Prioritization of Activities and Work Plan to support nuclear and radiation safety in Africa and recommendations

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Content

Introduction
Activities and Work Plan 2019-2021
A Project Idea
Conclusion
The objectives of the CS meeting:

- To evaluate the current situation
- To improve the governance;
- To assess the needs regularly;
- To raise awareness of the policy makers;
- To prepare the annual activity plan of FNRBA.

Governance level
- Steering Committee members
- IAEA Secretariat

Technical level
- 10 thematic working groups
- Local African experts
- TC Africa, Technical Officers of the IAEA,

Donors and Partners

INTRODUCTION

1. FNRBA Coordination meeting – Objectives

Impact

Ressources

Needs

Cost

Assessment of the need development of a survey (+ TC Africa)
Improved programming and selection of experts
Develop joint activities
Improved governance and commitment of M5
From Thematic Working Group management to Projects management
Coordination with partners and donors
Awareness of M5 and Policy makers in Africa

Nuclear and Radiation Safety and Security in Africa

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Nuclear and Radiation Safety and Security in Africa
INTRODUCTION

2. Timeline of action of FNRBA

- Assessment of the needs: August 2016
- 1st Coordination: Table of Challenges
- July 2017
- 2nd Coordination: Project proposals
- February - April 2018
- Survey open
- March 2018
- Steering Committee: Pretoria
- Prioritization
- September 2018
- 10th Plenary: Selection of projects 2019-2021
- June 2019
- Evaluation of Strategic Action Plan

Cooperation and partnership:
- Steering Committee
- TWG leaders
- IAEA TO, TC Africa
- US-NRC, KINS
- + ENSTTI, WINS, Regional safety networks
- Presentation at African Union/AFCON

Projects:
- On line survey to prioritize project ideas
- Collaborative platform to capture the needs of FNRBA members
- Discussion with partners
# Activities and Work Plan 2019 - 2021

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>CHALLENGES</th>
<th>PROPOSED ACTIVITIES</th>
<th>LINKED ACTIVITIES</th>
<th>LEAD TWG(s)</th>
<th>HOST COUNTRY</th>
<th>POTENTIAL SPONSOR/PARTNER</th>
<th>TIMELINES</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of regulatory standards in many Member States</td>
<td>• Develop Model Regulations: ✓ Siting ✓ Transport ✓ Waste Management ✓ Radiotherapy ✓ Nuclear Security</td>
<td>Training Courses IAEA School of Drafting Regional Workshops</td>
<td>TWG 3, TWG 5 TWG 8 TWG 7 TWG 2 TWG 10</td>
<td>Ghana South Africa Kenya Cameroun Morocco</td>
<td>IAEA EC</td>
<td>2-3 years for each</td>
</tr>
<tr>
<td>2</td>
<td>Limited number of Radiation Protection Officers in Member States Lack of certification process</td>
<td>• Qualification and Certification System for Radiation Protection Officers and Experts</td>
<td>Training Courses Regional Workshops</td>
<td>TWG 6 TWG 1</td>
<td>TBD</td>
<td>Proposed by EC Based on ENSTTI assessment</td>
<td>2019 - 2021</td>
</tr>
<tr>
<td>3</td>
<td>Increased use of new radiation technologies in medical diagnostics and treatment Inadequate regulatory oversight</td>
<td>• Provide guidance and build capacity on authorization and inspection of radiotherapy facilities, and new technologies • Awareness creation</td>
<td>Training Courses Regional Workshops Fellowships</td>
<td>TWG 2 TWG 1</td>
<td>TBD</td>
<td>IAEA EC</td>
<td>2020-2021</td>
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| 4        | - Ongoing interest in deploying nuclear facilities in Africa  
- Limited training opportunities in Member States | • Training  
✓ Design Assessment of Nuclear Reactors (Including Safety Doc review)  
✓ Uranium Mining and Milling  
✓ Waste Management  
✓ Integrated Management System  
✓ Ageing Management of Nuclear Reactors  
✓ Transport  
➢ Project – Developing Regional Expert Group on Transport Safety Assessment<br>❖ Step 1: Identify potential Experts from each of the 5 Regions  
❖ Step 2: Prepare/Procure Training Material  
❖ Step 3: Identify a venue for Train the Trainers/Experts  
❖ Step 4: Deploy Regional Experts to Identified Regional Centres.  
❖ Step 5: Mentoring Phase for Regional Experts.  
❖ Step 6: Accreditation and Activation of Regional Experts  
✓ Inspection Procedures | Training Courses Regional Workshops Fellowships | TWG3, TWG5  
TWG4  
TWG7  
TWG1, 2,3,5  
TWG5, TWG3  
TWG8 | TBD | IAEA EC IRDP/US-NRC | 2019-2021 |

10th Plenary of FNRBA, IAEA Headquarters, Vienna 18 September 2018
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| 5        | - Difficulty in convening workshops and meetings  
- Inadequate internal training programmes for Member States | • Development of e-learning tools within the existing website in complementary with the IAEA e-learning tools  
  
