Map production in Plan4Blue

Meeli Roose, University of Turku, 4.6.2019

European Union
European Regional Development Fund

KESKKONNAINVESTEERINGUTE KESKUS

PLAN4BLUE
MARITIME SPATIAL PLANNING FOR SUSTAINABLE BLUE ECONOMIES

Interreg
Central Baltic

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Baltic Environmental Forum
BEF
ESTONIA

KEY FINDINGS ON USING MAPS IN MSP

1. **Endless possibilities**: collaboration with guidance group essential
2. **Current status maps** are useful in the beginning of the planning process
3. Cartographic expertise required : need to **carefully plan useful maps**
4. **Socio-economic patterns** challenging to map
5. Maps are **necessary in stakeholder participation**
6. **Metada and documentation essentail** for using maps

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1. ENDLESS POSSIBILITIES: COLLABORATION WITH GUIDANCE GROUP ESSENTIAL

Spatial data officers need to collaborate with all MSP actors throughout the process to formulate together the goals and methodology for the spatial planning process.

Plan4Blue expert group from regional councils and the Centre for Maritime Studies advising the project team to build sectoral scenario maps for 2050.

2. CURRENT STATUS MAPS ARE USEFUL AT THE BEGINNING OF THE PLANNING

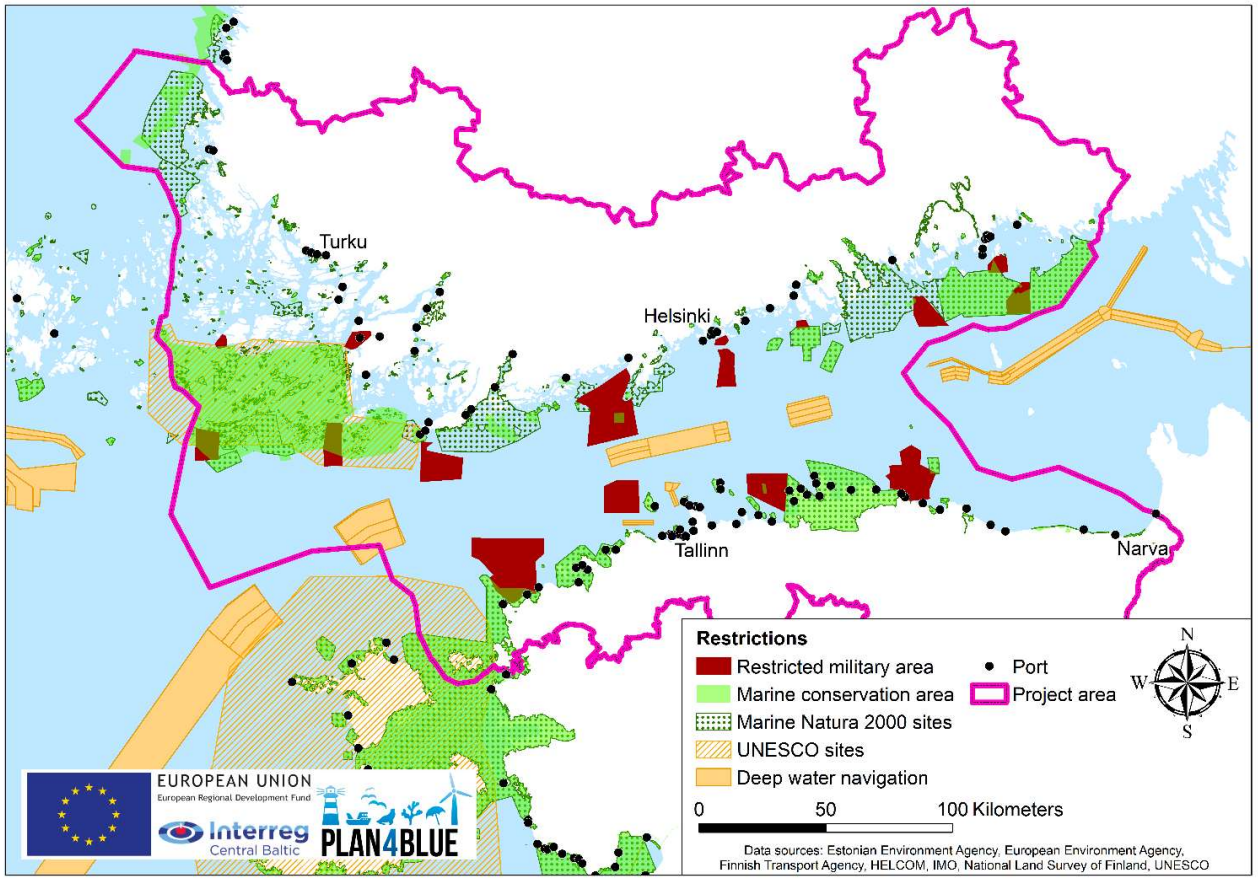
Background maps of current conditions of the Gulf of Finland (Plan4Blue example):

