

# Harmonisation : a tool for WENRA to support a high nuclear safety level worldwide

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# AN EVOLVING ENVIRONMENT

- Increased awareness of climate change induces an enthusiasm for nuclear in several western countries:
  - Prolonged operation of existing NPPs.
  - New NPP designs.
- This should be used as an opportunity to strengthen the safety level of installations and harmonise nuclear safety to as high as reasonably practicable.
- Both industry and regulators will have an important role to play.
- However, current risks that jeopardize our ability to harmonize:
  - Many governments favour a national approach.
  - Impact of Covid on international relations.
  - The war in Ukraine has isolated some countries.

# BE PREPARED FOR IMPORTANT DECISIONS

- Major nuclear energy decisions to be made or about to be made at least in Europe:
  - Safety has to be taken into account in these decisions
  - Intensify technical work to harmonise positions on:
    - NPP prolonged operation (e.g. demonstration methods for RPV, safety objectives for PSR).
    - New reactors including SMR.
    - Dismantling and waste management.

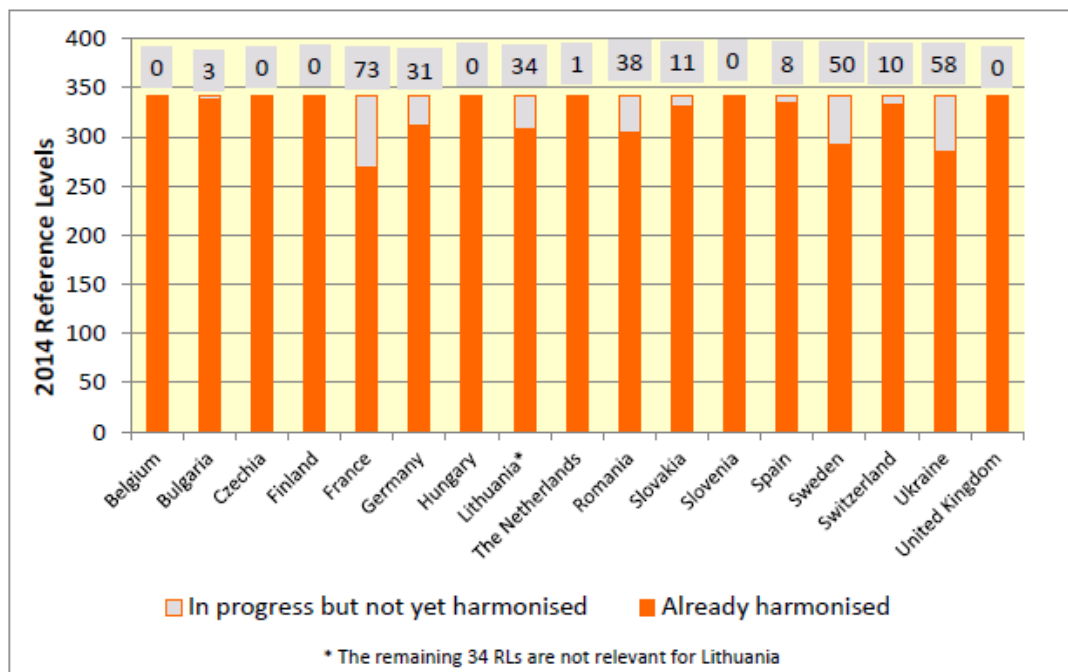
# WENRA SRLS, A SOUND BASIS FOR HARMONISATION

- WENRA is the independent association of European national nuclear regulators.
- WENRA promotes the harmonisation of national nuclear safety regulations among its members.
- WENRA Safety Reference Levels (SRLs) address various safety-related issues.
- SRLs constitute a sound basis for harmonization among WENRA members.

