



Workshop on Application of the Code of Conduct on the Safety of Research Reactors

Module 1 - Introduction to the Code

L.1.3 - The Preamble

L.1.4 - Definitions

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L.1.3 - The Preamble

- **Definition:**

preamble **1.** A preliminary statement, esp. the introduction to a formal document that explains its purpose. **2.** An introductory fact or occurrence
: PRELIMINARY

- **The preamble for the Code contains ten introductory statements**
- **The preamble states the main reasons why the Code was prepared and what impacted its content**

L.1.3 - The Preamble

- **Preamble Statement:**

- “Aware that research reactors provide important benefits throughout the world...”

- **Relevance to the Code:**

- It is important that research reactors continue to operate for the benefit of mankind
- If research reactors are not operated safely they may not be allowed to operate and the world would be deprived of the benefits derived from them
- As part of the research reactor community we are responsible for their safe operation

L.1.3 - The Preamble

- **Preamble Statement:**

- “Aware of the importance of ensuring that the use of research reactors is safe, well regulated and environmentally sound”

- **Relevance to the Code:**

- Code addresses the desirable attributes for the management of research reactor safety
- Roles of the operating organization, regulatory body and State are clearly stated
- Operating organization has responsibility for the safe operation of the reactor

L.1.3 - The Preamble

- **Preamble Statement:**
 - “Noting that the International Nuclear Safety Advisory Group (INSAG) has identified the need for action to address safety issues that may arise in research reactors...”

- **Relevance to the Code:**
 - INSAG identified numerous short-comings:
 - *Shutdown research reactors not being properly decommissioned*
 - *Sub-standard regulatory supervision*
 - *Fuel inventories at reactors, some being HEU*
 - *Low level of safety culture*

L.1.3 - The Preamble

- **Preamble Statement:**
 - “Desiring to promote an effective nuclear safety culture”

- **Relevance to the Code:**
 - The April 2000 INSAG letter noted a low level of safety culture in many research reactors

 - Reference - IAEA Safety Report, Safety Culture: A Report of the International Nuclear Safety Advisory Group, Safety Series No. 75-INSAG-4, (1991)
 - *“Safety culture is that assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance.”*

L.1.3 - The Preamble

- **Preamble Statement:**

- “Affirming the importance of international cooperation for the enhancement of nuclear safety”

- **Relevance to the Code:**

- The Code stresses the willingness of Member States to assist others through IAEA involvement in achieving the objectives stated in the Code
 - *Paragraph 7 - “If the State faces difficulties in application of this Code, it should communicate the difficulties and any assistance it may require to the Agency”*
 - *Paragraph 36(b) - “[The IAEA Secretariat should]...assist States, upon their own request, in application of this Code ”*
 - *Paragraph 36(c) - “[The IAEA Secretariat should]...continue to collect and disseminate information relating to the safety of research reactors, provide safety review services, develop and establish relevant technical standards and provide for the application of these standards at the request of any State by advising and assisting on all aspects of the safe management of research reactors”*

L.1.3 - The Preamble

- **Preamble Statement:**

- “Affirming the importance of the IAEA’s safety standards relevant to research reactors that provide an extensive basis for ensuring their safety”

- **Relevance to the Code:**

- Indicates that the Code draws from the IAEA safety standards and was developed to be compatible with the standards, **not an alternate to the standards**
- Points readers of the Code to a much larger body of information in the IAEA safety standards to assist research reactor operating organizations, regulatory bodies and States in the safe operation and regulatory supervision of research reactors

L.1.3 - The Preamble

- **Preamble Statement:**

- “Noting ... work ... to prepare a draft amendment of the Convention on the Physical Protection of Nuclear Material ... to cover... physical protection of ... research reactors, against sabotage”

- **Relevance to the Code:**

- Current focus of the Convention is on the transportation of nuclear material, including research reactor material
- There is an ongoing process to amend the Convention to broaden physical protection provisions for reactor facilities
- Those drafting the Code considered physical protection an important and relevant issues to include in the Code but chose to omit it from the Code pending higher level attention in the form of the Convention

L.1.3 - The Preamble

- **Preamble Statement:**
 - “Keeping in mind that the Convention on Nuclear Safety (1996) ... does not apply to research reactors”
- **Relevance to the Code:**
 - Power reactors are easier to address in a Convention because of their similarity in design and function
 - By excluding research reactors, the Convention involved fewer countries and did not have to address the diversity of research reactor designs and utilization programs
 - Some Member States include their research reactors along with power reactors in reports required by the Convention
 - Some Member States preferred a separate Convention or an amendment to the existing Convention rather than a Code of Conduct for research reactors

L.1.3 - The Preamble

- **Preamble Statement:**

- “Taking account of the provisions of the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management, in particular those provisions that apply to spent fuel and radioactive waste arising from the operation and decommissioning of research reactors”

- **Relevance to the Code:**

- Convention states general safety requirements to ensure that individuals, society and the environment are adequately protected against radiological hazards
- Convention focuses on facilities for the management of spent fuel or the management of radioactive waste
- 34 States are Parties to the Convention; 42 are Signatories
- The Code addresses the role of the State, the regulator and the operator
 - **Paragraph 15** - “...make adequate legal and infrastructural arrangements for decommissioning of research reactors”
 - **Paragraph 20 (s)** - “establish requirements for management of radioactive waste arising from the research reactor”
 - **Paragraph 32 (j)** - “keep the generation of radioactive waste resulting from the operation and utilization of the research reactor to the minimum practicable ... and ensure that there are effective arrangements for the safe management of such waste ...”
 - **Para. 35 (c)** - “...arrangements for dealing with the fuel and radioactive waste”

L.1.3 - The Preamble

- **Preamble Statement:**
 - “Decide that the following Code of Conduct should serve as guidance to States for, inter alia, the development and harmonization of policies, laws and regulations on the safety of research reactors”

- **Relevance to the Code:**
 - Definition:
 - *Inter alia* Among other things.
 - The Code is one document, among others, providing guidance on the safety of research reactors
 - Conclusion of the Preamble introductory information and statement of purpose; time to move on to specifics

- **Scope of the Code of Conduct**

- This Code applies to the safety of research reactors as defined by this Code, **at all stages of their lives from siting to decommissioning**
- This Code **does not apply to the physical protection** of research reactors
- This Code **does not apply to research reactors within military or defence programmes**

- **Objective of the Code of Conduct**
 - The objective of this Code is to **achieve and maintain a high level of safety** in research reactors worldwide through the enhancement of **national measures** and **international co-operation** including, where appropriate, **safety related technical co-operation**. This objective is achieved by proper operating conditions, the **prevention of accidents** and, should accidents occur, the **mitigation of the radiological consequences**, in order to **protect workers, members of the public and the environment** against radiation hazards