

U.S. Nuclear Regulatory Commission's (NRC's)  
**30<sup>th</sup> Nuclear Regulatory Information Centre (RIC)**  
 Session: W22

**National Nuclear Security Infrastructure:  
 Challenges & Opportunities**

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**OUTLINE**

I. Background  
 II. National Legislative and Regulatory Framework  
 III. Vision & Strategic Plan  
 IV. Challenges & Opportunities  
 V. Lessons Learned

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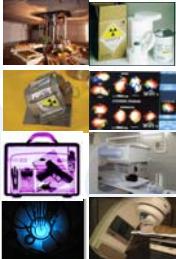
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**Background**

- Continuous development requiring continuous improvements
- Law 142-12 on nuclear and radiological safety and security and the establishment of AMSSNuR

<p><b>Industry</b></p> <ul style="list-style-type: none"> <li>• More than 300 gauges used for quality control in petrochemicals, sugar factories, cement plants ... etc.</li> <li>• Thirteen non-destructive testing companies.</li> </ul>		<p><b>Health</b></p> <ul style="list-style-type: none"> <li>• &gt; 4500 X-ray installations</li> <li>• &gt; 250 scanners</li> <li>• &gt; 35 Electron beam Accelerator</li> <li>• &gt; 20 Nuclear Medicine Centers</li> </ul>
<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• More than 20 scanners installed at ports, airports...etc.</li> <li>• 6 electron accelerators.</li> </ul>		<p><b>Agriculture</b></p> <ul style="list-style-type: none"> <li>• &gt; Twenty veterinary facilities</li> <li>• One food irradiator.</li> </ul>
<p><b>Research &amp; Education</b></p> <ul style="list-style-type: none"> <li>• Research reactor 2 MW.</li> <li>• A dozen research laboratories</li> </ul>		<p><b>Radiopharmaceuticals</b></p> <ul style="list-style-type: none"> <li>• 2 Cyclotrons for the production of Fluorine 18</li> <li>• CNSTEN Laboratory for the Production of Iodine 131.</li> </ul>

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## Challenges (1/5)



➤ Among others, here are the five main challenges that AMSSNuR has been facing:

*i. Transition period*

- Launching AMSSNuR;
- Ensuring continuity of regulatory control; and
- Continuously improving safety and security.



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## Challenges (2/5)



*ii. Regulations*

- Updating the existing regulatory framework;
- Involving all relevant stakeholders: 32 national key players in upgrading the regulatory framework:
  - Setting up 5 thematic groups;
  - Coordinating thematic and plenary meetings; and
  - Ensuring elaboration of regulatory texts;



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## Challenges (3/5)



*iii. Human Resources*


- Limited number of experienced staff;
- Recruiting and training staff; and
- Retaining qualified people.

46%

• More than 15 years of experience

37%

• Less than one year of experience



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## Challenges (4/5)



*iv. Knowledge Management (KM)*

- Establishing a KM policy and strategy;
- Bridging the gap between young and experienced staff; and
- Establishing an Integrated Management System (IMS).



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10

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## Challenges (5/5)



*v. Security Culture & Cooperation*

- Disseminating & improving nuclear security culture and cooperation at national level; and
- Contributing effectively to strengthening security culture and cooperation at regional level.



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11

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## Opportunities



- Concluded MoUs with different regulatory authorities for cooperation;
  - ✓ U.S. NRC; CSN; HAEA;
  - ✓ AFCN, ARN, CNSC, FANR, GRS, ONR.
- Partner in international and regional networks: FRNBA, ANNuR, GNSSN, RCF, ...etc.; and
- Awareness, commitment and support from the government.




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12

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## Lessons Learned



- Support of the Government since the start is critical;
- Involvement of national stakeholders, interaction and cooperation with international partners are essential to success;
- Participation in and contribution to regional and international activities help improving capacity building;
- Networking (FRNBA, RCF, ANNuR, GNSSN...). Keep regulatory body aware of good practices and contribute to continuous improvement.



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13

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