

**The stakeholder involvement for new radiation
protection regulations in Europe**

Point of view of the industry

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ENISS

**ENISS - European Nuclear Installations
Safety Standards Initiative***Objectives*

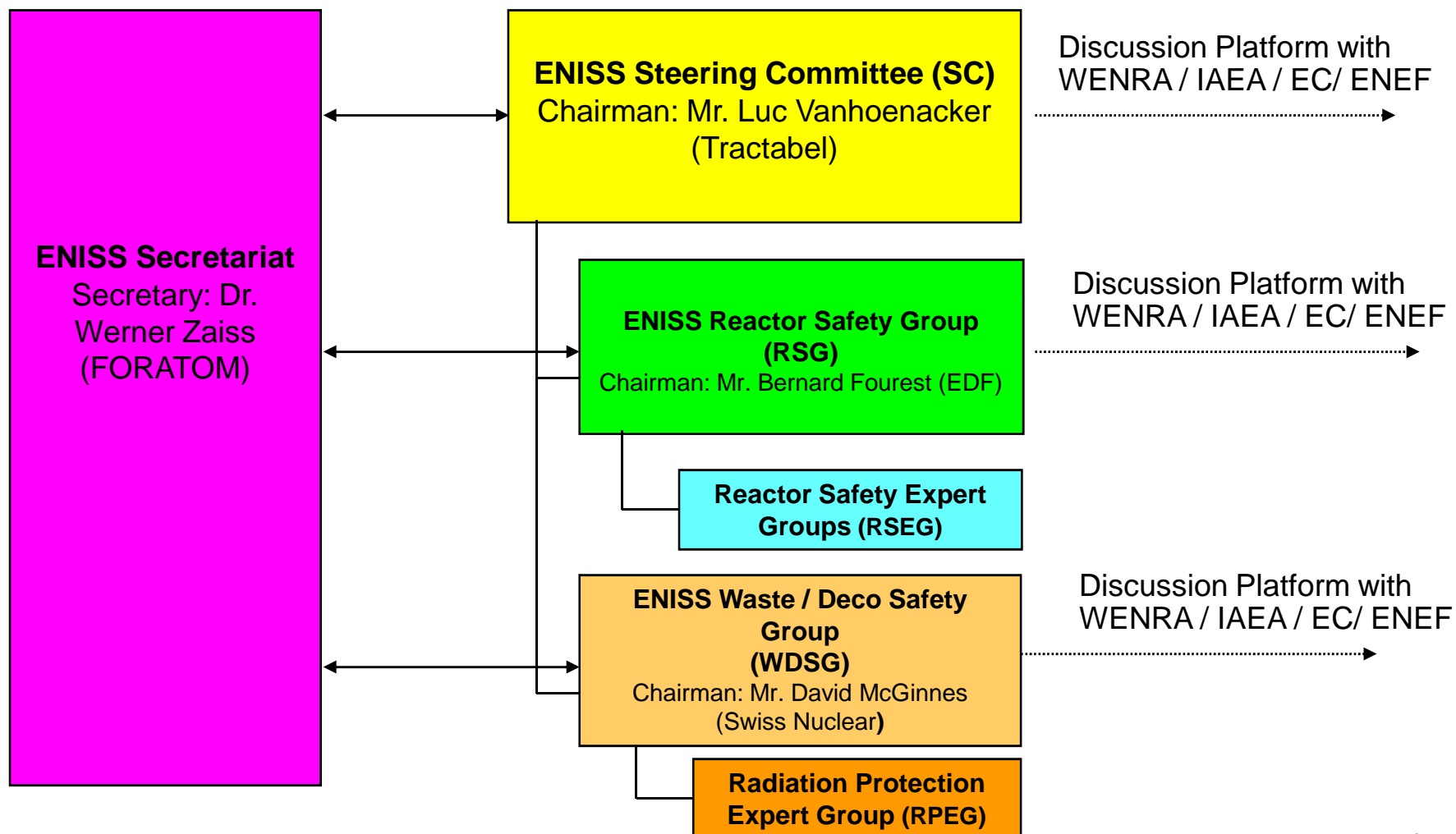
- To establish a common licensee view with respect to the "WENRA RLs"
- To present the industry position in discussions with WENRA
- To support an exchange of information about the interaction of license holders with their national regulators, in order to achieve a harmonised set of new regulations.
- To create an information platform for the European nuclear license holders with respect to new national and international regulatory activities
- To strengthen the influence in the revision work of the IAEA Safety Standards
- To cooperate with the European Institutions on regulatory issues in the area of nuclear safety, radiation protection, waste management and decommissioning
- To collaborate with international associations dealing with regulatory issues

