REPULIC OF TUNISIA

Convention on Nuclear Safety

NATIONAL REPORT OF TUNISIA

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Contents

List of Abbreviations

NCNS	National Commission for Nuclear Safety
CNS	Convention on nuclear safety
CNSTN	National Centre for Nuclear Science and Technologies
CNRP	National Centre for Radiation Protection
CNEA	National Atomic Energy Commission
STEG	Tunisian Company of Electricity and Gas

INTRODUCTION

Although Tunisia has always banked upon the benefits of the peaceful uses of nuclear energy, concrete steps in its nuclear program applications have, ever since independence, been swinging between brilliant successes and temporary setbacks. In fact Tunisia was among the leading pioneers of developing countries to join the IAEA, in 1957, and take part in its first general assembly in October the same year.

Among the earliest steps that were taken as part of an ambitious nuclear program, we can mention the creation of the Atomic Energy Commission during the early sixties of the twentieth century, taking aim at the use of nuclear power for producing electricity and the desalination of seawater. We can also mention the creation of a significant number of laboratories at the Nuclear Research Centre in Carthage, along with the training of a considerable number of highly qualified technicians, engineers and researchers.

Accordingly, Tunisia is among the pioneering countries in the world in terms of conducting the relevant research studies for the desalination of seawater using nuclear energy, which was confirmed by the information circular No.45, issued by the IAEA on July 22, 1963. This program was maintained by the establishment of the Atomic Physics Institute under the Finance law of 1969, targeting the promotion of human resources. However, these ambitious goals simply vanished into thin air towards the end of the sixties, the result of which was that the Tunisian nuclear power ambitions merely faded into oblivion during the seventies, and then a tentative step was taken in 1981 through enacting a few regulatory laws such as the promulgation of the law on radiation protection and the creation of the national centre for radiation protection in 1982.

During the mid eighties, there was an attempt by the Tunisian Company of Electricity and Gas to resuscitate Tunisia's nuclear ambitions through a feasibility study for the production of electricity using nuclear power, with the cooperation of the IAEA, and the suitable nuclear sites being chosen, but due to the absence of a clearly defined nuclear program and the provision of the relevant requirements, no decisions were taken in this regard.

However, with the creation of the State Secretariat for Scientific Research and technology, and attaching it to the Prime Ministry, the Tunisian nuclear program was relaunched through setting up and implementing a plan for the advancement of peaceful uses of nuclear energy and technology, the main components being the creation of a National Atomic Energy Commission for supporting this sphere of interest on the national scale, the creation of the National Centre for Nuclear Sciences and Technologies and the approval of setting a nuclear research reactor at the centre. There were major breakthroughs in all the components of the plan, leading to a remarkable development in various sectors, with the exception of the research reactor, which was supposed to be commissioned by the year 2000.

And in November 2006, the Tunisian Company of Electricity and Gas (STEG) was commissioned by the government to conduct, in collaboration with the Ministry of Higher

Education and Scientific Research, through the National Centre for Nuclear Science and Technologies (CNSTN), a technical-economic feasibility study for a NPP implementation , a move imposed by the dwindling production of Tunisia's oil fields and the surge in the prices of hydrocarbons, forcing the country to spend heavily on energy imports to power its electricity network. The decision was presumably due to be taken by the end of the year 2011, but it was never taken.

But it should be remembered that Tunisia has, over the past decade or so, been experiencing a transitional period during which the national priority was the adoption of a new constitution and the promotion of a new democratic system and its constitutional institutions.

As a conclusion we can say that Tunisia is still considering the introduction of nuclear energy in the country. More information is included in this report.

REPORTING ARTICLE BY ARTICLE

1-Article 6: Existing Nuclear Installations

According to the Convention on Nuclear Safety Hereinafter designated as “CNS” Tunisia is a non-nuclear country and has no nuclear installations as defined in the article 2 of CNS.

