASOL and Lenz, which is the big ammunition factory and the big ammunition dump south of Johannesburg. One day, they were changing the guards, and the guard truck takes a wrong turn, and we go through a bit of Lenz, and I see something that tells me immediately that the apartheid regime was playing with nuclear weapons. So, from the age of 17, I was hunting the South African bomb. I didn't tell anybody. I then go to Wits, [and] I meet Rodney and his brother Justin, who are heroes [in] several ways. They are both champion fencers … sword fighting fencers, and I think that is what enabled Rodney to be the guy that actually goes and blows up Koeberg, because he has that eye for the jugular … he struck. I am not that sort of a person; I am not a striker; I just did the research. Whether any of the research helped Rodney in the end, I have no idea, [be]cause a spy does not know what gets through. Anyway, I met Rodney, and at that point he was part of the 'hairy left'; this was now 1968 through '72 sort of period. Rodney was hairy in all directions. He had hair on his head, and hair on his chin … and he didn't actually wear shoes much. The sort of snooty upper-class liberals of the student representative council system there, dismissed him as perfectly useless. It turned out that they were the ones who were perfectly useless, and he was the one that is a true hero of South Africa.

Of all the achievements of the armed struggle, the bombing of Koeberg is there. Rodney bombed Koeberg in 1982; two and a half years after I was in prison. Frankly, when I got to hear of it, it made me being in prison much, much easier to tolerate. And it was eventually costed — the auditors forced the publication of the cost — at R519 million, in 1982. [The] Dollar to the Rand was equal then. So, we are talking about half a billion Dollars. The SASOL bombings — I made a list of it; it was about 6 times. Not only on the day of my trial, but later through the 1980s, SASOL was regularly bombed. Arnot, the coal-fired power station that I had worked on for my thesis, was bombed, and Camden [power station] was bombed, and a bunch of coal fired power stations were bombed. If you add it all up, everything that's in my thesis and in my confession — my tortured confession … SASOL, Koeberg and the coal fired power stations; the cost comes to a billion Dollars in 1982. I have no idea if I actually was responsible for that billion Dollars, but I was spying for the ANC research unit

under Frene Ginwala. Some of my stuff got through, some of it didn't. Some of it was in my confession, which recommended something about bombing Koeberg just before they put the uranium in it. If it in fact had nuclear fuel in it, bombing it would endanger the people in Cape Town. I think that's the strategy that Rodney used. He did it just before. I think his achievement is spectacular.

Let me end with two little stories. The one is the headlines. I have the *Ottawa Citizen* of 4 June 1980, and it goes: "White scientist may face death penalty". This is in the middle of my trial; I am being tried for terrorism, and the possible sentence for terrorism is death. So, the world press played this out. So "White scientist may face death penalty," the people of Ottawa were assured. Two days later, "White scientist spared from gallows." I am not sure which newspaper that's from, but that was another overseas newspaper. So, I was saved from the gallows. Not that I ever thought I was going to be hanged, but the press did.

Then the other nice story, is [that] my confession gets to the lawyers at the point where I am going on trial, and one of the lawyers it got to was Priscilla Jana, another ANC legal hero, who ended up being an MP in parliament, and the confession is being slowly faxed on those old fax machines, to London, to another set of lawyers who would pass it on to the ANC. And this fax is working very slowly, [and while] one by one by one by one, the pages are going through, the Special Branch Police [conduct a] raid. They come stomping into the lawyer's offices — big boots and all; it sounded like one of those bad Soviet Union, or Nazi, or Western stories, about a jackboot operation. A young black lawyer takes the confession out of the fax machine and puts it into his shirt and then goes out onto the metal fire escape through a window, and hangs upside down on the fire escape, so that the Special Branch can't see him. When the police go away, having not found the thing they were after, he starts re-faxing, and it gets faxed to London. The wonderful point of this story is that that young black lawyer is Penuell Maduna, who later is Nelson Mandela's Minister of Justice. So, there are some lovely stories there, great ironies.

As a student I shared a house with the great priest Cosmas Desmond, who wrote the books on the dumping grounds, the removal of Black people from Black spots under apartheid. He was house arrested and at that stage Winnie Mandela was house arrested. She was allowed out during the day and so was Joyce Sikhakhane, who was an ANC intelligence operative. We are talking about 1971 here. Winnie needed somewhere to go during the day, and so did Joyce, but they couldn't be in a room together with Cos Desmond, because he was banned and house arrested, and they were banned, and house arrested. So, officially, they were visiting the students who lived in the house with Cos. So officially, I was receiving Winnie Mandela as a guest; this happened often throughout 1971. She took the opportunity to teach me politics, and she also on occasion would cook me lunch. So, at the age of 21 or 22, I was being taught politics by Joyce Sikhakhane and Winnie Mandela, and Winnie was cooking my lunch, which was rather nice. Joyce Sikhakhane later mentions this in her own bio for the SADET [South African Democracy Education Trust] history publication series, about how there were various White students that she saw herself … I am going to use the word developing instead of recruiting, because at that stage I wasn't made a member or anything of the ANC. There was another set of political inputs, both from this fantastic priest, Cos Desmond, another unsung hero of the country, who drove thousands of kilometres to every Black spot the people were being removed from.

I also need to say that I was not anti-nuclear. I don't believe the ANC was anti-nuclear; it was anti-nuclear weapons. I did what I did as part of a war, as part of an armed struggle. The bombing of Koeberg

was an armed struggle thing, rather than a debate about nuclear energy. Now obviously nuclear energy has dual use. The other thing about nuclear power stations is that they are wonderful targets. If you look at the integrated operations plan of the West, or if you look at any nuclear targeting at the time, nuclear power stations were targeted for nuclear explosions, because they expand; they are a force multiplier. They expand the power fantastically of any nuclear explosion. The fact that Rodney could get his bombs inside Koeberg, proved just how vulnerable nuclear power stations are in time of war. We are seeing that very much now in Ukraine, and the Zaporizhzhia nuclear power station, which could go 'bang' tomorrow with a missile going the wrong way.

JvW: Rodney, what were your early socialization in terms of anti-apartheid and then of course in deciding to plant the bombs at Koeberg?

RW: I went to St. Martin's School, previously St. Peter's. Trevor Huddleston was a founding member of St. Peter's. Oliver Tambo went to that school, so it was quite left, but liberal, rather than socialist. I first met Renfrew at Lenz, in the army, when we were seventeen. But I didn't have the opportunity of a wrong turn in a truck [like him]; I wouldn't even have known what I was looking at, but he did. I was just a guard in those towers around that ammunition dump; that was in 1967. Then we went to Wits in 1968, where I met Renfrew again, and I was quite a pacifist; that hairy face, you know, hair all over the place … bell bottoms and flower power and all those nice things. And anti-Vietnam.

Everything changed quite abruptly in 1976, when I got a call up to go into Angola. The sergeant phoned my father, and told my father that he was an old friend of mine, and did my father know where I was? My father gave him my telephone number. So, he phoned me and said that if I did not pitch up the following Thursday at the station, I would be imprisoned. I went home to my dad and said what must I do? He, being a Second World War artillery man, had been convinced that the Soviets were not really our allies. I mean they were scared, the Westerners of the Soviets. He said to me, "go to the army young man." So, I went. I had four choices: skip the country, go into hiding, go to jail, or go to the army. I went to the army … where I was going for the jugular. I went with the spirit of trying to damage it from within, which is what happened when I went to Koeberg too. The trouble was that the jugular landed up being twelve of us deserting in a Unimog and I landed up under the Unimog, taking nearly my own jugular. I wasn't charged for that because the Unimog had been an operational vehicle inside Angola and there were no numbers on it. They didn't want to charge me or take me to the corporal or anything because it would expose the fact that we were in occupation. That experience too, determined in me that I was longer a pacifist but a soldier, and I had been military trained.

Afterwards, I was a fencing coach, and moved into a commune in Paarl, which is quite close to where Koeberg was. One of my fencing pupils could see that I wasn't making a lot of money out of fencing and [said] that I should take a job as a draughtsman in Koeberg. He knew an engineer. I consulted with the commune, and we decided that I would go in … going for the jugular, as Renfrew put it. I went in and landed up 18 months later with the set of plans that I stole and which I wanted to take as a gift to the ANC, so that they can do something about Koeberg. I was against nuclear, a, and b, against the obvious fact that there were … well I didn't know as well as Renfrew did … the suspicion was that they were using shells with old nuclear waste, in Angola. I stole the plans and eventually my wife and I got to newly independent Zimbabwe, and found comrades who didn't tell me they were comrades, but they introduced me to Jeremy Brickhill, who was the only white man in ZAPU. We landed up throwing the

Koeberg plans through his toilet window in the middle of the night, because he wasn't answering his door. He got the plans to Mac Maharaj, who had them checked out in East and West — Soviet Union, America and Europe, and found they couldn't be faulted. They were suspicious of me, coming out of the army and suddenly bringing them such a thing. They thought I was a spy. Anyway, Mac eventually asked me if I would do the job, which really surprised me, but, as he said subsequently, I had the best chance of getting back in there. Mac introduced me to Aboobaker Ismail, who was running special operations. We had six meetings. During the first one he said to me, "go straight back to Cape Town and get a job." On the 19th of July, I think, 1982, the only job I could find was at Koeberg, as a piping draughtsman.

The bit about Renfrew's input: I was guided by Rashid [Aboobaker Ismail], and he obviously had been guided by Renfrew, because all the suggestions came from [Renfrew's] confession, like bombing just before it went online … And the date that was closest to that was 16 December 1982, a public holiday. That was the target day, but it fell on a Thursday rather than the weekend. I couldn't use a weekday, because there were people everywhere and so it had to be on the weekend when there was nobody there, to avoid killing anybody. So, that bit of advice from Renfrew, came through, and the targeting as well, I am sure. Because there were obviously political targets with the reactors, but the real damage was caused by the two bombs which were under the control room, in the electrical cables, because it spread the fire to both ends of the cable, and the control room controlled all the cables. It must have been a big mess.

I fled before the bombs went off and climbed the fence into Swaziland … and eventually fled to Maputo, where I met Joe Slovo and Oliver Tambo. They flew my wife in … When Joe [Slovo] came to pick me up, he was in a brand-new white BMW, and I said, "I thought we were communists, how come you drive a car like this in Maputo?" He laughed and he said, "two weeks ago it was stolen in Johannesburg." Then I ran via Maputo to London and there started another project.

