



Institute for Security Studies

POLICY BRIEF

RECOMMENDATIONS

- African states need to continue recognising the common interests they share in nuclear matters, especially in relation to uranium mining and the peaceful pursuit of nuclear energy, and need to further cooperate both bilaterally and multilaterally to strengthen nuclear safety and security on the continent.
- The most effective means of achieving such cooperation is through treaties, forums and bodies already in place such as AFRA, AFCONE and the FNRBA, and states need to ensure that these remain strong and well supported.
- The same support needs to be afforded to international treaties such as the CPPNM and its amendment, the ICSANT and others.
- African states need to encourage other African states to not only sign and ratify existing nuclear safety and security conventions, but also to domesticate these international and regional agreements into domestic legislation.
- Those African states that struggle or are unable to ratify or submit to international agreements as a result of either financial or technical difficulties need to approach organisations or agencies such as the IAEA to request support or assistance.
- The six African states that attended the 2012 Seoul Summit need to meet with various other African states to potentially develop an 'African perspective' on nuclear safety and security that could be presented and pushed for at the 2013 IAEA International Conference on Nuclear Security. Similar approaches and processes could and should be developed for the 2014 Nuclear Security Summit.

To infinity and beyond Africa's role in shaping the international nuclear security agenda

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SUMMARY

Nuclear security will once again take centre stage in July 2013 when the International Atomic Energy Agency (IAEA) hosts a conference on enhancing global efforts to achieve effective security of nuclear and other radioactive materials. Although the IAEA has been supporting states to improve their national nuclear security measures since the 1970s, this conference represents a unique opportunity for the agency to reinforce its leading role in this field, as well as for various stakeholders to provide direct input into the IAEA's Nuclear Security Plan for 2014–2017.

As the nuclear security summit process winds down, with the third and (probably) final summit due to take place in the Netherlands in 2014, the international community is looking for a mechanism that can drive the nuclear security agenda forward in a more inclusive way. This is especially important for African states, which, thus far, have had limited opportunity to engage in global debates on nuclear security, but which certainly have the potential to play a much bigger role in future.

This policy brief argues that the momentum generated by the nuclear security summit process is merely a starting point for improving nuclear security, and contends that international bodies, such as the IAEA, together with governmental and non-governmental experts, must now take this process forward. Recent developments in African states in the field of nuclear security are also discussed as examples of the important role that non-nuclear weapon states continue to play in enhancing global nuclear security, despite facing immense socio-economic and developmental challenges.

NUCLEAR SECURITY SUMMIT PROCESS

In March 2012, 53 heads of state and government, as well as representatives of various intergovernmental organisations including the IAEA, met in Seoul, South Korea for the second Nuclear Security Summit to discuss various issues relating to nuclear safety and security.¹ As with the 2010 Nuclear Security Summit, the outcome of the 2012 summit was once again a communiqué and detailed 'actions' voluntarily acceded to by all states present

at the conference. The communiqué focussed heavily on nuclear safety and security and laid out specific domestic and international measures that states ought to adopt, many of which were substantially reliant on measures adopted in 2010. Just as with the 2010 communiqué, emphasis was placed on various existing international documents such as the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) and the Convention on the Physical Protection of Nuclear Materials (CPPNM), as well as various instruments put forward by the IAEA and the United Nations (UN).²

The 2010 Nuclear Security Summit was criticised for focusing almost exclusively on nuclear security and ignoring other areas of concern such as nuclear safety, nuclear disarmament and nuclear non-proliferation.³ The 2012 summit sought to rectify this by focussing on 11 specific actions, the most notable being:

- Moving away from using highly enriched uranium (HEU) globally
- Dealing with spent fuel and radioactive waste
- Addressing the threat of radiological terrorism
- Strengthening the physical protection of nuclear facilities while addressing safety and security concerns at these facilities
- Increasing contributions to the IAEA's Nuclear Security Fund
- Bringing the CPPNM into force by 2014
- Noting the upcoming IAEA 2013 conference to be held in Vienna, Austria
- Emphasising the increasing need to acknowledge and address the threat of information security regarding nuclear affairs⁴

The 2012 summit was hailed for providing timelines for advancing the various nuclear security measures listed above, even though all of the measures remain voluntary.⁵ It is hoped that the 2014 summit will build on the progress of the previous two summits and will also take into account and support the outcomes of the 2013 IAEA International Conference on Nuclear Security.

