Policy Insights
140
November 2022

Africa's Women and the Promotion of Peaceful Uses of Nuclear Science and Technology

ISABEL BOSMAN & JO-ANSIE VAN WYK

African perspectives
Global insights

SAIIA
SOUTH AFRICAN INSTITUTE OF INTERNATIONAL AFFAIRS

Executive summary

Nuclear weapons are a threat to international peace and security. And, because these concepts are interconnected, they also threaten development. Science shows that women are more vulnerable to the severe physical consequences of a nuclear explosion. In contrast, the peaceful application of nuclear science and technology holds great potential for enhancing development. Women suffer the most in conditions of war, yet they are underrepresented in multilateral forums on peace and security, especially those that deal with weapons of mass destruction such as nuclear weapons. Historically, African delegations in these forums have the lowest rates of women representation. By including women in these discussions, development and the achievement of international treaty obligations can be enhanced.

Introduction

In Africa, a famous proverb says, 'If you educate a man, you educate an individual, but if you educate a woman, you educate a nation.' While this maxim speaks volumes about the value that women add to society, under-representation and disenfranchisement remain obstacles faced by women in their everyday lives. This is true not only in Africa but also in the global political landscape. Research conducted by the UN Institute for Disarmament Research (UNIDIR) and the International Law and Policy Institute (ILPI) has shown that there is significant gender disparity in vital multilateral forums, especially those that deal with security issues.[1] Researchers found that women are to a large extent under-represented in forums relating to WMD, which include chemical, biological, radiological and nuclear weapons. This shortcoming is linked to the underlying challenge that women are 'under-represented in most parliaments, governing cabinets, peace negotiations, business boards and management teams around the world'.[2]

Looking closely at the specific issue of nuclear disarmament, the UNIDIR and ILPI observed that Africa historically has had the fewest women delegates at Treaty on the Non-Proliferation of Nuclear Weapons (NPT) review conferences from 1980–2015. At best, African delegations at NPT review conferences have been composed of 18% women – well below levels recorded for the Asia-Pacific region (21%), Western Europe and others (30%), Latin America and the Caribbean (37%), Eastern Europe (29%) and the global average of 27%.[3] Its consideration of the gender composition of the NPT First Committee (Disarmament) delegations also revealed that the percentage of women in delegations from Africa has never been higher than 18%. In comparison, the global average is 31%.[4]

1 John Borrie et al., Gender, Development and Nuclear Weapons: Shared Goals, Shared Concerns (Geneva: UN Institute for Disarmament Research and International Law and Policy Institute, 2016), 3.
2 Borrie et al., *Gender, Development and Nuclear Weapons*, 20.
3 Borrie et al., *Gender, Development and Nuclear Weapons*, 21.
4 Borrie et al., *Gender, Development and Nuclear Weapons*, 21.

UN member states all adopted Agenda 2030 for Sustainable Development (also known as the Sustainable Development Goals [SDGs]). In so doing, these states reaffirmed the developmental importance of gender equality and the empowerment of women. And while this commitment is in place at the political level, in practice implementation is often lagging. Thus, much work remains to be done globally to achieve equal participation of women in decision-making, especially in forums relating to peace and security, where participation and the overall discourse remain dominated by men.[5]

Much work remains to be done globally to achieve equal participation of women in decision-making, especially in forums relating to peace and security

Peace and security are two ideals that cannot be separated from efforts to improve development levels globally. As Frances Stewart, former director of the Centre for Research on Inequality, Human Security and Ethnicity, puts it, 'in so far as [policies] enhance security, they will contribute to development' and vice versa, since 'enhanced development increases security'.[6] In this light, the UN Development Programme has come to use the term 'human security', described by the Commission on Human Security as 'embrac[ing] far more than the absence of violent conflict. It encompasses human rights, good governance, access to education and health care, and ensuring that each individual has opportunities and choices to fulfil his or her own potential'.[7] This definition also states that 'freedom from want, freedom from fear and the freedom of the future generations to inherit a healthy natural environment – these are the interrelated building blocks of human, and therefore national security'.[8] In other words, the understanding of security has to be expanded beyond its military attributes, to focus on its more *human* attributes.[9]

