Session 3:
State of the Art Post-Accident Food Safety Science

Chair: Anne Nisbet

Vice-Chair: Michiaki Kai

Rapporteur: Ted Lazo

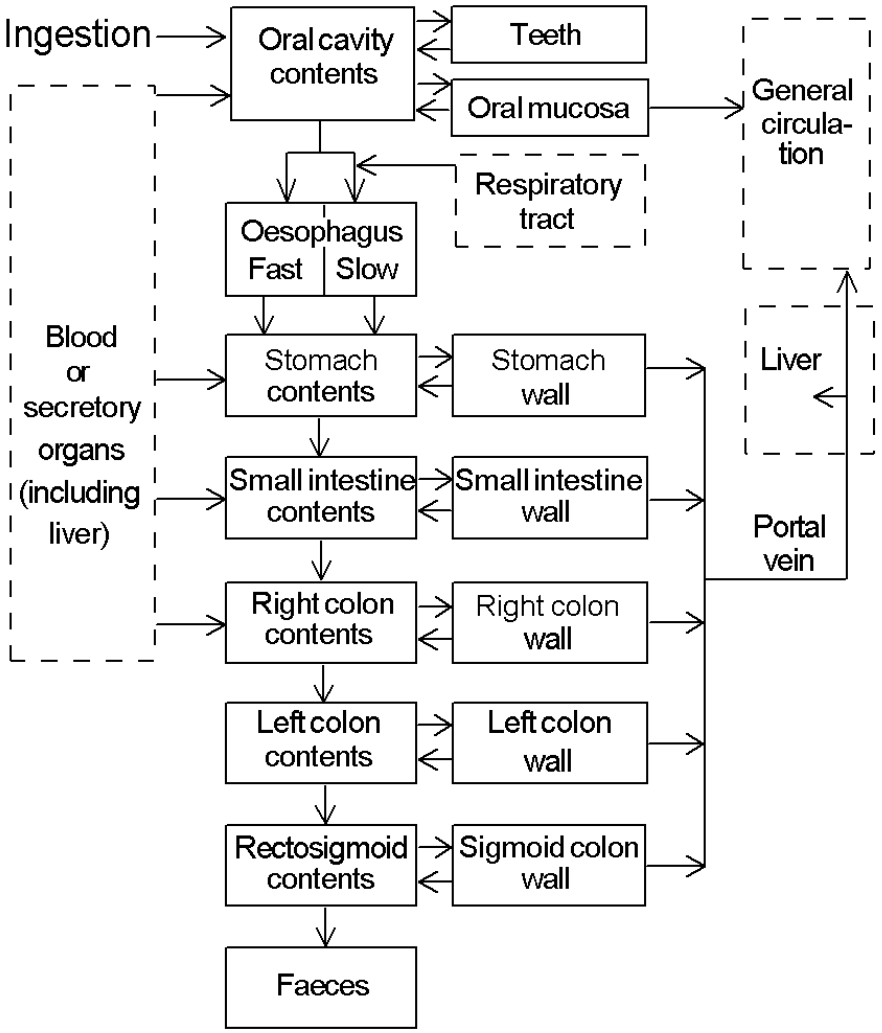
Speakers

- Rob Theelen, Food and Product Safety Authority, Netherlands
- Igor Gusev, International Atomic Energy Agency
- Ted Lazo, OECD Nuclear Energy Agency
- Dietmar Noßke, ICRP Committee 2, Germany
- Hildegarde Vandenhove, SCK-CEN, Belgium
- Kinson Leonard, Centre for Environment Fisheries & Aquaculture Science, United Kingdom
- Christopher Perks, University of Cumbria, United Kingdom

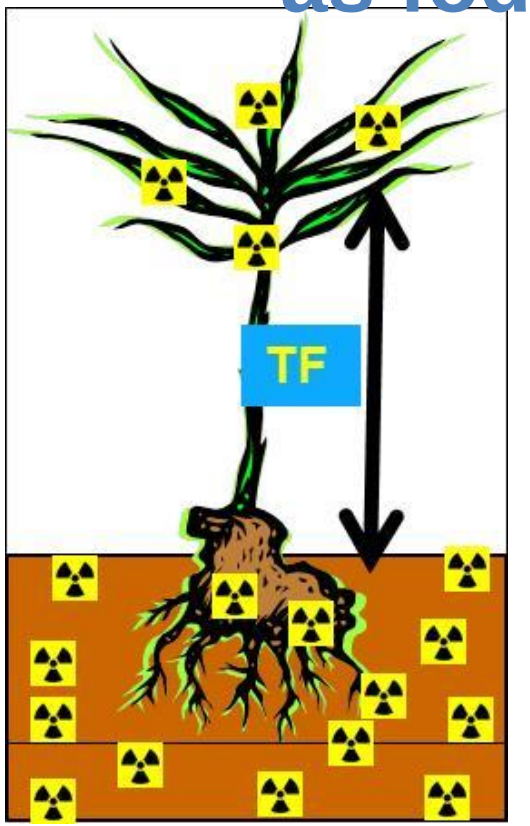
International Criteria

- FAO CODEX criteria for international food import
  - Cs-137 Criteria = 1000 Bq/kg
  - Based on 10% of food contaminated
  - Dose < 1 mSv/y
- IAEA Requirements for Existing Exposure Situations
  - Cs-137 Criteria = 1000 Bq/kg
  - Based on 10% of food contaminated
  - Dose < 1 mSv/y
- NEA Framework
  - Process based / Accident Specific
  - Validation of Scientific Basis for Criteria and Certification

