

PNRA's Contribution in Enhancing Nuclear Safety and Security



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Outline

- **Evolution**
- **The Mission**
- **Tasks Ahead**
- **Major Achievements – Nuclear Safety**
- **Major Achievements – Nuclear Security**
- **International Recognition**
- **Conclusion**



Evolution

- 1964 Constitution of Pakistan Nuclear Safety Committee
- 1970 Creation of Nuclear Safety and Licensing Division
- 1984 Establishment of Directorate of Nuclear Safety and Radiation Protection (DNSRP)
- 1994 Creation of Pakistan Nuclear Regulatory Board (PNRB)
- 2001 Establishment of Pakistan Nuclear Regulatory Authority



THE MISSION

To ensure the safe operation of nuclear applications in the fields of industry, medicine and agriculture and to protect the radiation workers, general public and the environment from the harmful effects of radiation by formulating and implementing effective regulations and building a relationship of trust with the licensees and maintain transparency in actions and decisions by the regulatory body



Tasks Ahead

- **Re-licensing of KANUPP**
- **Operation license to C-1**
- **Expansion of the regulatory net to cover all users of radiation sources and generators**
- **Preparation for GoP's program of installing 8800 MWe by the year 2025**

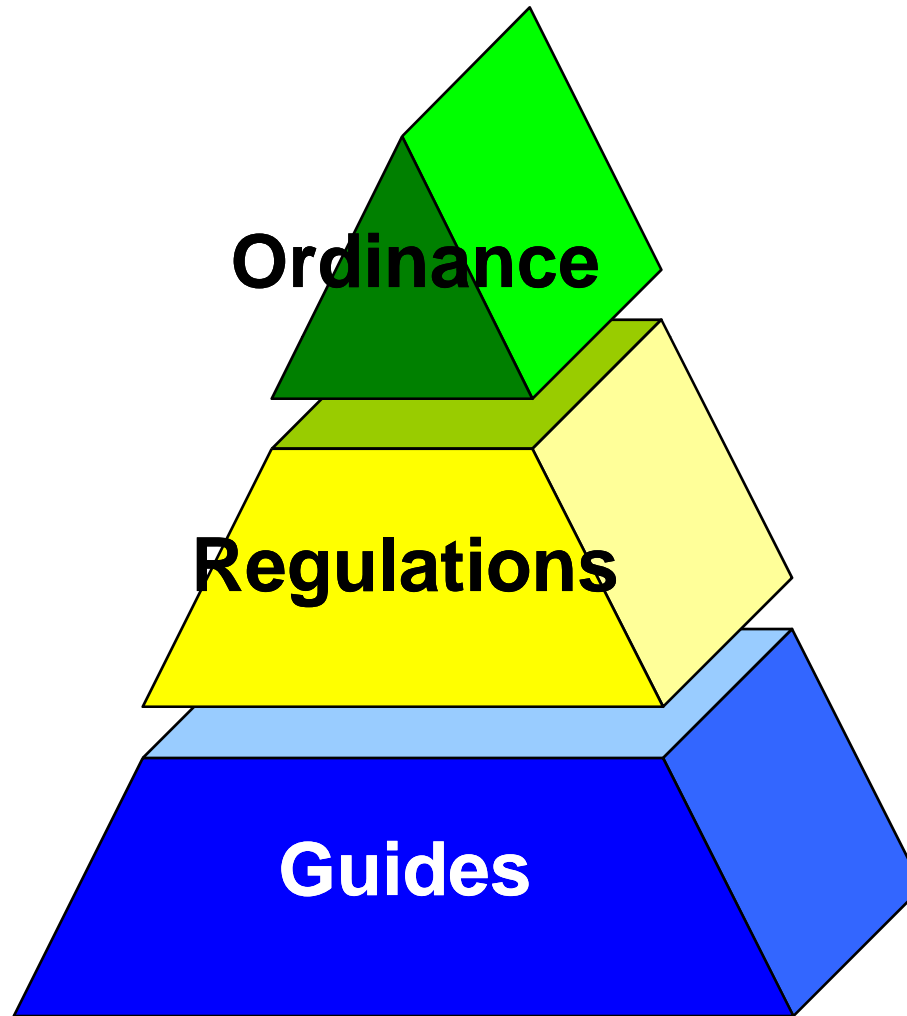


Major Achievements – Nuclear Safety

- **Development of regulatory framework**
- **Establishing regulatory oversight process**
- **Manpower development**
- **Organizational development – MS, infrastructure**
- **International Cooperation**
- **Major Achievements**