  IAEA Transport Safety e-Learning platform  
  GNSSN platform  
  IAEA e-Learning Modules for Nuclear Professionals  
  WINS Certification Programmes | TWG6  
TWG3  
TWG5  
TWG2  
TWG9 | TBD | WINS  
IAEA  
NRC/IRDP  
EC | 2018-2021 |
| 6        | - Lack of promotion of use of Model Regulations and standards  
- Unfamiliarity with developed Model Regulation | • Workshop on Implementing Model Regulations on Emergency Preparedness and Response  
  Regional Workshops (English, French) | TWG9 | UAE/ANNuR (English)  
Morocco (French) | IAEA  
KINS | Q4 2018  
Q1 2019 |
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<td>7</td>
<td>Lack of Technical Support to Regulatory Bodies</td>
<td>• Network of Regional Experts and Regional Training Centres&lt;br&gt;• Establishment of Regional Transport Experts&lt;br&gt;• Activation of Regional Transport Experts</td>
<td>Conduct Survey&lt;br&gt;Develop database&lt;br&gt;Selection of potential regional experts&lt;br&gt;Identification of Regional Centres&lt;br&gt;Train the Trainers (Regional Experts-in-training)&lt;br&gt;Deployment of Regional Experts&lt;br&gt;Mentoring of Regional Experts&lt;br&gt;Accreditation of Experts</td>
<td>TWG8</td>
<td>N/a (online) Regional&lt;br&gt;Ethiopia&lt;br&gt;Regional Training Centres&lt;br&gt;Online or by Region&lt;br&gt;Regional</td>
<td>N/a</td>
<td>February 2019</td>
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| 8        | - Inadequate coordination of nuclear security activities  
           - Inadequate expertise in nuclear security | Nuclear Security  
           - Transport  
           - Detection Architecture  
           - Physical Protection  
           - Cyber security  
           - Insider Threat  
           - Design Basis Threat  
           - Sources  
           - INSSP  
           - NUSIMS  
           - Emergency  
           - Support Centres collaboration | Conduct Survey  
           Workshops  
           Training Courses  
           Fellowships | TWG10  
           Online  
           Morocco, Ghana  
           South Africa | N/A  
           INS/US  
           DOE  
           IAEA | 2019-2021 |
The Terms of Reference of the TWG3-NPP calls for the convergence on regulatory standards and practices of participating countries. This could be achieved through comparison of regulatory standards and practices of the participating countries, comparing with other international standards and practices and also providing a framework for the development of respective safety standards in embarking countries.

A survey conducted in 2012 amongst TWG3 member countries identified gaps in the area of siting NPPs in the respondent countries. From the survey it is apparent that South Africa, Nigeria and Egypt have relevant standards either in place or it is in an advance stage of development.
The purpose of this document is to motivate for the establishment of a working group within TWG3-NPP to develop a set of model regulations for the siting of NPP’s that can be adopted by embarking countries in the region.

Participation

From various surveys conducted it is apparent that the countries are at different stages in the development of their legal and regulatory infrastructure for embarking on new nuclear programmes. This includes the status and development of regulatory standards.

The recent survey on Safety Standards indicated that Egypt, Ghana, Nigeria, South Africa and Tunisia have relevant standards either in place or it is in an advance stage of development. It is therefore proposed that these countries participate in the working group.
The process of developing the model regulations will require the participants to routinely meet to share information, benchmark safety standards on siting, develop a framework for the model regulations and to develop the actual regulations.

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<th>Purpose</th>
<th>Venue</th>
<th>Timeline</th>
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<tbody>
<tr>
<td>1</td>
<td>Presentation on development of regulations (IAEA)</td>
<td>Vienna</td>
<td>4th quarter of 2018</td>
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<tr>
<td></td>
<td>Presentation on siting standards in various countries (Participants)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Presentation of IAEA Safety Standards on Siting (IAEA)</td>
<td></td>
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<tr>
<td></td>
<td>Discussion and agreement on framework for model regulations</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Development of plan of action</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Literature review</td>
<td>South Africa</td>
<td>2nd quarter of 2019</td>
</tr>
<tr>
<td></td>
<td>Benchmarking of participant countries siting standards</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Development of 1st draft of regulations</td>
<td>TBD</td>
<td>4th quarter of 2019</td>
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<td></td>
<td>Circulate for review and comments</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>Update and finalise draft regulations</td>
<td>TBD</td>
<td>2nd quarter of 2020</td>
</tr>
<tr>
<td></td>
<td>Submit to Steering Committee</td>
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It is requested that the FNRBA international partners support and fund the Working Group members participation in the meetings.

The funding will be for participation of 6 Working Group members comprising of the TWG3 Coordinator plus nominees from Egypt, Ghana, Nigeria, South Africa and Tunisia.

A working group meeting should typically last about 4 days. Funding could cover flights, accommodation and subsistence as well as resource persons where required.

Cost Estimate: $86400
Conclusion

➢ The implementation of the projects outlined above will enhance the nuclear and radiation safety and security in Africa

➢ A resolution is required on the arrangement of priorities presented

➢ Support is solicited from Partners for each of the projects presented
Thank you for your attention....