- project area
- basemap
- restricted areas
- overlapping restrictions
- marine traffic
- population and human pressure
- blue business
- nature values
- environmental risk profile
- coastal municipalities

PROVIDER TUOTTAJA ANDMEESITAJA	SPATIAL COVERAGE ALUEELLINEN KATTAVUUS RUUMILINE ULATUS
IMO - International Maritime Organization	International
HELCOM - Helsinki Commission	International
EMODnet - The European Marine Observation and Data Network	International
European Environment Agency	International
Ramsar	International
Bureau van Dijk	International
Finnish Transport Agency	Finland
National Land Survey of Finland	Finland
Statistics Finland	Finland
Finnish Environment Institute SYKE	Finland
Geological Survey of Finland	Finland
Finnish Wind Power Association and Etha Wind Oy	Finland
Estonian Land Board	Estonia
Estonian Maritime Administration	Estonia
Estonian Environment Agency	Estonia
Statistics Estonia	Estonia
Estonian Environment Agency	Estonia
Projects	International / Estonia Finland / regional

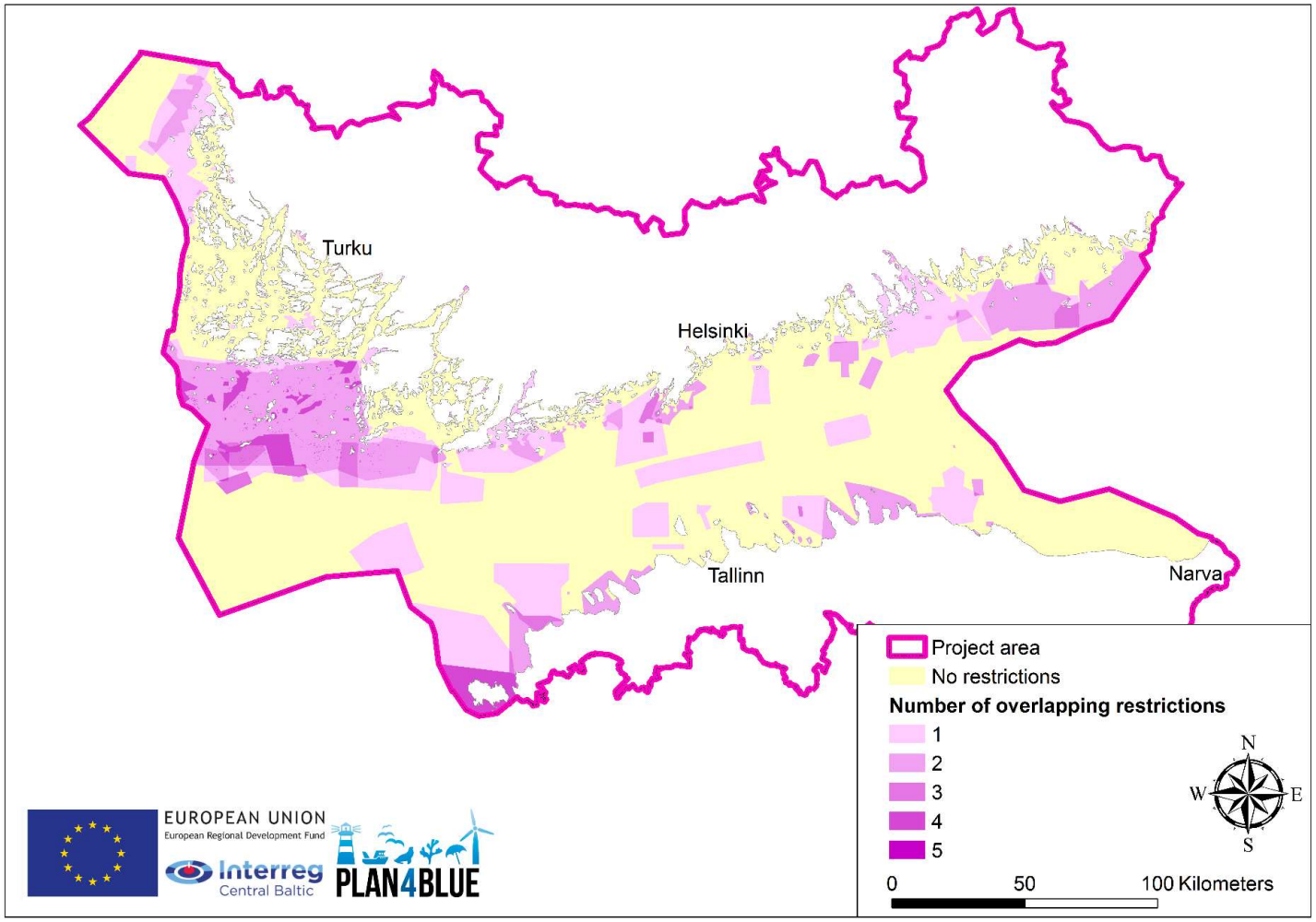
Primary data providers utilised for Plan4Blue background maps.

EXAMPLE: RESTRICTIONS MAP



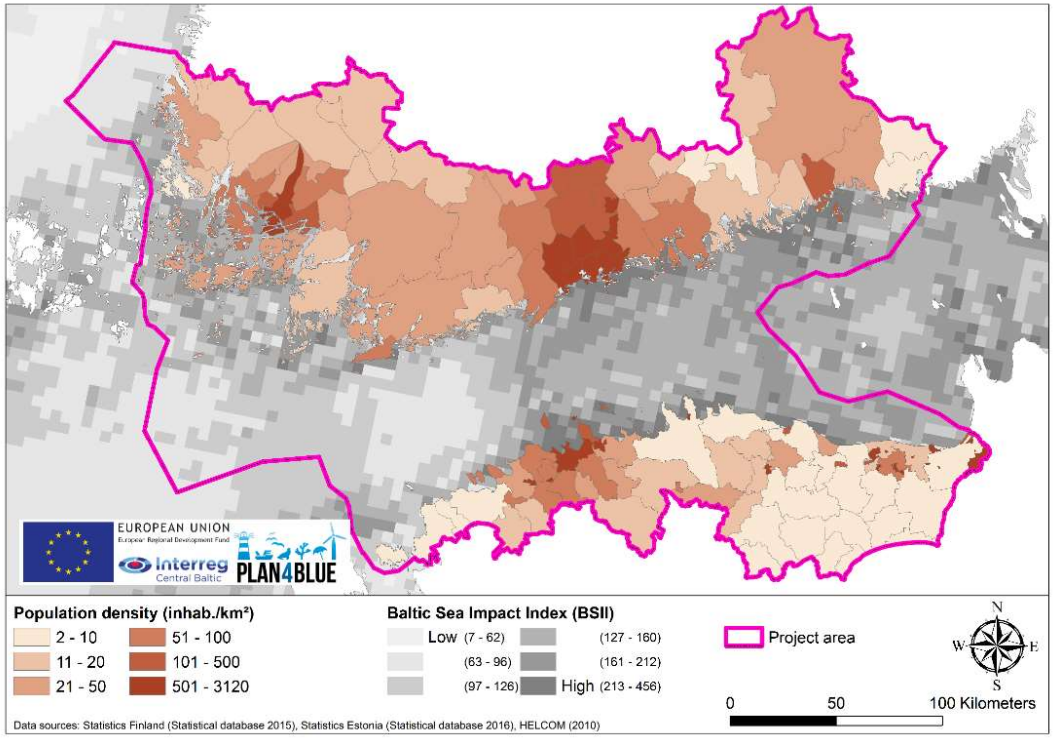
Military areas, deep water navigation areas, national nature conservation areas, Natura 2000 sites and UNESCO world heritage sites (Data: Estonian Environment Agency, European Environment Agency, Finnish Transport Agency, HELCOM, IMO, National Land Survey of Finland, UNESCO).