When I got to London, I got introduced to Aziz Pahad, and he had been told to give me 1,500 Pounds and [tell me to] disappear. I said to him, "I'd rather that you give me 150 Pounds a month and I'll work full-time for the ANC," and he agreed. Mac didn't think that was very clever because he thought, and he was correct, that if I were to continue to work for the ANC, the secret of Koeberg would spill out, and it did. Anyway, with Aziz I had envisaged a convoy of Land Rovers carrying tourists, safari style, but the problem with that, was that every Land Rover would need a team of drivers and people on the in. Where-as, if we had a huge truck, it would be only one team that could get caught. I identified a military, 8-ton 4-wheel drive Bedford truck, brand new out of the box, with steel packed on it, so that metal detectors wouldn't detect anything wrong. I put it all together. It took me a year to build a compartment, the seats, the lockers and the extra petrol tanks and spare wheel - changing the whole lot. [We] shipped it to Mombasa, and trained a team [consisting] of a driver and another guy who was going to be a passenger and watch the other passengers and driver team, so that everything goes smooth. They made a documentary on it called The Secret Safari. When that thing was shipped out, I never saw it again. Except that I flew to Lusaka to show them how to load it. We are off the subject; this is anti-nuclear …

RC: We not off the subject at all; we're not anti-nuclear, we were in an anti-apartheid war. Anti-nuclear means that you don't believe that the atom can split.

JvW: Rodney, thank you also for that. The Bedford 'secret safari' experience gives us insight into the adaptability of activists. Even though you were out of the country, you were able to reposition yourself and your organisation. You got

a new plan and still continued with the anti-apartheid struggle.

I want us to move on a bit to the activities that you had undertaken. Rodney, can I start with you. Once again, you had early exposure, a network of individuals that you knew, technical people. Prof Christie would know a little bit more about the science of how it operated. You had a group of friends. The army was an experience that added, so to speak, to the socialization that you eventually put into action. But how were you able to get the bombing material, because that was quite a decision to take? And then of course living with the legacy, the moniker of 'the Koeberg bomber'. I am just looking at the similarities between you and Prof Christie. The experience very early, the awareness of injustices, the exposure to individuals that thought different of the time. You also had an army experience that you experienced different and formed your views also with regards to anti-apartheid. And then, of course, working at Koeberg. So, sharing those similarities, but you are still referred to singularly as the Koeberg bomber. Are you comfortable with that reference, or how would you see your role?

RW: I'll start off with socialization. In primary school, we had a Zulu nanny, and she became a very close friend over the 13 years she worked for us. So that convinced me that the White attitude was pretty stupid. And also walking to and from school, we witnessed pass law enforcement, where the policeman would drive around the corner and Black men would run and jump over fences and walls and get attacked and locked up, because they did not have passes. They were not allowed in the area, but they were working for us. So that was an early motivation.

The army: when I was 17, I had a romantic notion of what the army would be because my father too was in Italy in the war, and it was quite a romantic idea to be a soldier. So, I tried quite hard. I did two army stays; the first was in '67 and second was in '76. Nine years apart. For the first time I was in, I was quite an enthusiastic soldier in the beginning. By the end of it, I went to Wits, and it was anti-Vietnam protesting and that phase. Then, of course, back to the army. By that stage I had a pregnant wife. So, I was not in the mood for being a soldier at all. But the military training was significant because when I was asked to participate in Koeberg, I asked to be military trained. And they said, "You've been trained, better than what the Soviet Union can do." So, they didn't train me again; they just taught me how to use the limpet mines.

The legacy: it's a big mistake to have it ever come out. Mac [Maharaj], wanted, when I got to England, that I should disappear. He didn't agree with Aziz's agreement with me, to let me carry on in the ANC, because he said the story would leak out eventually, because of that. And that's what happened.

In 1994, I was living in Cape Town in Observatory, and bumped into Muff Anderson and Riaan Malan. We had a common friend … my sister's boyfriend, Adrian, who had helped me jump the fence into Swaziland. Muff, ran the smuggling end of the operation, and had discovered, from Joe Slovo, that I had been Koeberg bomber. She had thought, again, that I was a spy. Riaan [Malan] picked up from her that night in the pub that I had done a big job, and he identified 1982 as the year of the job. He put two and two together and went to Adrian, and said "Muff tells me, Rod hit Koeberg." So, Adrian said, "she shouldn't have told you that!" Cover blown. So, Riaan knew. He went to another journalist, and she phoned me, and she said we know this story, and if you don't talk to us, we going to write what we know. [At that time] I was in the maximum intelligence, and we weren't allowed to talk to the press. I got permission from the Director General to talk to David Beresford. I trusted him and gave him my whole story, and he wrote the first article about it, and that spilled the beans. That is where the legacy came from. It wasn't

supposed to ever come out. Anyway, I've had a lot of fun with my legacy.

JvW: **We also know that the Truth and Reconciliation Commission, has exonerated you and given you amnesty for the events that occurred at Koeberg.**

Professor Christie, you were also very much involved with the ANC in London; you had contacts with Frene Ginwala, who later became Speaker of Parliament. During this period, what did you experience in the ANC as an anti-nuclear energy sentiment? We know that it was an anti-apartheid struggle, but what were your experiences in terms of the thinking of nuclear energy and of course nuclear bombs, etc?

RC: Let me be clear that I had very little contact with the ANC during my four years as a doctoral student in Oxford. I was suspicious of the London ANC as being full of spies, which later turned out to be true. But I did develop a relationship with Frene Ginwala. I think we first met in the University of London Seminar on South Africa, but I was not close to the ANC in London, at all. I don't think I ever went there, because I was suspicious of it.

I am not deeply familiar with the relationship, say with the CND [Campaign for Nuclear Disarmament] or with anti-nuclear energy struggles. You had to approach the CND with great suspicion, because they, as an organization, was very open to penetration by every spook outfit in the world. You never knew who you were talking to at CND either. And obviously the British anti-Soviet spy mechanisms were everywhere, as they should be in a Cold War. So, I kept out of that, so I can't really comment. You'll get this much better from Abdul Minty than what you would get from me.

I do want to ask a question though, in that context, of the effect of the Soviet Union on the policy to bomb Koeberg. I don't believe that uMkhonto weSizwe — the Spear of the Nation, the ANC army — or the ANC itself decided to bomb a nuclear power station without Soviet permission. That just doesn't ring a bell at all. You're in the middle of a struggle where your main backer, your main financier, is the Soviet Union, and you don't do something as big as bomb a nuclear power station without Soviet permission. The point I am going to is that on 9 June 1981 — 18 months before Rodney went in and bombed Koeberg — the Israelis bombed a Soviet built nuclear reactor in Iraq. Sadam Husain's nuclear reactor, Osirak. That was a staggering thing world-wide, because nuclear reactors in general are off-limits and off-target, and the Israelis did this for their own reasons. I am quite sure they got American permission. But did the Soviet Union say yes to the bombing of Koeberg as a reprisal for the bombing of Osirak? Was that bombing in the minds of the 'Cold Warriors'? The Cold War was a hot war, of course, quite often. There were proxy wars all over the place, and the anti-apartheid war was a proxy war. But did the decision to bomb Koeberg on the part of the ANC, get permission from the Soviet Union? I am prepared to bet it did.

You also got to be careful there. The Soviet Union was extremely careful not to let unnecessary eyes into their real nuclear policies, and I have asked several of the people who subsequently wrote about what the Soviet Union was doing in South Africa from the Soviet archives' point of view. And they eventually say, no, we know nothing of the nuclear question, because it was kept absolutely secret inside the USSR. But the question is, was the bombing of Koeberg a reprisal for the bombing of Osirak? I don't have an answer. But my guess is, yes.

RW: I agree with you. The Soviets definitely did approve it, because of the length of time it took the ANC to come back to me when they already passed the plans through the Soviets and the East Germans and that's where they were armed from. The limpet mines came from East Germany.

Mike Kantey (MK):

> **This thing that you are raising, Renfrew, will be of critical importance for this country, where we have been talking about the interface considering nuclear energy for electricity, and the application of nuclear weapons on the other. You can always argue in anti-nuclear circles in South Africa, that the weapons program and the civilian energy program are like Siamese twins; they are joined at the hip. So, when you look at the military strategic value of the attack on Koeberg, I would say, you also have to consider the context of an overall sabotage program. Incidentally, on the role of social influence: my father employed Denis Goldberg … and gave evidence of mitigation at the trail. And Denis, as you already know, were training people in sabotage. So, for me, given the fact that the coal-fired stations were fair game in South Africa, SASOL was a fair game. Looking at infrastructure, I don't think the nuclear aspect — other than the fact that the nuclear fuel had not been loaded, which was for me a respected consideration — was as easy as a one-to-one correspondence with Osirak. I think that you have to see the larger context of a military strategic assault on infrastructure projects in South Africa; total war, total strategy. So, for me, maybe a consideration but I would not say it's a sole consideration.**

RC: If that's a question, I would agree. The reason for the power stations being a target is, [that] to enrich uranium, you need vast quantities of electricity. They built so many power stations; so many that when they stopped enriching uranium, they supposably had too much electricity. But the reason they did that, is in my doctoral thesis. I go into Eskom, and I do a thesis on the electrification of South Africa, starting way back in 1895 or 1905, and I track it all the way through. But the purpose by the 1950's, and the reason for the huge World Bank loan programs, IMF loan programs to South Africa in the early 1950s, is to build power stations to produce uranium from the gold mines. Especially for Britain, because at that point Britain was trying to build its own atom bomb and then hydrogen bomb, and they are desperate for uranium. Smuts is in on the Manhattan project from as early as 1941, and there is a guy called Bain, who was sent from America in 1941, to start looking for uranium [in South Africa] and he finds uranium in the gold ore of the South African mines. And then there's the famous supposed discovery in a literature search in 1943, where they turn up a geologist's report of 1923, saying there is uranium in those gold mines. And that leads to Ernest Oppenheimer and Smuts being able to open up the West Rand mines and the Orange Free State mines, which was not economic without uranium, or were not likely to be. This is all in the wonderful biography of Ernest Oppenheimer, which shows Smuts effectively handing over to the National Party, a fully worked out plan for South Africa to produce uranium. Of course, Smuts hands over to the National Party when they get power in 1948, the SASOL secrets from the Germans of the Second World War, on how to make oil from coal, and the Nats (National Party) grab it with both hands. Within four years of the Nats getting it, they are producing heavy water. So, where I am going is that uranium is then central to the future of the gold mines, because it massively improves the profitability of the gold mines and hence the South African economy. And Eskom is heavily backed by the West with huge loans that funded Eskom for the next 40 years. So, the West is deeply invested in having a forced labour system, which is the pass laws, and the compounds, because they produce the cheapest workers to mine the gold and uranium.

