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The legislative, regulatory and institutional framework for nuclear energy in Tunisia

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INTRODUCTION (1/2)

- 1957 Tunisia joined the IAEA
- This orientation was based on an ambitious program that especially included:
- the establishment of the Atomic Energy Commission which has been operating since the early sixties of the twentieth century.
- Characterized by undertaking a program aiming at the use of nuclear power for the production of electricity and the desalination of seawater in the south of Tunisia,
- the establishment of a significant number of laboratories at the Nuclear Research Center in Carthage and the training of a considerable number of specialized technicians, engineers and researchers.

INTRODUCTION (2/2)

- Tunisia was one of the first countries in the world to have undertaken and carried out the relevant research studies for seawater desalination using nuclear energy, which is confirmed by the information circular No. 45 issued by the International Atomic Energy Agency on 22 July 1963 for the information of all Member States.
- Tunisia is still considering the introduction of nuclear energy in the country.

Introduction of the first NPP in Tunisia

- On November, 2006, the Tunisian Company of Electricity and Gas (STEG) was assigned by the government to conduct, in collaboration with the Ministry of Higher Education and Scientific Research, trough the National Centre for Nuclear Science and Technologies(CNSTN) a technical-economic feasibility study for NPP implementation.
- This occurred in an energy context marked by the dwindling production at Tunisia's oil fields and the surge in hydrocarbon prices that make the country spending depends heavily on energy imports to power its electricity network. This decision came in favour of further research and development of country's nuclear option in order to reduce the reliance on oil and gas.

Current Key Players in the Nuclear Field (1/3)

National Atomic Energy Commission (NAEC) :

- **H**eaded by the Minister of Higher Education and Scientific Research and composed by members from different ministries and national institutions.
- **I**t was created in 1990. It has the following tasks:
  - To develop, promote and implement nuclear technologies, methods and instruments in the country in fields of agriculture, industry, power energy, environment and medicine;
  - To implement basic and applied research programs in sciences related to nuclear technology;
  - To oversee the technical cooperation programs specially with the IAEA

Current Key Players in the Nuclear Field (2/3)

National Centre for Radiation Protection (CNRP) :

- **E**stablished in 1981
- acts as the regulatory authority at the national level for all issues concerning the use of radioactive sources in the context of radiation protection, except nuclear installations.

Current Key Players in the Nuclear Field (3/3)

- **National Center of Nuclear Sciences and Technologies CNSTN**

- Public research institution under the auspices of the Ministry of Higher Education and Scientific Research.
- Acts as permanent secretary of the NAEC
- In charge of the implementation of all nuclear related conventions and agreements and acts as focal point
- Provide advices to government

Position of Tunisia with regard to International Legal Instruments (1/3)

Treaty/Convention	Position of Tunisia
Treaty of non proliferation	Signed and adopted
Comprehensive safeguard agreement	Signed and adopted
Additional protocol	Signed (adoption in process)
Convention on early notification of nuclear accident	Signed and adopted
C. On assistance in the case of a nuclear accident	Signed and adopted
Convention on nuclear safety	Signed and adopted
Joint convention on the SSFM and on the SRWM	(adoption in process)

Position of Tunisia with regard to International Legal Instruments (2/3)

Treaty/Convention	Position of Tunisia
Convention on physical protection of nuclear material	Signed and adopted
Amendment of the CPPNM	adopted
Vienna convention on civil liability for nuclear damage	Under evaluation
Joint protocol relating to the application of the Vienna convention and Paris convention	Under evaluation
Protocol to amend 1963 Vienna convention	Under evaluation

Position of Tunisia with regard to International Legal Instruments (3/3)

Treaty/Convention	Position of Tunisia
Convention on Supplementary compensation for nuclear damage	Under evaluation
Comprehensive nuclear test ban treaty	Signed and adopted
IAEA Codes of conduct and practice and guidance	In process

- NEW LEGISLATIVE AND REGULATORY FRAMEWORK

ACTIONS ACHIEVED OR PLANNED

- A group of experts was created since May 2008 and it is coordinated by the CNSTN, permanent secretariat of the National Atomic energy commission (CNEA).
- As a first step, the expert team proceeded to an assessment of the Tunisian nuclear (and related) legislation

Results of the Assessment of the Tunisian National Nuclear and related Legislation (1/3)

- The radiation protection in nuclear installations is excluded from the scope of application of the basic radiation protection law n°81-51 dated June 1981 and will be covered by special laws

- Law n°97-37 dated June the 2nd 1997 and its decrees of applications related to the transport by road of hazardous materials doesn't cover all aspects of the transport of the nuclear materials

Results of the Assessment of the Tunisian National Nuclear and related Legislation (2/3)

- The law n°96-41 dated on June 1996, related to waste management, control and elimination, is a general legal framework covering all kind of waste and there is a need to promulgate provisions covering the radioactive waste management.

