ATOMEX:

Collaboration Complexity in Nuclear Emergency Preparedness in the Maritime Arctic

Project period: 2023-2026



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.

OBJECTIVES

- Building shared knowledge on collaboration competences and development of exercises to deal with complexity within Arctic maritime nuclear emergency preparedness
- Research studies on shared understanding of risk evaluation for safety and complexity in the Arctic
- Visualization of risk evaluation for better safety in the Arctic
- Designing an algorithm to support decision-making and risk awareness of nuclear emergencies

Bode

Hamburg

Tromse

Tikkurila

Interdisciplinary partnership The Research Council of Norway Academic partners NORD Nord University (Norway) AMMATTIKORKEAKOULU versity of Applied Sc Laurea University of Applied Sciences (Finland) Fraunhofer Fraunhofer Center for Maritime Logistics and Services (Germany) Emergency preparedness and response authorities DSA Norwegian Radiation and Nuclear Safety Authority Joint Rescue Coordination Centre Norway

Shared preparedness knowledge (WP 1)

- Preparedness in the Arctic: case analyses
- Collaboration competences: exercises and knowledge exchange

Algorithm for risk awareness (WP 2)

- Designing algorithm on dependencies between Arctic risk factors and consequences
- Validating the algorithm with simulation tests

Arctic Risk Evaluation (WP 3)

- Managing risk evaluation for better safety in the Arctic
- Risk data visualisation and desk app prototype





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