The West's rules then are, keep the Soviets out … get the gold out, get the uranium out, whatever you do, don't let the people vote. They are desperately opposed to democracy in this country for 40 years. The West is opposed to democracy — I say this

loudly — for 40 years, because they want gold, uranium, diamonds and coal via the power stations, from a forced labour system, which is the pass laws and the compounds. So, it's all linked, Mike, I agree, and in that sense, apartheid is caused by uranium and gold, and it is most certainly a nuclear state, long before it actually starts building nuclear weapons. It eventually sells something like 100 000 tons of pure uranium to the West. My honours and master's theses were on the Kunene River Hydroelectric Schemes, and of course you had Rössing uranium, which I guess took the electricity from the Kunene Schemes. I sent my master's thesis on the Kunene River Schemes to SWAPO, and in due course the Kunene River Schemes were also bombed. I don't know if they did it because of my master's thesis, but it's the same thing. So, you can add the bombing of the Kunene River Schemes at Calueque.

And while I'm there, it is worth saying that they cleared the Buccaneer bomber, and I have this, from a very good thesis at the Monterey Naval College in America in about 1983, and from much later, an Airforce officer. He was in the position to know at the time, and he said that the Buccaneer bomber was cleared for delivery of nuclear weapons. When they were doing all that bombing of the bridge at Cuito Cuanavale, in the battle of Cuito, they were repeatedly targeting the bridge. My theory is they were practicing for dropping a nuke in Angola, on the Cubans at Cuito. How close we came to that we'll never know. We never going to know much of the story, because it's all hidden in the secret archives of the secret services. But that Buccaneer bomber was certainly cleared. And then you go to the G6-G5, very long distance 6-inch artillery shells. I am prepared to bet that there was a plot to put a nuclear weapon inside those artillery shells.

But I am agreeing with Mike, it's a nuclear, uranium state from the beginning of apartheid. Apartheid is exactly coterminous with the Cold War, '48 to 1990. By 1990, they no longer need apartheid in the West, and they are prepared to give people the vote, because they've won the Cold War. But until then, the West is solidly opposed to democracy in South Africa.

MK: **If I can just add a rider on that excellent summary that Renfrew gave us … when I was commissioned to do research on the uranium industry by Greenpeace in Amsterdam, I discovered that on the board of Rio Tinto Zinc, were the Queen's secretary and Lord Carrington (who was involved in the negotiations on Zimbabwe). So obviously the British government, under Thatcher in particular, were hardened supporters of, as you put it, a nuclear state. And I think the apartheid nuclear state by virtue of our illegal possession of Namibia and most certainly inclusive of about 250 kilometres of Southern Angola and the DNZ, is one thing. And I think that the deterrence theory, which is basically the theory that Neil Barnard, head of military intelligence, introduced into the State Security Council, is very much embedded in an ability to deliver. And I think the other thing … is the testing of the Jericho 2 missile in Arniston. So, we had these industrial installations all over South Africa, which are propping up what can only be described as the total strategy approach.**

JvW: **And that links to an earlier comment on the importance of infrastructure, because that was part of the apartheid state's way of expanding its power by letting the economy grow. So, it was also a way of projecting power by getting this, let's call it a form of economic empowerment. And all of those infrastructure and the maintenance, etc. required electricity. Also, very early on in the 1920s, and even after the war, Jan Smuts had a meeting with Neils Bohr, for example. Smuts also had contact with nuclear physicist Van der Byl, So, there was very early on a great awareness of the importance of uranium and energy for force projection.**

I want to return to some of the main focus areas of the conference. What were your links with other governments? Rodney referred to the role of the Soviet Union, Swaziland, Mozambique, and newly independent Zimbabwe? On your side Prof Christie, what were your engagements with other government officials, etc?

RC: Well while I was doing my doctoral thesis in Oxford, I was in what was known as the Cold War College … which has an East European and a Russian study centre, and a Latin American study centre, and so on. It meant that I met people from the entire world doing modern studies. And quite plainly among them, there were people who went on to very top jobs. So, I met a whole lot of people who subsequently became really important. St Antony's staff, the foreign officers and the military of the Western world. I didn't have any formal connections to the British government or to any governments at that stage. Those only came much later.

JvW: Rodney, your arrival in Swaziland, was that through the ANC channels? How did that go?

RW: The Swazi government had been quite rough on ANC people, but there were a lot of civil servants who were sympathetic. When I got to Mbabane, the fall-back plan; they said they would meet me at the Wimpy bar, and that never happened. Every hour on the hour, I would go back, because there wasn't another fall-back plan, but eventually I tried to phone Rashid (Aboobakar Ismail) in Maputo, from Mbabane. And there were long queues at the payphone. And so, I would get in the queue, being the only White man. Get to the phone, dial the number and it sounded like a South African engaged signal. I would put the phone down and go back to the back of the queue again, and by about the 4th time I pretended to the queue that I had actually gotten through. So, I listened to this engaged tone and started to pretend to talk and then suddenly the phone got answered. The engaged tone was actually a ring tone. So, then I couldn't speak on the phone because I knew the phones were being listened to. I couldn't say that I had jumped the border, and I couldn't say that I couldn't get out, because I haven't got any stamps in my passport. And what must I do now. Eventually, I blurted that all out and Rashid said, get on the next flight at 5 o'clock to Maputo, and the customs man didn't even look at my passport. He had been warned that I was coming.

JvW: Rodney, earlier you mentioned that you are anti-nuclear. I'd like to hear your views on that.

RW: So, basically about the waste. There's no solution to waste storage and how you going to mothball Koeberg for example. It's a never-ending question. You can't price it; you can't put a price on it. Uranium having a 250 000-year half-life. How much is it going to cost by then?

JvW: What goes along with that is that nuclear waste is still usable, it's not something that you simply just discard. So, another aspect to anti-nuclear activism, is the potential for re-use of waste …

RW: Just saying they got something called a breeder reactor, if I am right, Renfrew.

RC: Yes.

RW: … where they re-use the waste and enrich it even more.

RC: It's worth saying that the United Kingdom did a test in the United States about 1956, I forget the code name, but where they actually used waste from a nuclear reactor and they proved that they could blow up a nuclear explosion, using nuclear waste. I'm blank on the code name of the actual explosion, but that has been done. And the point about the depleted uranium is also, as I think Rodney mentioned, it's put into shells, into artillery shells and because it's so heavy it goes through a tank much better than what steel would. But the waste of the nuclear power station can be used in at least two military ways.

Peter Becker (PB):

On the subject of depleted uranium – technically, it is from the preparation of the fuel, not from the nuclear waste. Depleted uranium is the by-product of fuel fabrication.

RC: That is a useful correction, thank you

Anna-Mart van Wyk (AvW):

One of the things that people are very concerned about, is the potential of a dirty bomb, where you take the nuclear waste from medical isotopes, or nuclear power stations, and combine that with conventional explosives, thereby creating a dirty bomb. It doesn't have the explosive power that an atomic bomb would have, but it does have the radiation, which is very harmful. The depleted uranium bombs were quite a big thing in the Iraq war, where America used some depleted uranium in shells. A lot of American soldiers also got exposed to that and developed serious health issues, as did many Iraqis. So, Renfrew you are quite right with regards to the concerns about the depleted uranium.

There was a comment earlier on about the Buccaneer, which was earmarked to carry the South African atomic devices. The Cheetah was also built to be able to carry the missile with a smaller nuclear warhead. South Africa, by the end of the end of the 1980s, came very close. They had the rockets; all the missiles that had been tested along the Southern Cape coast, but also the smaller warheads. By the end of 1980, South Africa was very far advanced actually with the smaller nuclear warhead for missiles. And then, Renfrew, you also mentioned the G5 and the G6. The G6 in particular was able to shoot a tactical nuclear shell.

RC: To add on to that – there's a glide bomb series called the Raptor, I think there's a codename, Holo or Hobo. And that enabled the Cheetah or the Buccaneer to deliver from further away and so be less endangered if the thing went off. And that could glide much further than an artillery shell. Right, at the point where the decisions are made to get rid of the bombs, literally a week or two before, these things are about to go. There is a Raptor 2, I think you know this?

AvW: Yes, that's correct.

(Unknown)

I think the distinction ought to be made between strategic missiles and tactical missiles. Because the strategic missiles are like the intercontinental ballistic missile that can travel over vast distance launched from a submarine or from a silo, where-as the tactical is a battlefield missile, of which the depleted uranium artillery ordinance would be an example. So, what we have, as we said in the beginning, is this inter-relationship between the civilian nuclear energy program and the military application.

RC: It is worth saying that there is a doctrine that says there is no such thing as a tactical nuclear explosion, and the doctrine says just one nuclear explosion can lead to the entire world firing their missiles. So, this idea that you can get away with a small nuclear that is 1 to 2 kiloton explosion and not cause a world nuclear war, is mocked in the literature. Because the moment you let off one small nuclear, everybody else is going to start pushing buttons. This is the theory. So, they may be called tactical but in the international political framework, there is no such thing as a tactical nuclear explosion. We may see a real test of this if either side in this Ukrainian insanity actually lets off a small nuclear weapon. Does that go up the chain and everybody pushes the button?

JvW: I would like to hear your views on South Africa's disarmament decision. Did De Klerk disarm out of conviction or was he under pressure to do so?

RW: I think Renfrew is the better one to answer, but yes, things definitely didn't come from the democratic government. I am quite amazed that they continued to allow Koeberg to carry on.

JvW: Ok so you have no doubt in your mind that there were, well one can easily say racist undertones in that decision to disarm, and of course not to be able to carry that over to a government, that at that stage was not trusted. Renfrew, your views on the disarmament decision?

RC: I have lost it but somewhere in the literature is a reference of a CIA future study that suggests because of Nelson Mandela's time in Libya, that if the ANC gets hold of the bomb, it may well pass it on to the then ruler, who was Gaddafi. So, there was a Western imprimatur; it's the first requirement of the settlement; there's no settlement without it, that the bombs must disappear. There is no way that the West basing themselves on the likelihood of the ANC passing it on to someone else. There is no way that the West would allow any sort of settlement in South Africa without the bombs disappearing … Piece of writing that is the very first requirement of the settlement. If there is a settlement that gives the ANC the bombs, the fear of them being passed on to other users was very, very great in the minds of West. Now, I think that one must read who the ANC were; that it's a valid motivation, I can see where they are coming from. So, I am quite sure that De Klerk and probably PW Botha, before that, they were both told, you do not go to "one person, one vote" in South Africa, before you got rid of the nuclear weapons. And that was an absolute instruction from their Western puppeteers. On their part, they absolutely did not want Black people to have nuclear weapons.

