

# Local-national forums in nuclear and radiological emergency and recovery in Norway

Inger Margrethe H. Eikermann  
Norwegian Radiation Protection Authority  
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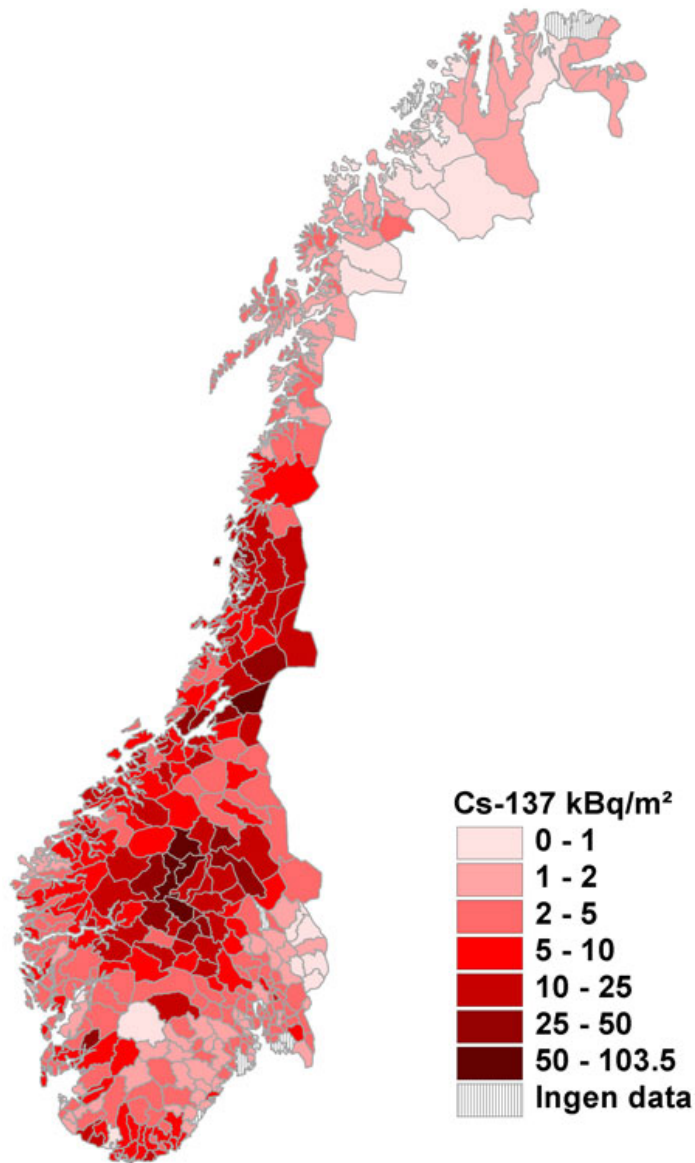
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# Background

- NRPA has extensive experience in post-Chernobyl management, and is also strongly involved in the continuous improvement of the emergency preparedness and response system.
- Through dedicated seminars and exercises, NRPA has a good contact with various actors and levels within the emergency and response organisation.
- Establishment of local-national forums is a national part of the EU NERIS-TP project work package 3
- The NERIS-TP is a follow-up of the EU EURANOS project "Involvement of people affected by the contamination of an area – a Norwegian pilot study"
- There is a need to involve stakeholders, such as operators, professional organisations, research institutes, universities, NGOs, consultants and all levels of the food production (farmers, processing industries and end sale)
- It is important to engage stakeholders on both national and local level