Nuclear science and technology (NST) are encountered where traditional security, viewed in military terms, meets human security. When it is used to build atomic weapons, NST can severely threaten human security, leading to grave humanitarian consequences. But, when applied peacefully, it can significantly enhance human security. Previous research by SAIIA has shown that peaceful uses of NST can contribute to achieving the SDGs, agreed to under

5 Borrie et al., *Gender, Development and Nuclear Weapons.*
6 Frances Stewart, "Development and Security" (Working Paper 3, Centre for Research on Inequality, Human Security and Ethnicity, January 2004).
7 Commission on Human Security, cited in Stewart, "Development and Security".
8 Commission on Human Security, cited in Stewart, "Development and Security".
9 Stewart, "Development and Security".

the UN Agenda 2030 in Africa and globally.[10] This includes enhancing gender equality and the empowerment of women and girls, as per SDG 5.[11]

This policy insight explores the absence of women in security-development discourse and practice through an African lens. It does this by looking at the status and vulnerability of African women owing to the continent's nuclear history, the persistent exclusion of women from decision-making and NST opportunities, and the lack of nuclear medicine facilities to treat women. It also explores the continent's international treaty obligations, and the role women can play promoting the peaceful uses of nuclear energy, not only on the continent but also in global forums. In addition, it takes into consideration the current global and continental environments and identifies key areas of opportunity for increasing the inclusion of women in both nuclear-related policy-making processes and NST-related fields.

Women and nuclear in the global environment

UN member states have made official commitments to increase women's political representation and public participation (the SGDs, the Convention on the Elimination of All Forms of Discrimination against Women and the Beijing Platform for Action, to name a few). As a result, they are working not only to advance women's participation and inclusion in decision-making processes at the national level but also to see gender parity reflected at the global level in multilateral forums. These are the forums where decisions with implications for the entire world are being made.[12] In addition, with the adoption of key agreements promoting gender equality and greater participation of women in decision-making processes, many states also set targets, commonly 50%, for the proportion of women represented in leadership positions. However, most are still far away from achieving these goals. While it is true that many individual women are occupying high-level positions and actively participating in key decision-making areas, UN Women finds that 'for women as a whole, the playing field needs to be level, opening opportunities for all'.[13]

Levels of inclusion of women in decision-making processes across the world remain relatively low, in spite of official commitments by states to achieving gender equality. According to data gathered by UN Women, only 24 countries have women heads of state/government. Comparing these statistics with the number of women who have held executive positions of power in the past and looking at the rate of improvement, UN Women calculates that gender equality in these top positions will only be achieved 130 years from now.[14] Breaking it down further to national parliament and local

10 Isabel Bosman and Noel Stott, "Nuclear Science and Technology: Driving Africa's Development" (Policy Insights 109, South African Institute for International Affairs, Johannesburg, June 2021).
11 UN, Department of Economic and Social Affairs, "Sustainable Development Goal 5: Achieve Gender Equality and Empower All Women and Girls", https://sdgs.un.org/goals/goal5.
12 UN Women, "Women's Leadership and Political Participation", 2013.
13 UN Women, "Women's Leadership and Political Participation".
14 UN Women, "Facts and Figures: Women's Leadership and Political Participation", 2021.

government levels, women make up only 25% of parliamentarians worldwide (an improvement of 14% in 27 years), with only four countries reaching or surpassing 50%: Bolivia (53%), Cuba (53%), Rwanda (61%) and the United Arab Emirates (50%). Improving the representation of women in parliament and reaching gender equality in national bodies worldwide will not be achieved for decades at current rates of improvement.[15] The statistics for local government bodies are not much different. In 133 countries considered by UN Women, women make up only 36% of elected local government members, with only two countries reaching 50%.[16] Significant regional differences are also recorded in the number of women in local government (see Table 1).

