



Findings of the ARTEMIS Peer Reviews

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Legal Background

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Official Journal of t

3. Member States shall periodically, and **at least every 10 years**, arrange for **self-assessments** of their national framework, competent regulatory authority, national programme and its implementation, and invite **international peer review** of their national framework, competent regulatory authority and/or national programme with the aim of ensuring that high safety standards are achieved in the safe management of spent fuel and radioactive waste. The outcomes of any peer review shall be reported to the Commission and the other Member States, and may be made available to the public where there is no conflict with security and proprietary information.

Council Directive 2011/70/Euratom

- At least every 10 years
- Self-assessment
- International peer review

The ARTEMIS peer review service

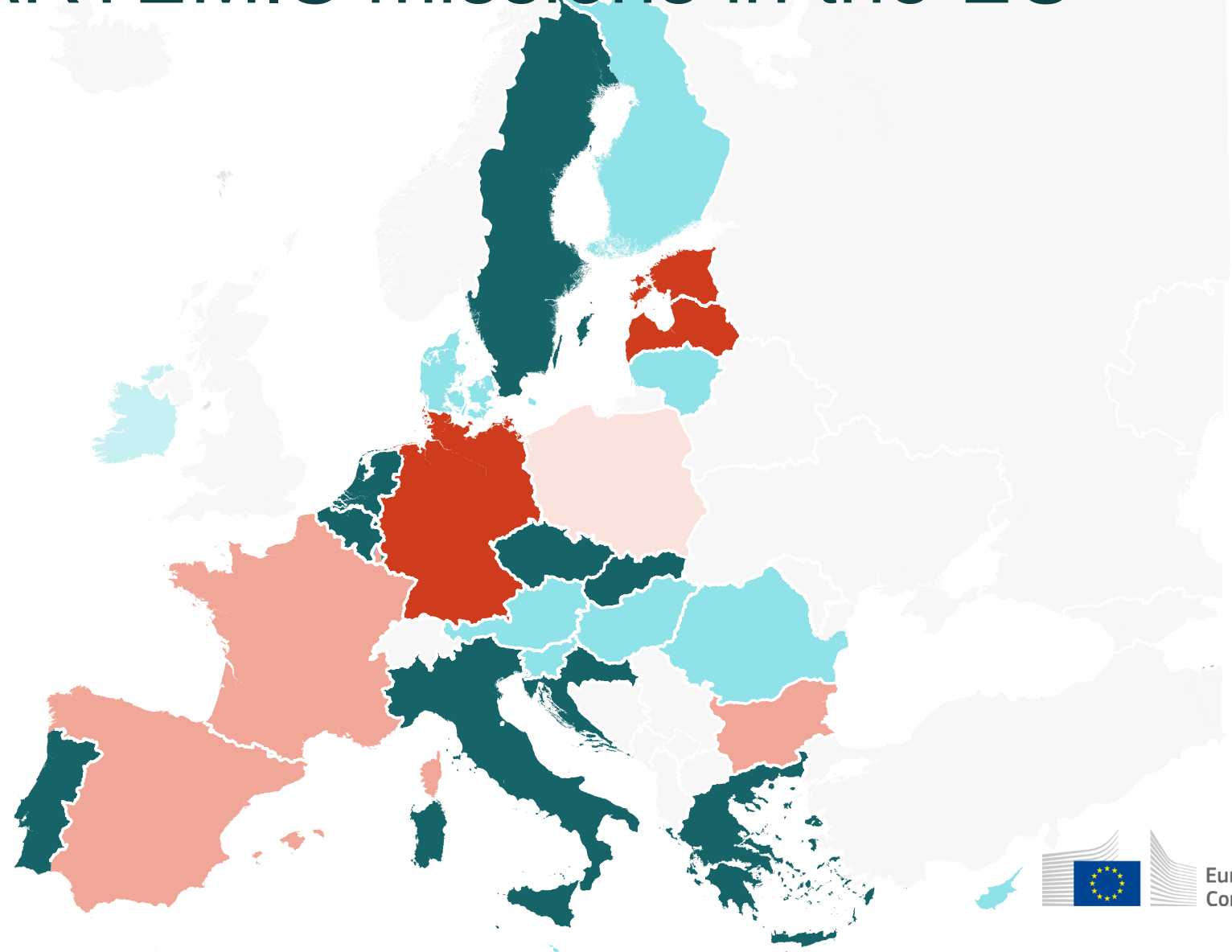
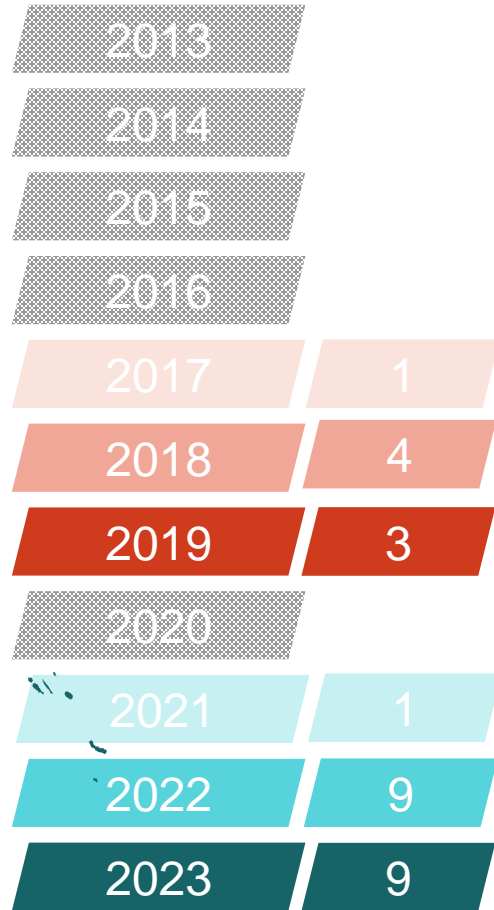