# Post-Chernobyl management in Norway

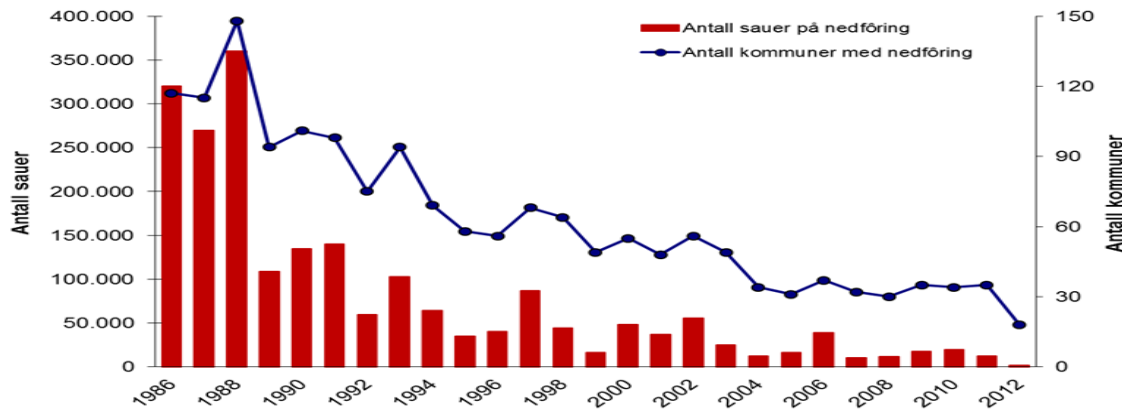


- Large areas contaminated, in particular natural pastures
- Food products from natural pasture areas are still today contaminated above the intervention limits
- Countermeasures are still necessary for goat milk, sheep and reindeer production

# Post-Chernobyl countermeasures in Norway



**Boli for sheep**



**Salt lick with Prussian**



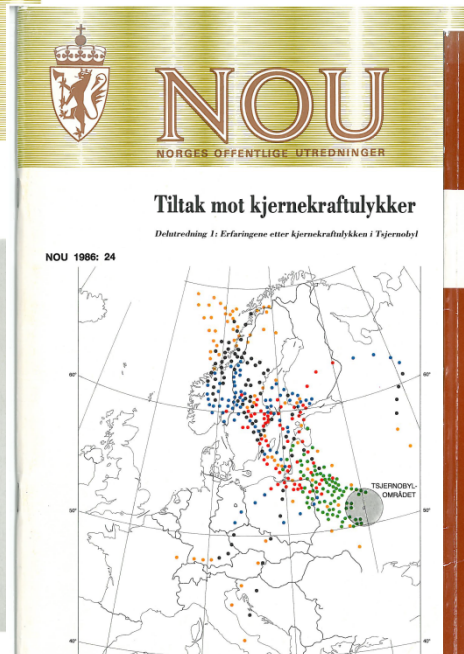
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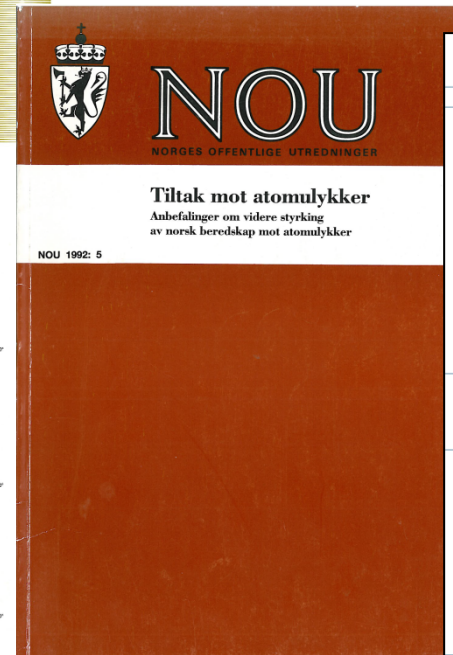
# Public reports on nuclear emergency preparedness after Chernobyl



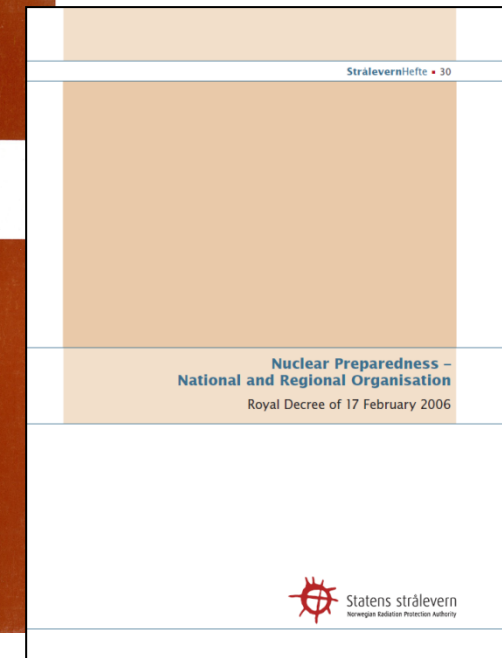
August 1986:  
«Information crisis»