TABLE 1 WOMEN IN LOCAL GOVERNMENT

Region	Percentage
Western Asia and Northern Africa	18
Eastern and South-Eastern Asia	25
Latin America and the Caribbean	25
Sub-Saharan Africa	29
Oceania	32
Europe and Northern America	35
Central and Southern Asia	41

Source: Compiled by authors based on data from UN Women, "Facts and Figures: Women's Leadership and Political Participation", September 19, 2022

In partnership with the Inter-Parliamentary Union, UN Women has further found that where women have held executive government positions, they tended to be tasked with overseeing affairs traditionally associated with women. Out of 1 451 ministerial portfolios considered in 190 countries, the highest allocation of women ministers is in the 'family/children/youth/elderly/disabled' and 'social affairs' portfolio clusters.[17] Other typical roles assigned to women in executive government positions are related to 'environmental/natural resources/energy, employment/labour/vocational training' and, of course, 'women affairs/gender equality'.[18] None of the women holding executive government positions occupies the security docket.

Expanding women's inclusion in political life and decision-making processes has wide-reaching benefits. It has been proven that including women in governance processes alongside their male counterparts 'broadens the perspective, increases creativity and innovation, diversifies the pool of talents and competences, reduces conflicts, and improves

15 UN Women, "Facts and Figures".
16 UN Women, "Women's Leadership and Political Participation".
17 Inter-Parliamentary Union and UN Women, "Women in Politics: 2020", January 1, 2020.
18 UN Women, "Women's Leadership and Political Participation"; IPU and UN Women, "Women in Politics".

the process of decision-making'.[19] The exclusion of women from decision-making processes on security matters has been owing to the subject of security itself becoming a gendered issue. The absence of women in these deliberations has been evident in, for example, as recent as the First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons (TPNW) in Vienna, Austria in June 2022. In other words, security has been viewed as a masculine matter and outside the realm of the involvement of women. However, as history and scientific evidence attest, women are often the worst impacted by conflict and security issues, making their inclusion even more pertinent. Moreover, women also have a better track record than men when it comes to conflict resolution and the establishment of peace.[20]

The exclusion of women from decision-making processes on security matters has been owing to the subject of security itself becoming a gendered issue

Nowhere has the gendered language of security discourse been more prominent than in the issue of nuclear disarmament. Feminist scholars have been firmly engaged on the matter since the 1980s and consistently point to the fact that nuclear disarmament forums have been and continue to be dominated by men who often view disarmament as 'emasculating', 'feminine' and 'weak'.[21] On 7 July 2017 the UN adopted the TPNW. This treaty entered into force in record time, on 22 January 2021. The TPNW perhaps marks a turning point in efforts to achieve total nuclear disarmament since the NPT came into force in 1970.

The NPT recognises the UN Security Council's Permanent Five – China, France, Russia, the UK and the US – as nuclear weapons states and is aimed primarily at preventing additional states from acquiring nuclear weapons. Another of its key objectives is disarmament, but it fails to provide a clear action plan and deadline for this. As it is centred around nuclear tests conducted before 1 January 1967, India (not party to the NPT), for example, has used this as a loophole, acquiring its nuclear weapons arsenal after the NPT had entered into force.[22] A former signatory, North Korea, withdrew from the NPT (another inherent weakness of the treaty) in 2003 and has also built up a considerable stockpile of nuclear warheads.[23]

19 Jennifer Asuako, "Women's Participation in Decision Making: Why It Matters", UN Development Programme Ghana, December 4, 2020.
20 Borrie et al., *Gender, Development and Nuclear Weapons*.
21 Borrie et al., *Gender, Development and Nuclear Weapons*.
22 Sree Resmi, "Nuclear Supplier Group (NSG) and India's Membership", Clear IAS, February 9, 2020.
23 Center for Arms Control and Non-Proliferation, North Korea, no date, https://armscontrolcenter.org/countries/north-korea/.