ENISS - Membership 2010

- Belgium (Tractebel, Electrabel)
- Finland (Fortum, TVO)
- Germany (EON, RWE, EnBW)
- Italy (SOGIN/ENEL)
- Spain (UNESA)
- The Netherlands (EPZ)
- France (EdF, AREVA NC)
- Sweden (EON-Se, Vattenfall AB)
- Switzerland (Swiss Nuclear)
- Czech Republic (CEZ)
- Hungary (Paks NPP)
- Slovakia (Slovenske Elektrarne,)
- Romania (Nuclearelectra)
- Bulgaria (Kozloduy NPP)
- United Kingdom (BE)
- Slovenia (Krško NPP)

All ENISS Members are representing licensees

ENISS - Organisation



ENISS Main Activities

- Comment WENRA RLs
- Involve in the IAEA Safety Standard revision work
- Provide comments on the EU Basic Safety Standards
- Participate in the ENEF process
- Feedback of Experience Programme
- Cooperation with EUR (European Utilities Requirements)
- Cooperation with WNA-CORDEL (MDEP)

WENRA RLs

Reactor Safety:

- First Draft issued in January 2006
- ENISS provided comprehensive comments
- Consultation and discussion between ENISS and WENRA RHWG
- Final RLs issued in January 2008
- Safety objectives for new reactors issued in January 2010

Waste/Spent Fuel Storage and Decommissioning:

- First Drafts issued in January 2006
- ENISS provided comprehensive comments
- Consultation and discussion between ENISS and WENRA WDWG
- Version 2.0 issued in March 2010; Stakeholders are invited to provide comments

IAEA Safety Standards revision work

- IAEA/ENISS Meeting to launch a cooperation agreement (8 February 2007)
- ENISS assistance in IAEA Drafting Groups (Experts)
- Areas to be covered: (Priority on Requirements)
 - NPP Design & Operation
 - Management Systems
 - Assessment and Verification
 - Waste Management / Treatment
 - Decommissioning
 - Radiation Protection
- ENISS has an observer status in IAEA Safety Standard Committees (NUSSC, WASSC, RASSC)

Feedback of Experience Programme I

Sharing experiences to reach common licensee position on
Regulatory issues:

- Probabilistic Safety Analysis
- Combination of PIE/Hazards
- Safety Analysis Report
- Severe Accidents
- Content of OLC
- Fire Protection
- Ageing Management
- Management Systems
- Digital I&C

Feedback of Experience Programme II

Expert Groups:

- Ageing Management
- Management Systems
- Digital I&C
- Radiation Protection
 - IAEA BSS
 - European BSS
- Clearance of Radioactive Material