While it can be argued that the summit process has played an important role in driving the international nuclear security agenda forward, this role should be seen within a broader context. The first summit in 2010 was a US-led initiative and a limited number of countries were invited to participate. Although the 2012 summit increased the number of participating countries from 47 to 53, it is clear that the purpose of the summits is to encourage strategic countries to take a lead in enhancing nuclear security, rather than agree to a global understanding of what nuclear security actually entails. Another shortcoming of the summit process is that the outcome documents produced do not obligate participating states to implement any of the commitments. Therefore, the nuclear security summits should be viewed as part of a group of nuclear security

initiatives, including the G8 Global Partnership and the Proliferation Security Initiative (PSI), rather than as the only forum to discuss such matters.

IAEA INTERNATIONAL CONFERENCE ON NUCLEAR SECURITY

The IAEA International Conference on Nuclear Security, due to take place from 1–5 July 2013, provides stakeholders with a unique opportunity to discuss, review and exchange information to better enhance international nuclear security. IAEA member states identified the agency as a key player in nuclear security at the 2012 IAEA General Conference, as the agency regularly participates in events on nuclear security. The IAEA also continues to develop 'comprehensive nuclear security guidance documents' and provides 'assistance to member states in the implementation of this guidance' on request from member states.⁶ Four key themes will be discussed at the conference:

- The past, present and future of nuclear security worldwide
- Security for nuclear and other radioactive material and their associated facilities
- Security for nuclear and other radioactive material out of regulatory control
- Cross-cutting areas of nuclear security⁷

According to the IAEA, the forthcoming conference not only provides experts and policymakers with a forum to exchange ideas, but inputs made will also be considered for inclusion in the IAEA's 2014–2017 Nuclear Security Plan, which is instrumental in determining the IAEA's priorities for the next four years.⁸ This plan represents a road map for countries aiming to improve their nuclear security and provides a platform to access technical expertise provided by the IAEA.

Although too much emphasis should not be placed on the outcome document of the conference itself, the momentum generated by the conference, as well as the development of the IAEA's nuclear security plan, will have a broad impact on shaping the future nuclear security architecture. This is predominantly due to the enhanced role that the IAEA will have to play in monitoring nuclear security developments worldwide as more countries, including those in Africa, incorporate peaceful uses of nuclear technology into their socio-economic and developmental plans.

RECENT NUCLEAR SECURITY DEVELOPMENTS IN AFRICA

At the 2010 Nuclear Security Summit only five African states were present (Algeria, Egypt, Morocco, Nigeria and South Africa) and although only one extra state (Gabon) was added to the list of African representatives in 2012,

this increase was welcomed.⁹ The participation of African states in international conferences, summits and treaties has often been described as 'marginal' and although this may be the case in terms of representation, it would be disingenuous to assume that this is as a result of a lack of political will on the part of African states and leaders.¹⁰

Although African states do realise the dangers associated with the proliferation of nuclear materials and weapons, domestic and regional concerns often force these states to divert attention and resources away from nuclear affairs to those of a domestic and/or regional nature. Given that over 30 African states are currently in the process of uranium exploration and that nearly half of the states on the continent have declared their desire to develop nuclear power for peaceful purposes, the need for African participation in international nuclear affairs has never been greater.¹¹

To their credit, African states have responded to these calls and have made significant improvements and commitments to nuclear safety and security since the 2010 Nuclear Security Summit. The 2012 summit identified three main issues to be discussed, namely 'cooperative measures to combat the threat of nuclear terrorism', the 'protection of nuclear materials and related facilities' and the 'prevention of illicit trafficking of nuclear materials'.¹² Since before the 2012 summit, African states have taken steps to improve nuclear safety and security on the continent.

