

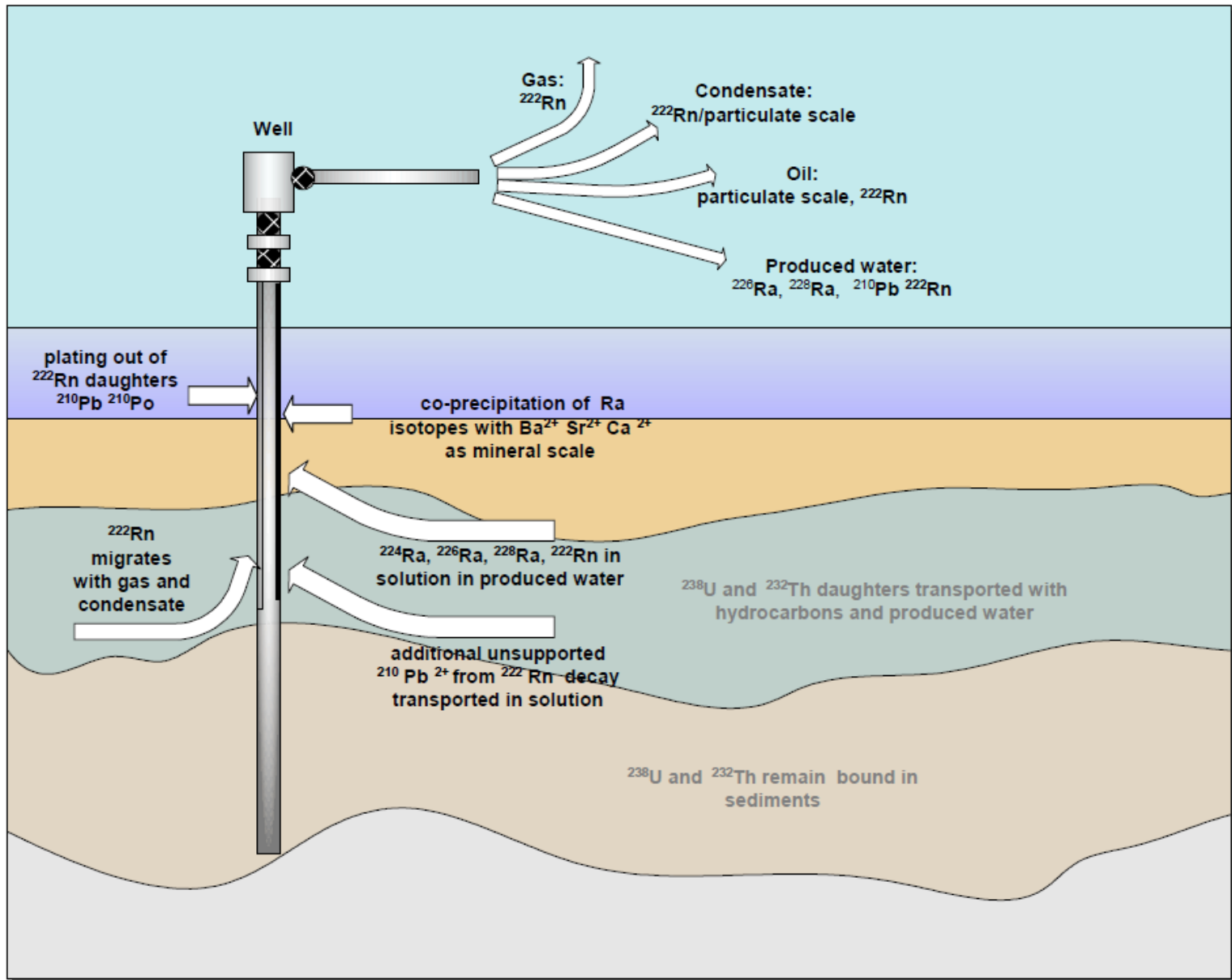
Comparison of Provisions for Exclusion and Exemption of NORM radionuclides associated with the North Sea Oil and Gas Industries

