



Sustainable Management of Disused Sealed Radioactive Sources

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The Joint Convention on the Safety of Spent Fuel Management and Safety of Radioactive Waste Management

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Why “Joint”?

➤ The Joint Convention on the Safety of **Spent Fuel** Management and Safety of **Radioactive Waste** Management

It is “*Joint convention*” because

spent fuel

is not always

radioactive waste



The need for the Joint Convention

- Following the accident at Chernobyl
- Trans-boundary movement of radioactive waste
- Accidents caused by disused radioactive sources
- The lack of adequate infrastructures for the radioactive waste management



The birth of the Joint Convention

- Drafted and adopted at a Diplomatic Conference in September 1997.
- Went into force on June 18, 2001, when 25 countries ratified and deposited articles with the IAEA.



Nature of the Joint Convention

- The only legally binding international treaty in the area of radioactive waste management.
- It is an *incentive* instrument, not designed to ensure fulfilment of obligations through control and sanction, but by a peer pressure



Nature of the Joint Convention

- Applies to the safety of management of:
 - ✓ Radioactive waste and spent fuel from
 - nuclear power plants
 - research laboratories.
 - the use of radionuclides in medicine and industry.
 - ✓ Spent sealed sources.
 - ✓ Discharges to the environment from nuclear facilities.
 - ✓ Waste from mining and processing of uranium ores



Objectives of the Joint Convention

- To achieve and maintain a high level of safety worldwide in spent fuel and radioactive waste management;
- To ensure that during all stages of spent fuel and radioactive waste management there are effective defences against potential hazards so that individuals, societies and the environment are protected from harmful effects of ionising radiation, now and in the future;
- To prevent accidents with radiological consequences and to mitigate their consequences should they occur



Objective of the joint convention

- Establishes rules for the transboundary movement of spent fuel and radioactive waste that *inter alia*:
 - ✓ require a State of destination to have adequate administrative and technical capacity and regulatory structure to manage spent fuel or radioactive waste in a manner consistent with the Convention.
 - ✓ obligates a State of origin to take appropriate steps to permit re-entry into its territory of such material if a trans-boundary movement cannot be completed in conformity with the Convention.



Obligations of the contracting parties

- To take the appropriate regulatory measures to
 - ✓ ensure that the individuals, society and the environment are adequately protected against radiological and other hazards of spent fuel or radioactive waste,
 - ✓ properly site, design and construct facilities,
 - ✓ make provision for ensuring the safety of facilities during their operation and after closure
- The preparation of national report for review by the other Contracting Parties
- Attending a Review Meeting held every 3 years



Reporting requirements

- Each Contacting Party shall submit a National Report to each review meeting
- The National Report shall address the measures taken to implement each obligation of the Convention
- The National Report shall :
 - ✓ Address spent fuel and waste management policy and practices
 - ✓ Address criteria used to define and categorize radioactive waste
 - ✓ Include a listing of national spent fuel and waste management facilities
 - ✓ Include an inventory of spent fuel and waste (subject to the Convention)
 - ✓ Include a listing of facilities being decommissioned



Outcomes of the Review Meeting

- At each Review meeting:
 - ✓ National Reports are critically reviewed (in Country Groups)
 - ✓ A Summary Report of the Review Meeting is prepared – addressing the issues discussed and the conclusions reached



Outcomes of the Joint Convention process

- Gradual and sustained improvement in safety worldwide
- Improved harmonization worldwide of safety policies and provisions
- Resolution of commonly experienced waste problems
- Normalization of international arrangements for movement of waste (and disused sources) between countries
- Common safety criteria and definitions
- Improved public confidence in national arrangements and provisions

- ... all of these related to the radioactive waste and spent fuel management

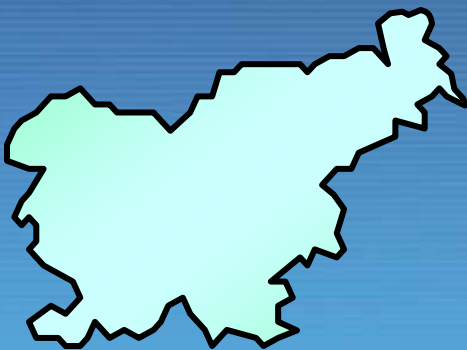


The benefits for a country from becoming Contracting Party to the Joint Convention