South Africa made no formal commitments at the 2010 summit,¹³ but in August 2011 the country delivered a shipment of 6,3kg of US-source highly enriched uranium from its Safari 1-reactor to the US for secure storage. The shipment was delivered as part of the US Department of Energy's National Nuclear Security Administration's Global Threat Reduction Initiative, 'which aims to reduce and secure vulnerable radioactive materials held at civilian sites around the world'.¹⁴

In that same year (2010) Lesotho, Morocco and Tunisia ratified the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) while the Democratic Republic of Congo (DRC) acceded to the Convention.¹⁵ In 2011 Algeria acceded to ICSANT and the following year (2012) both Côte d'Ivoire and Nigeria also acceded.¹⁶ In 2011 the Joint Convention on Spent Fuel and Radioactive Waste Management entered into force for Ghana and Mauritania and in 2012 Chad, the Comoros, Guinea-Bissau and Namibia deposited their instruments of ratification with the African Union (AU) for the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba), and Togo became a member state of the IAEA.¹⁷

The 2012 summit placed a substantial amount of emphasis on accession to various international nuclear treaties and obligations such as the ICSANT and the CPPNM.¹⁸ As the outline above shows, many African states had taken measures before the summit to ensure that they complied with concerns raised in the 2010 summit's communiqué.¹⁹

The African continent has also sought to advance nuclear safety and security through various bodies such as the African Commission on Nuclear Energy (AFCON) under the Treaty of Pelindaba and the Forum of Nuclear Regulatory Bodies in Africa (FNRBA), and through the African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology (AFRA). The importance of the above-mentioned bodies cannot be over-emphasised as each serves a very specific purpose in the nuclear safety and security arena.

AFCON serves as the implementation body for the Treaty of Pelindaba and is mandated with 'ensuring compliance with the obligations under the Treaty' whereas the FNRBA, which was launched in 2009, acts as a regulatory forum to monitor the increased use of radioactive materials for peaceful uses.²⁰ The FNRBA has been described as a 'positive step in strengthening nuclear safety and security in Africa' as it enables various African states to cooperate and exchange regulatory experiences by means of mutual cooperation, thereby further strengthening and enhancing nuclear safety and security on the African continent.²¹ Such cooperation is exactly the type that US President Barack Obama was alluding to when he called on the international community to 'act with a sense of purpose without delay' to ensure that all unsecured nuclear materials are secured and that nuclear safety and security is enhanced globally.²²

CONCLUSION

Given the moderate success of the 2010 and 2012 nuclear security summits, it is anticipated that expectations could be very high for the final outcome of the 2014 Nuclear Security Summit. The 2010 summit succeeded in drawing the international community's attention to matters of nuclear security and the 2012 summit built on these successes and carried various others further. Although the summit process should be commended for placing greater emphasis on improving nuclear security worldwide, numerous concerns remain and need further examination. These include the need to find a balance between securing nuclear and radioactive resources without inhibiting access to peaceful uses of materials, especially for developing countries.

See page 1 for recommendations to assist African states in the furthering of nuclear safety and security in preparation for the 2013 IAEA nuclear security conference and the 2014 Nuclear Security Summit in the Netherlands.

See Table 1 on the next page, which lists the status of treaties and conventions related to nuclear security.

