



FNRBA

CURRENT STATUS, ACTIVITIES AND DEVELOPMENTS OF FNRBA

**PRESENTED AT THE
1st GNSSN STEERING COMMITTEE (SC) MEETING, IAEA, VIENNA,
2ND APRIL 2012**

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ACTIVITIES INVOLVING RADIATION SOURCES IN THE REGION

- Medical Applications
- Industrial Applications
- Research Reactor Operation - 8
- Uranium Mining and Milling – increasing
- **Nuclear Power Generation**
- **Coming into force of the Africa Nuclear Weapon Free Zone Treaty** (the Pelindaba Treaty) August 2009 & establishment of AFCONE, May 04, 2011, under AUC



CHALLENGES TO RADIATION SAFETY, NUCLEAR SAFETY AND SECURITY

- Legacy practices
- Countries with no legislation
- Legislation exists but not implemented
- Legislation is implemented but no regulatory body
- Regulatory body exists but NOT effectively independent of promotional organizations



FNRBA – A Regional Response

- to provide for the enhancement, strengthening and harmonisation of the radiation protection, nuclear safety and security regulatory infrastructure and framework among the members of FNRBA;
- to provide for mechanisms for the FNRBA to be an effective and efficient internationally recognized forum for the exchange of regulatory experiences and practices among the nuclear regulatory bodies in Africa.



FNRBA OBJECTIVES

The objectives of FNRBA are to:

- Provide a platform for fostering regional cooperation;
- Provide for the exchange of expertise, information and experience;
- Provide opportunity for mutual support and coordination of regional initiatives; and
- Leverage the development and optimisation of resource utilization.



Members of the Forum

- The **Forum** is open to all Nuclear Regulatory Bodies in the region and it is **voluntary**. The **Forum** has grown from twenty-eight Member States to thirty-three in just two years.



FNRBA MEMBERSHIP

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open to all national nuclear regulatory bodies in Africa on a voluntary basis.

1. Algeria
2. Angola
3. Botswana
4. Burkina Fasso
5. Cameroon
6. CoteD'Ivoir
7. DRC
8. Egypt
9. Ethiopia
10. Gabon
11. Ghana
12. Kenya
13. Libya
14. Madagascar
15. Malawi
16. Mali
17. Mauritania
18. Mauritius
19. Morocco
20. Mozambique
21. Namibia
22. Niger
23. Nigeria
24. Senegal
25. Seychelles
26. Sierra Leone
27. South Africa
28. Sudan
29. Tanzania
30. Tunisia
31. Uganda
32. Zambia
33. Zimbabwe



FNRBA: ORGANS

The FNRBA shall function through the following organs –

- The Plenary;
- The Steering Committee; and
- The Thematic Working Groups (TWGs).

- **THE PLENARY**

- All heads of Member Regulatory Bodies
- Meets once a year in Africa



STEERING COMMITTEE

- Nine-member Steering Committee
 - Chairperson
 - Deputy Chairperson
 - General Secretary
 - Deputy General Secretary
 - One Representative each from the five sub-regions
- Meets twice a year:
 - First Quarter in Africa
 - Third Quarter in Vienna



The Steering Committee

- Pursuant to Article 7.2.5, of the FNRBA *Charter*, the Steering Committee is mandated **to present an Annual Report** of the FNRBA to the Plenary, outlining the activities carried out since the previous **Plenary Meeting**. The Steering Committee has been able to meet twice since the Second Plenary Meeting, once in Vienna on the margins of the IAEA General Conference and one during the annual Plenary Meeting.



The Steering Committee

RESOLUTION 03/003: COOPERATION WITH OTHER ORGANIZATIONS – Bamako 2011

- Provided Mandate to the Steering Committee to cooperate with other organizations, donors and governments to pursue opportunities for partnership based on mutual benefits and a defined framework for cooperation and strategic relationships



TECHNICAL WORKING GROUPS

- | TWG | ACTIVITY | COORDINATOR |
|------------|-------------------------------------------------------------------|--------------------|
| • TWG1 | Upgrading Legislative and Regulatory Infrastructure | Ethiopia |
| • TWG2 | Upgrading of Radiation Safety in Radiotherapy | Tunisia |
| • TWG3 | Regulatory Framework for Licensing of NPP | South Africa |
| • TWG4 | Upgrading of Radiation Safety in Uranium Mining and Milling | Namibia |
| • TWG5 | Upgrading of Nuclear Safety in Research Reactor | Ghana |
| • TWG6 | Education and Training, and Knowledge Management | Nigeria |
| • TWG7 | Upgrading of Security of RS and Waste Safety Mgmt Infrastructure. | Tanzania |
| • TWG8 | Upgrading of Transport Safety | South Africa |
| • TWG9 | Emergency Planning and Response | South Africa |



