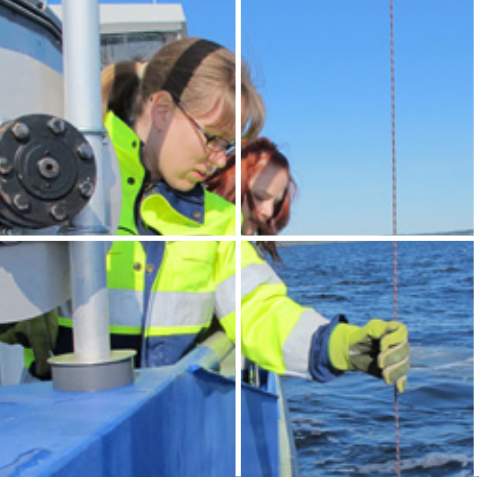
TOPCONS

TRANSBOUNDARY TOOLS FOR SPATIAL PLANNING AND CONSERVATION OF THE GULF OF FINLAND



enhancing harmony of human activities with marine nature values through cross-border cooperation

The Gulf of Finland with its sensitive marine ecosystem is a great challenge for the society when striving for the sustainable consolidation of human activities and the marine nature values.

TOPCONS project will develop innovative spatial tools for regional planning and utilization of the sea areas to improve the sustainable management and protection of the Gulf of Finland. Marine research is an essential part of merging human activities and nature values in a sustainable way.

TOPCONS project collects available environmental data, identifies benthic marine landscapes using data on marine geology and biology, studies the distribution of marine benthic diversity and investigates the ecosystem sensitivity and its implications for management and marine spatial planning. These have an essential role in enhancing the management and conservation of the Gulf of Finland.

data collection and harmonization

Available datasets on biology, geology and hydrography of the Gulf of Finland, and completely new information to characterize the geological and biological characteristics of the sea area will be collected. The geologists and biologists in Finland and in Russia need to speak the same language thus, it is necessary to harmonize data, methodologies and terminology used in marine spatial planning.

development of local scale benthic landscapes combining geological and biological diversity

To describe the elements defining the benthic landscape in the Eastern Gulf of Finland, relevant geophysical, hydrographical and topographical parameters need to be identified. During the project maps of the geophysical environment of the seafloor which relate to the landscape units and biological habitats will be produced. Also important habitats for fish reproduction will be mapped. The produced maps are referred to as marine benthic landscape maps.

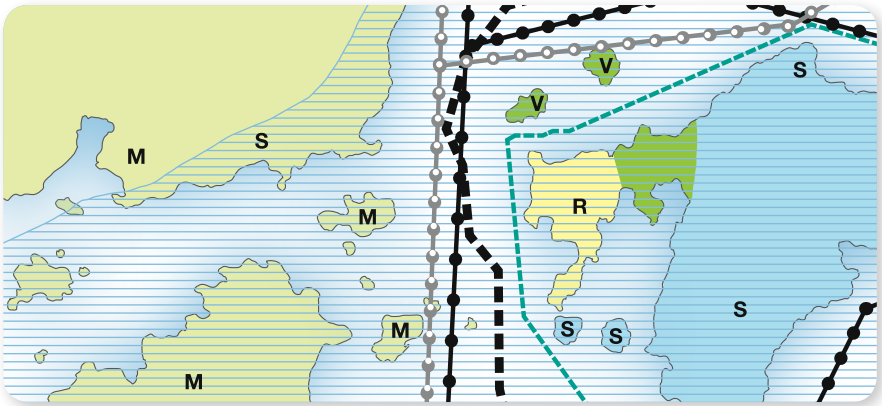
As a new approach to the marine spatial planning the correlation between geodiversity and biodiversity will be investigated. Ability of

the marine benthic landscape maps to represent biodiversity for management and decision making will be improved. As the human activities in the Gulf of Finland are constantly increasing it has been considered important to discover biodiversity hotspots and important fish reproduction areas to facilitate marine spatial planning and the management of marine resources in the near future.

ecosystem sensitivity – implications for management and marine spatial planning

Unique marine spatial planning tool that integrates the ecological values with human impacts will be developed in the project. Essential part of the tool consists of analyzed data on the views and values of different stakeholder groups in GIS (Geographical Information System) map layers, along with layers consisting of the ecological values and human activities. The sensitivity of ecosystem values to human pressure will be evaluated and the first preliminary version of the planning tool utilizing the sensitivity of different landscape units and habitats will be demonstrated.

Finally, the prototype of the planning tool will be tested for large scale marine spatial planning in protection and management of the nature of the Eastern Gulf of Finland.



Key

M	Agriculture and forestry
S	Protected area
V	Recreational area
R	Tourism and leisure

Kotka Maritime
Research Centre

University of Helsinki

Finnish Environment Institute

Geological Survey of Finland

Metsähallitus

Finnish Game and Fisheries Research Institute

A.P. Karpinsky Russian
Geological Research Institute

St. Petersburg Research Centre of
the Russian Academy of Sciences

Russian State
Hydrometeorological University

ENPI

This Project is co-funded by the European Union, the Russian Federation and the Republic of Finland.

Design: Non-Stop Studiot Oy, Kotka. Printed: Painokotka Oy, Kotka.

For more information:

www.merikotka.fi/topcons