Feedback of Experience Programme -I

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EU Basic Safety Standards

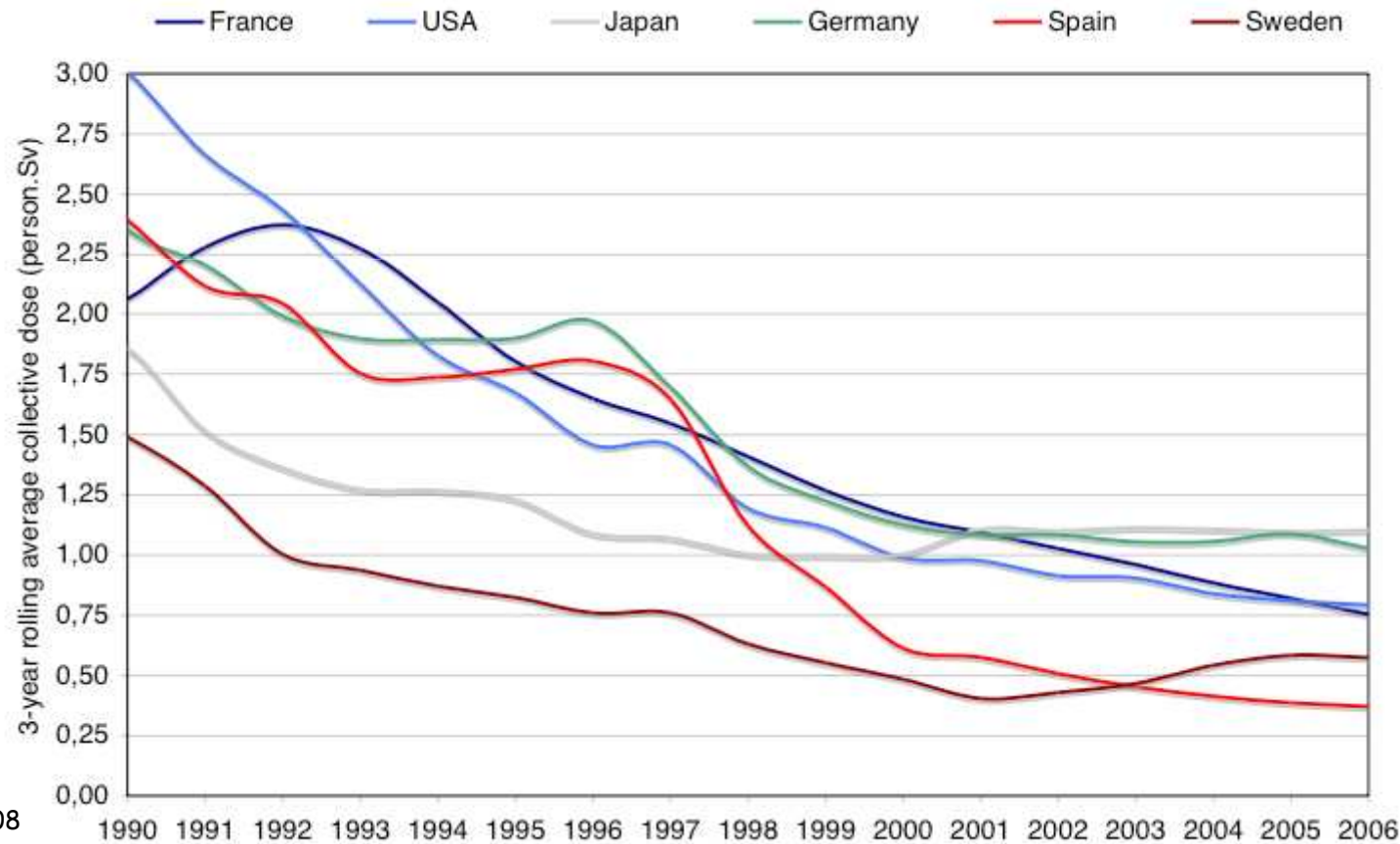
European Commission decided to revise its Basic Safety Standards and to consolidate existing radioprotection legislation:

- April 2008, ENISS provided DG TREN with industry concerns regarding ICRP new recommendation and IAEA draft BSS
- April 2009: ENISS provided DG TREN with comments regarding the EC working document on natural radiation sources in BSS Directive
- Draft EU BSS: Public consultation spring 2010, ENISS comments
- Spring 2010: Setting up of a expert group on clearance and exemption

