Possible contributions from NKS-B - to maintaining and strengthening Nordic competences and capacities

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- to maintaining and strengthening Nordic competences and capacities

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The NKS-B Programme

The NKS-B programme provides opportunities for financial support of activities under the following four areas:

- Radiological and nuclear emergency preparedness
- Measurement strategy, technology and quality assurance
- Radioecology and environmental assessments
- Management of radioactive waste and discharges

Societal demands and problems change over time – we need to keep up with the development and deliver state-of-the-art solutions.

Why go the NKS way ?

NKS is an informal collaborative network that has functioned over decades. It aims to provide a common Nordic understanding of rules, practice and measures, which change with time.

Through collaborative efforts problems may be tackled quicker, more efficiently, more consistently, and at a lower cost.

‘Lean’ annual application procedure: ability to rapidly address new problems (e.g., Fukushima, terror risk).

Effective size of work groups to dynamically address specific targeted problems.

Looking back on NKS-B activities (preparedness issues)

Photo from the SSM REFOX exercise in 2012

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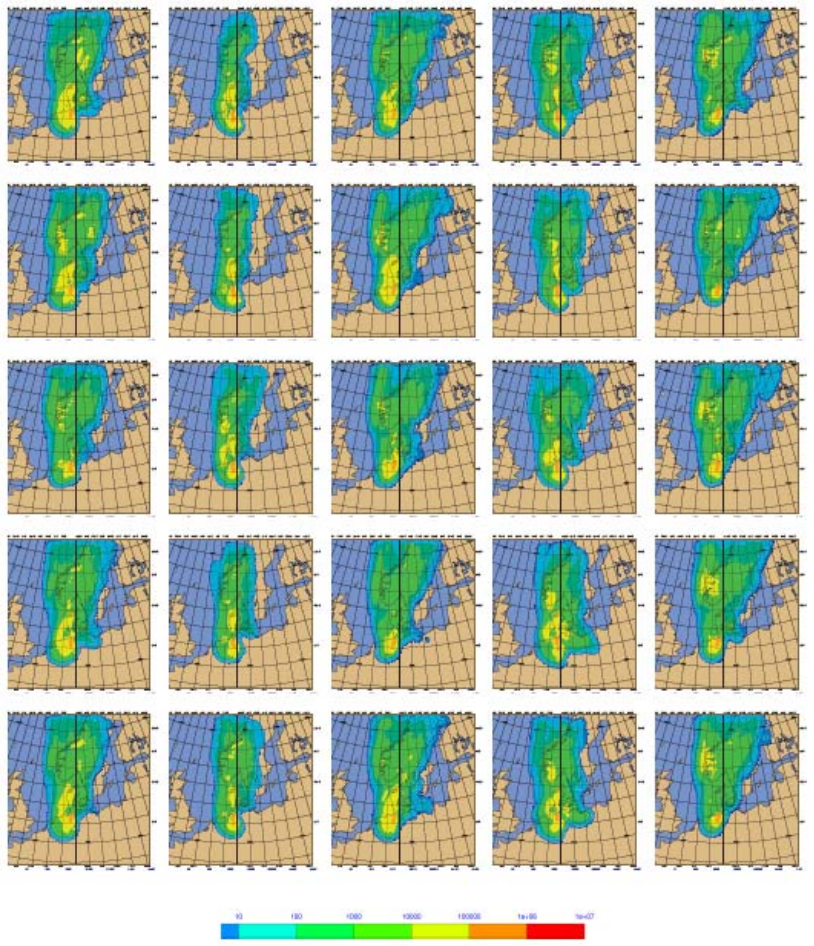
NKS Fukushima Seminar,
Stockholm, January 8-9th 2013

Fukushima relevant activities in 2012

MUD (Meteorological Uncertainty of atmospheric Dispersion model results): uncertainties of dispersion prognoses strongly depend on uncertainty of meteorological data.