- Improvements in safety of its public
- Gain in knowledge through information exchange
- Improved credibility
- Support in cases of malpractice in neighboring States
- Greater influence in a regional context
- Possible technical assistance from other Contracting Parties
- Evidence of an open and transparent national approach



Slovenian experience with the Joint Convention





SLOVENIA – Basic Facts

- Area: 20,151 km²
- Population: 2.049.462
- GDP: 18.367 EUR/capita
(2008)
- Member of EU since 1st May 2004
- Electricity Production: ~13,000 GWh
- Electricity Production Nuclear: 6,273 GWh
- The smallest nuclear country in the World!



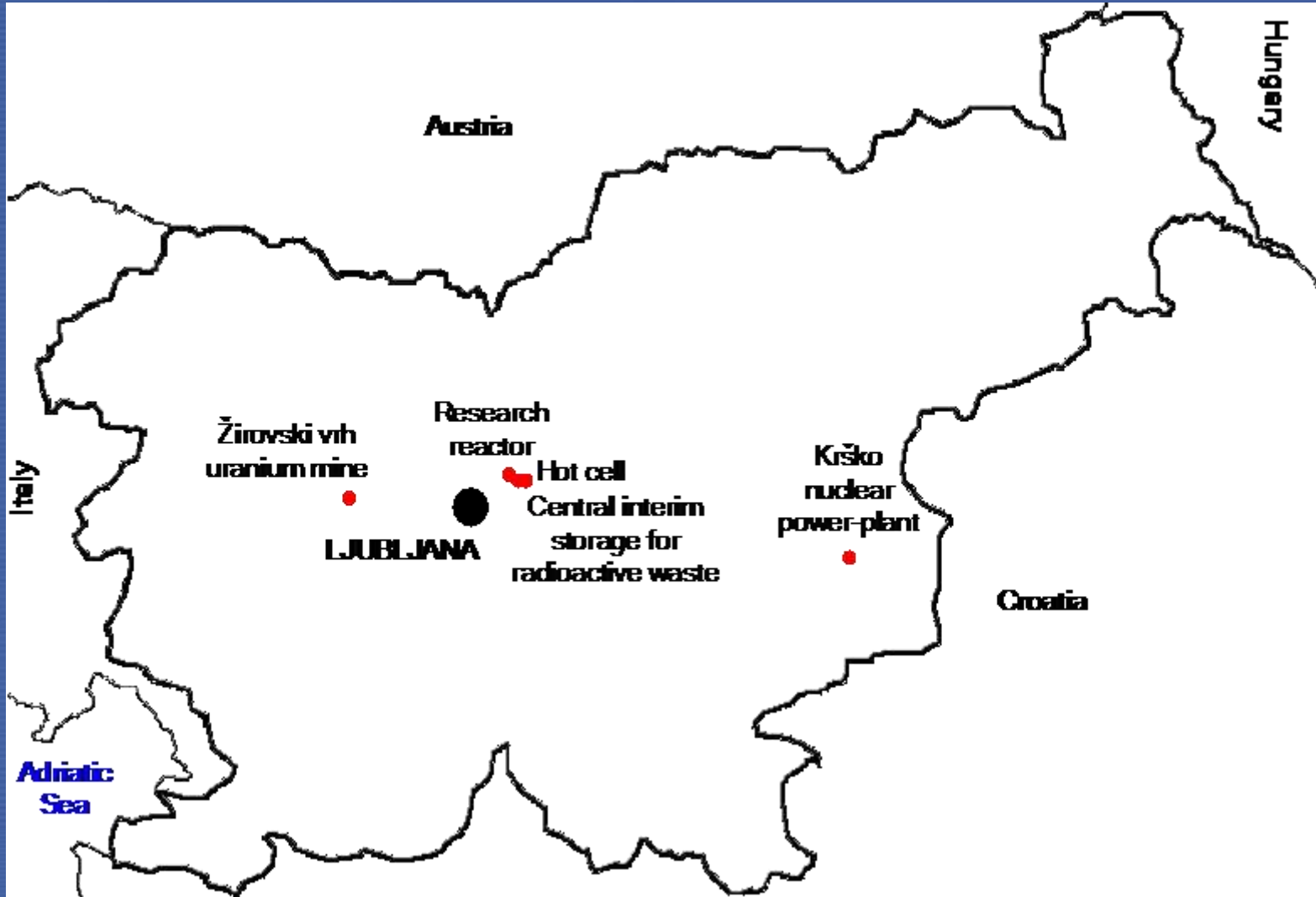
Slovenian Nuclear Programme

Small nuclear programme:

- The Krško Nuclear Power Plant
- Research reactor TRIGA Mark II
- Uranium mine in a decommissioning stage at Žirovski Vrh
- Central Interim Storage for Radioactive Waste
- Use of radioisotopes in medicine, industry and research – **about 2000 sources**



Slovenian Nuclear Programme





Summary of basic information

Type	Long Term Management Policy	Funding	Current Practice / Facilities	Planned Facilities
Spent Fuel	On site storage and ultimate geological disposal – 50 years	Decommissioning Fund (Levy from kWh)	On site wet storage at NPP	Dry storage, then disposal or export
Nuclear Fuel Cycle Waste	LILW repository - operational in 2013	Decommissioning Fund (Levy from kWh)	On site storage	LILW repository - operational in 2013
Application Wastes	Central Interim Storage for Radioactive Waste, then transfer to LILW repository	Users and state	Central Interim Storage for Radioactive waste	LILW repository - operational in 2013
Decommissioning Liabilities	LILW repository	Decommissioning Fund (Levy from kWh)		LILW repository - operational in 2013
Disused Sealed Sources	Central Interim Storage for Radioactive Waste then transfer to LILW repository	Users and state	Central Interim Storage for Radioactive Waste	LILW repository - operational in 2013 or with high level waste



Why did Slovenia join the Joint Convention?

- Slovenia was already the signatory of Convention on Nuclear Safety
- We have operating Nuclear Power Plant
- It was our ambition to join European Union
- We want to be developed and respected country in Europe
- We want to maintain as high as possible standards of radiological safety for our population



Why did Slovenia join the Joint Convention?

- Amount of radwaste is relatively small, but amount of problems is equal as in countries with big nuclear programmes
- Keeping contact with international professional community is a must
- Joining the convention is a prerequisite for any serious international cooperation in nuclear areas

