

TRAFFIC VOLUMES AND RISKS

VESSEL TRAFFIC IN THE GULF OF FINLAND WAS APPROXIMATELY 340 MILLION TONS IN 2019.

The dense ship traffic in the area can increase the possibility of various accidents. The consequences of the possible accidents can be large causing for instance economic losses and environmental damages.

According to the analysis by Aalto University researchers in 2018, oil-related ships, including crude oil and oil product ships, are about 18% of all ship types in the Gulf of Finland. And as long as one oil tanker is involved in the accident, they could constitute large threat to the society and environment. And we estimated that the annual frequency of collisions involving at least one tanker for the whole area of the GoF yields 0.078.



SIMULATORS FOR IMPROVING CROSS-BORDER OIL SPILL RESPONSE IN EXTREME CONDITIONS

Partners

- KOTKA MARITIME RESEARCH CENTRE
- South-Eastern Finland University of Applied Sciences XAMK
- Aalto University
- University of Helsinki
- Finnish Environment Institute SYKE
- Admiral Makarov State University of Maritime and Inland Shipping
- State Marine Technical University

XAMK provides technical development for connectivity of maritime simulators and leads the implementing the simulator based approaches for developing joint cross-border practices and exercises.



EDUCATION FOCUSED ON FUTURE



The technical solution was implemented by EMSN- connection: European Maritime Simulator Network. Xamk had already an active connection to the EMSN Network. The Network enables the simulator connectivity between maritime simulator centres in Finland and other European countries.

TRAFFIC VOLUMES IN THE GULF OF FINLAND 340 MILLION TONS IN 2019 AND OIL TRAFFIC IN THE GULF OF FINLAND BRINGS HIGH RISKS OF OIL SPILLS.

After comparing the various connection possibilities of the simulators, the network connection of the European Maritime Simulators was chosen. This was used to develop the new generation simulator. After the comparisons the network connection of the European Maritime Simulators was chosen. Developing a new generation simulator training model.

- The developed simulator training model allows to practice safely even in extreme conditions.
- The simulator training allows also to practice effectively cooperation, information sharing and operational decision-making processes.
- The settings resemble actual real-life events and situations.

SIMREC REPORT VIDEO

Oil spill simulator exercise and stakeholder day 12 May 2022, **Kotka Maritime Simulator Center**. Visitors tried out the functions of the simulator. Oil rescue officials and stakeholders were able to test wide range of exercises close to the real-life accidents in extreme weather conditions.

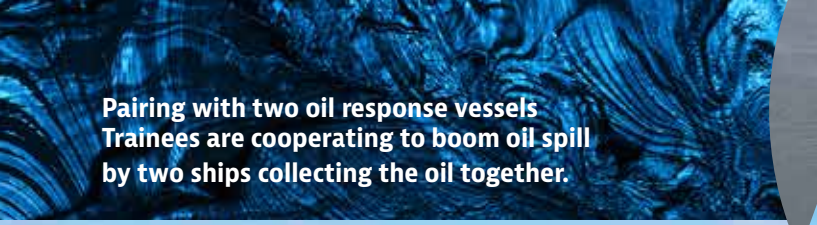


Oil spill response by smaller vessel in spring ice training imitating vessel driving in spring icy water.

Reconnaissance with 3 rescue vessels and cooperation with the command center. The aim of the exercise. Accurate situational picture of the leak, its location and size, based on the information provided by the ships.

Katso video - <https://vimeo.com/725165434/8f09894721>





Pairing with two oil response vessels
Trainees are cooperating to boom oil spill
by two ships collecting the oil together.



Booming around oil spill area Programme
trains operating of vessel in water around
the leak, demanding careful driving skills
to avoid danger of spreading oil away.



"Cross-training" - various
activities are held on 3
directions to introduce the
simulator to stakeholders.



*"Useful to mark
the oil spill by
coordinates to
navigational
systems"*

*"It is much cheaper to
collect oil at sea than later
on shore. therefore, speed
of action is important.
Fast decisions are
important"*

*"You offer a basic
package to which
everyone could connect
your own tools"*

*"These trainings would
be more effective in an
international level"*

*"Was a good
exercise,
quantitatively
illustrative"*

*"Need to create
a list of terms in
English. It helps
to communicate"*

COMMENTS SUGGESTIONS

DEVELOPING NEW GENERATION OF TRAINING SIMULATORS FOR BETTER OIL SPILL RESPONSE OPERATIONS

Joint training in a simulator environment helps building
a shared understanding on how to implement the oil
spill response and exercise the preparedness to deal with
accidents in a case of rapid decision-making situation.
Simulator program gives visual snapshot at sea.

SIMREC project has provided technical connection between
simulators situated in different places and improved the level
of oil spill preparedness, optimizing operations.

Training with simulators in challenging conditions is a cost-
effective way to practice.

In 2023 there will appear a new Simulator Centre in Xamk
Campus in Kotka City Port, Kantasatama. Center will provide
modern equipment to implement more tasks in simulations.



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