

INT9176-Strengthening Cradle-to-Grave Control of Radioactive
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National Needs and Expected Benefits from the Participation of Morocco in Project INT9176

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CONTENT

- ❑ Status of the national infrastructure for the Cradle-to-Grave control and management of radioactive sources;
 - National legal and regulatory framework;
 - National radioactive waste management and organization;
- ❑ National and regional activities held in Morocco within the framework of the project INT9176;
- ❑ National Needs / Expected Benefits

National legal and regulatory framework

- Law n° 005-71 of 12 October 1971:
 - Introduces the general principles that govern activities involving ionizing radiation sources and penalties,
 - Establishes the authorization and declaration regime.
- Decree n° 2-97-30 of 28 October 1997:
 - Fixes the general principles of protection and conditions to which are submitted activities implying radiation exposures,
 - Determines the conditions and the requirements of the authorization, declaration and exemption systems,
- Decree n° 2-97-132 of 28 October 1997:
 - Governs especially the medical and dental practices
- Decree n° 2-94-666 of 7 December 1994:
 - Relating to the control and authorization of nuclear installations.
- Law n° 17-83 of 14 November 1986 :
 - CNESTEN established and assigned the responsibility of managing the radioactive waste including DSRS.

National legal and regulatory framework

- Morocco has ratified international conventions in the areas of nuclear, radiation, transport and waste safety :
 - Joint convention on the safety of spent fuel management and on the safety of radioactive waste management;
 - Convention on early notification of a nuclear accident;
 - Convention on assistance in the case of a nuclear accident or radiological emergency;
 - Convention on physical protection of nuclear materials.
- Support for the code of conduct on the safety and security of radioactive sources, and supplementary guidance on the import and export of radioactive sources
- Adherence to IAEA Illicit Trafficking Database (ITDB) Program
- Morocco has currently two effective regulatory bodies:
 - The National Centre for Radiation Protection (CNRP), Ministry of Health: Regulatory Body for radiation, transport and waste safety.
 - The Ministry of Energy and Mines : Regulatory Body for nuclear safety.
- Morocco has elaborated a draft law related to nuclear and radiation safety and security. The main objective of this law is to establish a unique and independent Authority with adequate human , technical and financial resources. The law has been adopted by the Council of Government.

National radioactive waste management infrastructure and organisation

The policy of radioactive waste management :

- Based on protection of man and his environment by collect, treatment, conditioning and storage of radioactive waste.
- Implemented by adopting a centralised radioactive waste management facility where the CNESTEN is the organism responsible of the management of radioactive waste generated at national level.
- At present, Morocco has no disposal option.

The Moroccan regulation :

- The law requests an authorization to use sealed sources,
- Prime responsibility belongs to the license holder.
- The owner of the radioactive waste management facility is obliged to contract insurance covering the reparation of radiological damage.

National radioactive waste management infrastructure and organisation

- ❑ No manufacturing of sealed sources take place in Morocco;
- ❑ When the source becomes disused, there are two options :
 - Returning the disused source to the supplier
 - Transferring the disused source to the central waste management facility (CNESTEN) for conditioning and storage.
- ❑ Disused sealed radioactive source producer pays for its management,
- ❑ In case of orphan sources, the regulatory body takes control of the sources to ensure the safe storage and finds the owner if possible. Those orphan sources, are transferred to CNESTEN for further management.

National and regional activities held in Morocco under the ambit of Project INT9176

- ❑ Morocco has two officially designated counterparts for this project :
 - Centre National de Radioprotection (CNRP), Ministry of Health;
 - Centre National de l'Energie des Sciences et Techniques Nucléaires (CNESTEN).

- ❑ National training seminar on policy and strategy of management of Disused Sealed Sources, Salé, Morocco, 19-23 November 2012.

- ❑ Interregional (Mediterranean) workshop on Management Options for Disused Sealed Radioactive Sources of Category 3-5, including practical demonstration of conditioning procedures, Rabat, Morocco, 25-28 June 2013 .

National seminar on policy and strategy of management of Disused Sealed Sources

- ❑ 4 Experts from IAEA and EU;
- ❑ 30 national participants took part to this event from metal recycling companies , industrial and medical sectors;
- ❑ Sensitize the users on the best practices relating to the safe and secure management of sealed radioactive sources.



Interregional workshop on conditioning procedures of Disused Sealed Radioactive Sources



Preparation of the work (Procedures, material)



Characterization of sources



Shielded containers



Retrieved source



Devices without sources

Assistance needed / Expected Benefits

- ❑ Strengthening international coordination and cooperation,
- ❑ Opportunities for enhancing collaboration between the participating Member States to this Project.
- ❑ Requested assistance from IAEA in the conditioning and long term storage of disused sealed sources of category 3-5. The large number of devices already stored and to come in the future justifies the option of removing the sources from the devices (dismantling) in order to reduce the total volume to be stored on the long term.
- ❑ IAEA support in undertaking the repatriation of disused teletherapy Cobalt 60 sources, category 1 and 2, of French origin : packaging of the shielded sources into certified Type B transport packages, transport of the packages from their current location to France, preparation for long-term management in French facilities.

Assistance needed / Expected Benefits

- Strengthening the national capabilities :
 - Operational capabilities : HR (training for staff) and technical infrastructure (know-how, facilities, equipment, experts missions and procurement)
 - Regulatory capabilities : HR (training for staff) and regulatory infrastructure (regulations, experts missions).

- Need of Training in :
 - Gaining control over orphan sources;
 - Transport of radioactive material;
 - Management of radioactive wastes.

National needs / Expected benefits

- ❑ Assistance in the formulation and implementation of policy and strategy for the control of radioactive sources;
- ❑ Strengthening the national strategy for the radiological control at borders, control of scrap metal, metal products and other recycling materials;
- ❑ Enhancing the level of national expertise and capabilities relating to Cradle-to-Grave approach.

**THANK YOU FOR YOUR
ATTENTION**