In Tunisia, developed practices using or related to radioactive sources are carried out in the different fields. Radioactive sources are largely used in medical, industrial, agriculture, education and research activities. Tunisia has neither Nuclear Power Plant nor Research Reactor and all radioactive sources are imported.

Tunisia is facing a growing activity all over the country in a wide range of applications such as in medicine, an increasing number of nuclear medicine centres with PET-CT, number of new cobalt therapy and linear accelerator units, high dose Curie therapy, interventional radiology, screening imaging for cancer as mammography. More than a thousand radioactive sources ranging in activity between weak and very high, those are used in various peaceful activities such as in health, environment, agriculture, industry and scientific research.

Nuclear medicine has undergone a remarkable development in Tunisia. For instance, nuclear medicine departments have been set up in many hospitals and equipped with gamma cameras for an enhanced accuracy of the test results and increased speed of delivery. It is worth noting that 12 nuclear medicine centers are operational in Tunisia,

2-ARTICLE 7: LEGISLATIVE AND REGULATORY FRAMEWORK

- ***Each Contracting Party shall establish and maintain a legislative and regulatory framework to govern the safety of nuclear installations.***
- ***The legislative and regulatory framework shall provide for:***
  - ***i. the establishment of applicable national safety requirements and regulations;***
  - ***ii. a system of licensing with regard to nuclear installations and the prohibition of the operation of a nuclear installation without a licence;***
  - ***iii. a system of regulatory inspection and assessment of nuclear installations to ascertain compliance with applicable regulations and the terms of licences;***
  - ***iv. the enforcement of applicable regulations and of the terms of licences, including suspension, modification or revocation***

2.1-ACTIONS ACHIEVED OR PLANNED

The current legislative and regulatory framework for peaceful uses of nuclear energy is based on a set of laws and decrees that have been drafted at the beginning of the eighties of the last century and based on international standards and conventions in force in the seventies.

Most of these standards does not respond to the current needs for a safe and secure use of nuclear energy and techniques especially when we take into consideration that this framework cover only radiation protection.

This legislative and regulatory framework is no longer complying with the current requirements and led to cases of legal and regulatory vacuum with regard to the protection of persons, property and the environment.

In the meantime, on international scale, it has been adopted an important set of conventions and agreements dictated by international events related to the uses of nuclear energy and technology and by the requirements of the international regime of nuclear safeguards and nuclear safety and security.

Tunisia ratified most of these conventions and consequently required to fulfill its obligations, especially those related to CNS.

It should also be recalled that during the two working sessions of the board of ministers about nuclear energy and technology sector in Tunisia held on 27 August 2009 and December 28, 2010 recommendations were adopted to review of the existing structural and institutional frameworks. It was also decided to establish a national expert under the supervision of the National Atomic Energy Commission and was mandated to prepare a new legislative and regulatory framework for peaceful uses of nuclear energy.

The national expert team proceeded in the first stage to the diagnosis of the existing legal and institutional framework for the peaceful use of nuclear energy it turned out through that the current legislative and regulatory framework is complaining of several situations of legal and institutional vacuum.

To remedy to this situation, the expert team decided to establish a new legislative and regulatory framework based on a comprehensive law for peaceful uses of nuclear energy and techniques.

The drafted provisions are in complete accordance with international obligations of the Republic of Tunisia in the field of peaceful uses of nuclear energy and aims to ensure nuclear safety, security and safeguards and civil liability for nuclear damage in order to ensure protection of people, property and the environment now and in the future.

This approach was approved by the government and approves the decision to establish a new legislative, regulatory, and institutional framework.

The drafted comprehensive nuclear law is currently under the official process of adoption. In this regard, all primary steps of the official process of adoption are being achieved and the next step will be the final adoption by the government and requesting its adoption to the parliament.

