Human Resources for the Nuclear sector. Niger Republic

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1. Introduction

It is interesting to examine how the need to develop and maintain skills in term of human resources was dealt with Niger's nuclear sector.
Although the country is one of poorest in the world, some insight can be derived from its experience.

The Niger politics and strategies for both demand and supply side of human resources in the nuclear sector are to promote tangible socio-economic impact to the achievement of major sustainable development priorities.

Member state of International Atomic Energy Agency (IAEA) since 1968, Niger was started during the same year, its nuclear activities by extraction and processing uranium from open pit mine of SOMAIR. With 2960 tons of uranium from two big mines , Niger becomes the 3rd world producer.

Training and education are critical components of the development of human resources related to the nuclear sector in Niger Republic.
The country has gone through a number of initiatives to consolidate its legal framework concerning radiation safety .The National Centre of Radio Protection (NCRP), under the Ministry of Heath, is operational and is responsible for national regulatory activities programme, while the Ministry of Mines and Energy regulates uranium mining and milling activities.

Both regulatory authorities need to develop their human resources to be able to inspect users and enforce regulatory requirements in all areas.

2. Human resources suppliers

In order to establish a pool of competency, mining companies send their workers to France for education and training.

Incentives (good social condition, salaries etc) were provided to attract people to work in nuclear programme. Many foreign professionals were short term consultants, but many of them are employed by the companies, forming a pool of well-skilled and motivated professionals.

One way that was used to enhance and maintain the pool of trained professionals was the technical co-operation with the IAEA
In this regard , we thank IAEA who has assisted Niger Republic to train more than 200 people from 1980 to 2004.

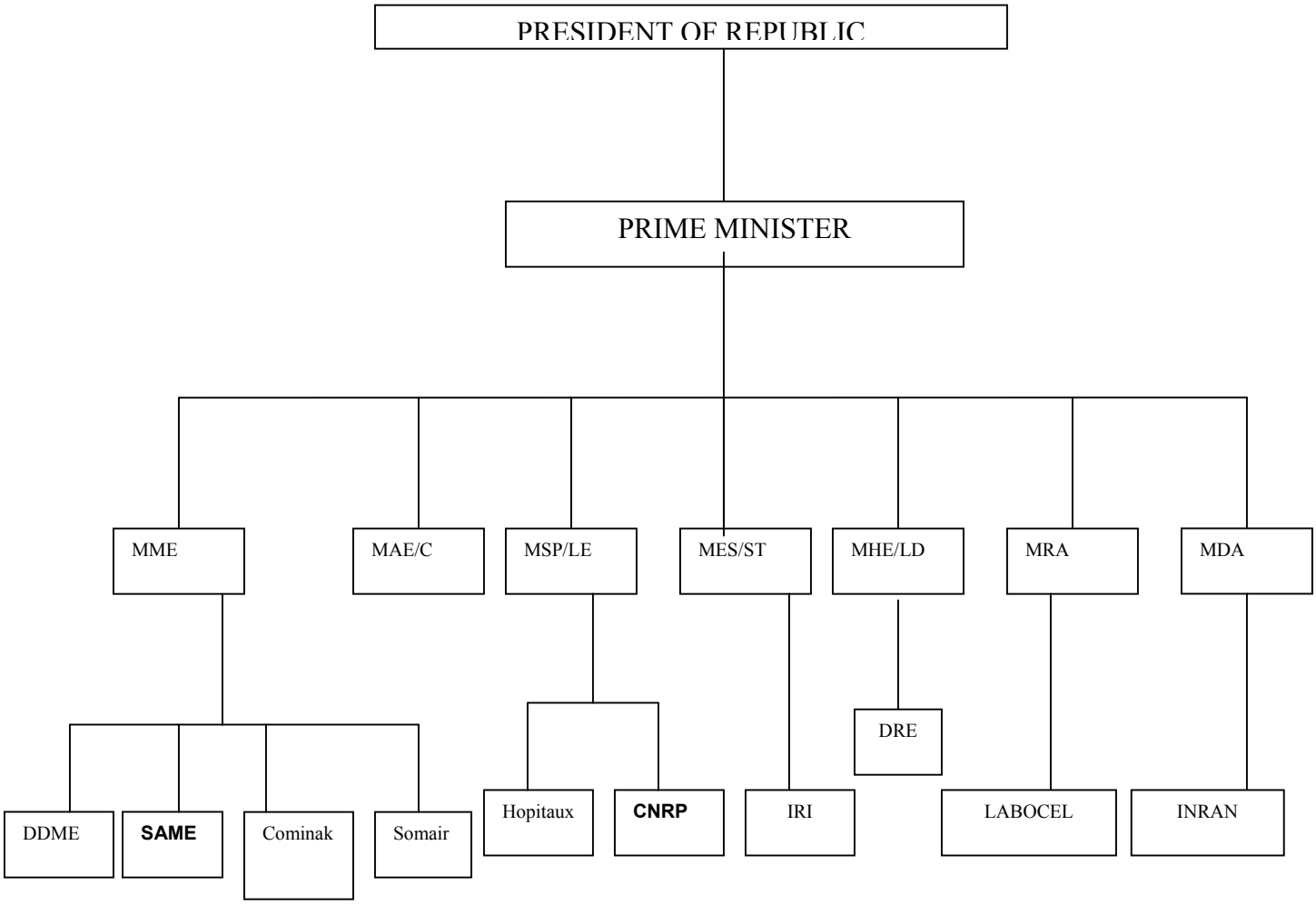
The main field of training includes:
- General atomic energy development;
- Nuclear physics;
- Prospecting, mining and processing of nuclear material;
- Nuclear engineering and technology;
- Application of isotopes and radiation in agriculture;
- Application of isotopes and radiation in medicine;
- Application of isotopes and radiation in industry and hydrology;
- Safety in nuclear energy.