Development of regulatory framework





Development of regulatory framework (continued)

- **13 regulations developed so far which are at par with international standards, specifically IAEA safety standards**
- **Pakistan is amongst the first few Member State that adopted NS-R-1 as its design regulations**
- **covering all areas and stages of NPPs – cradle to grave (siting, design, manufacturing, operation, QA, radiation protection, waste management, emergency preparedness, transportation)**



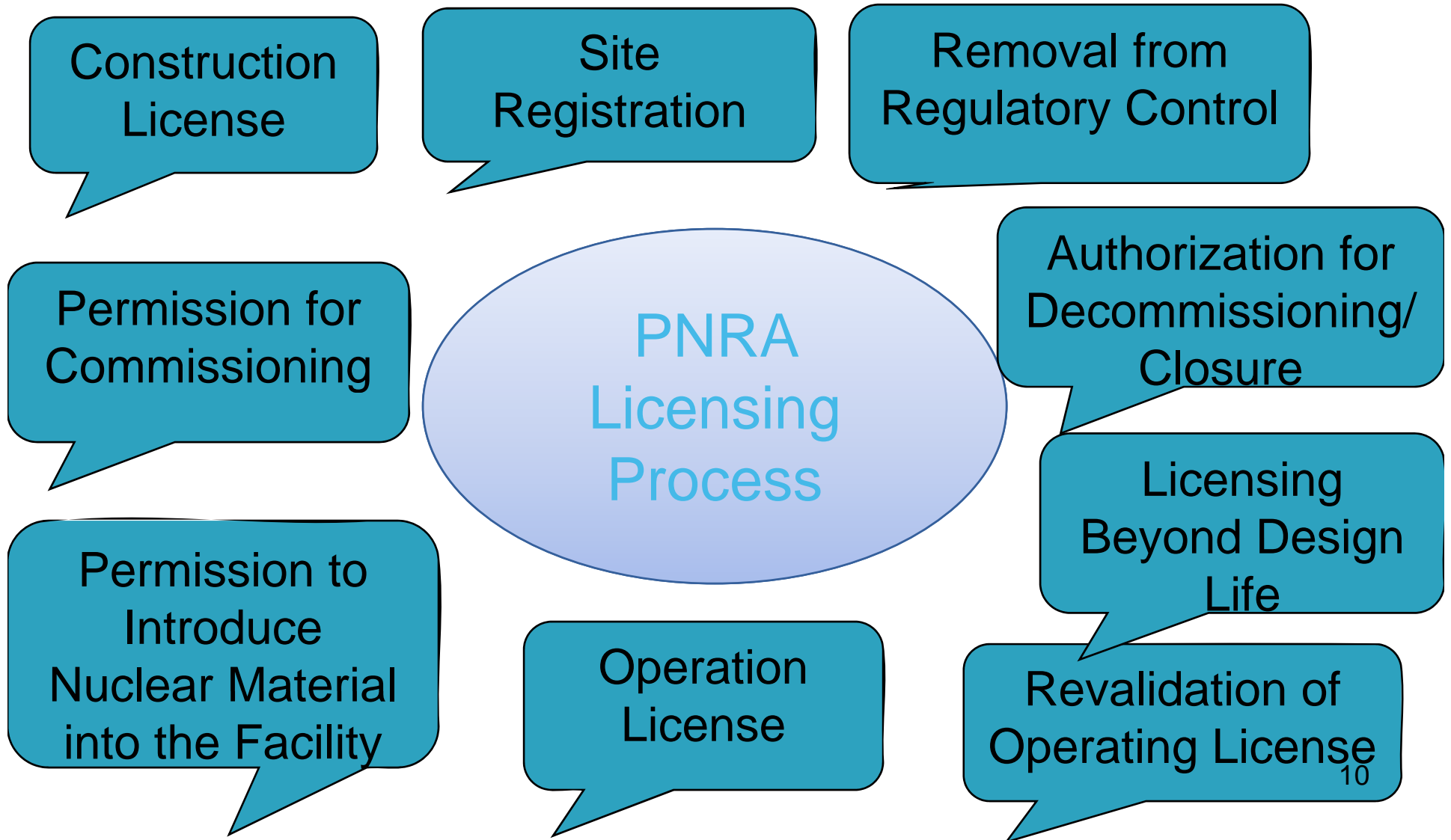
Regulatory Oversight Processes





Regulatory Oversight Processes

(continued)





Manpower development

- **Started with about 35 professionals**
- **Current strength is more than 200 professionals appropriately trained in technical areas, management system and regulatory processes**
- **Training Program**
 - **Based on Training Need Assessment (TNA)**
 - **School for Nuclear and Radiation Safety (SNRS)**
 - **Trainings outside PNRA are organized through HRD**
 - **IAEA TC Project on strengthening of PNRA – fellowships, scientific visits, training courses, workshops**
 - **On the job training in core functional areas under supervision and guidance of senior professionals**



Organizational Development

- **Development of infrastructure**
 - PNRA HQ building
 - Office cum residential complex at Chashma
 - Office complex in Karachi
 - Establishment of NRECC including mobile labs
 - Establishment of NuSECC including mobile labs
 - Establishment of National Dosimetry Services labs
- **Development and implementation of integrated MS based on GS-R-3**



International Cooperation

- **Collaboration with IAEA for manpower development**
- **Providing relevant experts to IAEA for various missions**
- **Providing supports to IAEA on implementation of various national and regional projects**
- **Protocol and agreement with NNSA and NSC**
- **Agreement with VUJE, a TSO of Slovak Republic**