2.2 MAINNATIONALLAWSANDREGULATIONSRELATEDTONUCLEAR SAFETY

1. Decree No 342 of 22/02/2010 related to the ratification of the Convention on Nuclear Safety.
2. Law n°81-51 of 18/06/1981 related to the radiation protection.
3. Decree No. 86-433 of 28/03/1986 related to the protection against ionizing radiation
4. Law No. 88-67 of 16/06/1988 related to the ratification of the Vienna Convention on Early Notification of a Nuclear Accident
5. Law No. 88-68 of 16/06/1988 related to the ratification of the Vienna Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency
6. Decree No. 90-1399, 03/09/1990, establishing a National Atomic Energy Commission as amended by Decree No. 95-2566 of 25/12/1995
7. Law n° 96-41 dated on 10 June 1996, related to the Hazardous Waste control its management and elimination
8. Decree No. 2000-2339 of 10/10/2000 establishing the list of hazardous waste
9. Decree No. 2005-1991 of 11/07/2005, relating to the study of impact on the environment
10. Law n° 97-37 dated of 02/06/ 1997 related to the transport by road of hazardous materials
11. Decree No. 2000-439 of 14/02/2000 establishing the list of dangerous substances which transported by road must be under the control and with the accompaniment of security units
12. Decree No. 2002-2015 of 04/09/2002 fixing the technical rules related to the equipment and the design of vehicles used in the transport of hazardous materials by road.

3-ARTICLE 8: REGULATORY BODY

1. ***Each Contracting Party shall establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework referred to in Article7, and provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities.***
2. ***Each Contracting Party shall take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy***.

3.1-CURRENT REGULATORY FRAMEWORK

Tunisia has established a regulatory and institutional framework to insure safe and secure management of radioactive sources within all the territory.

a. Existing legislation and Regulation

Legislation and regulations are in place since 1981, aiming to the protection against ionizing radiations of the workers, the patients and the public and establishing a regulatory body for these activities calledNational Centre for Radiation Protection (CNRP)(under the ministry of health)which is acting since 1981 as regulatory authority.

b. Organization and activities of CNRP

The CNRP is placed under the aegis of the Ministry of Health; it is a public institution having administrative and financial autonomy. The CNRP is directed by a Director General, familiar with ionizing radiations, nominated by a decree.
The staff includes senior permanent employees and temporary employees (bio physicians, medical doctors, medical physicians, engineers, lawyer, and administrator), technicians, inspectors and other agents.

There are administrative and medical services, Dosimetry, Spectrometry and Calibration laboratories, Control and Inspection service, Documentation and Teaching Unit, Research Unit, and Radiological Security and Safety framework (RSSR Unit).

The CNRP is enabled to regulate all practices involving radioactive sources or devices generating ionizing radiation, to take enforcement actions if there is any non-compliance with regulatory requirements, and to set administrative procedures: reporting to the Minister of Health.

3.2-ACTIONS ACHIEVED OR PLANNED

The drafted comprehensive nuclear law includes also the establishment of the National Commission for Nuclear Safety hereinafter designated as NCNS that will carry out regulatory functions in accordance with international standards, and related conventions.

The NCNS will be an independent regulatory body tasked with ensuring to take all necessary measures. This aims to ensure the safe, secure and safeguarded uses of nuclear energy and techniques in order to ensure the protection of facilities and activities, radioactive sources, individuals, property and the environment in line with the international obligations of Tunisia, especially in framework of the Convention on nuclear Safety.

One of the main functions of this commission will be licensing and controlling all nuclear and radiological activities, facilities and installations and the use of radioactive sources.

The NCNS will carry out regulatory functions for safety, security, safeguards, radiation protection, physical protection, radioactive material transport, and radioactive waste management.

NCNS 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 NCNS will be complete independent authority.

It should be noted that the provisions of the comprehensive nuclear law should be completed by decrees of application of the law and by guidance's to be promulgated by the NCNS.

The list of decrees of application of the comprehensive nuclear law is as following:

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

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.