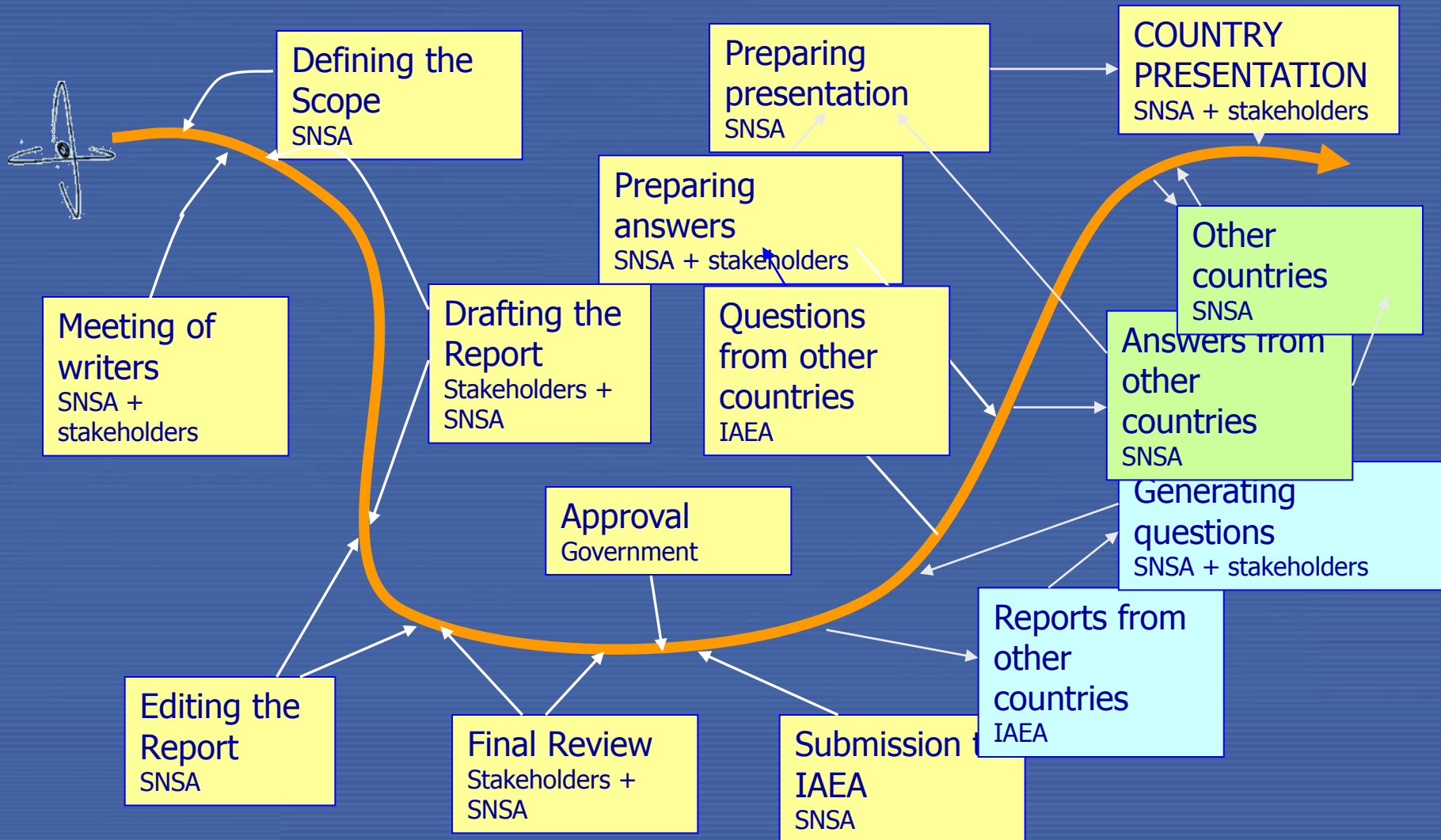


How did Slovenia join?

- Slovenia signed on **29th September 1997**
- Ratified in the Parliament in **February 1999**
- Convention entered into force in **June 2001**