- No legal provision are covering SSS and civil liability

Results of the Assessment of the Tunisian National Nuclear and related Legislation (3/3)

- The legislation and regulations in force in Tunisia reflect the existing nuclear activities and generally fails to meet the international standards.
- Laws, decrees, ministerial orders deal with nuclear applications in different fields and exclude from its scope nuclear installations or activities related to the nuclear fuel cycle……..
- Most of International treaties, conventions and agreements related to Nuclear energy are signed and adopted but there is a need to proceed with the necessary actions at the national level for their implementation.
- There is an urgent need to join all relevant international conventions not yet adopted

It was decide to :

- Prepare a legislative and regulatory framework based on a comprehensive nuclear law covering especially safety, security and safeguards, as well as liability for nuclear damage.
- This law cover all nuclear and radioactive practices from mining to the final disposal and implement all international standards and provisions of all related conventions and treaties.
- Work for the adoption of all relevant international conventions.

As a result:

- This approach was approved by the CNEA and later by the board of ministers.
- As a result of this effort a first draft a comprehensive nuclear law was prepared and submitted for evaluation by IAEA experts under the technical cooperation program..
- The final version of this project was evaluated by IAEA experts and recommendations are being implemented.
- The next step will be the approval of this project through the national official channels.
- Simultaneously the expert team advised the government to adopt some relevant international instruments in two steps:

•OVERVIEW OF THE NEW LEGISLATIVE AND REGULATORY FRAMEWORK: KEY ELEMENTS

Establishment of a new Regulatory authority : National Nuclear Safety Commission

- It was adopted by the expert group that a regulatory body will be created with regulatory functions for nuclear installations and radioactive source in line with IAEA "Milestones" approach, since the new legislative and regulatory framework was initiated in the context of plans to use nuclear power for producing energy.

- It was also adopted that the new regulatory body will be called the National Nuclear Safety Commission «NNSC» and will carry out regulatory functions for safety, security, safeguards, radiation protection, physical protection, radioactive material transport, and radioactive waste management.

Functions of NNSC (1/2)

- NNSC will carry out such regulatory functions for nuclear installations and radioactive sources. The drafted law is containing provisions to ensure its effective independence by providing a clear separation between promotional/advisory and regulatory functions, as well as providing with the needed authority, the competent human resources and adequate financial means. It was approved that the ANSN will be an independent authority

Functions of NNSC (2/2)

This NNSC will:

- Evaluate the nuclear energy safety and security programme and prepare the decree of NPP authorizations.
- Authorise all nuclear and radioactive practices and sources
- Control and inspect to insure nuclear and radiological safety and security culture and other related regulatory functions
- Enforce the application of relevant legal requirements(national laws and regulation and international conventions, standards, requirements adopted by Tunisia)
- Inform the public about nuclear safety and radiation protection…

List of decrees of application of the Tunisian comprehensive nuclear law 1/4

- 1-Decree on conditions of exemption of certain sources and activities or any part thereof from licensing and regulatory regime.
- 2-Decree on conditions and procedures on the regime of the licensing system
- 3-Decree on standards and categories of habilitation
- 4-Decree on the special statute of inspectors
- 5-Decree on conditions and procedures of inspections

List of decrees of application of the Tunisian comprehensive nuclear law 2/4

- 6-Decree on detailed requirements for nuclear safety
- 7-Decree on detailed requirements for radiation safety
- 8-Decree on conditions and procedures of emergency plans
- 9-Decree on detailed requirements for the decommissioning of nuclear facilities
- 10-Decree on detailed requirements for the physical protection of nuclear materials and installations
- 11-Decree on detailed requirements on security of radioactive sources and facilities.

List of decrees of application of the Tunisian comprehensive nuclear law 3/4

- 12-Decree classifying areas within nuclear facilities and conditions of access, in addition to the classification of nuclear materials and emergency in case of intrusion.
- 13-Decree on conditions on situations of exposure
- 14-Decree on conditions and procedures of authorisation addition of radioactive substances in the production and manufacture of drugs, supply and export of such products and the administration of radioactive materials for humans or animals, for the purposes of medical or veterinary research

List of decrees of application of the Tunisian comprehensive nuclear law 4/4

- 15-Decree on conditions and procedures of authorization of transport of radioactive materials
- 16-Decree on the safe management of the radioactive waste and spent fuel
- 17-Decree establishing a Fund for the safe management of radioactive waste and spent fuel and the decommissioning
- 18-Decree on detailed requirements on safeguards and on controlling the supply and export of nuclear materials and technology.

CONCLUSION

- **Clear Commitment to safety, security and safeguards**
- The Comprehensive National Nuclear Law which was prepared by the expert's team is covering provisions related to safety, security, as well as safeguards.
- This nuclear law establishes a new Regulatory Body which will be an independent authority under the supervision of the Presidency of Government.
- The new Regulatory Body will authorize and control all nuclear activities and enforce the application of relevant legal requirements.
- The comprehensive law establishes also a new institution charged by the management of the radioactive waste.

Thank you for your attention !

National Center of Nuclear Sciences and Technologies