Main Issues regarding IAEA & EU BSS

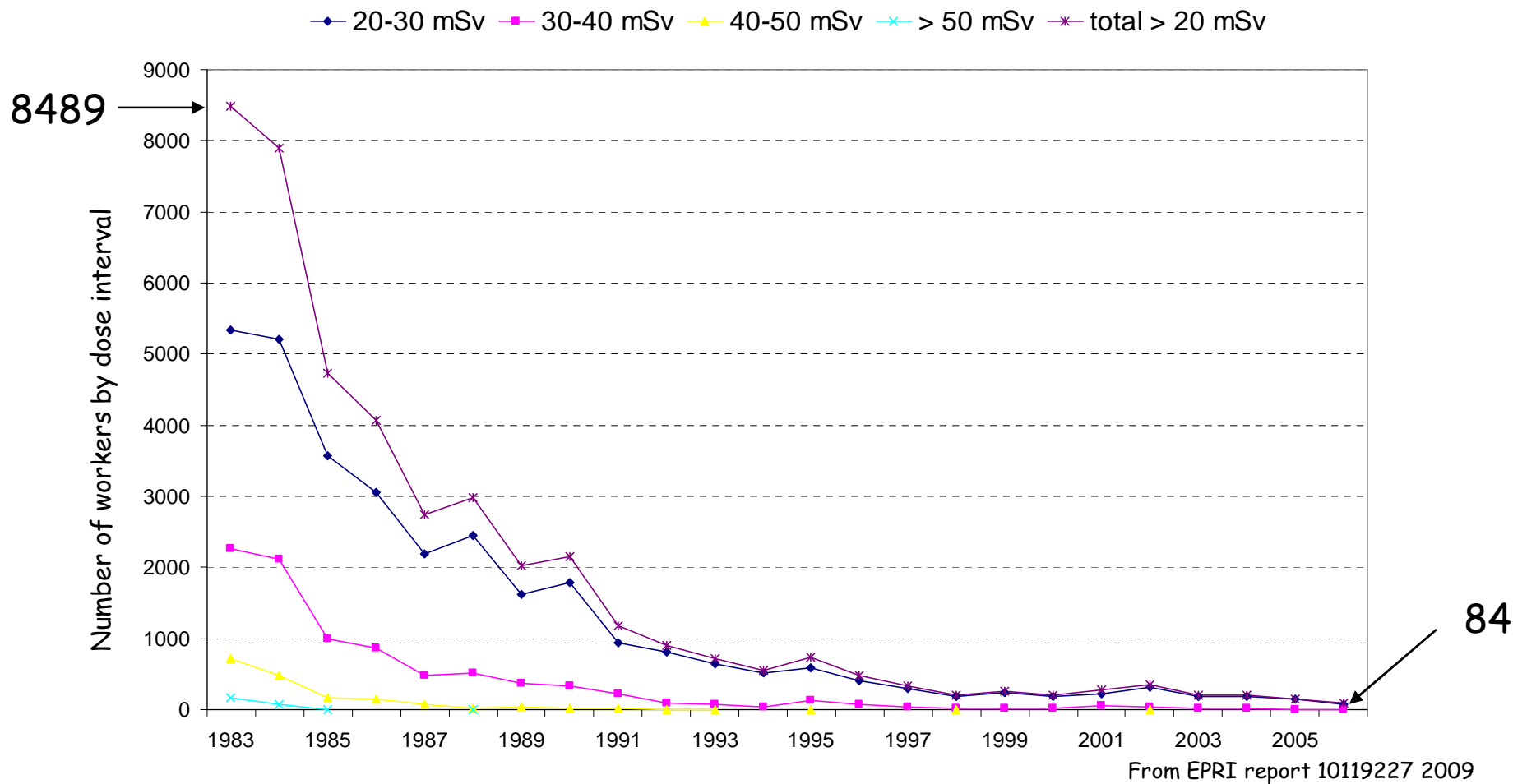
- Preeminence of Constraints versus Optimization
 - For occupational exposure
 - For public exposure
- Protection of the non-human species
- Exemption & Clearance

Evolution of the 3-year average collective dose in PWR (1990-2006)