You must remember, one of the things that I was found guilty of – no I was found "not guilty" on appeal – was a document where they did a study of the earthquake, the seismic effects of small … well of different sizes of nuclear weapons, and they did it by race group in South Africa. It was a study of South Africa, where is it safe to let off different sizes of nuclear weapons. So, it is ethnic cleansing being studied under the guise of "where can we let off peaceful nuclear weapons." I was eventually found 'not guilty', because it was shown that there was a copy on 'open access' in the Library of Congress in Washington. But the point I am making is that, it is possible that with very small nukes to take out particular bits of South Africa without doing too much damage to other bits. Metaphorically, you can bomb Soweto without taking out Houghton. So, on both sides nobody wanted the other side of this colour war to have nuclear weapons.

I am quite sure that FW de Klerk himself and the ruling thought in the National Party at that time, did not want the ANC to get them. And then on the ANC side, they had been opposed to nuclear weapons themselves and did not want the bomb. What would they do with it? So, it was a mutual agreement on all sides - the bomb has to disappear.

AvW: I have a primary document actually confirming the pressure on South Africa to dismantle any nuclear bombs that they might have. It was in a meeting between the ANC, the AEC, and Armscor, where they were discussing various issues. Definitely there was pressure; Renfrew is absolutely right. It was in 1988 or 1989, where Armscor wanted to continue with the nuclear weapons program, but the AEC and Department of Foreign Affairs felt it was too risky. So, they were having this luncheon to discuss the way forward, and basically the first line said: "pressure on South Africa to dismantle".

Noël Stott (NS):

I wonder if Prof Christie knows whether De Klerk informed the ANC or Mandela himself about the dismantlement before the announcement in March 1993?

RC: I have no evidence, but I am quite sure. Thabo [Mbeki] was in negotiations with the apartheid state from 1983 onwards, and I have not the slightest doubt that they were in those negotiations, not that we will ever get those documents or proof and certainly by the time De Klerk was active, I am quite sure it was agenda item one – on all of those negotiations. Then

again, we're not ever going to get proof of that. They kept it secret until De Klerk's announcement in 1993.

Somewhere in a meeting, I asked Waldo Stumpf why he looks like he is blatantly lying, and I throw some proof at him about nuclear weapons; this was about 1992. He blushes deeply and 'hums and haws' and he clearly can't answer the question. So, it leaked a bit. But the answer is, "yes", I am quite sure the ANC was party to that decision.

PB: **I was given a pamphlet by someone who found it in an old second-hand book and passed it on to me. It is detailed blueprints of the Koeberg plant, in pamphlet form. It's got blueprints, it's got electrical diagrams, a whole lot of detail. It is the plans they would have used for construction. By the appearance, it is a document for the construction of Koeberg for the engineers. So, it would be dated to the pre-1980s.**

RC: So, then it was not a public pamphlet; it was something for the engineers to use while they are building the thing. That's more plausible. I very much doubt that Eskom would put out public things. The plans of Koeberg that I took out of the Eskom library surreptitiously, was in the secret section. Those plans were certainly not publicly available. And I am sure the ones Rodney got his hands-on weren't either.

JvW: **Rodney, how were you able to obtain the plans for Koeberg? Was it a hand-drawn sketch from what you had seen? As you were a draughtsman, you most likely had access to those plans?**

RW: My first eighteen months there, when I got those plans, we were drawing the moulds for the concrete work, the shuttering. The engineers would call one in and say they want shutters for such and such a room number. And so you go to the library, and there was a librarian there, and you say that you want the plans for this room number, and he would go to a catalogue – it was about an inch and a half thick of A4 with floors on it and different buildings. He could identify the number of the room and which drawing it refers to, the big drawing, detailed drawing. And so, he would bring the detailed drawings and you could do your job. Now that reference catalogue is what I got the librarian to make for me, and he delivered it to my drawing board in a brown paper bag the next day. It was about 2-300 pages.

PB: **Is that plan that you had available, or did you hand it all over Mac Maharaj for verification?**

RW: I have never seen it since it went through the bathroom window to Jeremy Brickhill.

JvW: **So, I suppose whatever is available is still either in Megawatt Park, or somewhere in Moscow.**

RC: We should say it is still a national key point and still has to be defended, and the very last thing we need it plans of Koeberg floating around the place. It's illegal, it's bad policy, we shouldn't do it.

JvW: **This brings me to what you regard as the successes, which you have contributed to, during your time as activists? (Related to nuclear)**

RC: I was active on a lot of fronts … Maybe a final bit from me: I was on a world panel for the World Academies of Science (the IAP) and our job was to get a world agreed set of science research ethics, and I was chosen because of my anti-nuclear weapons in apartheid work, where I was saying that all the universities in South Africa that worked on the apartheid bomb, were desperately unethical; they were building a racist bomb, which at least some people were planning to use only on Black people. The object of that particular document – it is published by Princeton in 2016 – was to get India and China who, by then were getting really serious in world science research, on board with the world agreed set of research ethics rules. And so … we came up with something that we got signatures of virtually every Academy of Science president in the world. I took

my experience of what was really wrong with the racist nuclear bomb, into that debate on what scientists should research and what they shouldn't research, and the whole debate on dual use. Because if you are actually at Wits or UCT, and you are researching nuclear stuff that is used for the apartheid bomb, you are then an apartheid world war criminal in my head.

RW: There are four aspects to that bombing: the armed propaganda value, the actual physical damage, the 18 months of non-production of nuclear waste, and the cost – half a million as I mentioned, and they never caught me, and no-one died.

Conversation with Ambassador Abdul S. Minty, during a Conference on 'Anti-Nuclear Activism in Africa: A Historical Perspective', held at the Johannesburg Institute for Advanced Study, 3 April 2023.

Key:

AvW: Anna-Mart van Wyk (Session Chair)

ASM: Abdul S. Minty (Respondent).

AvWyk:

When did you first become aware that the Apartheid government was not only interested in the peaceful uses of nuclear energy as they publicly professed, and how did you promote or publicize your concern?

ASM: There is the contention that peaceful uses of nuclear energy didn't have much to do with nuclear weapons and this is the first thing that we found was wrong about South Africa. Because when I was doing some research work at the Richardson Institute for Conflict and Peace Research, after I finished my master's degree at University College, the Richardson Institute gave me a fellowship … and they said I could do a doctorate. So, when I was doing that research, I found that what I found out, was something I shouldn't publish and [that] we should stop. So, I gave up my PhD… In 1969, the Anti-Apartheid Movement (AAM) published a short booklet that I called "South Africa's Defence Strategy". It was published in several editions, because the Anti-Apartheid Movement

found that there was a lot of demand for it. There were a few translations in different languages. So, it was well-known, and it became used in the United Nations a lot, particularly in the anti-apartheid committees and so on, and that really contained the information that I had. The information that I relied on was that a South African minister said [in 1965]: "We must not look only at the peaceful uses of nuclear energy." Now, those of us who followed South Africa's military capacity and what it was trying to do all the time to subvert the liberation struggle, realized that peaceful uses of nuclear energy were as important as the weapons program. At that time, I was aware that we had to look at the peaceful uses, because by developing the nuclear knowledge and a nuclear skill, it would eventually use it for weapons, and that is why we also concentrated on the so-called peaceful uses as something that shouldn't happen; that the South African regime should not really have capacity for that. So, through the Anti-Apartheid Movement and through other movements in Europe and in Asia and Africa, we managed to get this issue addressed. For the first time, African heads of states were able to speak about it because they had information that we had provided. Information was vital because the Western countries in their fight against the African and Asian countries, and the Caribbean countries, always pointed out that "your information is not accurate, you are just speaking loosely", and so they had to rely on factual information. So, all of our work in the Anti-Apartheid Movement was based on factual information; understating, if necessary, but making sure that the facts got out. Where we were speculating, we made it clear that we were speculating, and speculating on what set of facts, as we were not just speculating from thin air. So would the other anti-apartheid movements, the churches, the trade unions, the student unions, and others, took up the call. We got a large number of bishops, for example, who signed a petition that I took to the Commonwealth early on in 1971. We had 100 bishops sign that. That was before the nuclear issue came up. It was simply the question of arms to South Africa, and weapons, and we said, "stop the arms". So, the nuclear issue was an extension of the arms campaign that the apartheid regime was developing, or the arms capacity it was developing because of how it anticipated the struggle in the region. So, the world got to know it.

In 1977, there was a World Conference against Apartheid, which was held in Lagos, Nigeria. The first one of those conferences was in Oslo in 1973. So, the 1973 and '77 conferences were world conferences in that many Western countries also took part. They didn't agree with what we were saying, but they actually listened to what was being said. I happened to be on the steering committee of both conferences, because the United Nations, which worked with us, and the hosts, Norway and later Nigeria, also agreed that I should be on the steering committee. All our preparations and conclusions and so on went through the steering committee and we worked together.

I became aware, quite early on, about South Africa's intention. The peaceful uses [of nuclear energy] that South Africa was developing in its capacity, was meant to be for military purposes. That was our assumption. People in the West didn't want to believe us; indeed, even people in the Anti-Apartheid Movement who were working with us, and who were from British and other political parties, said "you are going too far now, this is not true". So, we had to justify our facts and make sure that we never misrepresented anything. One of the remarkable things about the Anti-Apartheid Movement and our work, is that all these years had passed and not one case has come up where we were wrong, or we were false, or we had information that was wrong. We had to rely on getting

public support and that is why we had to be accurate. In order to be accurate, we knew we could build a campaign on accurate information even if we understated what was happening. We, of course, were involved in speculation as well, but we speculated on the basis of facts.

Another vital thing that many people don't recognize is that in that kind of situation, when I was reflecting on it now too, after many years, [is that] you also rely on your intuition. So, it's not always that you have the detailed information, but you have intuition and capacity that you developed to find out what the other side would want to do. You have to put yourself in their position and decide on their strategy with regard to that. Our entire anti-apartheid campaigns were built on that kind of assumption. So, we were ahead of them often, but what was useful was, we were never wrong. Even today there is no information that you will find in anti-apartheid news or other material that people can challenge and say, this was false. That's quite a credibility to develop with volunteers and people who are helping you because of their good heart; not necessarily because they had all the information, but they came with that, and we had to mobilize it in such a way that we then turned it into effective work. So that was how we worked and because I was on the steering committee of both conferences, both took key decisions that also affected Western governments. Some of the positions, of course, were not supported by Western governments, but they listened to the issues, and they had to confront the issues in the private discussions between African and Asian leaders and their leaders there.