November 1986:  
«Countermeasures in nuclear power accidents – Part I: experiences after the nuclear accident in Chernobyl»

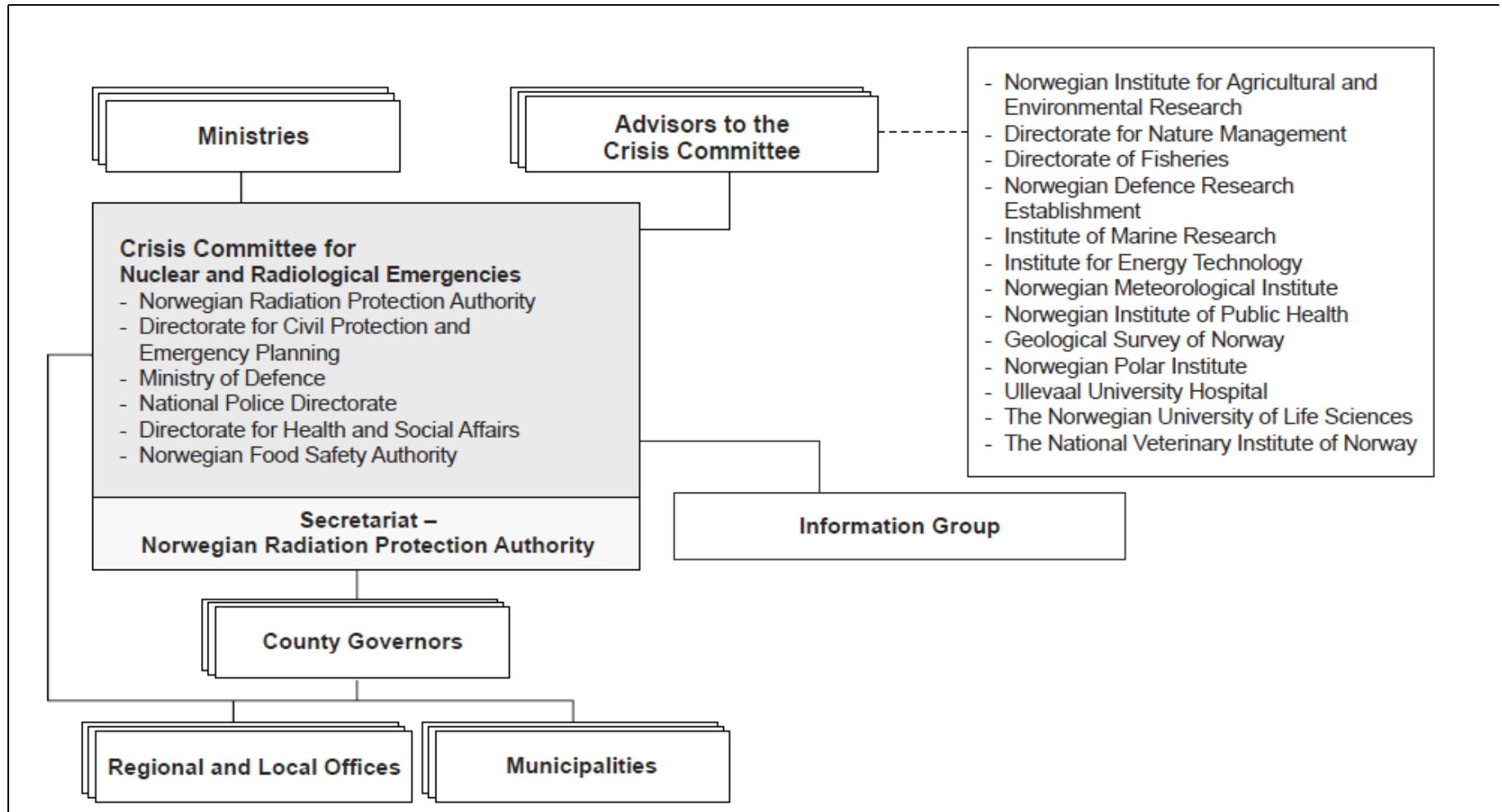


February 1992:  
«Countermeasures in nuclear accidents – Recommendations on further strengthening of Norwegian emergency preparedness towards nuclear accidents»