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 authorization 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

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.

This NCNS 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
- → 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…

It should be noted that detailed requirements and procedures should be included in the decrees of application of the comprehensive law and in other regulatory tools.

4-ARTICLE 9: RESPONSIBILITY OF THE LICENCE HOLDER

"Each Contracting Party shall ensure that prime responsibility for the safety of a nuclear installation rests with the holder of the relevant licence and shall take the appropriate steps to ensure that each such licence holder meets its responsibility"

Provisions are included in the drafted comprehensive nuclear law to ensure that the authorized person shall bear the prime responsibility for ensuring the safety of the nuclear installation and of all activities and procedures associated with it. These provisions are included as fundamental principles in the first chapter of the drafted law related to general provisions and detailed in the chapter 3 related to Nuclear Safety. To ensure that authorized persons meet their responsibilities, provisions are made under the chapter 2 related to the control of nuclear activities and the NCNS will control, inspect and enforce the application of relevant legal requirements.

5-ARTICLE 10: PRIORITY TO SAFETY

"Each Contracting Party shall take the appropriate steps to ensure that all organizations engaged in activities directly related to nuclear installations shall establish policies that give due priority to nuclear safety."

Priority to Nuclear safety as a fundamental principle is included in the drafted law; more details should be completed by preparing the decrees of application. Furthermore, different institutions such as CNSTN are considering nuclear safety as priority number one in all activities. For that, CNSTN has established a department of nuclear safety, which is responsible for safety aspects of all nuclear activities in the CNSTN. The department deals with different issues related to Radiation protection, nuclear security and nuclear safety. STEG team in charge of NPP feasibility study adopted the same approach.

6-ARTICLE 15: RADIATION PROTECTION

Each Contracting Party shall take the appropriate steps to ensure that in all operational states the radiation exposure to the workers and the public caused by a nuclear installation shall be kept as low as reasonably achievable and that no individual shall be exposed to radiation doses which exceed prescribed national dose limits

The existing legislation and regulations related to radiation protection, which were not updated, are not fully in compliance with the international fundamental requirements.

To remedy this situation, provisions are made in the drafted law to ensure the principles of: justification, optimization and dose limitation. These provisions are included as fundamental principles in the first chapter of the drafted law related to general provisions and detailed in the chapter 5 related to radiation protection, these fundamental principles are intended to ensure protection of persons, property or the environment caused by nuclear installation or other radiological activities.

The detailed requirements and procedures should be included in the decrees of application of the comprehensive law and in other regulatory tools.

7-ARTICLE 16: EMERGENCY PREPAREDNESS

1. ***Each Contracting Party shall take the appropriate steps to ensure that there are on-site and off-site emergency plans that are routinely tested for nuclear installations and cover the activities to be carried out in the event of an emergency.***

For any new nuclear installation, such plans shall be prepared and tested before it commences operation above a low power level agreed by the regulatory body.

2. ***Each Contracting Party shall take the appropriate steps to ensure that, insofar as they are likely to be affected by a radiological emergency, its own population and the competent authorities of the States in the vicinity of the nuclear installation are provided with appropriate information for emergency planning and response.***

3. ***Contracting Parties which do not have a nuclear installation on their territory, insofar as they are likely to be affected in the event of a radiological emergency at a nuclear installation in the vicinity, shall take the appropriate steps for the preparation and testing of emergency plans for their territory that cover the activities to be carried out in the event of such an emergency.***

Special provisions in the drafted nuclear law addressing emergency preparedness and response are included the chapter 3 related to Nuclear Safety, these provisions are intended to complete the law No. 91-39, dated on08/06/1991, related to disasters, their prevention and rescue organization. Users of nuclear installations and other radioactive material are requested to prepare and set up an appropriate on-site and off-site emergency plans dealing with accidents or emergencies that could result in damage to persons, property or the environment. The plan should include provisions for exercises to ensure its adequacy, including participation by all relevant persons and concerned governmental institutions.
All the relevant international legal commitments such as those under the CNS, the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency are implemented in the drafted nuclear law. This work should be completed by preparing the decrees of application that should implement the whole system with all the needed mechanisms.