That, I think, is when I first understood, that because of this fear of what South Africa would want to do in the long run, we had to watch every step and every movement. So, this small statement that South Africa must not only look at the peaceful uses, was very clear ambition that nobody in the West wanted to believe us, even at that time, they didn't and that is why I had to write this booklet. Trevor Huddleston did the foreword to that booklet, and he says if this is all true, the consequences are very serious. So, even a person like him was involved with us and I knew him from the beginning … could not commit himself publicly to the positions we were taking until there was more evidence, and even if he said in the foreword … "if this is true, then this is serious", we didn't mind that … but we felt that on all issues we had to give the sources of the information and the basis on which we were making our judgements.

AvW: Can you remember who the minister was who made that statement?

ASM: I can, but I don't want to mention it … it will expose other people who were close to him. In this work we had to realize quite early on, and it applies to a number of things, that you have to protect people's lives, and also afterwards … their dependents, because they will have reputations. So, we are rather careful not to damage any of that if we can help it, and certainly not keep mentioning people all over the place for credibility. If people did not want to believe us, then it is up to them, but if you looked in the booklet, the quotes are there. It has all the factual information because remember, the time was 1969, and we had to make people believe what was true and the facts we had, we had to compile and compress and put it in there. So, that booklet has a lot of information, not only that [statement], but other plans of the South African regime as well.

AvW: Let me jump to 1976, because of a very important event that happened in South Africa, and that was the discovery of the Kalahari nuclear test site. What was your response to the discovery and were there specific campaigns to raise awareness?

ASM: Well, this information simply confirmed all our warnings. So, in a sense, we got additional credibility – people who did not want to believe us for political reasons or because generally they did not have the

information. So, that was very important that we were right. People were saying before that in campaigns against us, that we were wrong; we are exaggerating; it is not true, South Africa wouldn't do that – and then here was the evidence. So, it was very clear that South Africa was doing it, and, in a sense, it confirmed all the warnings that we had given about the ambitions of the apartheid regime.

Of course, we pressed immediately for a United Nations embargo on arms and nuclear. Now, by 1977, it was a long time since the Anti-Apartheid Movement was formed in the 1960s … [but] by that time, we had quite a lot of influence in these international institutions by virtue of the Afro-Asian-Caribbean countries supporting us always. So, we said we must have an embargo on arms and nuclear. On the morning of the Security Council vote on the arms embargo, I went to the delegation to see the British foreign secretary David Owen, and we asked that they should support an arms embargo. We wanted nuclear included, but nuclear was far-fetched, and arms was something they could talk about. I remember to this day, the ease with which David Owen said: "the United Kingdom will never support sanctions, so you will not have an arms embargo."

Now politically we had been active around the world, and we had developed links with Andy Young of the United States, so we got hold of Andy Young, and we lobbied the United States on this issue. To our very pleasant shock and surprise, although we worked very hard for it, we found that Andy Young managed to change the position of the West, and that the West would now support an arms embargo, but not a nuclear one. This was a shock to David Owen, but he met us and said, "we will never support this", and then on the same afternoon, we had news that they had changed their mind; not changed their mind because of us, but because of the United States. So, one of the lessons of this is that, we had built up constituencies in many countries over previous years, who began to believe us, that our facts were true, and they could act on it. There was no inhibition on the part of those elements in the United States in the Black Caucus and so on, to support us, and therefore that influenced Andy Young too. I think that this is a very important factor that people miss out on often, and that is that the legitimacy and the status that you get through your work, is based on your credibility. People may not want to believe us, but we had credibility. They couldn't challenge what we said. So, when Andy Young supported that, we had that.

Now the only other sanctions that the Security Council had adopted was on Rhodesia, with Ian Smith's illegal declaration of independence [and] then they set up a special committee of the Security Council that got regular reports and acted. We thought that the arms embargo will get the same thing [but] with Mrs. Thatcher and others, we didn't get the same thing. They refused to set up an effective committee, but the [Arms Embargo] committee that was set up in the Security Council had an excellent Kuwaiti ambassador, [Abdullah] Bishara, who amassed a lot of the information we sent. I say we, [but] there weren't many people doing it – it was just us in the Anti-Apartheid Movement and later the World Campaign. So, we provided all the facts and the Security Council [Arms Embargo] committee under Ambassador Bishara would report that "these organizations reported to us, that this has happened." So, that report, if you have the time and are interested, is important reading material, to see that at a time when it was very difficult, what Ambassador Bishara was able to do.

Later, that committee became really useless. We were left with this situation where there was to be no committee as effective as the Rhodesian Sanctions Committee. We had to then establish the World Campaign [on Military and

Nuclear Collaboration with South Africa]. The World Campaign was on arms and nuclear, both. That is how the World Campaign was developed, out of the discovery of the Kalahari nuclear test site, which is the kind of things we had predicted. People did not want to believe us, and then it comes out as a shock to some and to others, you know, "why would they want to have nuclear weapons." So, we had a large number of campaigns about the danger. We worked with CND [the Campaign for Nuclear Disarmament] and others. I was made an official of one of the CND groups in Britain, and so we worked all over with organizations that were working on nuclear disarmament as well as other groups all over. So, we had to then, as I say, establish the arms embargo and the nuclear in the World Campaign. We knew that we didn't get nuclear [in the arms embargo] but remember our relief in getting an arms embargo mandatory in 1977. There was a war in Southern Africa and the apartheid regime was using weapons all over the place. It was attacking countries at will. It was destroying people; thousands of people were killed in this process, so we wanted the arms embargo, even if we couldn't get the nuclear. We thought it was important to get the arms embargo under the Security Council. If you got the decision in the Security Council, for the arms embargo, technically at least, you are committed to trying to stop arms going there. Even though we couldn't get the nuclear, we got the arms. So, we weren't working against the embargo because we didn't get the full embargo; we worked with what we could get and what we could achieve. In the meantime, we didn't relax on the nuclear issue, so we continued with that and the '77 exposure of course, showed that South Africa had these nuclear ambitions too.

AvW: Would you please walk us through the establishment of the World Campaign? And how was Norway involved?

ASM: I had long historical links with Norway. Others from Southern Africa went to Sweden, did things with Sweden, [but] I got to know the Norwegian Labour Party leaders, trade union leaders and others, and particularly the chairman of the Labour Party, Reiulf Steen, very well.

When we were having the second international conference … in '77, there was no Western leader coming, of prominence. I went to Oslo and spoke to Reiulf Steen, and he arranged a meeting for me with the prime minister. I saw Mr. Odvar Nordli and explained that no one was coming from the West and this conference was important, it was in Nigeria, and so on, and would he please come. A few days later he agreed, he would come. He was the most prominent prime minister we had. Later on, the Norwegian Labour Party were very anxious, because that conference was ten days before the Norwegian general election, and to lose a prime minister when you have a general election – you might lose the election. But he still came, and Reiulf Steen was very committed to our struggle. So, the Norwegian prime minister was there … and at that meeting, we also decided because of the failure of getting support internationally, and knowing the Security Council to work, that we needed the World Campaign. Norway said, since they were going to be on the Security Council — they were elected already but not yet operational — that if I went to Norway and did some research on these subjects and provided it to them, they would undertake to take it up in the Security Council, and that this was an important decision to make. So, what happened was that the United Nations Special Committee on Apartheid, who were also in Norway and at the meeting [in Lagos], asked me and other leaders of the British Anti-Apartheid Movement, like David Steel [former AAM President, Member of Parliament, and leader of the Liberal Party], [and] others [if] we could set up this World Campaign. So, we agreed with

Norway that I could move to Norway. I didn't agree, but the African leaders agreed that they would try and persuade the British Anti-Apartheid Movement to let me go to Norway … and then, when I got to London … Joan Lester in particular, as a member of Parliament, they were very strong in saying that I should do that. I had thought if I do that and move to Norway to run this office, I have to give up the Anti-Apartheid Movement and they would refuse to let me go, so I opted for both. For a while I flew around the world … London was almost every month, and I just had to travel backwards and forwards. Also, we were running a very strong 'Free Mandela Campaign' and that also required us to be at different capitals at different times to lobby and support the Anti-Apartheid Movement.

Now, maybe just a little bit of background: the arms embargo was important, although it did not have the nuclear, because of the military capacity of South Africa. South Africa was relying on more and more arms, attacking African states with impunity. There was no restraint in that at all from anybody, and inside South Africa, there was a build-up of an internal resistance. South Africa was becoming ungovernable and Southern Africa as a whole was then in conflict. For example — and this is background, which is important in this context — in 1975, I went to the UN Security Council. The African and Asian countries would sponsor me, so I would be invited to the Security Council as an individual expert, as they called it, and then I could speak there. So, I went to the UN Security Council in 1975 and with me, I took a pile of the NATO forms; the Codification System for Spares and Equipment. When you are a NATO member and you are applying to get certain spares, NATO must have tested those weapons and show that they are of good quality, so the NATO members would then get it. I managed to get hold of the secret South African sources of these NATO forms. The question arose – how did South Africa get NATO forms? [It is] not a member of NATO. So, I took that to the Security Council. I printed all the copies and distributed it to members. There was a real anger from many of the Western countries. The British ambassador, Sir Ivor Richard, who was a friend of mine in the anti-apartheid struggle, but now was ambassador in the UN — he was very critical of me, that I was totally lying, and the documents were wrong … but it was found that we had the authentic documents; that South Africa, not a member of NATO, was being given a codification system for spares and equipment. It was to be used for an electronic system that South Africa would have in the region, to monitor the Southern oceans. That's one example, in '75. In '76, there was a NATO meeting in Norway. Norway, as a member of NATO, hosted the meeting that is called the NATO Ministerial Council. I told the foreign minister, and the prime minister was also sympathetic, and I said, you know, we must make sure that none of the NATO staff meets the South Africans. So, they gave us an agreement. The president of the NATO Council, and the Norwegian foreign minister, informed us that the decision was taken that no NATO staff would meet South Africans. A few months later, I found out that the South African foreign minister had a secret meeting with [NATO] Secretary General [Joseph] Luns. When I said this to the Norwegians, they said, "no, you are wrong this time. They can't give a promise to the president of the NATO Council and then break it" [But] when Norway asked, Luns replied, "yes, I did meet the South African foreign minister, but it was not official, we only spoke in Afrikaans." So, the South African spoke in Afrikaans and the NATO Secretary General spoke in Dutch, which is close to Afrikaans, and so he said that was not an official meeting. Anyway, what was discovered, was that the NATO international staff would not meet South Africans, but the national staff could. We

then demanded that both the national and international staff be covered. NATO should have no links with South Africa. So, it was a very tough battle to fight NATO, because everybody would come in defence of NATO. We were very pleased that Norway, which had a conservative government, unlike Sweden, was a member of NATO, said no, we would not allow this.