A second method that was used to increase the trained human resources was the development of local training centre and programme :
- A comprehensive training programme for radiation protection was put in place by the uranium companies . It consists of refresher training courses and on-job training , with the aim of keeping personal at all levels updated on innovations and technology developments.
- The Radio-Isotopes Institute Centre (IRI) provides courses of post-graduate degree (DEA) by course work and research report in the field of nuclear applications (Nuclear medicine, Agronomy, Nuclear physics).
- The National Centre of Radio Protection (CNRP) is supposed to provide training in radio protection. Due to some administrative problems , the training is not yet stated.

3. Human resources users

The main sectors using manpower comprising the need for human resources are as following:
- Extraction and processing of uranium (Ministry of Mines and Energy, MME);
- Human heath (Ministry of heath, MSP/LE);
- Water resource management (Ministry of hydraulic, MES/ST),
- Research and development (Ministry of high education, MES/ST).

Organisational Flowchart



4. Difficulties

The major impediments in nuclear development in Niger remain:
- The lack of trained technical and management personal who have adequate experience and skills to deliver quality services;
- The absence of appropriate planing mechanisms;
- Ineffectual regulatory performance;
- Non-appropriate technical competence in radiation protection and safety matters at all level; that means at workers , employers and regulatory level;
- Lack of national inspectors and material of inspection;

- Lack of clear vision, strategic plans and managerial skills
- Lack of career patting for personal;
- Lack of well-tested surveillance systems and other security measures for the safeguarding of the nuclear materials and radioactive sources.

5. Conclusion

The important role in the development of human resources played by the Ministry of Mines and Energy in its capacity of national co-ordination, as well as its planning and programming function need to be enhanced and streamlined further in order to achieve better impact of technical co-operation.

Both regulatory authorities, users and suppliers of human resources need to develop their competence. The Government should be encouraged to continue to strengthen its regulatory framework so that it can be self-sustaining.

In the addition to the important matter of education and training, it must be pointed out that maintaining competence needs more effort that just excellent training programmes. One key element is generally an intelligent use of the knowledge through good management.