Allows to fulfill the article 14 (3) requirements



Does not check compliance against Council Directive requirements

Timeline of ARTEMIS missions in the EU



ARTEMIS findings in numbers

- *Findings:*
 - *Recommendations - aspects relative to the IAEA Safety Requirements are missing, incomplete, or inadequately implemented*
 - *Suggestions - opportunities for improvement not directly related to inadequate conformance with IAEA Safety Requirements*
- *In total 317 findings during the 27 full-scope missions*
 - *167 recommendations*
 - *131 suggestions*
 - *19 good practices*

The number of recommendations, suggestions and good practices is in no way a measure of the status of the national infrastructure for nuclear and radiation safety. Comparisons of such numbers between ARTEMIS reports from different countries should not be attempted.

Review topics

- National policy and framework
- National strategy
- Inventory of spent fuel and radioactive waste
- Concepts, plans and technical solutions
- Safety case and safety assessment
- Cost estimates and financing
- Capacity building – expertise, training and skills

(1) National policy and framework

Findings are mostly related to:

- *Delays in updating and/or approving national programme*
- *Not all waste types/streams are covered*
- *The need for decision on spent fuel management*

For SIMS

- *Independence and functional separation of regulatory authority*

(2) National strategy (programme)

Findings are mostly related to:

- *The lack of provisions to ensure the timely implementation of the national programme*
- *The need for a revision of the national programme due to changes in policy or its implementation schedule*
- *The absence of an R&D plan to support the implementation of the national programme*

For SIMS

- *National programme does not identify long-term solutions*

(3) Inventory of radioactive waste

Findings are mostly related to:

- *Incomplete inventory data*
- *Need for quality improvements to the inventory data*
- *Establishment of a centralised national inventory database*

For SIMS

- *The lack of future inventory estimates*

(4) Concepts, plans and technical solutions

Findings are mostly related to:

- *The lack of an implementation plan for disposal facilities*
- *The need to develop a generic waste acceptance criteria (WAC) for disposal, as well as a final WAC as soon as a facility-specific safety case is available*
- *The need to pay attention to the interdependencies between management steps, such as those related to treatment and packaging, transport and compliance with waste acceptance criteria for specific facilities.*

For SIMS

- *Development of WAC*

(5) Safety case and safety assessment

Findings are mostly related to:

- *The development of the safety case for a Deep Geological Repository*
- *The development of the safety case for near surface disposal facilities*
- *Further development of Waste Acceptance Criteria*

For SIMS

- *The need for up-to-date safety assessment of existing radioactive waste management facilities*

(6) Cost estimates and financing

Findings are mostly related to:

- *The existence of outdated or incomplete cost assessments*
- *Ensuring the sufficiency of financial provisions, especially for DGR*
- *Evaluation of uncertainties and associated risks*