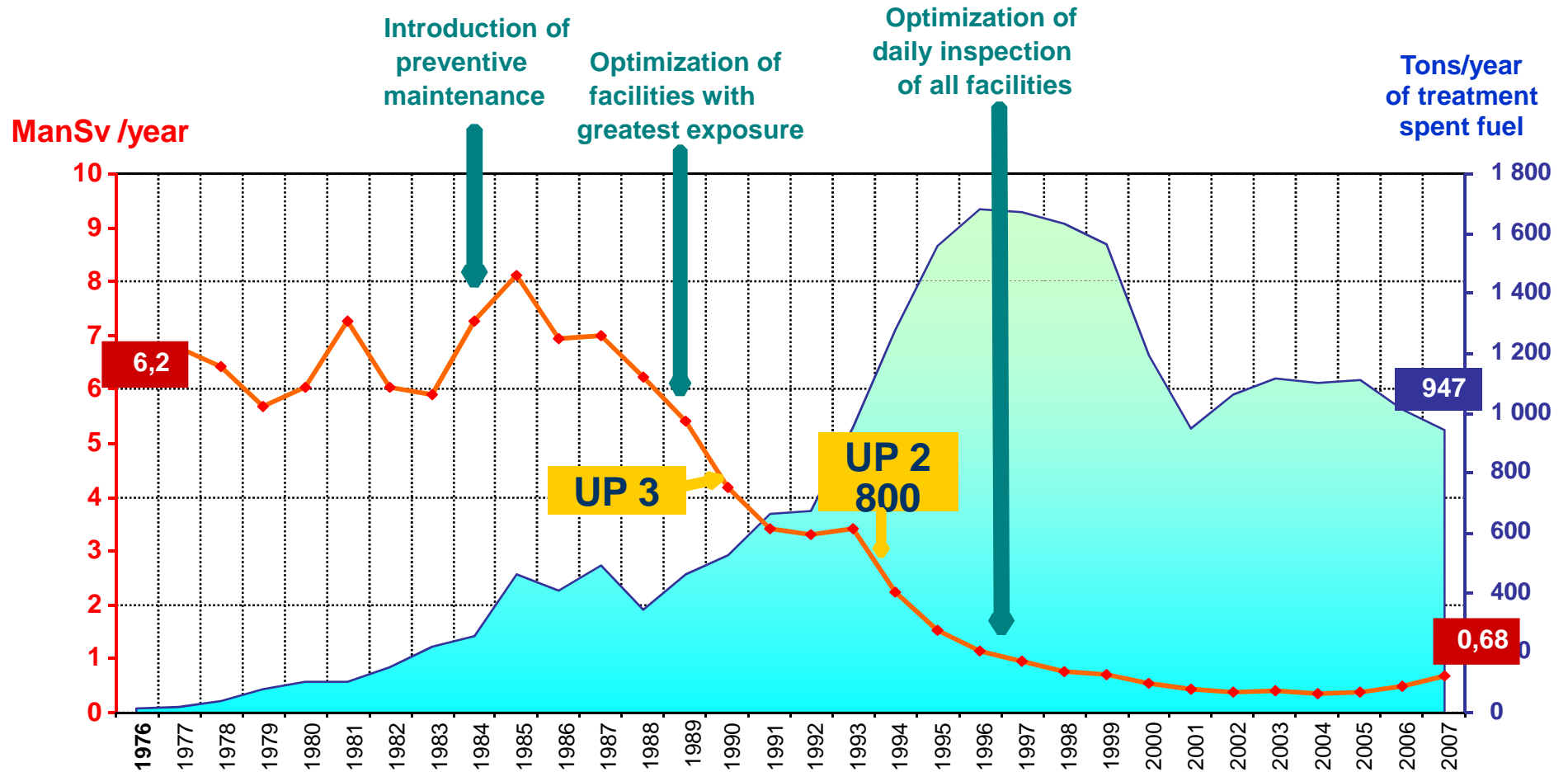


From ISOE 2008

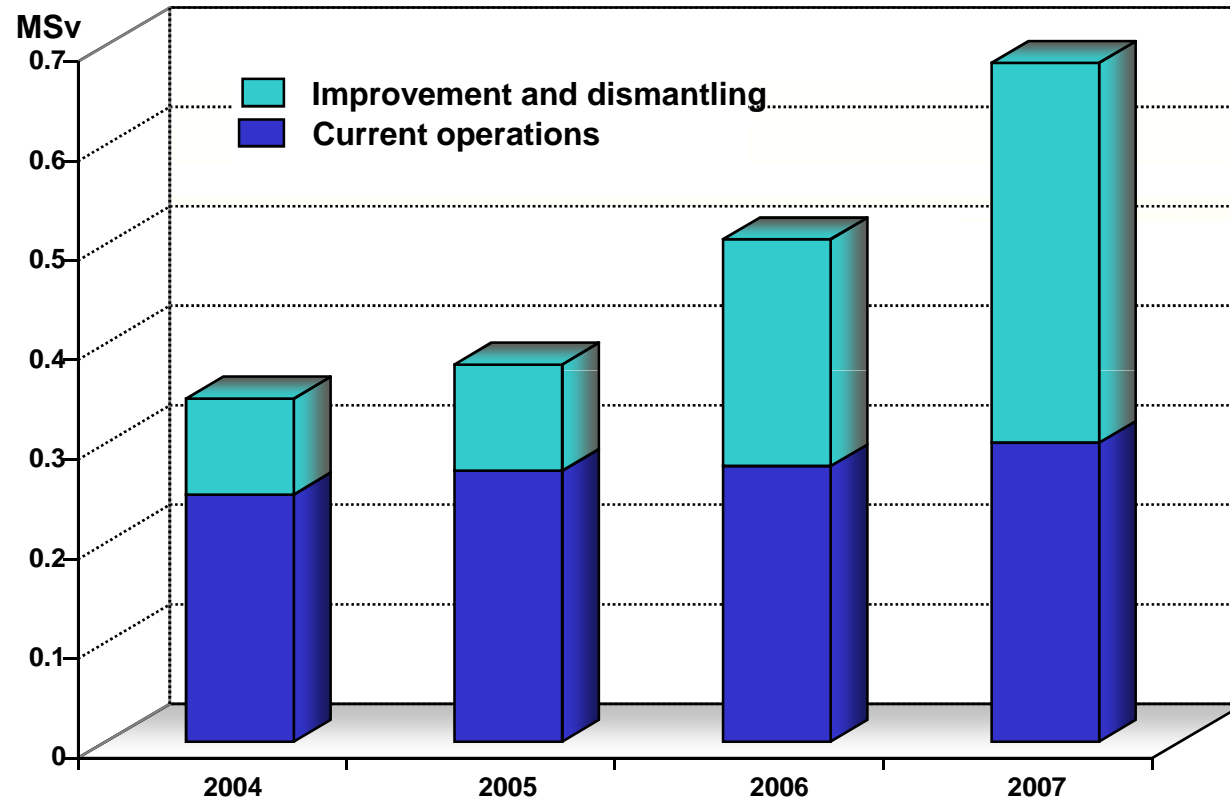
Evolution of worker dose in US NPP (1983-2006)



