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Experiences of MSs in Building Regulatory Framework for the Oversight of New NPPs

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Outline

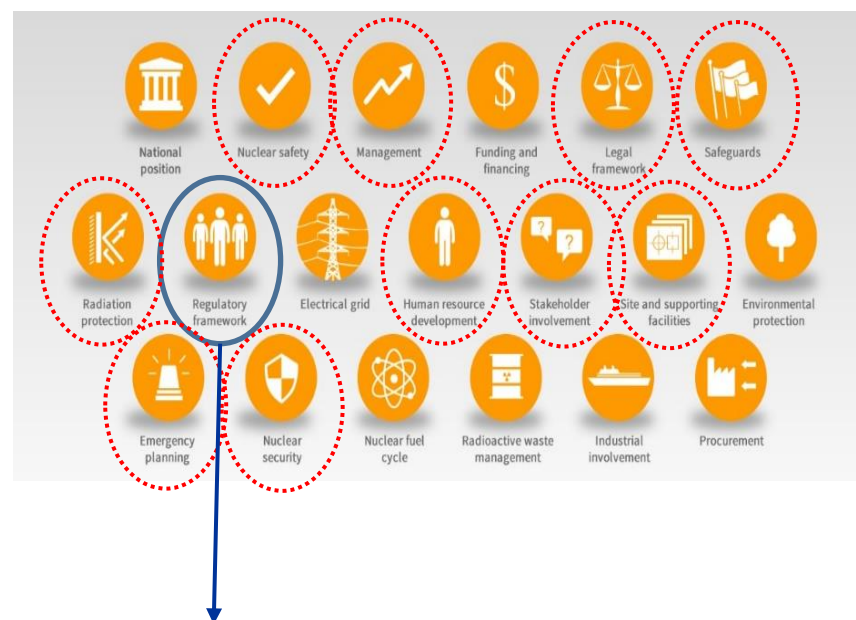
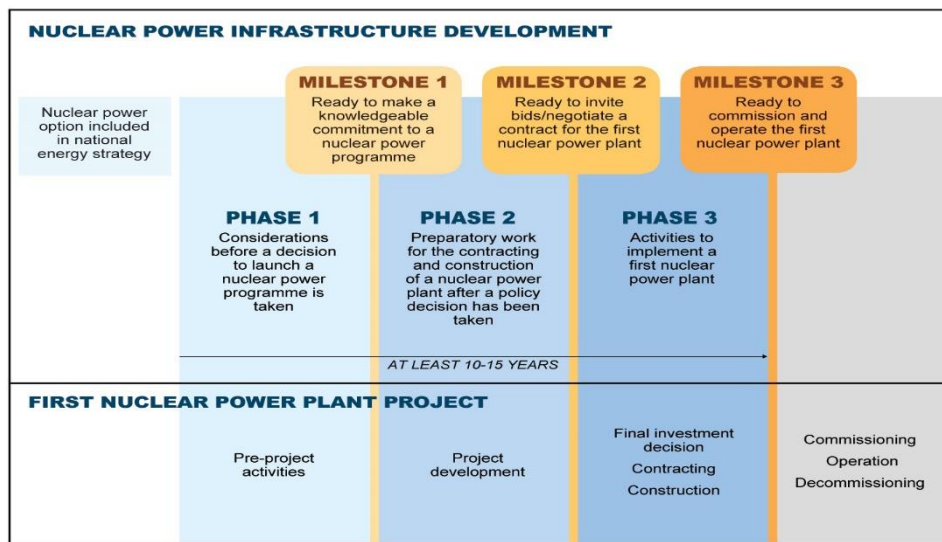
- Regulatory functions and activities
- Resource requirements for establishing and implementing regulatory framework
- Purpose and scope of the TECDOC
- Structure of the TECDOC
- Summary from the Case Studies in TECDOC