Figure shows results of ensemble of atmospheric dispersion model calculations (hypothetical accident; Cs-134 deposition).

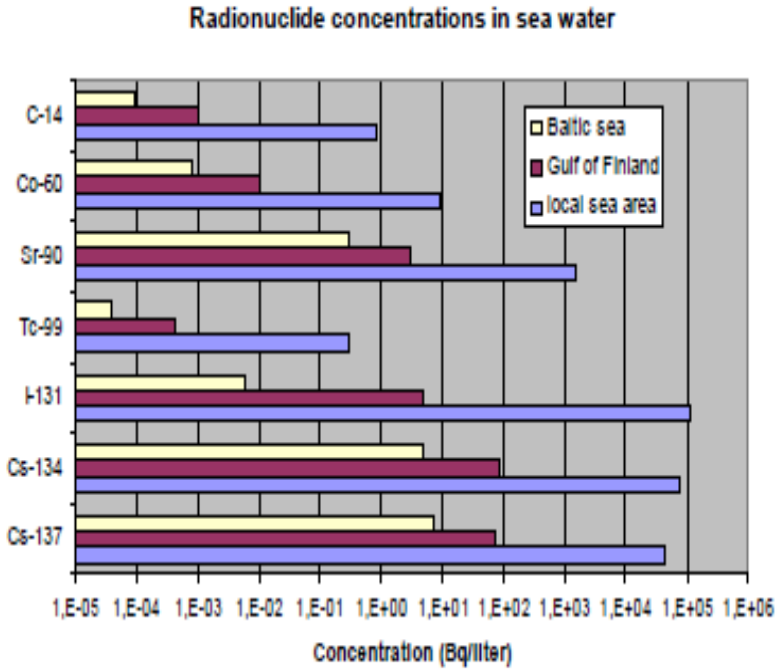
PUBPLUME (Communicating Dispersion Modelling Results to the Public)



Fukushima relevant activities in 2012

COSEMA (COnsequences of SEvere radioactivity releases to Nordic MArine environment)

Renewed interest for model development following discharges and accidental releases from Fukushima NPP to the Pacific Ocean.



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Fukushima relevant activities in 2012

GammaWorkshops

Focus on gamma spectrometric needs in emergency preparedness (incl. in situ measurements)

MOMS (MObile Measurement and Strategy)

Harmonising Nordic mobile measurement systems.

THYROID

Evaluation of Nordic capabilities to quantify radioiodine uptake in human thyroids.