La Hague Plant collective dose versus production (1976-2007)



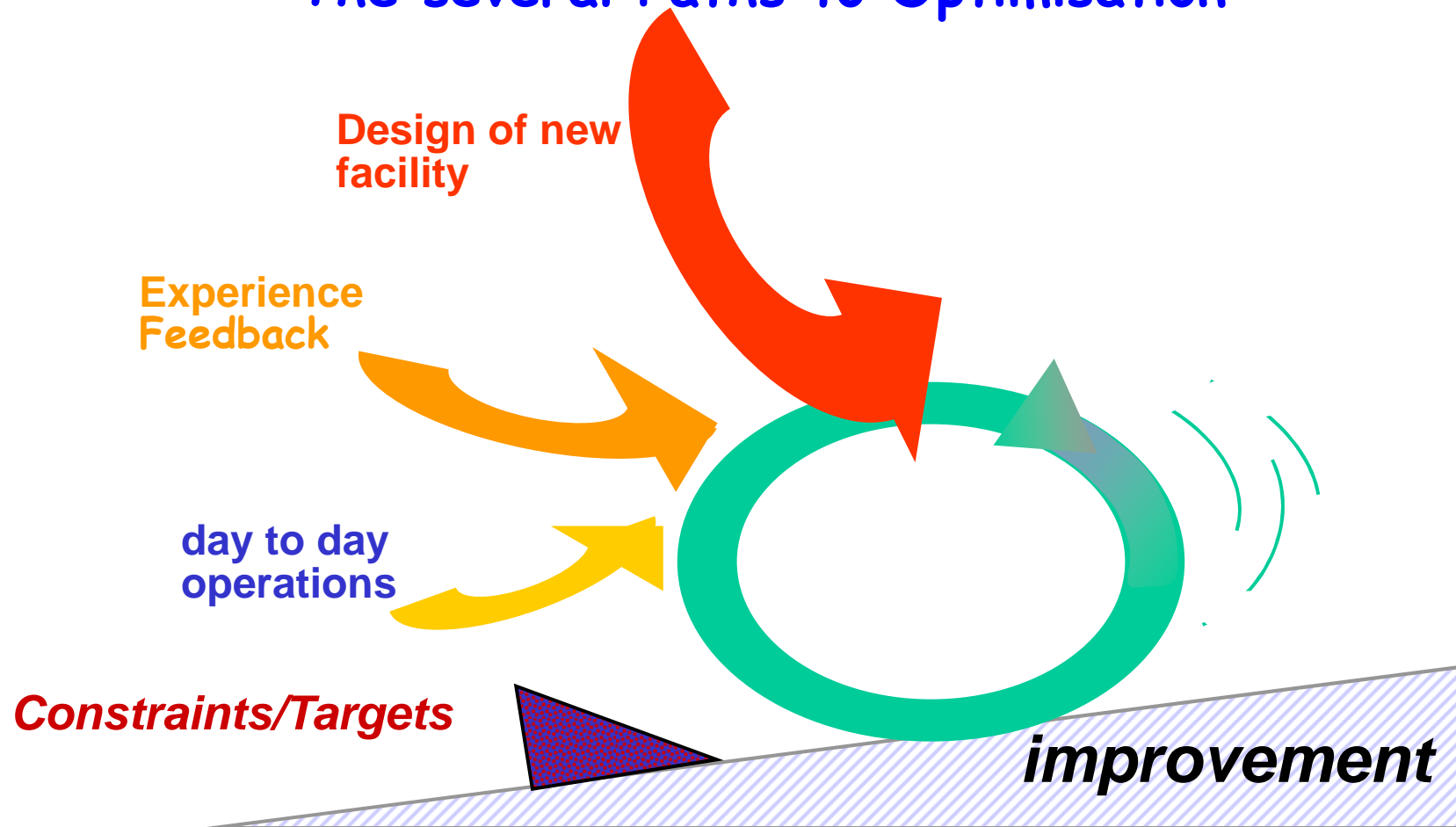
Optimization vs. Optimized



Since 2004 increase of a new activity:

- *regular operations of reprocessing fuel,*
- *clean up of the old workshops and major work in facilities*