The Norwegians were rather remarkable, and the prime minister too. The few times when I met the prime minister, he would say, "you know, we will support your struggle because we don't want South Africa to become communist." So, they had a general anti-communist campaign, and apartheid was contributing to that, so that was their position. They did not say that very often, because we had very close relationships and personal relationships, with the chairman of the Labour Party. So, we then exposed the NATO link, at various levels, with South Africa, and this also went further. As I mentioned before, if you look at Ambassador Bishara's reports of the Arms Embargo Committee set up by the Security Council, that is the best report. After that, when successive chairmen took over, they were no longer in the report. Now, what all this showed, is the degree of Western solidarity with the apartheid regime. People don't want to even talk about it today, but the Western countries were solidly behind South Africa, and we therefore had to fight very powerful forces. I don't know how many of you know that the only committee in the United Nations that was boycotted, was the Committee on Apartheid, by the West. No Western member was on that committee. It made it a little easier for us to work with that committee. And then, if you look at the Council on Namibia, the Committee on Zimbabwe, and so on, the Apartheid Committee was the most effective, because it got legitimacy, it got support, it had information that it could use, which the others didn't have. So, we were able to do quite a lot from this; we didn't feel that because of not having nuclear, we can't work on the arms embargo, so we did.

AvW: In 1980, the 'Stop the Apartheid Campaign; was launched. I am very curious to know, was the launch of that campaign in any way inspired by the Vela incident of 1979? (For those who don't know about the Vela incident: there was a [nuclear] flash close to Prince Edward Island, which belongs to South Africa, which led to wide suspicion that South Africa had conducted a nuclear test in 1979).

ASM: First of all, the Vela incident itself was confirming again what we had been saying. Remember, many Western countries were not supporting us, were against us, attacking us and so on, and when this kind of information came out, they could not attack us in the same way. We then built up more support in those countries and political parties, trade unions, churches, and so on. So, we all realized the danger of the apartheid bomb, clearly. Vela confirmed that what we believed for long, and said so, that we were right. People said we were not right, we were wrong. South Africa was not nuclear. I was told by numerous foreign ministers, France, Germany and Italy, that South Africa was only interested in peaceful uses. And so, when this happened … we had to take a wider context and say, look, South Africa relies on police and military, and South Africa at that time, 1980, did not have enough money for defence. A defence force that has to rely on Mirage planes that are very old, would not be a very secure defence force. We had already stopped many aircraft going to South Africa. South Africa later made a copy of the Mirage, with the help of the French, that was different to the original old ones. So, we argued that if we effectively stopped all arms to South Africa, the regime would collapse. Many people challenged this, saying it can't be true, how can a whole regime collapse? We said because it relies on the police

and the military as its main instrument of government, and that is what it does in the neighbourhood as well, and so, we need all-round sanctions if we can, but if an effective arms embargo is implemented — we did not mention nuclear in that context — you can collapse the apartheid regime, because it will have no capacity to fight these wars. And it was involved in a number of wars in the region. So, this was one of the things we said.

We had some other experiences which I think is important to mention. You see, in work, we'd hear from somebody who works in a factory in Britain or Germany, that South Africa has ordered X, Y, Z, and this is a military item. We would have to decide whether we go public with that, but we also had to do our research because our credibility would be involved. So, we got a lot of false information as well. One was even a printed letter head of an American company, claiming that the letter was supposed to be a letter to the South African military telling them, "we will supply you with these things". Others were, "we will look into this for you" — different kinds of material. We didn't publish any of that, but they were all aimed to discredit us. But what is important to remember [and which] is very difficult to convey today: at that time if we were found to have one bit of inaccurate information, our entire credibility was gone. Everything. That was the amount of hostility we had from the West. So, we had to be very careful and to know what was planted, what was unreliable, and where it was deliberately intended to damage our reputation. And yet, we couldn't lose a chance, if something was being supplied, to expose that and to stop it. It was a very, very difficult period, but at least the Anti-Apartheid Movement and others connected with us, trusted me with it, that I could make these judgements, so we checked things when it came and didn't expand on things that were not really worth doing.

In 1987, when we had the Commonwealth Committee on Sanctions, Canada was the chair. The Canadian foreign minister invited me and met me, and I gave evidence to him. I said to him that "if you are able to have an effective arms embargo, the apartheid regime will end." He looked at me in astonishment. So, he had twelve officials. He invited me to Canada to give information on the arms embargo, and he said I could bring twelve officials. I only had one secretary working in my office, so I could not bring twelve officials. It was only me. He confirmed with me [meeting] with twelve officials, [and] we went through a lot of issues. We were able to tighten various aspects of the Canadian embargo. He was very interested in developing this idea that I had put forward, that if you had an arms embargo, you could actually cripple the apartheid regime. This gave us a lot of credibility, in that we could actually put things across and in the end, if you look at 1990, this is actually what happened. South Africa at last decided that either it had a 'hot war' in the region, which it couldn't win, or [they had to] give up apartheid. They decided to give up apartheid. So, it was an analysis at the time, which people didn't want to believe, but later on it was found that we were not very far from the mark.

AvW: **I remember clearly the 'Stop the Apartheid Bomb' campaign and the booklet that was written by Dan Smith, and just how precise his information was at that point already. Yet, it only became known much later in South Africa, from the documents we were able to get from the archives. I could tick most of the boxes that Dan Smith had written about in that book.**

ASM: You see, Dan Smith was working with CND, and was a friend of mine, and so I asked him if he would write the booklet, because we needed to involve more people. Then, there was [would be] another booklet; the first booklet on defence strategy was by me [in 1969]; if

there was another one by me, it wouldn't add that much. He had a style that was also different. So, Dan agreed to write this booklet. That is how we got the second booklet done and published and translated.

Audience question:

With permission, Chair, may we go back to the military strategic decision in the apartheid regime. It struck me from the literature that one of the factors that contributed to the decision by the … let's call it the State Security Council, to turn back the apartheid regime, was financial pressure from City Bank and other banks. Similarly, it was argued by people like Neil Barnard that the internal resistance had reached that particular pitch especially in '89, late '80's. Would you like to comment on the multiple views expressed?

ASM: You see, the way it was described to me by many British and other leaders, was that South Africa could not have a 'hot war', and by hot war we mean now the armed struggle, and the other pressures. So, they had to decide whether they were going to go into a long hot war, a Vietnam type of war, or whether they would give up and save whatever they could for the White community; that's how they were thinking. So that was the decision. I was saying this to the Canadians much earlier, that if you enforce an effective arms embargo … With Canada, a Western country as Chairman of the Commonwealth Committee, I had the possibility to widen the area of influence. And that's why we were saying — we didn't say it before, like that — we said if you do this effectively, and with financial sanctions, you can hit. It doesn't mean that some of the other pressure on South Africa must be reduced because this one will work. No, we have to put total pressure on the apartheid regime this way. So, it was a fact, but people are giving a lot more attention to the financial sanctions than to the political isolation. Because the political isolation of South Africa was almost broken; it couldn't be isolated more.

And then it relied very largely on Israel. When we looked at the nuclear capacity and looked at Israel … we also looked at the visits. Many Israelis visited South Africa and were involved in nuclear things, and we monitored as much as we could of that. The other country where there was deep connection with South Africa in the military nuclear [aspect], was West Germany. And whenever any exposure came out of that, the East Germans and Polish were very pleased, you know, because it was part of the Cold War – they could beat them over South Africa. So, we had to be very careful that we didn't become an instrument of the Cold War in any way.

AvW: And there was of course, the French connection …

ASM: The French connection was very deep. I mean even with the aircraft and the new ones that were being developed, South Africa had missiles and so on. France was deeply involved.

AvW: And with Israel – of course, the Jericho missile. I've got a document where [Defence Minister] PW Botha met with the Israeli Defence Minister, Simon Perez in 1976. In that document it is stated that Israeli was offering to sell Jericho missiles to South Africa with any warheads – it didn't say nuclear – "but any warheads, the correct warheads". Definitely, that was something that was also quite contentious at the time.

What was your connection, if any, with the South African liberation movements?

ASM: Well, if you go really back, to 1960, it was Barbara Castle who had run the big rally after Sharpeville. She would become the president of the Anti-Apartheid Movement, because we needed a new president, and she asked if I would be the Honorary Secretary. Oliver Tambo asked me to agree to this. So, it was clearly the

support from him, and he wanted it, so I had very long and close relationship with him in that way.

I had worked with Barbara Castle before on a big campaign we had outside the Commonwealth, where we had a 72-hour vigil with prominent actors and actresses and people petitioning the Commonwealth day and night, and she arranged it for every day. I went to the Labour Party conference, sat next to her on the platform, and we wrote these letters – hundreds of letters – for people to join. So, Barbara had worked with me, and I knew her well. She said that if I would be secretary, she would be president. So, I was under pressure to do that, although I told Oliver Tambo I was studying, [please] give me some time. Then, we had the South Africa United Front set up in London, with the PAC, Indian Congress, Coloured People's Organization, and so on. We worked with all of them. We worked with the PAC – they were all on our national committee of the Anti-Apartheid Movement, so they had a formal role at every meeting, every three months, and I worked with all of them. I also worked a lot with the so-called Portuguese Movements, the freedom movements in the former Portuguese territories. They used to come to Europe once a year, and I was asked to accompany them … and I maintained the contact with those countries in Britain and elsewhere, and in Europe, while they were gone, to send any messages to them in support. So, we worked with all the different movements. SWAPO [South West Africa People's Organization] was a highly effective organization. I was with Sam Nujoma when SWAPO was formed, and I worked with them, and SWANU (South West African National Union) was the other organisation, [which] had later become less important, eventually it was SWAPO. SWAPO had a very effective battle against the apartheid regime; they really challenged them in Namibia, to a great extent. I worked very closely with SWAPO. So, with all the liberation movements, we were working.

We were also the biggest anti-apartheid movement by the [19]80's. All the anti-apartheid movements with whom we had links, also in a way shared some of the credit we had, and we worked together. We had no differences with any anti-apartheid movement in the whole of the world, you know. There were many campaigns. Some conferences I used to go to, and there you would find leaders from political parties coming to say: we support you, and they were part of the political party of that country, and then they would put pressure on their Prime Minister. People supported us with enthusiasm because they identified with the issues. So, I had very close relationships with all of them. They knew that I had come originally from the ANC, if you wish, but it was not something that I pushed everywhere. Oliver Tambo told me the year before I became the Honorary Secretary, if you agree, you will have to work as the British Secretary, not as an extension of the ANC, and not in that way as a South African. So, I went home very upset, thinking that they had thrown me out, but it was a very wise decision, when you think with hindsight, because it made me effective.

The chairman of the [United Nations] Special Committee, would sometimes go to different countries – Germany, Italy, France and so on. He took me [along] on many of those trips. If he took the liberation movements, the ANC and PAC would fight each other. He felt the credibility would not be there. So, I could go, and the liberation movements never opposed that. I was able to go and fill the gaps in those places.