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FNRBA STRATEGY

- » Self assessment of regulatory infrastructure in MRBs
- » establish electronic communication platform to build a network for exchange of knowledge
- » create opportunities for *face-to-face* platforms for exchange of experiences and best practices
- » establish collaborative agreements with regional and international bodies; networking bodies; professional bodies that promote similar objectives



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FNRBA – PROGRESS 1/5

Strategic Plan Direction Defined

- » Round Table Discussion December 2009
- » Launched the five-year Strategic Plan December 2009

- » FNRBA Website Launched – www.fnrba.org but not maintained properly and now designed by IAEA GNSSN

- » Carried out Survey of the status of legislative and regulatory infrastructure in Africa and developed Classification of National Regulatory Infrastructures on Radiation Protection & Nuclear Safety in Africa

- » Carried out Survey on the status of radiation safety in radiotherapy practice in Africa and presented a report to the 2010 Senior Regulators' Meeting, IAEA, Vienna, Austria

- » Conducted 2nd TWG9-EPR Coordination Meeting and Training Course on National Preparedness and Response for radiological emergencies, Khartoum Sudan held in 5-8 September 2011 .



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FNRBA – PROGRESS 2/5

- » Signed an MOU with KINS on 23rd Sept 2010 and ready with ISS
- » 4th Plenary Meeting held in Yaoundé, Cameroon – 29th March 2011
- » The TWG1 completes the required data on the levels of 26 regulatory bodies based on their own assessments which fall in 9 categories out of 12 identified in the classification



Status of RBs in the Region

Level	Description	Key elements	Open to list countries/RBs
Level – 1A	No Legislative and any related regulatory activities		Non members
Level – 1B	No Legislative but with few RP activities such as provision of PMS etc		Mozambique, Malawi, Cote d'Ivoire (3)
Level – 2A	Legislative is there but RB is not established		Tunisia (1)?
Level – 2B	Legislative issued and RB established, but with few activities - highly understaffed and no or very little budget allocated to conduct basic activities	Basic regulatory activities such as: <i>inventory of sources, development of working materials like checklists or protocols for inspection & authorization</i>	
Level – 2C	Legislative issued and RB established with few staff but RB almost not functional (no inventory of sources; inspection & authorization not initiated)	<i>No inventory of sources, development of working materials like checklists or protocols for inspection & authorization not initiated</i>	(ARSN) Senegal (1)
Level – 2D	Legislative issued and RB established but with few or no regulatory activities (Government commitments are there; i.e. RB is legally established, more or less adequate budget is allocated, basic number of staff are recruited)	<i>Inventory of sources, development of working materials like checklists or protocols for inspection & authorization done for some practices, development of guidelines (codes of practices) initiated</i>	
Level – 3A	Legislative issued and RB established, the RB is working on few activities only (i.e. fulfilled or working on only few TSAs)	TSA-1 completed and work is going on TSA-2 (or partly completed)	Uganda, Gabon, Cameroon, Sierra Leone, Angola (5)
Level – 3B	Legislative issued and RB established; the RB is completed some TSAs and start working on others (but not all TSAs)	TSA-1 and TSA-2 are completed and work going on (other few TSAs)	Namibia, DR Congo, Mali, Zambia (4)
Level – 3C	Legislative issued and RB established; the RB completed some TSAs and working on all TSAs having different achievements	TSA-1 and TSA-2 are completed and work going on all other TSAs having different achievements	Ethiopia, Ghana, Zimbabwe, Kenya, Madagascar, Mauritania, Niger, Sudan (8)
Level – 4A	Legislative issued and RB established; the RB is working on all TSAs having different achievements but with few sustainability concerns	TSA-1, TSA-2 and some others TSAs are completed and work going on the remaining few TSAs; with few concerns on sustainability	Morocco (New nuclear draft law is under adoption) (1)
Level – 4B	Legislative issued and RB established; the RB is completed all TSAs having different but good achievements in all. The RB have few sustainability concerns	All TSAs are completed and sustainability of the RB is not fully ensured	Egypt, Nigeria (2)
Level – 4C	Legislative issued and RB established; the RB is completed all TSAs having highest achievements with no sustainability challenges to maintain the effectiveness of the RB (highly developed regulatory system existed).	All TSAs are completed and sustainability of the RB is ensured (highly developed regulatory infrastructure existed)	South Africa, (1)

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FNRBA – PROGRESS 3/5

In Collaboration with US NRC organized

- » **Executive Workshop on Regulatory Infrastructure for Nuclear Power Programme, Abuja, Nigeria, 22-26 March 2010**
- » **Technical Workshop Siting and Construction Permit Process and Requirements, Centurion, South Africa, 18-22 March 2010**
- » **Technical Workshop on the Construction Permit Process and Requirements, Mombassa, Kenya, 11-15 July 2011.**
- » 2nd Plenary Meeting held in Nairobi, Kenya in May 2010



