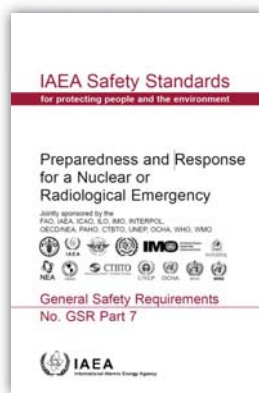


Future of EPR for NPPs: Potential Developments and Envisaged Approach

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Safety Standard in EPR: Basic Requirements



- Includes graded approach based on hazard and threat assessment
- Is technology neutral
- NOT related only to design safety – other important aspects considered
- Fully applicable to new reactor designs

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Basic Approach to EPR



- EPR arrangements need to be developed accounting for events
 - of very low probability
 - not considered in design phase
 - irrespective of the cause
- Hazard and threat assessment is a key
 - for graded approach
 - to determine size of Emergency Planning Zones / Distances

3

Considerations/Issues

New Reactor Designs



- Not clearly developed/commonly accepted methodology to produce hazard assessment
- High uncertainties and need for prompt actions (early in emergency) may persist, hence need for an emergency classification system
- Matters to consider
 - Size of releases - sizes of EPZ/D
 - Characteristics of possible releases – timeframe of response actions

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IAEA CRP on EPZ&D for SMR



- **Title:** Development of Approaches, Methodologies and Criteria for Determining the Technical Basis for Emergency Planning Zone for Small Modular Reactor Deployment
- **Duration:** 1 January 2018 – 31 December 2020
- **Objective:** To develop approaches and methodologies for determining need for off-site EPR including sizes of EPZs for SMRs taking account of enhanced safety performance of SMRs and evaluating design-specific, defence-in-depth and site-specific technical basis
- **Outcome:** To be used as basis for development of revised/new technical guidance (EPR Series document)



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Thank you!