June 1998, updated in 2006 and 2013: «Nuclear Preparedness – National and Regional Organisation» (royal decree)

# Nuclear Preparedness – National and Regional Organisation in Norway



# Project: Nuclear and radiological emergency preparedness seminars

- A series of seminars in nuclear and radiological emergency preparedness for the 19 county governors in Norway
- One day-seminar arranged by the NRPA for the county emergency board and the administration
- Content of the seminars
  - Threat/hazard assessment and the nuclear and radiological emergency preparedness organisation
  - Methods and tools for decision making
  - Information strategies
  - Countermeasure strategies
- Table top exercise



# The EURANOS project – Involvement of people affected by the contamination of an area

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- How do we best prepare for the long-term effects of nuclear accidents?
- Who may help to develop the best management practices and which methods should be used?
- How do we get appropriate information so that the concerns of the affected people will be included in the management plans?



# Involvement of people affected by the contamination of an area

- Participants from the local communities, local- regional- and national authorities responsible for health, agriculture and environment, and NGO's and with and without Chernobyl experience
- Two workshops of 2 days each in January and March 2008
- Two facilitators organized the workshops and the IDPA-method was used

From making plans FOR" to " making plans WITH".



# The WP3.1 subproject

A series of seminars are set up where authorities and stakeholders at all levels and sectors are involved. These seminars will address the following challenges:

- **I. Threat assessment** - what are possible scenarios that could cause radioactive contamination of our municipality/local territory??
- **II. Sensitivity analysis** - what part of the community would be most affected?
- **III. Evaluating mitigating actions** - what are the choices? Can they be implemented in our community?
- **IV. Engaging local actors** - who need/should be involved in the local cooperation to solve the challenges, at various phases of the emergency? What are the responsibilities and roles? How will the the engagement be done in practice?
- **V. National assistance** – (i.e. assistance between different national levels) what are the expectations and what is possible? How will the chain national → regional → municipality/local cooperation work in practice? Roles and responsibilities of each level.



# Local-national forum in Østfold

## Østfold:

Most southeastern county in Norway with a variation of agricultural produce, like potatoes, vegetables, different animal production, as well as recreation and hunting

The county also hosts Norway's largest research reactor, with associated storage and transportation of radiological and nuclear materials

## Participants:

Regional and local food authorities, NRPA, the Ministry of Health and Care Services, the Farmer's association, the food industry, members of the regional forum for coordination of nuclear emergency preparedness, representatives from local municipalities, the local health sector, and NGOs



