

**Legal and Regulatory Framework and
Situation for Physical Protection of Nuclear
/Radioactive materials in Ethiopia**

October 14, 2017, Vienna, Austria

Contents of the presentation

I. Introduction

II. Organizational Structure of the Regulatory System

III. Legislative Framework of the Ethiopian Radiation Protection Authority

IV. Efforts towards Implementing Nuclear Security and Physical Protection of Nuclear and Radioactive Materials/Facilities Plan

V. Challenges

VI. Conclusion

I. Introduction

- Ethiopian has been receiving technical and financial assistance from IAEA in the framework of national and regional technical cooperation projects.
- The assistance of the Agency (IAEA) also assisted to improve its infrastructure in safety and security and system to provide a wide scope of services to its customers.
- A total quality management system is in the process of establishment for efficient provision of services.



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- The physical protection of category I and II sources in the country is strengthened through bilateral agreement with the Department of Energy of USA.
- The Authority initiated a correspondence with neighbouring countries for controlling illicit trafficking of radioactive and nuclear materials entering through borders.
- The Government of Ethiopia recognized that the responsibility for nuclear and radioactive security rests entirely with the national effort by establishing effective national systems for nuclear security measures



II. Organizational Structure of the Regulatory System

Ministry of Science & Technology

ERPA

Director General

Support Services

Ionizing Radiation Notification and Authorization Directorate

Ionizing Radiation Regulatory Control Directorate

Research & DeV. Directorate



III. Legislative Framework of the Regulatory

- The Government of Ethiopia promulgated radiation protection legislation Law 79/1993 in December 1993, which established an autonomous regulatory authority to control and supervise the introduction and conduct of any practice involving sources of ionizing radiation.
- This law was revised and replaced by RP Law 571/2008



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- A new Nuclear and Radiation protection legislation law (Proc No 1025/2017); has been developed and approved by the Parliament and gazetted on 19 July 2017.
- This law has provisions incorporating nuclear and radiation safety, security, Physical protection of nuclear and radioactive materials, and safeguards.



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- A team of delegation came to Vienna and prepared a draft regulation as a follow up to implement the new legislative.
- The content of the regulation is enriched with the consultative meeting discussion of stakeholders and received comments from IAEA experts; and then submitted to the Ministry of Science and Technology to be approved by the Council of Ministers;

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- 11 draft directives of different areas such as industrial radiography, transport security NORM, Gauges and weloging, medical exposure etc are prepared as per the new regulation so as to execute it on the ground with shared responsibilities.
- protocols, procedures, specific application formats and checklists compatible with the IAEA requirements are also updated and prepared in consistent with the new legislative.



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- The current Authority will be established by regulation as stated in the new proclamation(Proc No 1025/2017) and renamed as "**Ethiopian Nuclear and Radiation Protection Authority**".
- To fully implement the legislative for enhancing the Regulatory Activities of the Authority, ERPA have signed a memorandum of understanding with different stakeholders such as Customs Authority, MoH, MoT, ERA, MoM and NMI.

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- The current Proclamation has also provisions for **physical protection, transport security and information security** of nuclear materials and facilities.
- However; the presence of comprehensive legislative framework doesn't bring an efficient Physical protection system of nuclear/radioactive materials by itself.



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- The implementation of the legislative requires standards of professional competence of the regulatory, the operator and other relevant stakeholder staffs.
- The availability of adequate and independent financial resources, and the establishment of a security culture in both the regulatory body and the licensees are also the pressing needs for effective execution of the legislative.



IV. Efforts towards Implementing Nuclear Security and Physical Protection of Nuclear and Radioactive Materials/Facilities Plan

- Even though Ethiopia is neither a user of nuclear energy nor a nuclear power; it begins and takes seriously nuclear security measures since the threat may occur at any time and place unpredictably specially in its borders apart from contributing to international peace and security.



Efforts towards..Cont---

- We are also located in a hostile region where terrorist attacks are frequently occurring, and we can be badly affected by a nuclear radiological incident elsewhere through our borders.
- Therefore; we have to strengthen our nuclear and radioactive security measures and also actively cooperate with the international community and our partners to contribute for the efforts of strengthening the global nuclear security.



Efforts towards..Cont----

- The Ethiopian Radiation Protection Authority organized a five day workshop in cooperation with the International Atomic Energy Agency to conduct a review of the five functional areas of the Integrated Nuclear Security Support Plan (INSSP) for further implementation of nuclear security activities.
- This workshop enables us to identify achievements, national needs and propose implementation plan for the next three years based on the identified priorities.



Efforts towards..Cont---

- An action plan is prepared to be implemented with relevant stakeholders.
- As a follow up of this action plan a second workshop is arranged from November 27, 2017 to December 1, 2017 with IAEA to prepare nuclear security activities implementation road map.
- National assessment and inventory of nuclear materials will also be done in cooperation with the operators/ licensees.



Efforts towards...Cont---

- The inventory will help to identify and consolidate nuclear security needs of our country through the framework of Integrated Nuclear Security Support Plan (NSSP).
- The Authority conducted the regulatory infrastructure self assessment review and identified its strengths and weakness for further improvement.



Efforts towards..Cont---

- Following this self assessment; the Authority will host an IRRS Mission from 03-12 December 2017 to review the regulatory system against the standards of an effective regulatory system.
- We are relatively good in radiation safety and we need trained man power at different levels to discharge our respective responsibilities and enhance national capability in the physical protection of nuclear materials



V. Challenges

- The control of nuclear materials including their physical protection is at an infant stage due to the following main factors:
- The shortage of qualified experts and trained staff;
- The public is not generally aware of the widespread use of them and the hazard that their malicious use can pose.
- Inadequate infrastructure to discharge the expected mandate;

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- Inadequate support of stakeholders to work cooperatively;
- Lack of or limited incentives for career development, resulting in a high turnover of trained staff; and inability to solicit and allocate the necessary resources to recruit and retain specialists;
- Limited experiences in the physical protection of nuclear and radioactive materials.

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- Lack of system and cooperation with neighbouring countries to control orphan sources entering through borders;
- Absence of DSRS return agreement documents for some sources;



VI. Conclusion

- For the application of nuclear science and technology and realization of its benefit establishing effective regulatory control system is mandatory to build confidence not only at the national level but also within neighbouring countries and the region at large.
- Though regulating safety and security is a national responsibility; international cooperation is important to promote and enhance safety and security.

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- We all are expected to fulfil our national and international undertakings and obligations by meeting radiation safety, nuclear security and safeguards requirements.
- The regulatory Authority shall take appropriate measures with defined requirements for physical protection of nuclear and radioactive materials to implement the regulatory process (authorization incensing, inspection, enforcement)



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- All relevant stakeholders shall work with synergy for ensuring that nuclear material is not diverted to nuclear weapons or other nuclear explosive devices
- Standards have to be developed through consultation with those who are or could be required to apply them.
- Ensure the implementation of treaties applicable to the sector and to which Ethiopia is a party, and cooperate with local, regional and international organizations having similar objectives



THANK YOU FOR YOUR ATTENTION!!