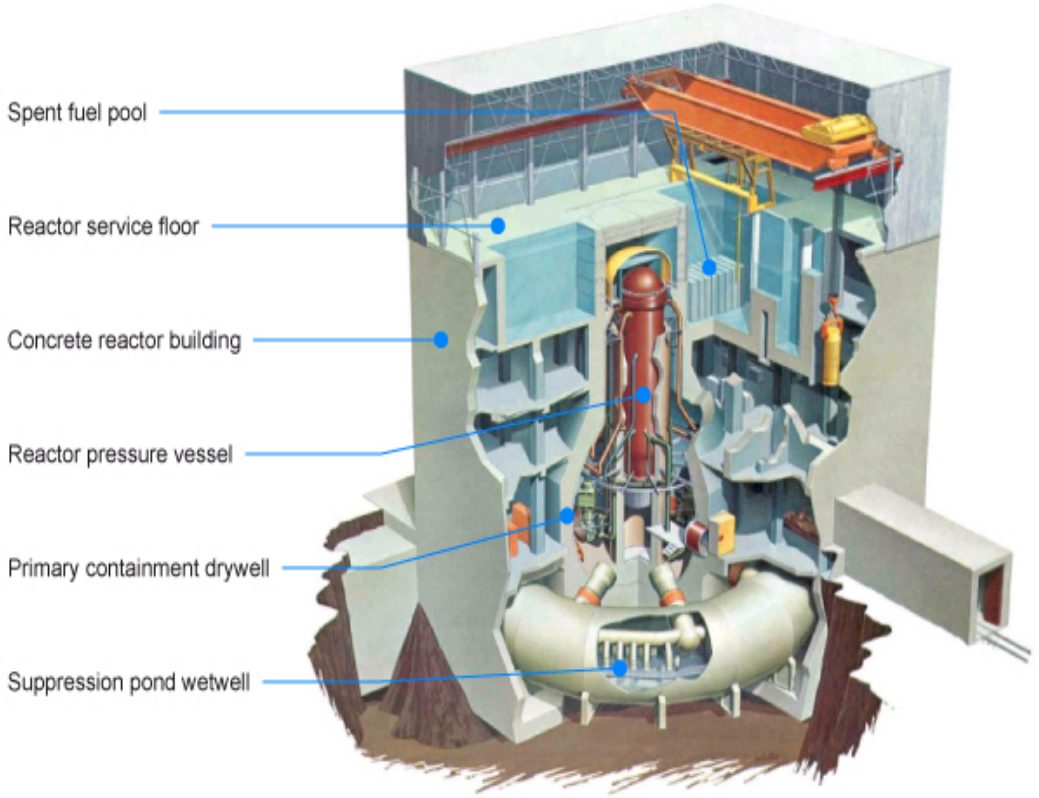
NORDEX 12

Practical emergency preparedness lessons from recent exercises, drills and training.

Photo from the SSM REFOX exercise

Fukushima relevant activities in 2012

RASTEP (NKS R and B)
Development of a computerised tool for rapid prediction of NPP source terms for emergency management systems.



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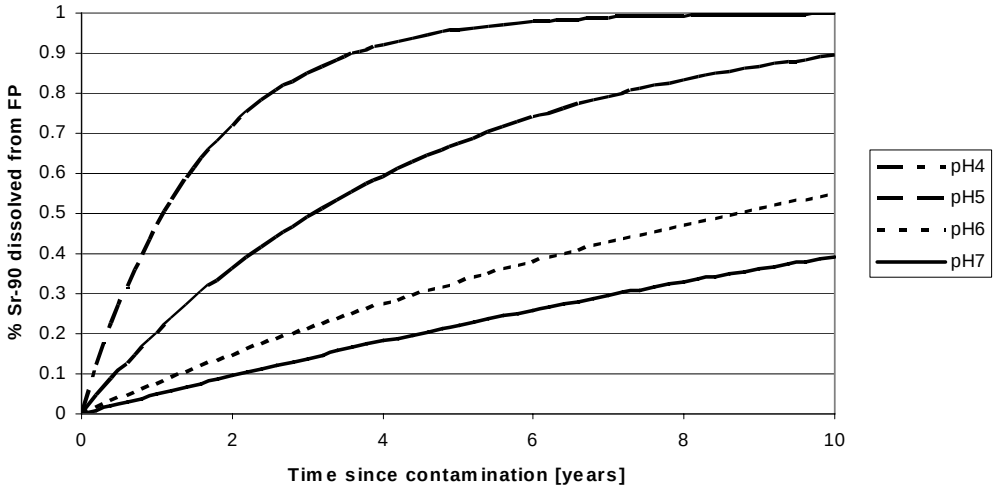
Fukushima issues yet to be addressed (examples)

In DSS, the source term is so far generally only considered as a nuclide vector. Very important to consider physicochemical forms of contaminants in relation to accident characteristics (e.g., explosion, fire, oxidizing conditions).



Post deposition migration: ^{90}Sr dissolved from fuel particles in the areas contaminated by the Chernobyl accident

Fukushima issues yet to be addressed (examples)

Taking into account in preparedness plans and DSS that NPP accident releases may occur over several weeks (when to implement countermeasures).

The challenge of communication with the public on radiological issues (e.g., writing information material to counter and kill the strange myths written by incompetent authors on the internet and in best-selling books).