On this regard it is stated in the drafted nuclear law that emergency plans determining the distribution of tasks to intervention management in and outside the site shall be prepared. They shall be divided into:

A- An internal emergency plan prepared by the exploiter aiming to return the facility to a safe situation and to minimize the effects of the accident. This plan shall also determine the total organizational measures and necessary potential to be used at the site. It shall also include the measures that enable promptly apprising the concerned parties.

B- A special plan to counter the nuclear and radiation hazards, shall be prepared under the supervision of the governor of the region with the aim of protecting the population in the near term in the event of an accident at a radiation or nuclear facility. It shall determine the tasks of the concerned parties, the warning deployment plans and the material and human capabilities.

C- A special plan to counter the nuclear and radiation hazards, during the transport of radioactive material or radioactive waste, shall be prepared under the supervision of the governor of the region with the aim of protecting the population in the near term in the event of an accident at a radiation or nuclear facility. It shall determine the tasks of the concerned parties, the warning deployment plans and the material and human capabilities.

D- A national plan to counter the radiation and nuclear hazards shall be prepared under the supervision of the Minister of Interior with the aim of protecting the population in the aftermath of the accident impact extending beyond the boundaries of the state where they took place and determining the tasks of the concerned parties, the warning deployment plans and the physical and human capabilities.

The elements and procedures pertinent to the above-indicated plans shall be regulated by a government.

It is planned that the decree of application and the preparation of plans will take place after the promulgation of the law; some specific plans will take into consideration possible hazards having its origin from other countries since we do not have any nuclear installation.

Existing Plan: ORSEC

1- Legal framework

A legal framework governing the organizational arrangements and disaster management is based on the following legal texts:

- Law No. 91-39 of 8 June 1991 on the lute against disasters, their prevention and relief organization.
- Law No. 2009-11du March 2, 2009 promulgating the code of safety and prevention of explosion of fire and panic in buildings.
- Law No. 96-29 of 3 April 1996 establishing a National Urgent Response Plan for Fight against marine pollution events.
- Law No. 37-97 of 2 June 1997 on the transport of dangerous material by road.

• Decree No. 3333-2009 of 2 November 2009 setting the intervention plans to assist aircraft in distress.

• Decree No. 433-1986 of 28 March 1986 on the protection against ionizing radiation.

• Decree No. 93-942 of 26 April 1993 as amended by Decree No. 2004-2723 of 21 December 2004 laying down the modalities of elaboration and implementation of national and regional plans on the fight against disasters, their prevention and organization

• Decree n ° 75 -155 of 7 March 1975 establishing and organizing a search and rescue service in Tunisia.

• Decree No. 88-1751 of 11 April 1988 establishing the organization of operation of the locust control companion.

2 - National Plan (ORSEC)

To manage all kinds of risks, the state has a strategy based on a legal framework and a clear and efficient procedure. The essential elements of this strategy are:

- Disaster prevention
- Disaster management.

2-1 Disaster prevention

Disaster prevention is essentially structured on:

- Risk identification:

  Referring to the history and to studies related to urban, industrial and technological development, the risks which are often encountered are:

  - Flooding ;
  - The tremors ;
  - The forests fires ;
  - The plagues of locusts ;
  - Industrial risks ;
  - Urban risk.
- The location of risks by region.
- Preventive Culture.

2-2 Disaster management: The operational organization

The necessary measures to prevent disasters and deal with all types of relief are taken in the context of:

- National plan;

- Regional plans;
- Specific plans.