Table 1 Status of treaties and conventions related to nuclear security

	African state	1540 Report	NPT	IAEA CSA	IAEA AP	Treaty of Pelindaba	CTBT	Joint Convention	CPPNM	CPPNM Amendment	Algiers Convention	ICSANT
1.	Algeria	X	X	X		X	X		X	X	X	X
2.	Angola	X	X	X	X							X
3.	Benin	X	X			X	X					X
4.	Botswana		X	X	X	X	X		X			
5.	Burkina Faso	X	X	X	X	X	X		X		X	
6.	Burundi		X	X	X	X	X				X	
7.	Cameroon	X	X	X		X	X		X			
8.	Cape Verde		X				X		X		X	
9.	Central African Republic		X	X	X		X		X			X
10.	Chad		X	X	X	X	X				X	
11.	Comoros		X	X	X	X			X		X	X
12.	Congo (Republic of)	X	X	X	X						X	
13.	Côte d'Ivoire	X	X	X		X	X		X			X
14.	Democratic Republic of Congo	X	X	X	X		X		X		X	X
15.	Djibouti	X	X				X		X		X	
16.	Egypt	X	X	X							X	
17.	Equatorial Guinea		X			X			X		X	
18.	Eritrea	X	X				X				X	
19.	Ethiopia	X	X	X		X	X				X	
20.	Gabon	X	X	X	X	X	X	X	X	X	X	X
21.	Gambia		X	X	X	X					X	
22.	Ghana	X	X	X	X	X	X	X	X	X	X	
23.	Guinea		X			X	X		X		X	
24.	Guinea-Bissau		X			X			X		X	X
25.	Kenya	X	X	X	X	X	X		X		X	
26.	Lesotho		X	X	X	X	X		X		X	X
27.	Liberia		X				X					
28.	Libya	X	X	X	X	X	X		X		X	X
29.	Madagascar	X	X	X	X	X	X		X		X	
30.	Malawi		X	X	X	X	X				X	X
31.	Mali		X	X	X	X	X		X		X	X
32.	Mauritania		X	X	X	X	X	X	X	X	X	X
33.	Mauritius	X	X	X	X	X					X	
34.	Morocco	X	X	X	X		X	X	X		X	X
35.	Mozambique		X	X	X	X	X		X		X	
36.	Namibia	X	X	X	X	X	X		X		X	
37.	Niger	X	X	X	X		X		X	X	X	X
38.	Nigeria	X	X	X	X	X	X	X	X	X	X	X
39.	Rwanda	X	X	X	X	X	X		X		X	
40.	São Tomé and Príncipe		X									
41.	Senegal	X	X	X		X	X	X	X		X	
42.	Seychelles	X	X	X	X		X		X		X	
43.	Sierra Leone	X	X	X			X					
44.	Somalia		X									
45.	South Africa	X	X	X	X	X	X	X	X		X	X
46.	South Sudan (Republic of)										X	
47.	Sudan	X	X	X			X		X		X	
48.	Swaziland		X	X	X	X			X			
49.	Tanzania (United Republic of)	X	X	X	X	X	X		X		X	
50.	Togo	X	X	X	X	X	X		X		X	
51.	Tunisia	X	X	X		X	X		X		X	X
52.	Uganda	X	X	X	X	X	X		X		X	
53.	Zambia		X	X		X	X					
54.	Zimbabwe		X	X		X						
	TOTAL	32	53	43	33	37	41	7	36	5	43	17

NOTES

- 2012 Seoul Nuclear Security Summit, *Overview*, http://www.thenuclearsecuritysummit.org/eng_info/overview.jsp (accessed 12 February 2013).
- 2012 Seoul Nuclear Security Summit, *Key Facts on the 2012 Seoul Nuclear Security Summit*, <http://www.thenuclearsecuritysummit.org/userfiles/Key%20Facts%20on%20the%202012%20Seoul%20Nuclear%20Security%20Summit.pdf> (accessed 12 February 2013).
- 2012 Seoul Nuclear Security Summit, *Key Facts on the 2012 Seoul Nuclear Security Summit*, <http://www.thenuclearsecuritysummit.org/userfiles/Key%20Facts%20on%20the%202012%20Seoul%20Nuclear%20Security%20Summit.pdf>; 2012 Seoul Nuclear Security Summit, *Overview*, http://www.thenuclearsecuritysummit.org/eng_info/overview.jsp (accessed 12 February 2013).
- 2012 Seoul Nuclear Security Summit, *Key Facts on the 2012 Seoul Nuclear Security Summit*, <http://www.thenuclearsecuritysummit.org/userfiles/Key%20Facts%20on%20the%202012%20Seoul%20Nuclear%20Security%20Summit.pdf> (accessed 12 February 2013).
- 2012 Seoul Nuclear Security Summit, *Key Facts on the 2012 Seoul Nuclear Security Summit*, <http://www.thenuclearsecuritysummit.org/userfiles/Key%20Facts%20on%20the%202012%20Seoul%20Nuclear%20Security%20Summit.pdf> (accessed 12 February 2013).
- International Atomic Energy Agency (IAEA), *International Conference on Nuclear Security: Enhancing Global Efforts*, <http://www-pub.iaea.org/iaeameetings/43046/International-Conference-on-Nuclear-Security-Enhancing-Global-Efforts> (accessed 28 February 2013).
- International Atomic Energy Agency (IAEA), *International Conference on Nuclear Security: Enhancing Global Efforts*, <http://www-pub.iaea.org/iaeameetings/43046/International-Conference-on-Nuclear-Security-Enhancing-Global-Efforts> (accessed 28 February 2013).
- International Atomic Energy Agency (IAEA), *International Conference on Nuclear Security: Enhancing Global Efforts*, <http://www-pub.iaea.org/iaeameetings/43046/International-Conference-on-Nuclear-Security-Enhancing-Global-Efforts> (accessed 28 February 2013).
- 2012 Seoul Nuclear Security Summit, *Key Facts on the 2012 Seoul Nuclear Security Summit*, <http://www.thenuclearsecuritysummit.org/userfiles/Key%20Facts%20on%20the%202012%20Seoul%20Nuclear%20Security%20Summit.pdf> (accessed 12 February 2013).
- Amelia Broodryk and Noel Stott, *Securing Africa's Nuclear Resources*, Institute for Security Studies, March 2011, 14.
- Scott Firsing, *Africa, Nuclear Security and the 2012 Summit*, <http://www.internationalpolicydigest.org/2012/02/29/africa-nuclear-security-and-the-2012-summit/> (accessed 4 March 2013).
- 2012 Seoul Nuclear Security Summit, *Overview*, http://www.thenuclearsecuritysummit.org/eng_info/overview.jsp (accessed 12 February 2013).