IAEA Milestones Approach

Nuclear programme governance guide

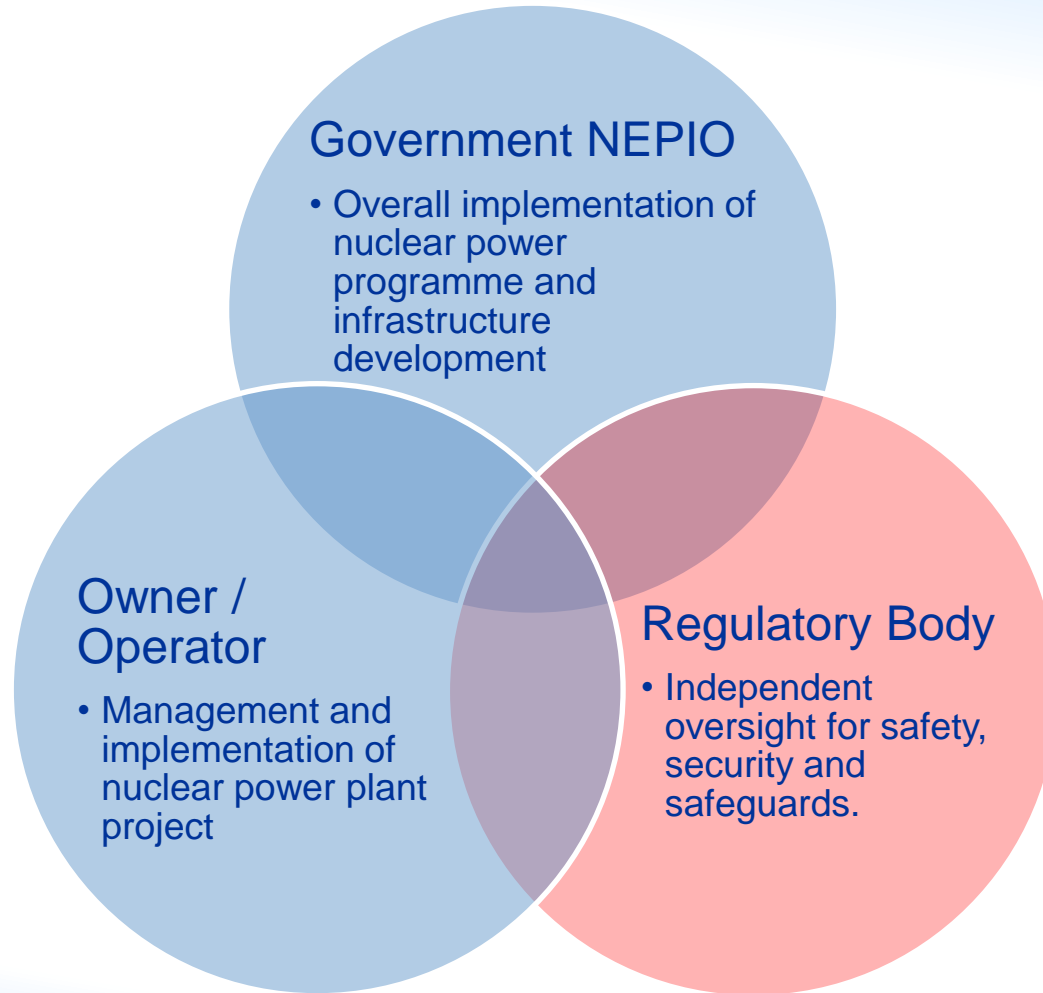
- 3 Phases (Consider – Prepare – Construct)
- 3 Milestones (Decide – Contract – Commission)
- 19 Infrastructure Issues