For SIMS

- *A lack of dedicated tools to ensure adequate and timely financing*

(7) Capacity building – expertise, training and skills

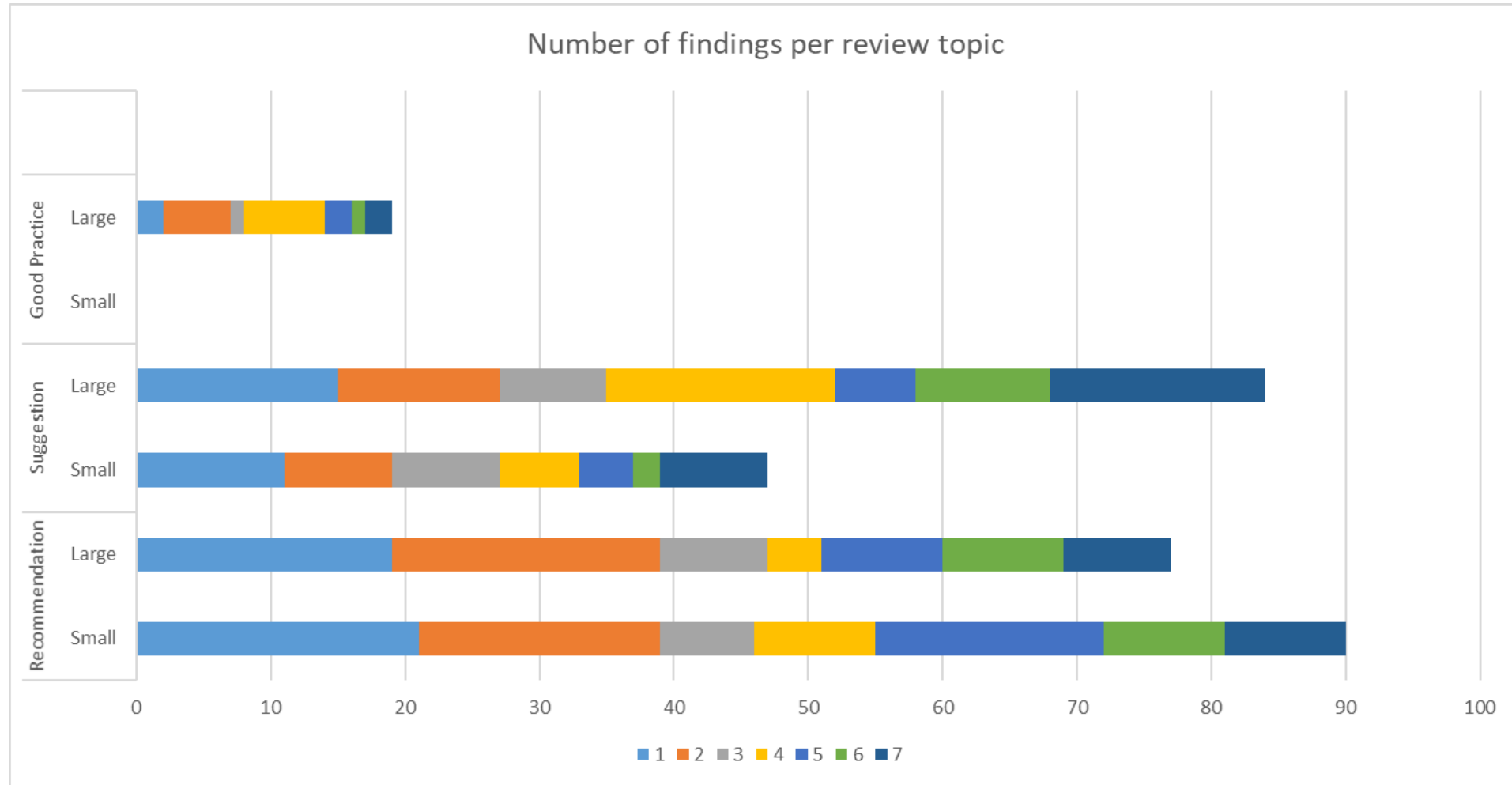
Findings are mostly related to:

- *The adequacy of human and financial resources*
- *The need for a national resourcing plan*
- *The adequacy of R&D funding*

For SIMS

- *The adequacy of human and financial resources*

Findings per Review topics



Thank you!