Review conferences of states parties to the NPT have been at a deadlock for many years now, and non-nuclear weapons states are slowly losing patience with the failure of nuclear weapons states to reach an agreement on disarmament and the expansion of the number of nuclear weapons states. The TPNW has been a welcome addition to this environment. Like the NPT, it favours non-proliferation, but it goes further to ban nuclear weapons outright. More importantly, the TPNW has a distinct humanitarian component and bestows upon states parties the responsibility to acknowledge the severe damage caused not only by the use of nuclear weapons but also by their testing, and to compensate victims.[24] It also obliges states parties to consider the environmental impact of these weapons, to compensate victims and decontaminate areas exposed to ionising radiation from the use and testing of nuclear weapons.[25] These matters are of major concern to women, since research has shown that women and girls, when exposed to radiation, are disproportionally harmed compared to boys and men.[26]

The humanitarian aspect of the TPNW is a turning point in itself. Carol Cohn, a scholar studying the gendered nature of nuclear disarmament discourse, has noted that 'the emotional, the concrete, the particular, human bodies and their vulnerability, human lives and their subjectivity – all of which are marked feminine' – have been all but ignored in these forums.[27] Research over many years shows that women have experienced these vulnerabilities in the harshest ways, since they are more susceptible to the consequences.[28] With the adoption of the TPNW, these aspects have been given a prime position in the nuclear disarmament discourse.

> The TPNW is the first international treaty to recognise the disproportionate impact on women in its text

Of great significance is that the TPNW is the first international treaty to recognise the disproportionate impact on women in its text.[29] Besides this, the treaty recognises that 'equal, full and effective participation of both women and men is an essential factor for the promotion and attainment of sustainable peace and security' and that its signatories commit to 'supporting and strengthening the effective participation of women in nuclear

24 UN Office for Disarmament Affairs (UNODA), "Treaty on the Prohibition of Nuclear Weapons", 2017.
25 UNODA, "Treaty on the Prohibition".
26 Cynthia Folkers, "Disproportionate Impacts of Radiation Exposure on Women, Children, and Pregnancy: Taking Back our Narrative", *Journal of the History of Biology* 54 (2021) 31–66; Mary Olson, "Atomic Radiation Is More Harmful to Girls and Women than to Boys and Men" (Presentation, 2022 Conference on the Humanitarian Impact of Nuclear Weapons, Vienna, June 20, 2022).
27 Borrie et al., *Gender, Development and Nuclear Weapons*, 16.
28 Folkers, "Disproportionate Impacts of Radiation"; Olson, "Atomic Radiation Is More Harmful".
29 UNODA, "Treaty on the Prohibition".

disarmament'.[30] Further, Article 6 of the TPNW obliges signatories to 'adequately provide age- and gender-sensitive assistance, without discrimination, including medical care, rehabilitation and psychological support, as well as provide for their social and economic inclusion'.[31]

With Russia's invasion of Ukraine and the outbreak of war in February 2022, global focus has once again shifted to the possibility of nuclear war and the quest to avoid it. The use of nuclear weapons anywhere in the world will have catastrophic global consequences that will not remain confined to the area in which they were used. Thus, promoting the peaceful uses of NST goes hand in hand with advocacy for nuclear disarmament and international peace and security. However, as the climate emergency continues to intensify, states are beginning to look for alternative sources of energy as they move away from coal-centred electricity supply chains. Nuclear energy is a possible solution and aligns with one of the more commonly assigned portfolio areas for women executive leaders (energy). Furthermore, since it requires engineers and other highly skilled technical staff, it creates another means by which to include women not only in the policy-making processes related to its establishment but also in the daily running and operating of nuclear power plants.

Women from the nuclear sector can also be included in security forums, especially those seeking to promote non-proliferation and nuclear disarmament

Other peaceful uses of NST include the medical/health sector, which gives women the opportunity to be educated and trained as staff for operating equipment such as radiotherapy and x-ray machines. In addition, advancing nuclear medicine also means that more people, women included, can be given access to life-saving treatment. Finally, many women from the nuclear sector can also be included in security forums, especially those seeking to promote non-proliferation and nuclear disarmament. This aspect is included in the TPNW and recently (June 2022) was reiterated by the First Meeting of States Parties to the TPNW that adopted the Vienna Declaration and Action Plan. It, inter alia, outlines states' commitment to implement the gender provisions of the TPNW by, among others, establishing a national Gender Focal Point to coordinate the implementation of the TPNW's gender provisions. States also undertook to develop guidelines to ensure age- and gender-sensitive assistance for those harmed by the use and testing of nuclear weapons. A third commitment contained in the declaration entails the integration of gender perspectives into states' international cooperation and assistance. Finally, the declaration stresses 'the