Major Achievements – Nuclear Security

- **Post 9/11 scenario**
- **Nuclear security became major concern**
- **New stake holders identified**

**In the new scenario PNRA prepared
NATIONAL NUCLEAR SECURITY
ACTION PLAN - NSAP**



Major Achievements – Nuclear Security (continued)

**In the new scenario PNRA prepared
National Nuclear Security Action Plan**

With the objective to

“Develop a sustainable system for nuclear security with assured response and recovery capabilities, and integrated with applicable national and international laws”



National Nuclear Security Action Plan

- **Security of Radioactive Sources in Category 1-3**
- **Nuclear Security Training Center**
- **Nuclear Security Emergency Coordination Center (NuSECC)**
- **Locating and Securing Orphan Sources**
- **Provision of RDE at Entry/Exit Points of the Country**
- **Physical Protection of NM and Facilities**
- **Collaboration with National and International Organization.**



Border Points Equipped



Chaman



Sost



Wagah



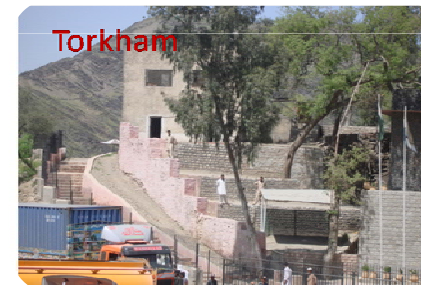
Taftan



Port Qasim



Gawader



Torkham



Recognition of PNRA

Efforts and achievement of PNRA are very well recognized at national as well as international level.



Prime Minister Statement at Nuclear Security Summit

- NSAP project of PNRA is as *one of the four pillars of Pakistan's nuclear security regime. The National Nuclear Security Action Plan (NSAP), being implemented by PNRA in collaboration with IAEA, encompasses several aspects of nuclear security including, physical protection, prevention of illicit trafficking, management and security of radioactive sources and response to unauthorized acts, involving nuclear and radioactive material".*



Conclusion

A well structured regulatory body with technically competent and dedicated manpower having necessary resources and conducive environment can do wonders. We at PNRA may not have done wonders but surely did not fall short of it.