- ¹³ Scott Firsing, *Africa, Nuclear Security and the 2012 Summit*, <http://www.internationalpolicydigest.org/2012/02/29/africa-nuclear-security-and-the-2012-summit/> (accessed 4 March 2013).
- ¹⁴ World Nuclear News, *US-origin HEU returned from South Africa*, 19 August 2011, http://www.world-nuclear-news.org/RS-US_origin_HEU_returned_from_South_Africa-1908114.html (accessed 4 March 2013).
- ¹⁵ United Nations Treaty Collection, *International Convention for the Suppression of Act of Nuclear Terrorism*, New York, 2005, http://treaties.un.org/Pages/ViewDetailsIII.aspx?&src=UNTSO&mtdsg_no=XVIII-15&chapter=18&Temp=mtdsg3&lang=en#Participants (accessed 4 March 2013).
- ¹⁶ United Nations Treaty Collection, *International Convention for the Suppression of Act of Nuclear Terrorism*, New York, 2005, http://treaties.un.org/Pages/ViewDetailsIII.aspx?&src=UNTSO&mtdsg_no=XVIII-15&chapter=18&Temp=mtdsg3&lang=en#Participants (accessed 4 March 2013).
- ¹⁷ African Union, *List of Countries which have Signed, Ratified/ Acceded to the African Nuclear-Weapons-Free-Zone Treaty (Treaty of Pelindaba)*, http://www.au.int/en/sites/default/files/pelindaba%20Treaty_0.pdf?OpenView ; International Atomic Energy Agency (IAEA), *Joint Convention on Spent Fuel and Radioactive Waste Management: Status*, http://www.iaea.org/Publications/Documents/Conventions/jointconv_status.pdf; International Atomic Energy Agency (IAEA), *Member States of the IAEA*, <http://www.iaea.org/About/Policy/MemberStates/>; United Nations Treaty Collection, *International Convention for the Suppression of Act of Nuclear Terrorism*, New York, 2005, http://treaties.un.org/Pages/ViewDetailsIII.aspx?&src=UNTSO&mtdsg_no=XVIII-15&chapter=18&Temp=mtdsg3&lang=en#Participants (accessed 4 March 2013).
- ¹⁸ 2012 Seoul Nuclear Security Summit, *Seoul Communiqué*, http://www.thenuclearsecuritysummit.org/userfiles/Seoul%20Communique_FINAL.pdf (accessed 5 March 2013).

- ¹⁹ 2012 Seoul Nuclear Security Summit, *Seoul Communiqué*, http://www.thenuclearsecuritysummit.org/userfiles/Seoul%20Communique_FINAL.pdf (accessed 5 March 2013).
- ²⁰ Amelia Broodryk, *Seoul Searching: Africa's role in the 2012 Nuclear Security Summit*, Institute for Security Studies, August 2011; Nuclear Threat Initiative, *African Nuclear Weapons Free Zone (Treaty of Pelindaba)*, <http://www.nti.org/treaties-and-regimes/african-nuclear-weapon-free-zone-anwzfz-treaty-pelindaba-treaty/> (accessed 6 March 2013).
- ²¹ Amelia Broodryk, *Seoul Searching: Africa's role in the 2012 Nuclear Security Summit*, Institute for Security Studies, August 2011 (accessed 6 March 2013).
- ²² The White House Office of the Press Secretary, *Remarks by President Barack Obama, Hradcany Square, Prague, Czech Republic, 5 April 2009*, http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered (accessed 6 March 2013).

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