2-2-1 National Relief Organization Plan

- The Minister of the Interior gave the order to implement the National Plan;
- The Permanent National Committee is responsible for developing the National Plan against calamities, prevention and rescue organization and monitor its implementation;
- The Minister of the Interior is the chairman of this committee which regroups permanent representatives of relevant ministries;
- The Director of Civil Protection is the permanent secretariat of the commission. His mission is to prepare and coordinate the intervention;
- The Minister of the Interior provides a response plan according to each disaster.

2-2-2 Regional Relief Organization Plan

- The governor adopts the regional relief organization plan which is developed by the regional commission in cooperation with the regional unit of civil protection;
- The governor gives the order of the regional plan triggering and must inform immediately the Minister of Interior;
- Regional plans include specific plans for each type and category of calamity;
- Regional plans are part of the national plan and are developed at the regional level.

2-2-3 Specific Plan

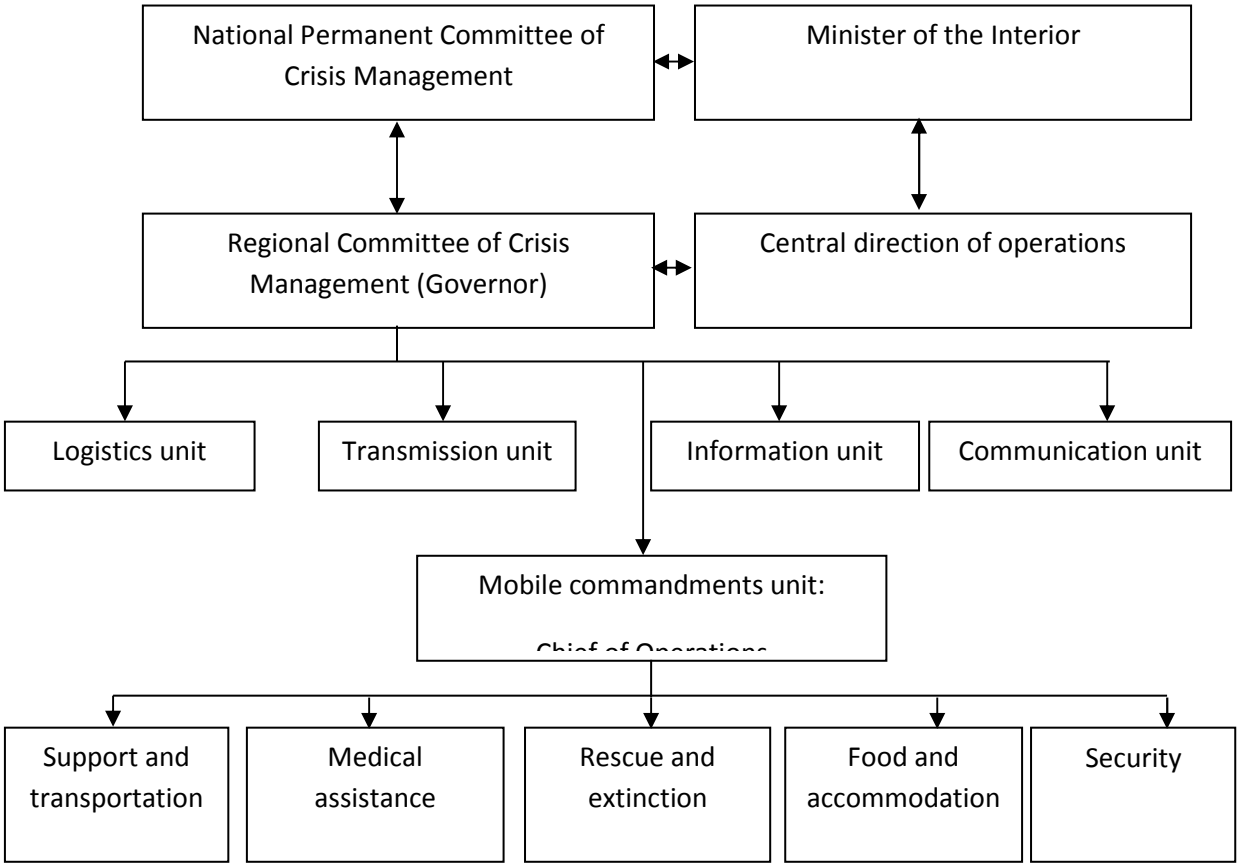
In practice, the units of the Civil Protection apply the specific plans which are suitable to manage major accidents and disasters because they better meet operational requirements in crisis management. The following table describes each specific plan:

Specific plan	**Description**
Red plan	It concerns all the disasters and all accidents that generate a high number of victims and whose emergency interventions will be

	based on the rescue and medical care (Earthquake, transportation accidents, poisoning and toxic gas leak)
Green plan	Regards forest and farms fires that require specific firefighting techniques.
Yellow plan	For technological accidents that take place mainly in industrial facilities and in general give rise to fires, explosions and gas and hazardous materials leaks.
Blue plan	Concerns floods and sea, lakes and watercourses (wadi) interventions and requires specific rescue equipment (boats, motor pumps, shelter, clothing and blankets, food ....).

2-2-4 Organization

The general relief organization plan is illustrated in the following figure:



2-2-6 Foreign Assistance

The assistance may be requested in very serious situations that exceeds the national capacities. It is decided by the government through diplomatic channels of the Ministry of Foreign Affairs.

II- Existing Radiological and Nuclear Emergency Plan

Tunisia has now a wide use of radioactive sources in medical, industrial, agricultural, education and research field. While regulation submits establishments and users to strict rules, any human or hardware failure can cause a radiological emergency requiring a rescue plan to deal with the emergency timely and appropriately.

Nevertheless, TUNISIA currently doesn't have a clear and efficient radiological emergency plan. Therefore, a commission chaired by the CNRP, was created to develop a draft of a radiological emergency plan for radioactive sources. This project is currently in progress. Through the RAF9041 project, Tunisia has benefited from the assistance of Canadian experts to develop a possible structure plan in consultation with the CNRP and ONPC. This project is still under discussion and consultation at national level. Regarding nuclear power plants, the Nuclear Project team has established an emergency plan for the future plant in case of incidents or accidents for the two candidate sites. This plan contains the following elements:

- The emergency classification system
- Emergency areas and distances offsite
- Urgent protective and response measures
- The levels of operational intervention
- Organization of the intervention and crisis cells

Initially, both plans have been developed according to the following elements:

- Available support at all levels;
- Actors, their roles, their responsibilities, their involvement, their interaction and the mechanisms needed to implement an emergency action plan.

Secondly, it is expected to detail each type of intervention, since the outbreak of the alert until the return to the normal situation and long-term monitoring through different stages: the first response, operational intervention level, first aid, medical intervention, hospitalization and emergency measures.

Thereafter both plans will be developed at three levels:

- International level: Notification and assistance;
- National level: Coordination and communication, deployment of human and material resources and the integration of the radiological and nuclear emergency plan with the national plan ORSEC;

Regional and local level: procedures and instructions of operations.

8-ARTICLE 19: OPERATION

Each Contracting Party shall take the appropriate steps to ensure that:

i. the initial authorization to operate a nuclear installation is based upon an appropriate safety analysis and a commissioning programme demonstrating that the installation, as constructed, is consistent with design and safety requirements;

ii. operational limits and conditions derived from the safety analysis, tests and operational experience are defined and revised as necessary for identifying safe boundaries for operation;

iii. operation, maintenance, inspection and testing of a nuclear installation are conducted in accordance with approved procedures;

iv. procedures are established for responding to anticipated operational occurrences and to accidents;

v. necessary engineering and technical support in all safety-related fields is available throughout the lifetime of a nuclear installation;

vi. incidents significant to safety are reported in a timely manner by the holder of the relevant licence to the regulatory body;

vii. programmes to collect and analyse operating experience are established, the results obtained and the conclusions drawn are acted upon and that existing mechanisms are used to share important experience with international bodies and with other operating organizations and regulatory bodies;

viii. the generation of radioactive waste resulting from the operation of a nuclear installation is kept to the minimum practicable for the process concerned, both in activity and in volume, and any necessary treatment and storage of spent fuel and waste directly related to the operation and on the same site as that of the nuclear installation take into consideration conditioning and disposal.