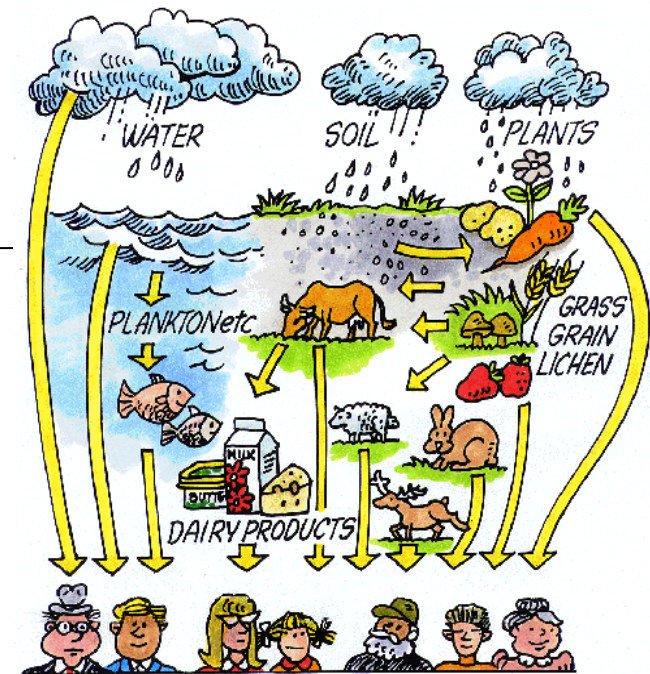
# Local-national forum in Østfold

## Introductory sessions

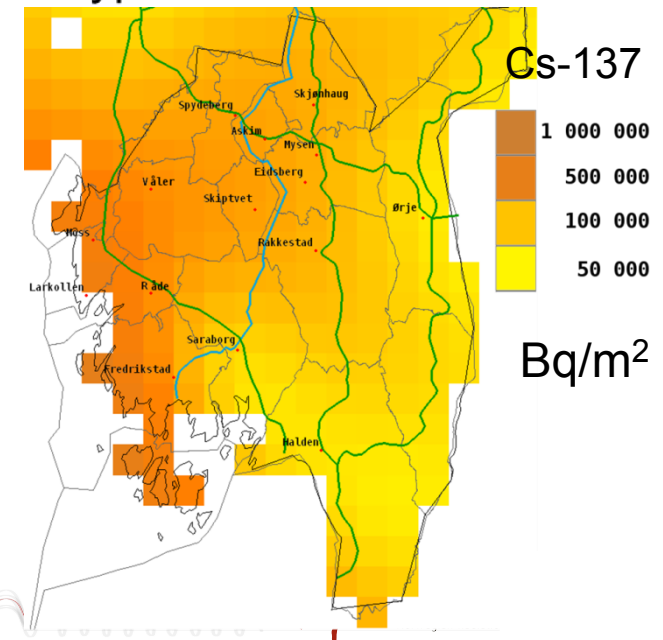
- Presentation of radioecology
- The emergency preparedness organisation
- The responsibilities of different authorities
- Relevant countermeasures in nuclear and radiological emergency preparedness and recovery

## Table-top exercise

- Presentation of a scenario with a dispersion map
- Participants were divided into groups where they discussed countermeasures and mitigation actions in different parts of the recovery phase
- Conclusions from the group discussions were presented and further discussed in a plenary session



Hypothetical scenario





# Lessons learned

- Through the discussions, the participants realised their roles and responsibilities and the need to be better prepared for this kind of emergencies
- There are many practical challenges which need to be solved locally, and there need to be prepared emergency plans. It is important that these plans are elaborated with stakeholders on all levels.
- Need for different kinds of decision support tools and educational tools for the local and regional authorities. These tools need to be well-known and adapted to regional specificities in `peace time`
- Procedures and systems for communication between local, regional and national levels in the emergency response organisation need to be developed in order to have a successful implementation of countermeasures during an emergency and late phase recovery



# September 2013 – Regional emergency response exercise

- Initiated by the Food Safety Authority
- Started with educational seminar by NRPA
- Emergency exercise for the regional level
- National, regional and local food authorities
- 3 County Governors with staff
- Civil defence
- Most focus on challenges in the food production system
- Countermeasures in early to mid phase, division of responsibilities and tasks
- Cooperation between municipalities and counties



# General summary points

- It is important to keep and to transmit knowledge on nuclear emergency preparedness and response
- To build country resilience, all levels and sectors must be involved
- Radiation protection authorities can play an important role in education, exercises and facilitation of seminars
- Research projects can contribute, but must work in line with national plans (in particular in small countries)



# Co-expertise with the affected people

- The inhabitants are the owners of the situation in the affected areas.
- To better address their expectations experts should
  - be at their service
  - listen to their concerns
  - respond in an understandable way.
- The development of common evaluation of the situation by evacuees, residents, experts and authorities in the various communities (co-expertise) should be supported.

# Developing tools for local-regional forums

- Nordic projects on presentation of prognoses
- Cooperation between NRPA and the Norwegian food safety authorities on models for contamination in drinking water and using EURANOS handbooks
- Cooperation with regional authorities using their GIS systems for handling local countermeasures