

Background

The increased maritime transportation, flow of goods, and populations changes the risk picture in the Arctic. A recent sharp increase in nuclear-propelled vessels and ships transporting spent nuclear fuel and radioactive materials adds **new uncertainties** into risk assessments, risk perceptions, and **challenges of inter-sectoral collaboration complexity** in case of response to maritime radiation emergencies in the Arctic.

Objects

The project objectives are:

- Building knowledge on collaboration competences, complexity and development of exercises
- Research studies on shared understanding of risk evaluation for safety and complexity in the Arctic;
- Managing and visualization of risk evaluation for better safety in the Arctic
- Designing an algorithm to support decision-making and risk awareness of nuclear emergencies

Expectation for a future partner

- **Network development** with global research community working in the field of nuclear disasters
- **Observation** of collaboration exercises
- Knowledge exchange on **case studies** on disaster response and risk assessment, such as the Fukushima disaster and maritime nuclear accidents

Seeds and Needs

Interdisciplinary partnership



Academic partners

Nord University (Norway)

Laurea UAS (Finland)

Fraunhofer CML (Germany)

Emergency preparedness and response authorities

Norwegian Radiation and Nuclear Safety Authority

Joint Rescue Coordination Centre Norway

Seeds!

Collaboration exercises and knowledge-exchange events

- Cooperation between nuclear and radiation, and search and rescue authorities in maritime RN rescue operations
- Exercise design studies and innovative exercise solutions
- Risk assessment and risk perception studies
- Simulation exercises
- Case database and algorithm modelling

Seeds!

Risk factors and consequences

- Case studies on nuclear disaster management: risk assessment, emergency response, preparedness plans, expert assessment

Needs!

Observation and joint development of innovative exercise solutions

- Knowledge exchange and network development