30 UNODA, "Treaty on the Prohibition".
31 UNODA, "Treaty on the Prohibition".

importance of the equal, full and effective participation of both women and men in nuclear disarmament diplomacy'.[32]

Nuclear and women in Africa

Africa is home to a regional chapter of the Women in Nuclear Global Organisation, Women in Nuclear Africa (WiN Africa). As a non-governmental organisation, WiN Africa works to 'represent women in all nuclear related-forums within Africa internationally and provide mentoring solutions for problems hindering progress of women in the nuclear field'.[33] The organisation encourages women and girls to take up career paths in the field of NST and advocates for its peaceful application. NST can aid development owing to its benefits in the health and agriculture sectors. Here, the technology is used to treat and diagnose a variety of illnesses and physical conditions in both humans and animals, including cancer, and to preserve food, protect crops and conduct pest control.[34]

The prevailing global and African trend is that women remain excluded from nuclear medicine and its benefits.[35] In Africa, cervical cancer is the most common female cancer, but the continent lacks the human resources, facilities and equipment to prevent and treat this.[36] A notable sign of progress regarding the inclusion of women in NST and relevant decision-making has been a series of webinars hosted by the African Commission on Nuclear Energy during 2019 and 2021 to highlight and promote their role.

In Africa, cervical cancer is the most common female cancer, but the continent lacks the human resources, facilities and equipment to prevent and treat this

Although an atomic bomb has never been used on an African country, the continent is nevertheless familiar with these weapons. Its people have first-hand knowledge of the dangerous effects of exposure to ionising radiation resulting from a nuclear explosion. South Africa is commonly cited as a prime example of nuclear disarmament, since it

32 UNODA, "First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons: Draft Vienna Action Plan, TPNW/MSP/2022/CRP.7", June 22, 2022.

33 Soheir Saad Korraa, "WiN Africa: One Voice for Education, Equality, Peace and Progress" (Presentation, "Women's Contributions to Building Strong State Systems of Accounting for and Control of Nuclear Material in Africa", March 8, 2021), 3.

34 Bosman and Stott, "Nuclear Science and Technology".

35 Laura Evangelista et al., "Gender Issues in the Nuclear Medicine Community: Results from a Survey Promoted by the EANM Women Empowerment Task Force", *European Journal of Nuclear Medicine and Molecular Imaging* 49, no. 7 (2022): 2106–2112.

36 John Brittain and Nicole Jawerth, "No Woman Should Die from Cervical Cancer in Africa", *IAEA News*, September 24, 2020.

voluntarily decided to end its nuclear weapons programme and rid itself of these harmful weapons in 1989. Libya is another African example of a state that voluntarily terminated its nuclear weapons programme, a matter that was verified by the IAEA in 2004.[37] The South African example is what many people commonly associate with nuclear weapons and the African continent. What is seemingly missing from much of this dialogue is the 17 nuclear weapons tests (atmospheric and underground) conducted by France in Algeria between 1960 and 1966 in the Hamoudia zone (reserved for atmospheric tests) and the In Ekker zone (reserved for underground tests).[38]

Victims of these French nuclear tests are still seeking compensation. It is not known exactly how their health has been impacted following exposure to ionising radiation, as no official studies have since been conducted or released. In June 2022 it was reported at a side-event during the first meeting of states parties to the TPNW in Vienna that such studies would finally be conducted by the International Committee of the Red Cross in partnership with the Algerian Red Crescent Society.[39] Science, as indicated, has proven that women are biologically more susceptible to the most harmful effects of ionising radiation, and these studies will hopefully provide insight into how these tests affected women in Algeria specifically.