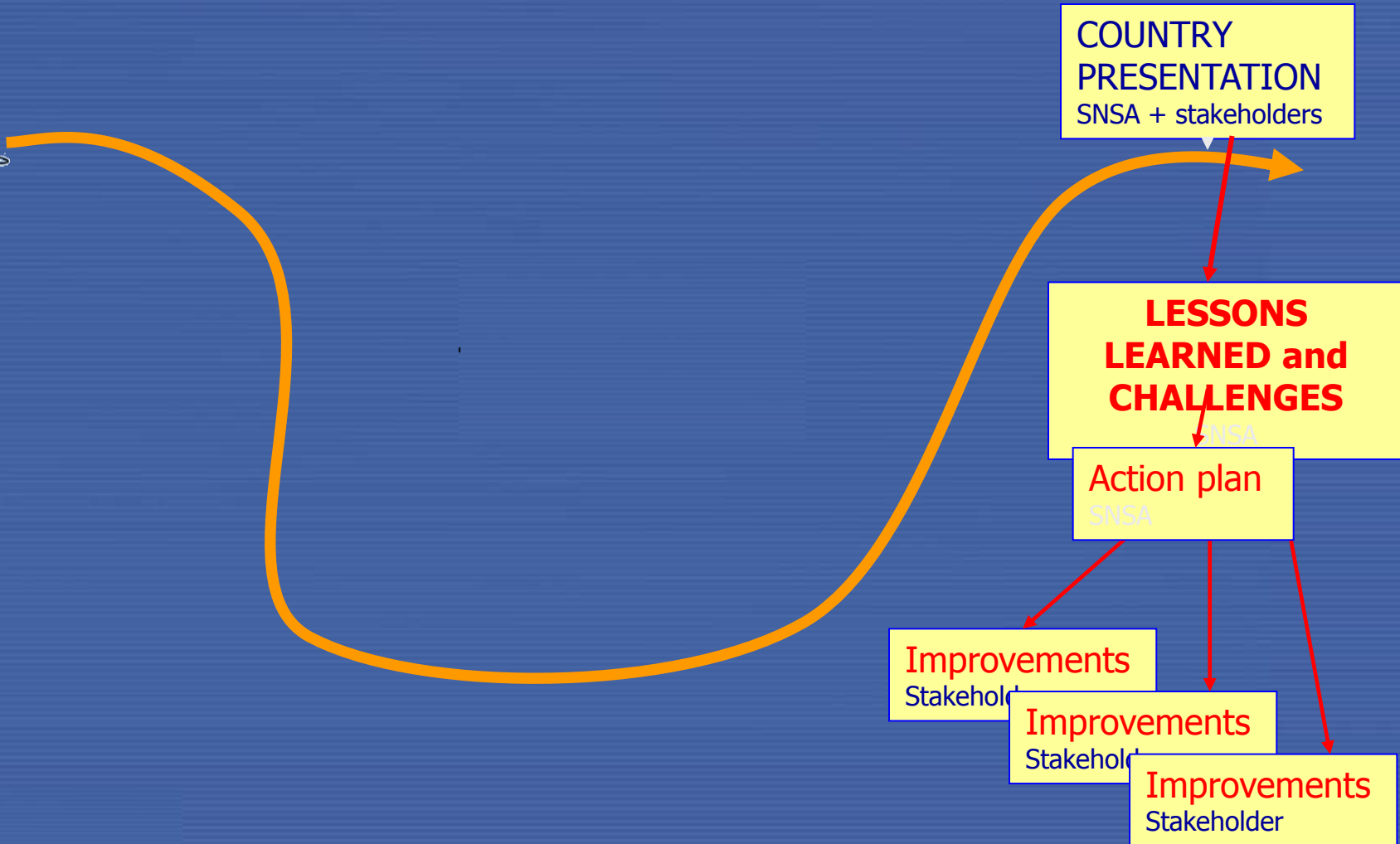


Managing the reporting process





Managing the process





Review Process



Uploading
National Reports



Analysis of
National Reports



Preparation of
Questions



Preparation of
National Reports



Presentation at RM of National
Reports, discussion Q&A,
challenges, GP, improvements



Preparation of
Answers



How do we manage it?

- The preparation of the first report was a big project!
- Drafting started about 15 months before the review conference
- It was co-ordinated at the Nuclear Safety Administration
- Stakeholders: Nuclear Power Plant, Radwaste Management Agency, Slovenian Radiation Protection Administration, “J. Stefan” Institute, Uranium Mine
- Several meetings of the team necessary
- Draft report prepared three months before submission deadline
- Draft reviewed by all contributors and approved by the government



Review of other reports

- After submission the review of other reports started
- Reports distributed to internal reviewers, questions generated
- Final selection of questions approved by the management of our Administration
 - ✓ some to everybody
 - ✓ not too many to anybody
 - ✓ priority to questions, relevant to Slovenia



Answering to questions

- After questions from the others were received, the answers prepared mostly by staff of our Administration
- When needed, other organisations helped
- Two weeks before the review conference the presentation prepared



1st Lesson: BENEFIT OR NOT?

➤ YES, BENEFIT:

- ✓ Very useful Quality Assurance process
- ✓ It is worth making a comprehensive analysis of the situation regularly
- ✓ Joint Convention = mirror for ourselves
- ✓ Contribution to safety culture of people managing radwaste
- ✓ Strengthens the awareness of safe management of radwaste
- ✓ Comparison with others always raises competition, which makes everybody better



Human Resources needed

- One staff member as editor – 6 months
- About 5 people at stakeholders, 2 weeks each
- 4-5 reviewers at SNSA – two weeks each
- 8-10 delegation members at IAEA – 2 days each
- 2-3 delegation members for 8 days
- Total: 1 to 1.5 man/year



Welcome to the Club!