01	Issue A:	Safety Policy
02	Issue B:	Operating Organisation
03	Issue C:	Leadership and Management for Safety
04	Issue D:	Training and Authorization of NPP Staff (Jobs with Safety Importance)
05	Issue E:	Design Basis Envelope for Existing Reactors
06	Issue F:	Design Extension of Existing Reactors
07	Issue G:	Safety Classification of Structures, Systems and Components
08	Issue H:	Operational Limits and Conditions (OLCs)
09	Issue I:	Ageing Management
10	Issue J:	System for Investigation of Events and Operational Experience Feedback
11	Issue K:	Maintenance, In-Service Inspection and Functional Testing
12	Issue LM:	Emergency Operating Procedures and Severe Accident Management Guidelines
13	Issue N:	Contents and Updating of Safety Analysis Report (SAR)
14	Issue O:	Probabilistic Safety Analysis (PSA)
15	Issue P:	Periodic Safety Review (PSR)
16	Issue Q:	Plant Modifications
17	Issue R:	On-site Emergency Preparedness
18	Issue SV:	Internal Hazards
19	Issue TU:	External Hazards

# CONCRETE PROGRESS SINCE 20 YEARS IN HARMONISING REGULATION IN WENRA COUNTRIES

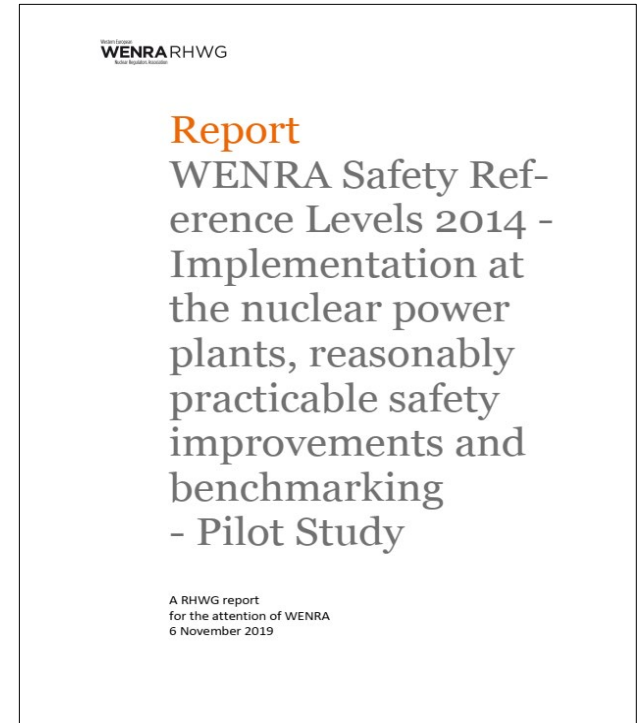
- WENRA regularly reviews the practical implementation of its SRLs in the national regulatory frameworks of its members.




Status of the implementation of the 2014 SRLs in national regulatory frameworks as of 1 January 2022

# HARMONISATION FOR PROLONGED OPERATION OF EXISTING REACTORS

- Post Fukushima Stress-tests have contributed to a certain degree of harmonisation of safety of existing NPPs.
- Work still needs to be done: WENRA pilot study on 2 SRLs related to design extension of existing reactors (issue F):
  - Review the implementation of measures regarding severe accident management.
  - Benchmarking on specific safety improvements was performed focusing on prevention of early and large releases.
  - Valuable approach: data collection, comparison of various solution to implement fulfill SRLs, evaluation of the implementation status of SRLs.



# HARMONISATION FOR NEW DESIGNS

- Nuclear safety is a national responsibility.
  - National regulators have to get involved in the licensing process to be able to support its outcomes.
  - Any “mutual recognition process” has to address potential differences in:
    - Safety objectives
    - Regulatory requirements
    - Regulatory practices
- 
- WENRA

# HARMONISATION FOR NEW DESIGNS

- Are regulations an obstacle?
  - If they set objectives rather than means, regulations are not an obstacle to innovation (e.g. WENRA's SRLs).
  - Regulations should come after the first new designs, not before.
  - The industry is welcome to point out any regulatory discrepancy between countries that would make joint licensing difficult.
  
- Key factor for success:
  - Undertake joint evaluations simultaneously (same project submitted at the same time in several countries). Industrial property issues?
  - Role of the industry (same specifications, same industrial codes and standards...).



Thank you for your  
attention