AvW: **Well, Oliver Tambo's words were also wise in a very unprecedented way. You had the ear of the Special Committee Against Apartheid and the Africa Group at the United Nations. You addressed numerous organisations,**

conferences and seminars, including Commonwealth Conferences, and you lobbied the IAEA, which I think would not have been possible if you were a spokesperson for the ANC. I think that opened up many doors for you, being able to move around. What would you regard as your biggest frustrations, and your biggest successes?

ASM: There is one qualification, and I mean it advisedly, I didn't have the ear of the Special Committee, and all this — I had the support. They were fully committed to us before we spoke, because of our credibility from before. Whatever we had said before, they could defend, and nobody could challenge them and be wrong. We were not wrong, we were right, so that made a very big difference and in the United Nations, Mr. [Enuga] Reddy ran the Special Committee against Apartheid … he was responsible for a lot of these interactions. He had money, he was a United Nations official, he went to many conferences, went to Lagos, and so on. He would call a lunch, invite 20 or more diplomats and others, and he would invite me, and we could interact. So, he was able to support. He'd personally supported financially and in other ways, and those kinds of events. So, he was very, very important. And then … I attended every Commonwealth Conference except two. [During] one I was ill, and [during] the other one, we did not have the money. So, every two years, with Julius Nyerere, Kenneth Kaunda, Mrs. Ghandi and many others, we would consult before, and say "what are the issues?" They would ask us what we thought were the issues, and we worked together. So, at every Commonwealth, we had a strategy that worked out effectively. So, I think it was not only the ear of it, but that full support and commitment, so that we could move forward.

The IAEA – it's not that I just lobbied, I was a member of the Board, and later I was the only candidate of the Third World against the Japanese candidate …

AvW: That was post-1994 …

ASM: Yes, but I'm saying the IAEA has a long history and the IAEA at that time was not interested in doing anything about apartheid. I was nominated by South Africa on the Board of the IAEA [after 1994], and then I worked on the IAEA, and with the IAEA, and we got the support of most of the Third World. But the IAEA Board's work, is completely Western, if you look at it even today. So, you cannot vote, anybody from the Third World, I was the first candidate. And when Thabo Mbeki decided that I could stand, and I did, people were surprised at the amount of support I got. I blocked the Japanese candidate three times. This was unprecedented. I remember one of the Board member meetings, the Germans and French were there, and one of them said at the end, "today's meeting will be very short, because we will have the Japanese candidate, you won't spend your time there, this afternoon you'll be free". This was around coffee in the morning. I said "Oh, thank you very much, I'd be pleased to leave the meeting early". And I went and blocked the meeting. We had so many supporters, they could not have the two-thirds majority they needed. So, we went very far. Someone also said that Japan spent one-and-half-million on getting votes.

When I was a candidate, my main issue was that the IAEA must not just hold conferences, and invite people from the Third World for two weeks, and then they go home, and they can't do anything with that information. They must give them the equipment with which they can work, and that was one difference with all the other candidates before. So, there were many precedents that we had to set up.

AvW: **I'll jump to my last question; a crucial one for me. I read many of the AAM papers, which are in die Bodleian Library at Oxford. We are jumping to April 1993. You stated in a memorandum to the**

Chairman of the Special Committee against Apartheid at the time, Professor Gambari, that De Klerk's [March 1993] statement contradicted evidence that the World Campaign had collected over the years. My question is, what was your response to De Klerk's announcement that South Africa had built six atomic devices?

ASM: Well, first of all, De Klerk said that it was a deterrent. Deter who? Normally, with nuclear weapons, you deter other nuclear. Who was the nuclear country? Tanzania? Zambia? Who was the nuclear country they were deterring? They were not deterring in that way. It's a lie, a complete untruth. What they were doing, was to clothe nuclear capacity, so they could frighten Africa, and they would give an excuse to the Western countries. I know this myself … they told many African and Asian countries … don't press South Africa too hard because it's got nuclear things and it's a bit mad. This was a very valuable argument for them to utilise. The other thing is that there is still a big question mark … and nobody knows … how much Israel supported South Africa. I had evidence that South Africa probably had more than six weapons. Who did they go to? Israel would be the logical one, because of the historical relationship. So, how many more weapons were there, and how many weapon systems did they work on jointly, with others? Because you can't have that kind of interaction, just one country and one person. They must interact with others. So that is all unsaid and untold.

We raised these issues, and I said at the time, we had a lot of evidence … about what Israel did and what indeed other countries did, and they couldn't just have worked on one nuclear weapon, and a lot of other things, and they couldn't have worked extensively on the peaceful uses without overshadowing to the military. Because South Africa did not make that distinction in its internal reports. But I think what is important in this context is … we also worked, even after South Africa became free, and democratic South Africa joined the Commonwealth, her Majesty the Queen (of Britain, Elisabeth) invited me to celebrations in the palace, where they had invited people who had been to many Commonwealth conferences. That kind of factor was also influential later, because President Mandela had a special relationship with the Queen. He was the only human being who could go in through the side entrance to go up to the Queen … I mean, credibility.

The Queen shares that one meeting of the opening of the Commonwealth, and all Commonwealth heads sit there, around her, so the Queen was respected a great deal and many of the African leaders of whom I used to work with, when they went to Commonwealth Conferences, they sometimes would leave a meeting that we had, you know, and I ask, "how can you leave?" … "No, I've got to go see the Queen". "Going to see the Queen, we have this thing to work out?" Julius Nyerere calmed down all of them, then all went to see the Queen, and then for their audience they all had about 10 minutes or 15 minutes to file new papers. This I think is also important in terms of the credibility of the kind of issues with which we were working, and we were lucky; a lot of ordinary people – it didn't matter, as they said, they lived ordinary lives, but they're joined together to build the anti-apartheid struggle.

CM: **Ambassador, it's Clive Meiring asking the question: You spoke at length about having science backed facts that you used to build your case. What would you say to current South Africans, where we seem to be taking a lot of decisions, particularly in the energy sector, which are non-science fact based. We seem to have departed from what you said gave you your credibility. As a country, we're taking a lot of energy decisions that are not fact based. We're doing exactly the opposite of what you did when you built up your credibility.**

ASM: You see you can't give us too much credit because we were working in an atmosphere where nobody wanted to support us. We had to build that support, or credibility, so we were in an atmosphere, we were having the term 'anti-apartheid' – you're against something, you are not for something. Many people used to say that. But that was the boycott movement that Barbara Castle named 'anti-apartheid' the week after Sharpeville, because she said, our objective is to destroy apartheid, not just to boycott, so she moved the whole thing around and people supported it because of Sharpeville. Sharpeville frightened people so much.

We had so many odds against us that we had to prove and stand by what we said and then move forward with it. So that was a great difficulty at the time; that was the atmosphere in which we had to work. We had to rise above the atmosphere to get further, because the atmosphere was more towards South Africa, from the West, [which] completely did defend it. So, I am not able to answer your question accurately but that is the only response that I can give you.

Noël Stott (NS):

Ambassador, I remember you once said to me, "don't quote me but" (it was many years ago) … you said that you think we gave up on the nuclear weapons too soon. The question I want to ask you, is whether Mandela himself or the ANC in general were informed by De Klerk about the program's dismantlement before the public announcement.

ASM: I don't know, and I don't think, I may have been misunderstood, I don't think I would ever say that we gave nuclear weapons up too soon. Every day that we had nuclear weapons was a danger. So, I was against nuclear weapons from day one. Not against nuclear energy … but nuclear weapons. I don't know if President Mandela was given early warning. I have no information that supports that position, but I think that what would have happened is that South Africa would have worked with its main allies and it responded to the change by responding to their pressures, that if you don't change South Africa, you're going to have a hot revolution, and you know, Black people would take over, with violence and all that. And so, they also wanted to say what could they do to save the economy and the interest of the Whites – a factor that they would have to consider. The final compromise that they worked out – this was part of the equation. But, no, I don't think that they were told before, and maybe they were, I don't know. I hope it does not sound too arrogant, but I think if they were informed, somehow, I would have heard about it. They would have consulted me because they knew I was working on these issues. So, I never heard.

Luc Brunet (LB):

I was very interested in what you said about the support of the Canadian government or the arms embargo, in particular in 1987. I was wondering if you could say just how supportive Canada was as a Western government in NATO and the Commonwealth, in opposing specifically the nuclear weapons programme in South Africa.

ASM: You see, there are historical things and factors that people don't know about, for example the former Canadian prime minister Trudeau, whose son is now [the prime minister], he used to go dancing with the Tanzanian ambassador in Canada, in the early years. So quite a bit of information I had after the ambassador had passed on and he became prime minister. Canada was the first, if you wish, European Western White country to support us. Canada was more like the Nordic countries in their approach, always. I worked very closely with them; I even asked for their advice if I could go to Botswana in order to see my grandmother who brought me up, she was dying, and they consulted Botswana.

I met Sir Seretse Kama in Canada, and he said no, we don't think he can come because we don't have the resources to stop South Africa, so you shouldn't. Canada … Trudeau, had a very close relationship, and he was very close to Nyerere, Kaunda and so on, so I also met him in that context. When they met, he would invite me.

Remember Canada also provided the Secretary General of the Commonwealth once; the first secretary-general was Canadian, Arnold Smith. He also helped. When I went to the Singapore Conference, the Singapore government was hostile in the beginning; they said they wouldn't meet me and so on, but he said if they don't see you, I will receive the petitions from you. I took a hundred thousand petitions from Britain against arms for South Africa … I mean from memory, when I was taking the petitions, two big suitcases, my clothes were in a small bag … we got a taxi in London to take me to Heathrow and I said, gosh I don't know, I used up all the money I have for the conference. We got to the airport at Heathrow and the taxi driver said no, don't pay me. And then when I went to the Pan American desk to get my flight, there too, she said I was over the weight, but we won't charge you extra. So, human beings reacted in different ways.

AvW: **Let me quickly move on to two questions from an online participant: The first one is: Did the apartheid regime consider or perceive Western sanctions credible enough to reconsider their nuclear choices?**

ASM: No, there were no Western sanctions at the time. It wasn't a question of looking at Western sanctions. I think there were no prospect of any Western sanctions either. There were countries like the Nordic countries, because of Scandinavia's accordance on who would be more hostile toward apartheid, but there were no sanctions coming.

AvW: **Yes, it was only in 1986 that the Comprehensive Anti-Apartheid Act was passed. And following the 1977 arms embargo, which did not contain the nuclear aspect, there was another UN embargo in 1984. This one was against the export of South African arms, but then they updated it to include some nuclear element …**

ASM: It took us many years to get a decision to stop the exports.