Provisions dealing with all aspects of operation as described in the CNS are included in the drafted law; the system should be completed by the decrees of application and the establishment of the new regulatory authority.

The whole project aims to establish a legislative and regulatory infrastructure for safe and peaceful use of nuclear energy and technologies in Tunisia. This infrastructure should implement the international commitments made in the framework of international conventions ratified by Tunisia and all related international standards and recommendations including those adopted by the international atomic energy agency and based on good practices and lessons learned by experience gained in this field.

A national legal and technical expert team in charge of the establishment of a new legislative and regulatory framework for peaceful uses of nuclear energy and techniques was established by the government since years ago its members are representatives from different concerned ministries and national agencies and the CNSTN is coordinating its activities.

We note that the process of drafting regulations (decrees, guidance) in application of the comprehensive nuclear law on the peaceful uses of nuclear energy and nuclear techniques is covering all areas. ; Authorization schemes and control of nuclear and radiological activities, requirements for radiation safety and radiation protection in the various exposure situations, nuclear safety and nuclear security, radioactive waste management and safety of transport of radioactive materials and safeguards….

We take into consideration the growing number of international instruments and standards and their complexity in the nuclear field should be reflected at the national level by adopting regulations to apply these instruments and standards in a way understandable by all stakeholders, based on a graded approach, taking into consideration the current status and the future development of the national nuclear program. These regulations should also be prepared in a way that their implementation is reasonably achievable without any over or less requirements.

Currently the expert team coordinated by the National Centre for Nuclear Science and technology (and in the future by the National Nuclear Safety Commission after its establishment) started the process

CONCLUSION

Tunisia has many years of experience in the fields of peaceful uses of nuclear energy and has an ambitious program for the development of applications of nuclear energy and techniques. The legislation and regulations in force in Tunisia reflect the existing nuclear activities and generally fail to meet the international standards. The CNRP acting in practice since more than 34 years as regulatory body got a large experience and human capabilities. It is involved with the national expert group under the coordination of the CNEA in the elaboration of nuclear law and will be integrated within the NCNS to insure the continuity of the regulatory activities. The national expert group aimed to include provisions in the drafted law that should enforce the provisions of the CNS all the related conventions and international standards. The IAEA is involved in this process by revising the drafted law. This work should

be completed by preparing the decrees of application that should implement the whole system with all the needed mechanisms.

The expert group is also following closely all recommendations made by various groups following the Fukushima accident and the IAEA DG report on the matter in order to take them into consideration, if need be, into the decrees of application of the comprehensive nuclear law.

The same approach is adopted with regard to the provisions of Vienna declaration on Nuclear Safety as adopted in the related Diplomatic Conference.

To Summarize Tunisia has decided to establish a new legislative and regulatory framework in line with international conventions and standards especially taking into consideration those conventions and standards related to Nuclear Safety, Security and Safeguards. Within this framework, a draft of a comprehensive nuclear law was prepared and finalized establishing mainly a new regulatory authority with tasks and duties as described in the CNS. Currently the draft of the new comprehensive nuclear law is in the process of adoption. It should be recalled that Tunisia is currently under a transitional period in which the national priority was from 2011 until now the adoption of a new constitution and the promulgation of the constitution implementing laws and regulation. We also making efforts at the level of the Atomic Energy Commission and the ministry of Higher Education and Scientific Research to make the adoption of the comprehensive nuclear law as a National Priority.