A Stackhouse, M Nilsen, C Nielsen

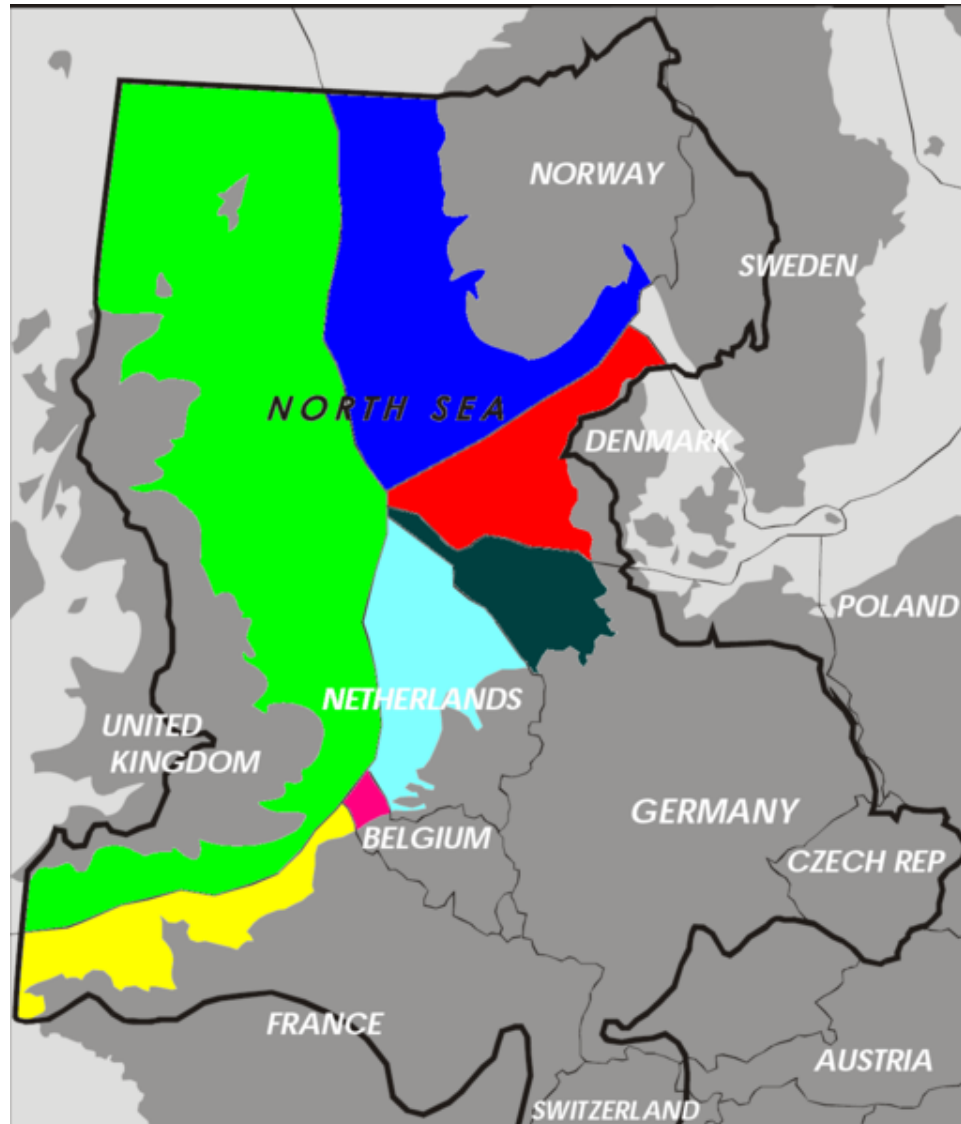
IRPA13 - 14 May 2012

Contents

- Brief overview of North Sea and NORM
- Who has undertaken the comparison and why
- On overview of the similarities and differences
- Reason for differences
- Practical implications
- Conclusions for developing legislation in the future