Regulatory Framework is established and implemented by Regulatory Body



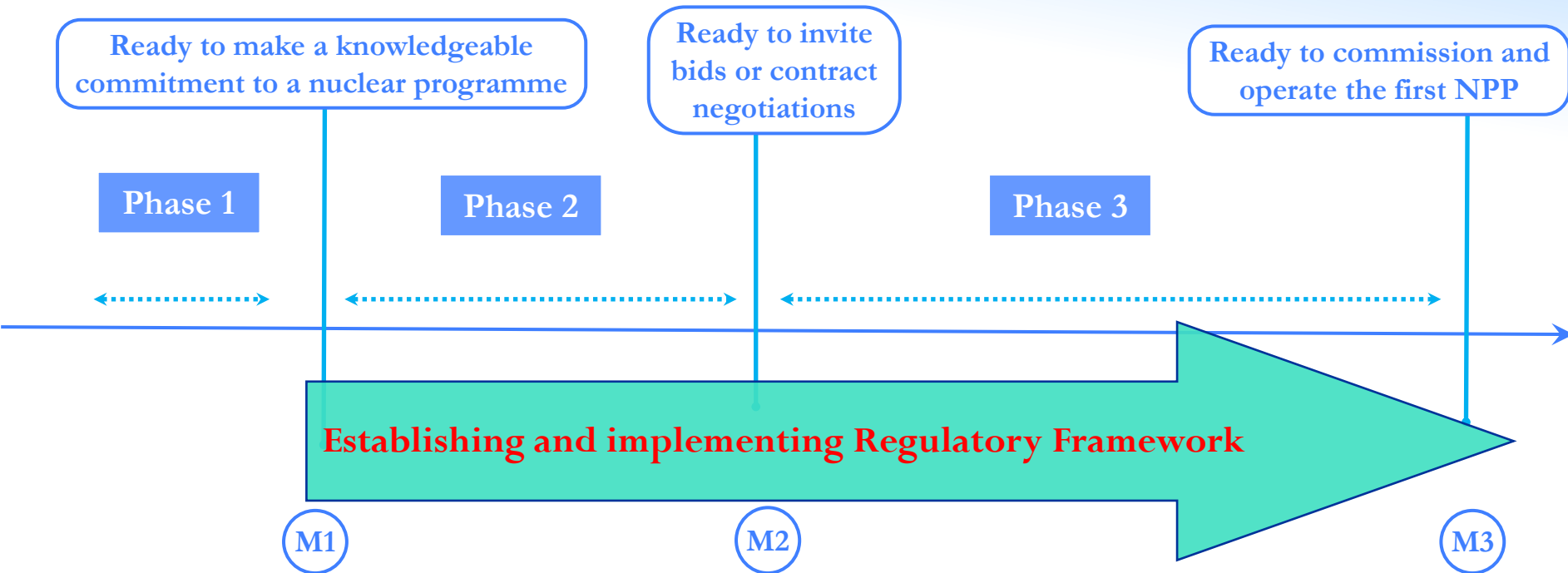
Regulatory Framework is a single infrastructure issue, but it has elements in and interactions with many other infrastructure issues

Three Key Organizations in Nuclear Power Programme



Regulatory Framework

Phased approach



- ✓ **Phase 1 is mostly awareness and planning stage;** develop an understanding of the obligations and implications of a nuclear power programme.
- ✓ **Phase 2 is implementation phase;** efforts should focus on establishment of institutions (organization and human resource) and development of regulations and guides for early stages of nuclear power programme (siting, design and construction).
- ✓ **Phase 3 is full establishment and application phase;** oversight of construction activities, regulations and guides for commissioning and operations to be completed, regulatory body to be fully developed to be able to oversight commissioning and operation stages.

Regulatory Functions and Activities for NPP

Core Regulatory Functions (GSG-12)

- ✓ Development of regulations and guides
- ✓ Notification and authorization
- ✓ Review and assessment the submissions (prior to authorization, periodically)
- ✓ Regulatory inspections Enforcement in the case of regulatory requirements or authorization conditions are violated
- ✓ Emergency preparedness and response;
- ✓ Communication and consultation with interested parties