AvW: **That's right, they changed it in 1984, and with the clause then on nuclear in there, as well, for the first time.**

The second question is: Do you think that had the United States offered a nuclear umbrella, that it could influence the nuclear calculous of the apartheid regime?

ASM: The US at times was candid, you know, about other people's support for us because of the Black situation, and we had contact with that community. So, the anti-apartheid community in the United States – we worked with the African Americans there, and therefore we had a constituency, which was bigger than many other countries and they were politically important, so I don't think that would have worked.

Jo-Ansie van Wyk (JvW):

My question concerns the exposé of the West German co-operation. There was that exposé in *Sechaba*. Were you involved in that exposé? And I'm always curious, how did you manage to get those intelligence sources?

ASM: Well, I am aware of it, but you see, one person in Germany reliably got somebody working on nuclear things – he threatened that person. That person got a whole lot of documents from the South African embassy to his place, to a room bigger than this with all the documents of German-South African cooperation – original documents. Some people were asked, "come and collect what you want" and I don't think many

people were asking, and not many were able to go, but the truth is, we also found out some of the links with NATO and South Africa through that. So, there were these 'accidents' … the South African embassy was moving from one place to another and somebody working there just took one whole trailer-truck.

But we had to be very careful because our lives were also threatened; I mean South Africa even sent people to Norway to me. They called it an operation against a military office and a private residence, because I had my office in my residence. We were never sure that we would live to the next day. The constant threat was there each day; we were working on extremely sensitive issues, so that was important. But that's why we were lucky that we got diplomatic support from African, Asian and other countries and also individuals like David Steel in Britain. He was at one point keeping the Labour government in power, and he came to the Lagos conference, and his vote was key. They had a lot of influence over that, and others, all of parliament, you know, and many Western leaders would support us, so you couldn't just raid those leaders at will. They would have to support you and believed what you were doing and that they could defend it, so we were lucky to have that.

The ANC published a book through *Sechaba*; they published these documents on German cooperation, so they had a lot of information about it, from there.

JvW: Of interest to researchers: The University of KwaZulu Natal has a large collection; in fact they have all the *Sechabas* – electronic versions.

Audience question:

And that book on the uranium enrichment process – did you find that critical?

ASM: Well, it's speculation from one side. I don't have anything to contradict it, but I wouldn't necessarily say anything said there, because there is no supporting evidence.

JvWyk: Ambassador, I think you grew up in Fordsburg? You wrote in one piece, that even as a young boy/young man, there were discussions and awareness about what's been happening in Nagasaki and Hiroshima. So that awareness, fascinates I think a lot of us. Did you read a lot about that? How were you socialized?

ASM: I grew up in Fordsburg, yes, and I went to both places.

First of all, we were all shocked by the United States nuclear weapon, used against Japan. There was no need for it. Although we were children, we were so shocked by it. How could you do such a thing? And so, I followed that from that time, even before I went abroad. Even at school, I was probably around 12, 14, and was against it. But we were at a very political school, because the government wanted to move us Indians to Lenasia – there was no Indian living in Lenasia at the time, now it's full of Indians and others … Congressman Ahmed Kathrada and others started what people knew as a Congress School. That was my first high school. I was supposed to go to Booysens, and from Booysens to Lenasia, and we refused to go to Lenasia, so I was also without a school. So, the Congress started the school, which was called Central Indian High School, which "Kathy" [Kathrada] was responsible for, and I went to that and within the first week or so I was elected the secretary of the school committee, so I managed the school committee. People came to arrest our teachers, because they were ANC people … Alfred Hutchinson, etc, all teaching us. All the people banned by the government, were available to teach us, and so they were teaching us. We had police raids … we were using Muslim madrassas or Hindu schools, when they were not using it. They used it in the

afternoon when the children came from normal school, and then went to that school, but we could use it in the morning. One of the raids – there were several - we refused to leave the premises, which still had our teachers there. We were twelve, thirteen, fourteen, I suppose. We refused to go, and at one point when the Special Branch wanted to take our teachers, they used to come with that Ford cars with the radios inside, and so on. I mean we knew those cars very well because whenever they came there, we had to be alert. So, the Ford cars came, and they went up the building to get the teachers, but they left the window open and the key there. So, I said to one of the young girls, "you know, why don't we get that?" She said yes, she would like to. So she went, pulled out the key, and the police came down the stairs, now what do you do? And so, there was a passing cart with fruit at the back, and fruit salad, so we throw it on there and it went slowly, in full view of everybody, and they couldn't go in, so they had to call another squad car, and so on. So, they couldn't take our teachers away that day, but they were taken away later.

So, we were made to protest by our existence. We didn't choose, it is just what happened. The Central Indian High School, you know, produced many people who later took part in struggle – the Pahad brothers, and so on. Aziz Pahad was in my class and Essop was one up. And so, we worked in this place; we had debating societies, we were only two hundred children, but we were against the main Indian school of over a thousand children, very strict and we won debates against them, you know. So, we were doing more research than what any of them were doing, and we were more politically conscious.

AvW: **Ambassador Minty, this has been wonderful! Unfortunately, we have come to the end of our session. But thank you very much, this has been absolutely fascinating. Just an interesting note: I wrote my PhD on 1977 US arms embargo against South Africa, and how it was implemented until 1997, and how South Africa circumvented that. In the early stages of my PhD, all the documents that I had about the World Campaign, and your efforts through the Anti-Apartheid Movement, were of such crucial value to me. So, thank you for what you have contributed over the years, to the scholarship of many, many people, and your activism that was really crucial for raising awareness about what South Africa was busy with at the time. So, thank you very much, we really do appreciate your time.**

Decolonial Dreaming in the Sauútiverse

by Nedine Moonsamy

Wole Talabi (ed). ***Mothersound: The Sauútiverse Anthology*** (Android Press, November 2023).

There has been a recent surge in Africanfuturist anthologies, and collections like *Dominion* (eds. Zelda Knight and Oghenechovwe Donald Ekpeki, 2020), *Africanfuturism: An Anthology* (ed. Wole Talabi, 2020), *Africa Risen* (eds. Sheree Renée Thomas, Oghenechovwe Donald Ekpeki and Zelda Knight, 2022), and *The Year's Best African Speculative Fiction* (ed. Oghenechovwe Donald Ekpeki 2021, 2022, 2023) have established African SF as a global and popular genre in its own right. *Mothersound: The Sauútiverse Anthology* (2023), edited by Wole Talabi, is the most recent addition to this trend, but it also works to exceed it through a method of complex, shared worldbuilding which further exploits the decolonial potential of Africanfuturism.

Initially coined by Nnedi Okorafor, Africanfuturism has come to represent a genre quite distinct from Western SF and Afrofuturism (which accommodates Blackness in SF but is not entirely Afrocentric). The genre resonates with audiences because these stories are not mere window-dressing exercises where preconceived SF narratives are relocated to African geographies. Rather, they offer the profound awareness of how African indigenous epistemes feature in the creative construction of futuristic and alternative worlds. African cultures, folklores and philosophies thus inhere to the worlds in which these stories are based, which enforces a radical deconstruction of the very

foundations of Western science and technology, and, by extension, our understanding of genres like science fiction and fantasy itself.

Mothersound operates on similar terms, as the word 'Sauúti' is derived from the Swahili word for sound, which spearheads an entirely new philosophy for inhabitants of this imaginary multiverse. Based on the importance of orality in many indigenous African cultures, sound emerges as a powerful animating force that echoes across the five planets, three moons and two suns in the Sauútiverse. Using sound to (re) build alternate African histories, myths and geographies is deeply affirming as these indigenous modes of existence have been denigrated by colonial encroachment in our earthly lives. As readers, we get to witness how the lost archive of orality thrives in the vastness of the Sauútiverse as every whisper, wind, sonic blast, and intuitive echolocation between various beings and technological instruments alters the material world through its vibrational force, an idea that is most powerfully conveyed in stories like "What Has No Mouth?" (Dare Segun Falowo), "The Way of Baa'gh", (Cheryl S. Ntumy), "The Grove's Lament" (Tobias S. Buckell), "Sina, the Child With No Echo" (Eugen Bacon) "Kalabashing" (J. Umeh) and "Lost in the Echoes" (Xan van Rooyen). Each of the stories in the collection makes the reader grow sound-sensitive, aware of an alternative logic that we otherwise ignore because of our Western inclination towards sight as a primary sense for navigating the world. This is the decolonial labour of Africanfuturism at its best, for it provides channels to experience the world otherwise, while showing us the limitations of Western logic.

Yet, the greater harm inflicted by colonialism is the understanding that we inhabit a *uni*-verse; a world designed for a singular expression of power, being and mind. This push for hegemony has only generated more strife than freedom, which is why many decolonial scholars propose pluriversality as a means of reconstructing human agency against forces of oppression. As expressed by theorists like Walter Mignolo, the pluriverse challenges ideas of universality by understanding that realities co-exist, and that notions of truth – and reality itself – are deeply situated in our individual experiences. This is dramatized most strikingly in *Mothersound*, as our situatedness and orientation changes with each story. We are told stories by human and non-human subjects on different planetary bodies, which becomes a direct illustration of how radically new perspectives emerge from new angles. This pluriversal mode also yields the great pleasure of reading for interconnectedness, as contested narratives arise through carefully interweaved histories and characters. For example, in *Mothersound*, various stories help develop an understanding that history does not look the same on every planet, as some cultures, like the humanoids on Zezépfeni, cast themselves as the heroes, meaning that others must inevitably come to serve as the antagonists in their stories. Yet when residents of Mahwé (see "The Way of Baa'gh") and Wiimb-ó (see "Undulation" and "Muting Echoes, Breaking Tradition") get an opportunity to respond, historical events look rather different. Stepping into the Sauútiverse is stepping out of monomyth, as this collection educates on the partiality, diversity and situatedness of narrated events that go on to shape each other through acts of collaboration and contestation.

Even more significantly, *Mothersound* also translates pluriversal thinking into method as the Sauútiverse is a shared and open world, and only exists through collaborative worldbuilding. The project was first initiated in 2021 by Wole Talabi, Fabrice Guerrier and *Brittle Paper* who then invited established writers into workshops over the span of two years to design and create in the Sauútiverse. As an illustration of this collaborative ethos, the Sauútiverse is already expanding as the imminent arrival of a new anthology, *Sauúti Terrors: The Dark Side*, edited by Eugen Bacon, Stephen Embleton and Cheryl S. Ntumy, has been announced. The latest addition includes an exciting line-up of writers who all use their talents to explore the shadows of the Sauútiverse, and I am excited to witness the Sauútiverse grow in inclusiveness and range.