North Sea Areas



Approx 1300
installations in
the North Sea

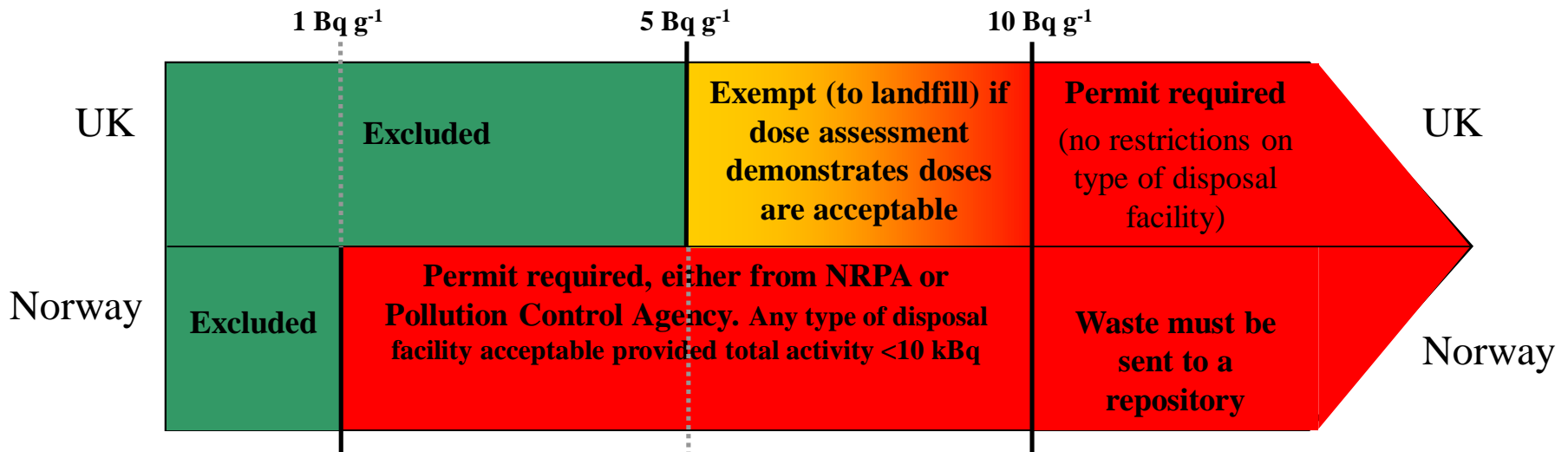
Majority are in
UK and
Norwegian
waters

North Sea NORM Regulators Working Group

- Members
 - UK members, (SEPA, DECC, EA)
 - Norwegian Radiation Protection Authority
 - National Institute for Radiation Protection (Denmark)
 - Federal Office for Radiation Protection, Germany (BfS)
- Purpose
 - Share best practice and information of common interest
 - Harmonise approach as far as possible
 - Consider joint research