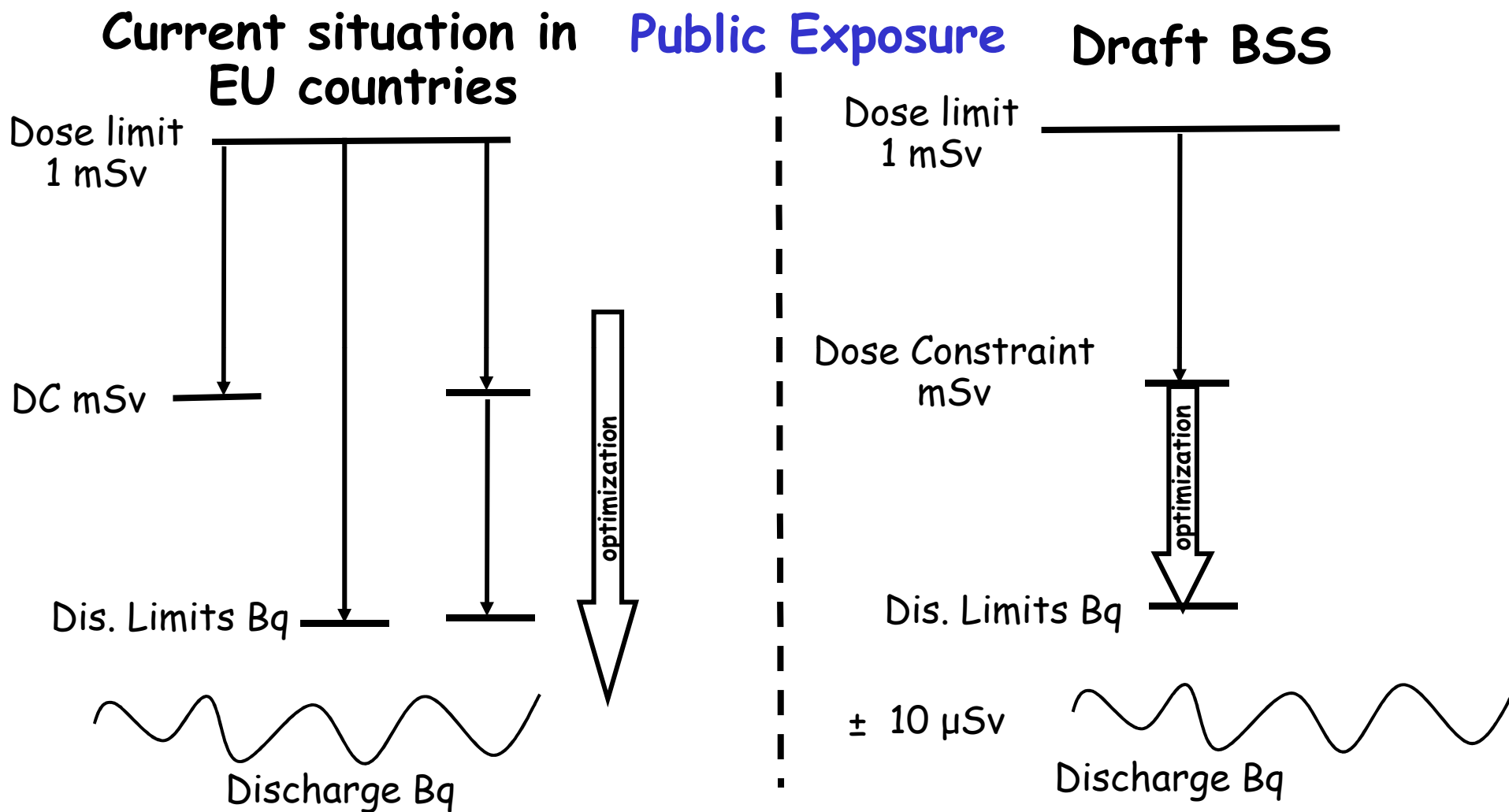
The several Paths to Optimisation



- Industry use the constraint as a tool to manage doses to achieve optimization at many levels
 - To set up target for the design of a new NPP or facility
 - During operation by the management to set up targets for a site, an entity, a region...which can take different forms depending on the activity:
 - maximum dose per worker/year,
 - so many workers above x mSv,
 - collective dose for a site or a facility
 - During day to day operation to set up targets and limits for each significant operation:
 - collective dose for the operation: optimization of operating procedure
 - individual doses: limit the dose per worker (operational dosimetry)
- In a never ending continuous improvement process covering the whole management system

The optimization process (example of AREVA)





Public Exposure

- System for managing discharges by setting DC or discharge limits is not harmonized in EU countries but :
- No system has been proven more efficient than another for optimizing public exposure and major progress have been accomplished regardless of the system
- The use of both DC and discharge limits make the system complex and the discussions are still on going on major aspects such as:
 - Who is responsible for setting DC (licensee or regulator)?
 - Should the DC be set at the local level or the national level?
 - If a DC is set at the national level, how can you explain to the public the difference between the limit for public exposure (1 mSv) and a constraint?
- Doses to the public due to discharges of nuclear facilities are in the order of 10 μ Sv

What is the benefit for public health of making the system more complex and less understandable for the public ?

Constraints vs Optimisation : Conclusion

- The process of optimization is based on company's commitment and efficient management systems
- It is a never ending continuous improvement process
- The concept of dose constraint is widely used in the industry to cover different concepts
- It is useful as a practical way to set objectives in the concept of optimization, but it's just a tool
- And it works as long as:
 - The operator exercise its responsibility to set up an efficient system
 - The authorities controls that the system is in place, that the results are met but do not prescribe means to achieve results

Licensees/Employers have prime responsibility for nuclear safety and radiation protection. They need the flexibility to achieve best results

Protection of non-human species