Jean-Marie Collin and Patrice Bouveret, who have produced a comprehensive study on nuclear waste left behind by the French in Algeria, note that these weapons tests were unique, since it was 'the only state to have gained independence while its coloniser was conducting tests on its territory'.[40] In fact, of France's 17 nuclear weapons tests, only six were conducted before Algeria gained independence with the signature of the Evian Accords in March 1962.[41] Relations between Algeria and France have been constrained since these agreements and led to 'the environmental and health impacts of Saharan nuclear tests never really giving rise to official and scientific publications or to cooperation on this issue, either on the part of French or Algerian political authorities'.[42]

Large amounts of radioactive and non-radioactive waste were buried in the sand in the vast Sahara Desert surrounding the areas where nuclear tests were conducted, but these sites have not been submitted to 'checks for radioactivity and are even less the subject of campaigns to raise awareness among local residents about the health risks'.[43] Furthermore, the impacts of the nuclear tests were not only felt in Algeria. Collin and Bouveret report that four of the atmospheric nuclear tests conducted by France in Algeria 'caused deposits of radioactive particles in the Sahara Desert, but also, as revealed in 2014, over North Africa

37 International Atomic Energy Agency, *IAEA Verification of Libya's Nuclear Programme*, Staff Report (Vienna: IAEA, March 10, 2004).
38 Jean-Marie Collin and Patrice Bouveret, "The Waste from French Nuclear Tests in Algeria: Radioactivity in the Sand – Analysis with Regard to the Treaty on the Prohibition of Nuclear Weapons", Heinrich Böll Foundation, July 2020.
39 The authors attended the first Meeting of States Parties to the TPNW in Vienna in June 2022.
40 Collin and Bouveret, "The Waste from French Nuclear", 7.
41 Collin and Bouveret, "The Waste from French Nuclear".
42 Collin and Bouveret, "The Waste from French Nuclear", 8.
43 Collin and Bouveret, "The Waste from French Nuclear", 14.

in its entirety and even in sub-Saharan Africa', with radioactive fallout also reported in parts of Europe in the first two weeks following the first test in 1960.[44]

In recent years, the number of African countries interested in including nuclear power as a source of electricity has been on the rise. Climate change, the need to look for alternative energy sources and uneven electricity access on the continent are driving this interest. According to data from 2021, only 46% of the population in sub-Saharan Africa has access to electricity. Those in rural areas are the worst affected, with 471 million people still without electricity – compared with 97 million people in urban areas in the region.[45] Electricity generation is an example of the peaceful application of NST. It is also another area for the promotion of the inclusion of women through education and training. Additionally, the expansion of electricity access can benefit women in specific ways, since research has shown that women in Africa have unequal access to and use of electricity and that the issue of gender is not added to electricity provision.[46] This is, for example, one of the objectives of the US government's 'Power Africa' initiative, whereby it promotes and supports women's role in and access to electricity and the broader power sector.[47]

The number of African countries interested in including nuclear power as a source of electricity has been on the rise

Through the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba), the continent has declared itself a nuclear-weapon-free zone. The treaty promotes the peaceful uses of NST and recognises its added value for improving development in Africa. Due to this status, Africa is often regarded as a kind of moral authority on the issue of nuclear disarmament, and participation by Africans in these forums is high. However, as the introduction indicated, the continent still falls short in including women in high-level positions in such spaces.

During the Nuclear Ban Forum hosted by the International Campaign to Abolish Nuclear Weapons in Vienna in June 2022, the authors attended one of the sessions on gender and nuclear disarmament. Africa was represented by a series of experts, including in the panel discussion on gender and nuclear disarmament; however, these were overwhelmingly male. When asked where all the African women were and what could be done to better facilitate their inclusion and participation, one expert advised that men should make the circle bigger, so to speak. They should not only encourage women counterparts to

44 Collin and Bouveret, "The Waste from French Nuclear", 16.
45 Tamara White, "COVID-19 and Poverty's Impact on Electricity Access in sub-Saharan Africa", Brookings, July 12, 2021.
46 Lauren Clark, "Powering Households and Empowering Women: The Gendered Effects of Electrification in Sub-Saharan Africa", *Journal of Public and International Affairs*, May 5, 2021.
47 USAID, "Power Africa: Leveraging Partnerships to Increase Access to Power in sub-Saharan Africa", June 22, 2022.

participate but also help to remove the barriers of access preventing their full inclusion. Interestingly, the expert also noted that more African women should have been present at the forum itself and pointed to the issue of visas, stating that Africans, in general, are often not granted the necessary visas to facilitate their participation in international forums.

