Model Project - Outcomes and Challenges
1994-2004

6th GNSSN Plenary Meeting
18 September 2019
R. Pacheco, Head Control of Radiation Sources Unit
RIT-NSRW
Proactive Approach

• In the early nineteen sixties, the demand for assistance on radiation safety through the Agency's TCP was passive.

• Between 1984 and 1994, Agency Radiation Protection Advisory Team (RAPAT) missions were sent, on request by Member States, to 64 countries that were then receiving Agency assistance.
Why was the Model Project established?

Based on the assessment, it was concluded that the vast majority of its Member States still had little or no infrastructure for radiation safety.

The outcome was the development of an integrated and proactive strategy for upgrading radiation, transport and waste safety infrastructures in Agency’s TC recipient Member States.

The IAEA includes in its TCP in 1994 the Model Project on “Upgrading Radiation Protection Infrastructures”
The main strategy elements of the Model Project are:

1. **Collecting and evaluating information** on the existing radiation, transport and waste safety infrastructure.


3. **Graded performance indicators** were introduced to measure the level of achievement.

4. **Firm commitments** on Action Plans were discussed and finalized, and then approved by relevant counterparts and authorities in each participating Member State.
The implementation of milestones 2, 3, 4 and 5 was heavily dependent on the effective implementation of the milestone 1.
Regional Managers and Technical Support

In support of this approach, the Agency appointed **Technical Officers** for each milestone and ‘Regional Project Managers’ for each of the regions: Africa, East Asia, West Asia, Latin America, and Europe.

1 to 2 follow-up visits per year were done in each country.
Participating Member States

The number of participating countries in the Model Project had increased from the initial 5 in 1994 to a total of 91 in 2004.

<table>
<thead>
<tr>
<th>No</th>
<th>AFRICA</th>
<th>EUROPE</th>
<th>AMERICA</th>
<th>West Asia</th>
<th>East Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Mali - 1996</td>
<td>Moldova - 1996</td>
<td></td>
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<tr>
<td>17</td>
<td>Mauritius - 1996</td>
<td>Portugal - 2001</td>
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<td>Morocco - 2001</td>
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<td>20</td>
<td>Niger - 1996</td>
<td>Turkey - 2001</td>
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<tr>
<td>21</td>
<td>Nigeria - 1996</td>
<td>Serbia &amp; Montenegro (FR Yugoslavia) - 2003</td>
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<tr>
<td>22</td>
<td>Senegal - 1996</td>
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<td>23</td>
<td>Sierra Leone - 1996</td>
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<tr>
<td>24</td>
<td>South Africa - 2002</td>
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<tr>
<td>25</td>
<td>Sudan - 2001</td>
<td></td>
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<tr>
<td>26</td>
<td>Tanzania - 1996</td>
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<td>28</td>
<td>Uganda - 1996</td>
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<tr>
<td>29</td>
<td>Zambia - 2002</td>
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<td></td>
</tr>
<tr>
<td>30</td>
<td>Zimbabwe - 1996</td>
<td></td>
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</table>
Peer reviews:

- Infrastructure Appraisals missions were implemented during the period 1999 - 2004, with 66 missions to 50 different Model Project countries to assess the effectiveness of the national infrastructures.
Progress Achieved

MILESTONE 1: Regulatory framework at the end of the project

<table>
<thead>
<tr>
<th>% of participating countries</th>
<th>Legislation</th>
<th>Regulations compliant with BSS</th>
<th>Regulatory Body (RB) established</th>
<th>RB sufficient staff recruited</th>
<th>Notification and Authorization</th>
<th>Inventory of radiation sources</th>
<th>Inspections</th>
<th>Enforcement</th>
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</thead>
<tbody>
<tr>
<td>80%</td>
<td>75%</td>
<td>65%</td>
<td>60%</td>
<td>50%</td>
<td>70%</td>
<td>50%</td>
<td>50%</td>
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</tbody>
</table>

Source: Paper: Dr. Khammar MRABIT
A Proactive Approach for Integrated and Continuous Improvement
MILESTONE 2: Occupational Exposure Control at the end of the Project

- Individual External Monitoring: 80%
- Capability of or access to Calibration: 60%
- Workplace Monitoring: 50%
- Dose Record System: 80%
- Strategy and Programme for Capacity building: 60%

Source: Paper: Dr. Khammar MRABIT
A Proactive Approach for Integrated and Continuous Improvement
Progress Achieved

MILESTONE 3: Medical Exposure Control at the end of the Project

- Radiotherapy: 30%
- Nuclear Medicine: 30%
- Diagnostic Radiology: 20%

**Green:** National Programme in place
**Yellow:** National Programme in process of being established

MILESTONE 4: Public Exposure Control at the end of the project

- Environmental Monitoring: 30%
- Waste Management: 40%

**Green:** National Programme in place
**Yellow:** National Programme in process of being established

MILESTONE 5: Emergency preparedness and response capabilities at the end of the Project

- National Emergency Response Plan: 40%

**Green:** National Plan in place
**Yellow:** Action taken in process of being established

Source: Paper: Dr. Khammar MRABIT
A Proactive Approach for Integrated and Continuous Improvement
Challenges

- **The size of the project** and the volume of activities were a challenge for the IAEA implementation.

- **This project was also a challenge for the countries**, because they had to cope with a project that required continuous attention and action.

- **Lack of human and financial resources**. In many countries, at the beginning of the project, there were none or only a small number of personnel assigned to radiation safety activities.

- **Delays in the promulgation** of legislation and regulations or other legal framework.

- **Institutional instability**. Changes in administration, social unrest, priorities as well as in the project’s personnel.

- **Involvement of National Societies** to create a multiplicative impact.
<table>
<thead>
<tr>
<th>Region</th>
<th>Number of participants in training courses</th>
<th>Number of fellowships</th>
<th>Number of scientific visits</th>
<th>Number of assignments by IAEA staff</th>
<th>Number of assignments by international experts and lecturers</th>
<th>Number of assignments by national consultants</th>
<th>Number of participants in meetings and workshops</th>
</tr>
</thead>
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<td>East Asia &amp; Pacific</td>
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<td>304</td>
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<td>1401</td>
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</table>

Source: Paper: A Proactive Approach Dr. Khammar MRABIT

US. $ 35,000,000
Thank you!