- ICRP 103: "It had been considered that the standards of environmental control needed to protect the general public would ensure that the other species are not put at risk, and the ICRP continues to believe that this is likely to be the case"
- However the ICRP consider that this is a legitimate concern and "believes that the development of a clearer framework is required"
- A lot of work has already been done on this topic in many countries but further work is required to reach international consensus on methodology and level of protection
- IAEA has considered setting requirements in BSS, but has decided against it
- ICRP has launched a Task Group TG 82: "Application of the ICRP's approach to environmental protection under different exposure situations" which results are expected in 2013

We believe it is preferable to wait for this work to be achieved to be able to set up requirements at the EU level based on a sound international basis

Clearance and Exemption

- The subject of clearance & exemption is of an increasing importance as the decommissioning of nuclear facilities progress in the member states
- In accordance with its procedures ENISS has set up a specific expert group in order to:
 - Collect data on current practices in the EU
 - Give a unique position for the nuclear industry on the subject
- Work is ongoing and report is expected beginning of October
- Preliminary results show that the situation is diverse but that many Member States have adopted regulatory framework based on current EU recommendations (RP 122 part I for general clearance, RP 89 for clearance of metal scrap, RP 113 for building rubble and buildings for demolition)
- Proposal has been made to align clearance values with the IAEA for simplification of clearance procedures and to achieve international harmonization

Caution should be applied before changing values as it will have a huge impact with no proven benefit

Conclusion

- ENISS is committed to bring practical industry experience to the regulators in order to achieve more efficient regulation
- ENISS support the principle of international harmonization but :
 - Harmonization of existing regulations should be acted on a clear cost/benefit analysis
 - Regulation on a new subject should be made on a sound technical basis that is shared internationally
- ENISS believes in the principle of the prime responsibility of the licensee/employer for nuclear safety and radiation protection
- In consequences regulations should avoid too detailed prescriptions and leave the licensee/employer the choice of the best means to achieve a result. It will be more efficient.

Thank you for your attention