Conclusion

Women's absence from and under-representation at forums on nuclear disarmament, nuclear non-proliferation and the peaceful application of nuclear energy continue despite global and African initiatives to achieve gender equality. One of the innovations of the TPNW is to stress the skewed humanitarian impact of radiation exposure on women compared to men. It also obliges states to include women in deliberations on nuclear matters and adopt gender-appropriate mitigation and compensatory measures.

> Women's historical exposure to French nuclear tests in the Sahara Desert remains opaque, under-researched and uncompensated

Women's historical exposure to French nuclear tests in the Sahara Desert remains opaque, under-researched and uncompensated. Women's involvement in nuclear disarmament, nuclear non-proliferation and the peaceful uses of nuclear energy can contribute to global and African nuclear disarmament and developmental agendas such as the UN SDGs and the AU Agenda 2063. Besides this, women stand to benefit most from the benefits of the peaceful uses of nuclear energy in the fields of health, electricity generation, education, and agriculture.

Returning to the African proverb cited earlier, the solution to the promotion of the peaceful uses of nuclear science and technology in Africa could be rephrased to, 'If you educate and include women on the peaceful uses of nuclear science and technology, it adds to the achievement of development goals for their nation and, indeed, to the achievement of international treaty obligations.'

Recommendations

- African states' compliance with treaty obligations should be prioritised.
- Gender empowerment at international, continental and national levels can be improved by increasing women's representation in the nuclear sector.
- Gender equality in the nuclear sector can be improved by creating and investing in related education opportunities for women.
- Establishing and investing in nuclear medicine facilities across Africa should be prioritised, as these directly contribute to enhancing women's health.
- Women and national populations can be empowered through public education on the peaceful uses of NST.
- More should be done to include women in delegations attending multilateral forums.

Authors

Isabel Bosman

holds an MA in Political Studies from the University of the Witwatersrand. Her research interests include the nexus between technology and politics, biometrics, electronic voting, elections and democracy. Before joining SAIIA in 2021, she was a Konrad Adenauer Foundation scholar. She has worked on SAIIA's Atoms for Development project, which focuses on the peaceful use of nuclear energy in Africa and issues of nuclear energy governance.

Jo-Ansie van Wyk

has completed a DPhil (International Relations) on South Africa's post-apartheid nuclear diplomacy, and has published on, among others, nuclear diplomacy, South Africa's nuclear diplomacy, disarmament, non-proliferation, the International Atomic Energy Agency (IAEA), nuclear medicine and the Pelindaba Treaty. She is Fulbright Alumna (University of Delaware) and a member of the South African Academy for Science and Art. From June 2010 to October 2014, she served on the South African Minister of Trade and Industry's South African Council for Space Affairs (SACSA). She is currently Professor of International Politics, Department of Political Sciences, at the University of South Africa.

Acknowledgement

SAIIA gratefully acknowledges the support of the Norwegian Ministry of Foreign Affairs for supporting the Atoms for Africa's Development project and this publication.

About SAIIA

SAIIA is an independent, non-government think tank whose key strategic objectives are to make effective input into public policy, and to encourage wider and more informed debate on international affairs, with particular emphasis on African issues and concerns.

SAIIA's policy insights are situation analysis papers intended for policymakers, whether in government or business. They are designed to bridge the space between policy briefings and occasional papers.

Cover image

Scientist analysing lab results (Morsa Images)

Please note that all currencies are in US$ unless otherwise indicated.

African perspectives.
Global insights.

Jan Smuts House, East Campus, University of the Witwatersrand
PO Box 31596, Braamfontein 2017, Johannesburg, South Africa
Tel +27 (0)11 339-2021 • Fax +27 (0)11 339-2154
www.saiia.org.za • info@saiia.org.za