Solid wastes

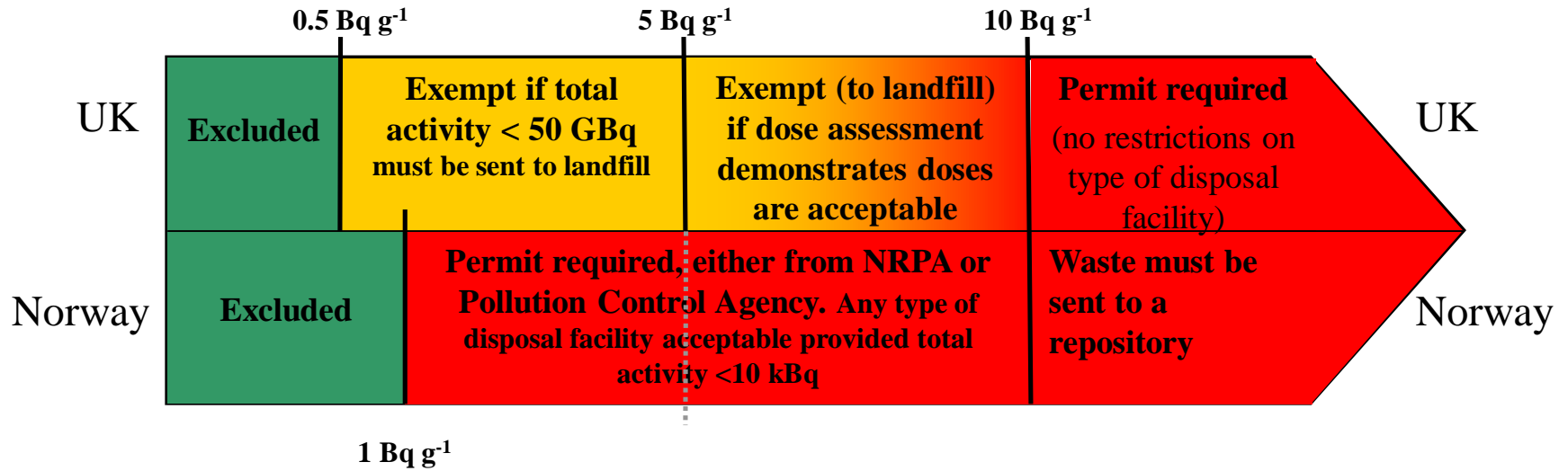
Lead-210



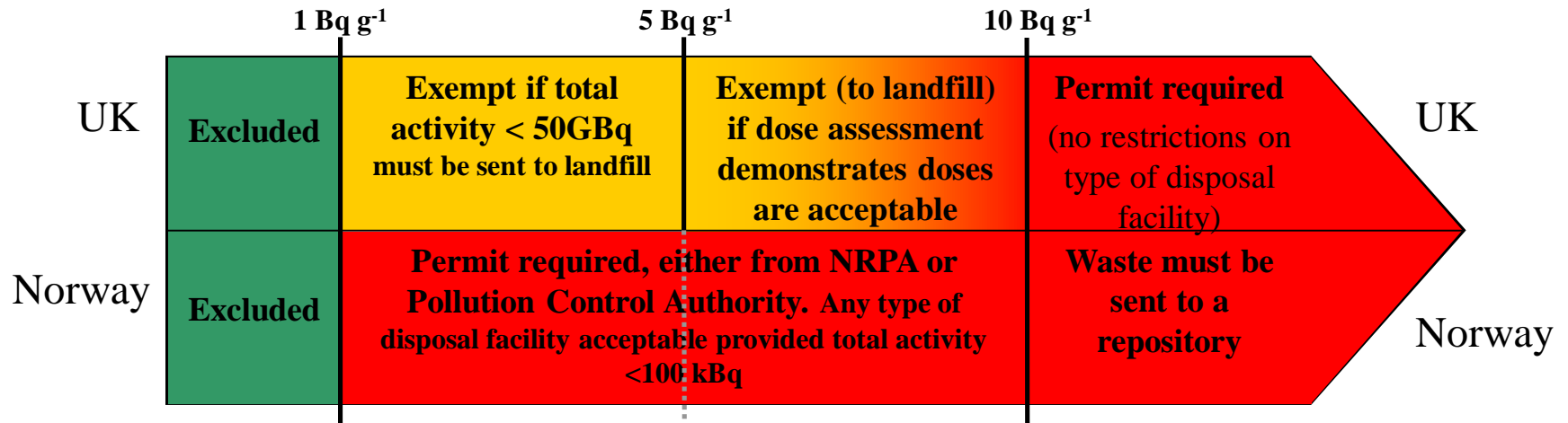
Denmark: permit is required if Pb-210 $> 5 \text{ Bq/g}$

No exemptions or restrictions on what may be permitted

Radium-226



Radium-228



Denmark: permit is required if Ra-226 > 0.5 Bq/g or if Ra-228 > 1 Bq/g

No exemptions or restrictions on what may be permitted

Liquids

- Very different approaches
 - UK has bespoke assessments and radionuclide specific values in Bq/l
 - Norway has supplemented concentration values with total activities
 - Denmark has same values as for solids but reporting is mandatory

Summary - Reasons for differences

- Legislation based on different international requirements/guidance
 - EC RP122
 - IAEA RS-G-1.7
 - Basic Safety Standards Exemption values
- Bespoke assessments carried out by some countries
- Practical considerations
 - Industries affected and quantity of waste generated
 - past practice
 - available disposal routes has an influence

Conclusions

- Close alignment regarding approach to clearance of solids in North Sea area
- However, regulatory requirements on wastes that are subject to regulation quite different
- For a consistent and harmonised approach it is important to work together on international legislation and standards – but this close working needs to continue during implementation into national law
 - Not always easy!

Thank you for listening