State of the Art Modelling of Internal Dose from Contaminated Food



Alternative crop usage: Food crop as fodder



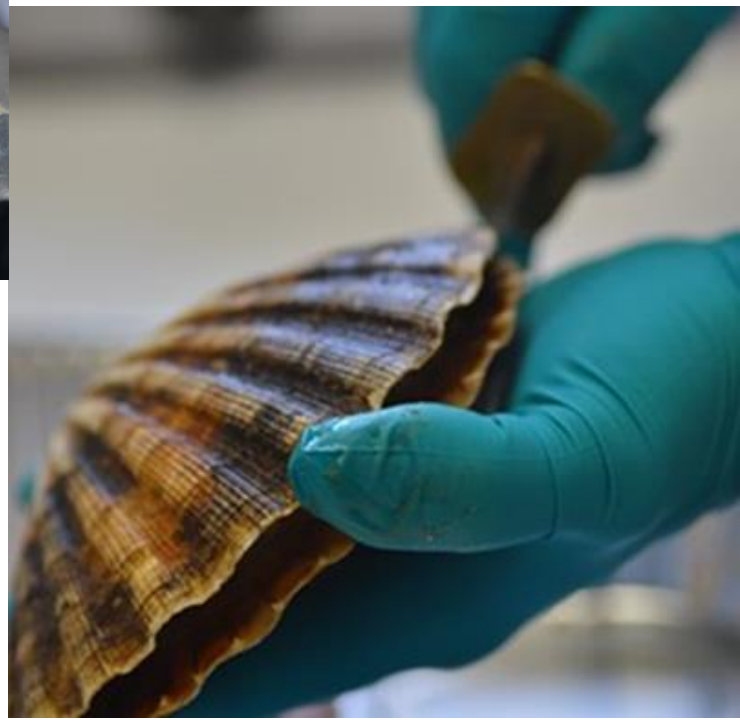
Alternative land use

Cs Transfer to Plants

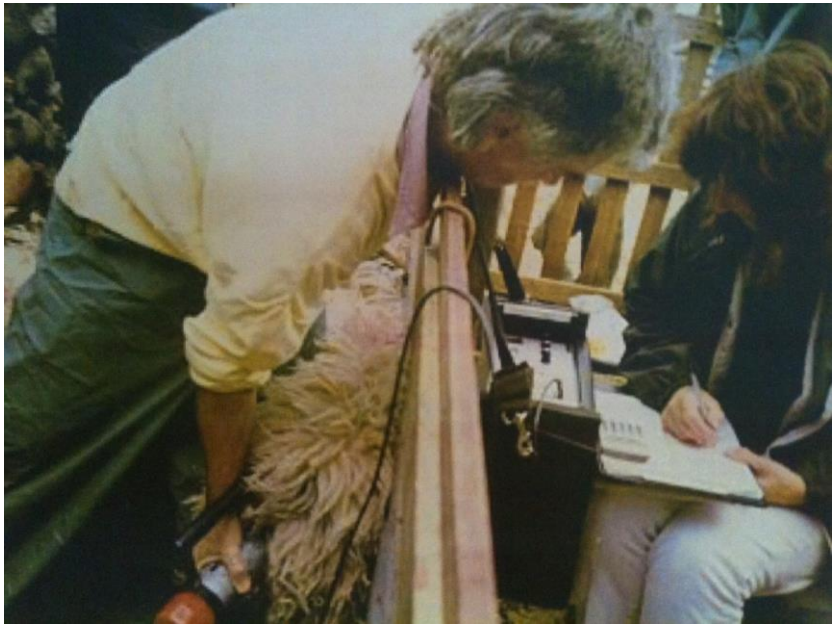
- **Best-practice** – having the fundamental capability (methods instruments, tools, resources, skills, supporting knowledge etc.) securely in place and fully operational

- **Best-practice** – the ability to adapt (sometimes very quickly) existing fundamental capability to suit the specific requirements of the accident/incident scenario

- **No such single Best-practice** – that covers all eventualities in the event (response phase) – as singularly unique



State-of-the-art measurement



Conclusion

- The NEA Framework seems to provide a holistic approach to post-accident food management, using CODEX and fitting with existing international guidance
- Post-accident food management strategies, derived from previous experience and ongoing research, seems to be able to effectively produce food well under even stringent consumption criteria
- Modern radiation detection equipment is capable of quickly and accurately assessing radionuclide concentrations in food