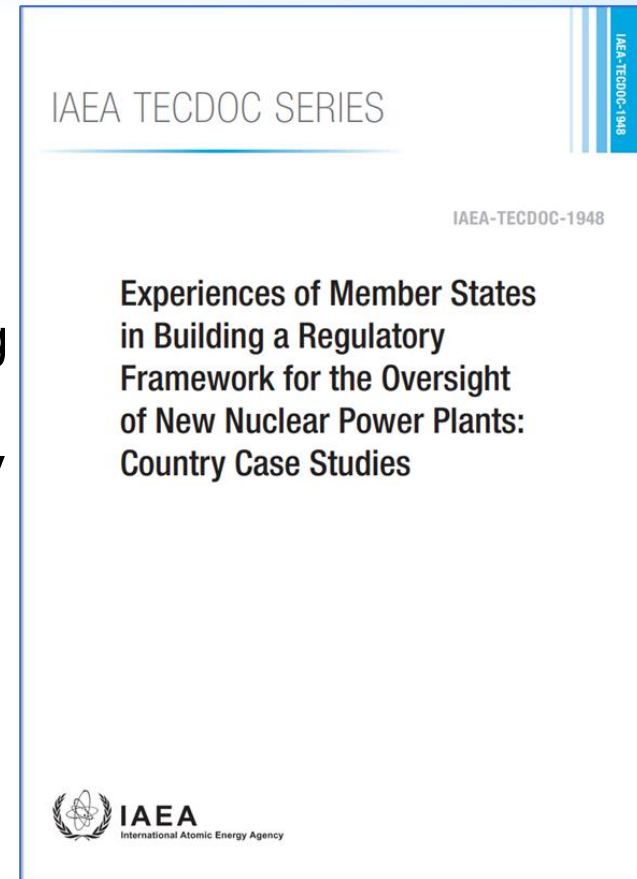
Regulatory Functions and Activities for NPP

Support Functions (GSG-12)

- ✓ Administrative support, including human resources, finance, management of relevant documents and records, equipment purchasing and control;
- ✓ Legal assistance;
- ✓ Research and development processes;
- ✓ Arrangements for contracting external expert support, where needed;
- ✓ Establishment of advisory committees;
- ✓ Liaison with other governmental organizations;
- ✓ International cooperation and assistance.

TECDOC on Case Studies: Regulatory Framework

- Experiences accumulated in last decade in advanced newcomer countries in the area of establishing and implementing a regulatory framework for a nuclear power programme
- **Purpose:** to provide information on the experiences of Member States for establishing regulatory structures for safety, security, safeguards, environmental impact, emergency planning and other areas covering 19 infrastructure issues necessary for a nuclear power programme.
- **Scope:** information on the experiences of different countries in building regulatory framework including the challenges and solutions in establishing and implementing their regulatory framework



Structure of the TECDOC

1. Introduction
2. Phased Approach to Establish Regulatory Framework
3. Case Study Methodology
4. Analysis of Case Studies
5. Common Challenges and Solutions
6. **Country Case Studies**
 - UAE
 - Belarus
 - Bangladesh
 - Turkey
 - Pakistan

Key observations



- Countries embarking on nuclear power programmes have following several key concepts to build and implement the regulatory framework:
 - Use of IAEA safety standards and security guidance as first iteration for regulatory framework;
 - Gradual development of national regulations and guides;
 - Close cooperation between the Regulatory bodies of the country of origin and the recipient country including the utilization of demonstrated design and the codes and standards in the country of origin;
 - Use of external technical support;
 - Use of IAEA peer reviews and advisory services as third party reviews.

Summary from the Case Studies

- A national regulatory framework with an independent regulatory body developed
- Importance of cooperation with vendor country regulatory body
- The use of external expert support envisaged, mostly in the areas of:
 - capacity building and training of its staff
 - review and assessment of safety documentation NPP
 - inspection of manufacturing of safety related equipment and construction
- The role of international cooperation emphasized

Common challenges

- Alignment of development of necessary legal and regulatory framework with the nuclear power plant project
- Need for government coordination and support
- Adequate funding for all regulatory activities
- Adequate human resources and capacity building
- Development of proper management system with all the necessary processes and procedures
- Contracting with external support organizations and the oversight of the work done by them
- Getting support from the regulatory body from the vendor country
- Language issue in the case of different languages in recipient and vendor country

Take away

- Initiate studies on development of regulatory framework earlier
- Acquiring necessary competence takes time, start earlier
- Using external support is essential for a new regulatory body – be prepare for that
- Utilize all the available resources national and international in capacity building
- Observe the experience of others



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Thank you!