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FNRBA – PROGRESS 4/5

- » Carried out Survey on the Status of Infrastructures for Nuclear and Radiological Emergency Preparedness and Response in Member States
- » Coordination meeting of TWG-9 - Infrastructures for Nuclear and Radiological Emergency Preparedness and Response – conducted in Khartoum, Sudan early Sep. 2011.
- » **In collaboration with the IAEA,**
 - **Participated in a Regulatory Emergency Exercise for the Koeberg NPP, Cape Town, South Africa, 29 November to 1 December 2010.**
 - **Held a Seminar on Emergency Preparedness and Response, Cape Town, South Africa, 2 December 2010.**
- » Technical Cooperation Project
 - » Support workshops & meetings
 - » Self-assessment of regulatory infrastructures



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FNRBA – PROGRESS 5/5

- » Carried out its 4th Meeting of the Steering Committee of FNRBA in Vienna, 19 Sep. 2011.
- » Planning Meeting with the support of the IAEA/GNSSN 01-02 April 2012 conducted in Vienna and draws an action plan for 2012. This action plan now endorsed by the Yaoundé Plenary Meeting
- » Meetings and discussions with different stakeholders: IAEA-GNSSN/ANSN including delegates of KINS, TAMU Representatives and TCA and NSRW during GC55, Sep. 2011. Strategic discussion held with US-NRC in Dec 2011.
- » The discussions focused on collaborative issues such as:
 - » Capacity buildings to MRBs
 - » Hosting of FNRBA website
 - » In creating collaboration with other networks in sharing experiences
 - » Support workshops & meetings
 - » Self-assessment of regulatory infrastructures



22 African States Considering the Introduction of Nuclear Power

- Algeria
- Egypt
- Ghana
- Kenya
- Libya
- Morocco
- Namibia
- Nigeria
- Senegal
- South Africa*
- Sudan
- Tanzania
- Tunisia
- Uganda
- Eight others



International Instruments

- The assurance of nuclear safety is reinforced by a number of intergovernmental agreements. These include certain Conventions that are legally binding on the participating States.
- As a result survey on the status of participating countries was conducted



International Instruments

Status

CONVENTION	ENC	CA	JC	CNS	CPPNM	PELINDABA
Ratified	14	14	5	5	35	28
Signed	6	6	-	5	-	36

Legend

ENC - Convention on Early Notification of a Nuclear Accident

CA - Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency

JC - Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

CNS - Convention on Nuclear Safety

CPPNM - Convention of Physical Protection of Nuclear Material

Pelindaba Treaty – African Nuclear Weapon Free Zone Treaty



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ON-GOING/PLANNED ACTIVITIES

- **Africa Diplomatic Conference on Safety and Security of Nuclear Power Plants**
- **Completion of Self-assessment of legislative and regulatory infrastructure**
- **Advocacy for the signing, ratification and domestication of International Safety Treaties and Conventions**
- **Partnership with other regulatory bodies outside Africa**
- **Implementation of the FNRBA action plan for 2012**



ON-GOING/PLANNED ACTIVITIES

- **Strengthening collaboration work with AFCONE**
- **Networking with GNSSN and other regional networks**
- **Partnership with ISS, DoE and NSSPI –TAMU**
- **Strengthening the activities of TWGs**



CHALLENGES

- .Weak legislative and regulatory infrastructure**
- .Weak compliance with international safety standards**
- .Lack of funding of FNRBA activities**
- Partnering with RB in the nations exporting radiotherapy machines and equipment as well as reactors**
- .Partners for the Africa Diplomatic Conference on Safety and Security of Nuclear Power Plants**
- .Poor communication and lack of active participation by some members on TWGs**



APPRECIATION

- .FNRBA appreciates the support of the IAEA, the USNRC and KINS
- .FNRBA needs more partners to achieve its objectives not only in the Nuclear Power area but in all other applications



Summary

- .FNRBA is a good regional platform that can play key role to assist on the establishment of Rbs, enhance & sustain their activities**
- .FNRBA recognizes the need for collaboration among RBs and other stakeholders at international level to deal with common challenges and sharing of experience; and therefore, highly appreciate and welcome the activities of the IAEA/GNSSN and other similar networks**
- .FNRBA is new and needs more partners to learn and enhance its activities effectively to achieve its objectives in mutual beneficial manner**
- .FNRBA request the assistance of RBs and manufacturers to access information and avail technologies – Radiotherapy, Irradiators, Reactors,**



Expectation of FNRBA

FNRBA's expectation and recommendations:

- .Sharing of experience and knowledge will be enhanced in different modalities which include IT
- .More capacity building activities in running regulatory bodies in the region can be avail
- .Assistance from partners to establish, enhance and sustain the regulatory infrastructure in the region – priority
- .Education & training of regulators which include OJT is one area of importance for member RBs



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4th Plenary Meeting of FNRBA, 29th March 2012, Yaoundé, Cameroon





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