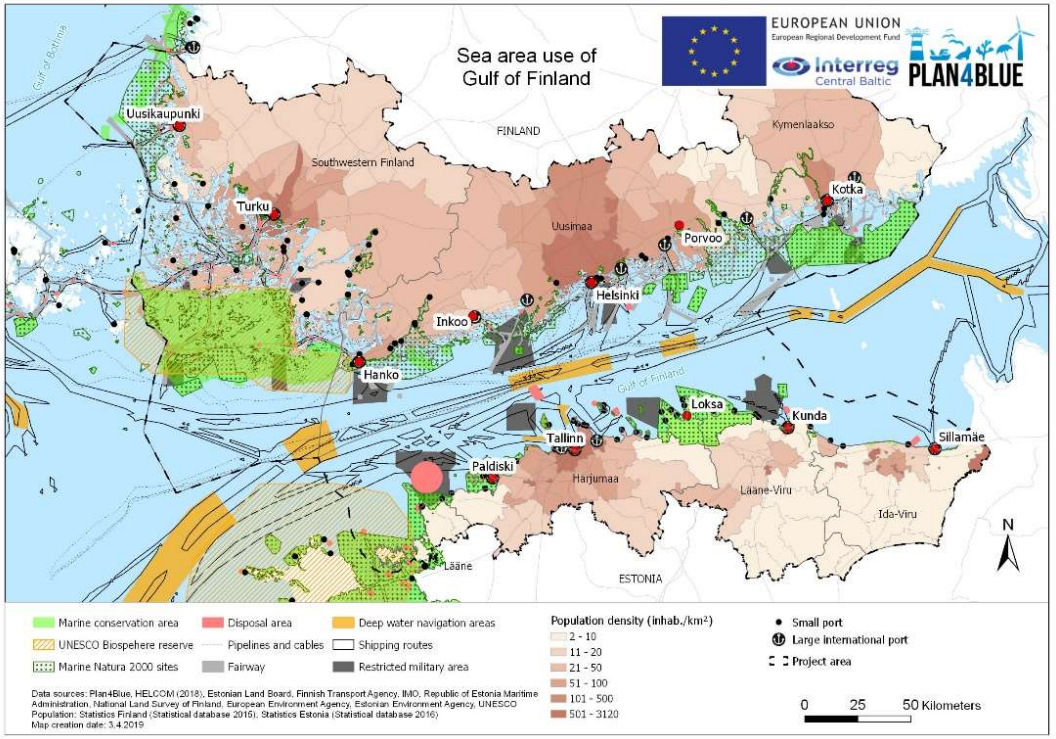
EXAMPLE: RESTRICTIONS, OVERLAY ANALYSIS



3. CARTOGRAPHIC EXPERTISE REQUIRED : NEED TO CAREFULLY PLAN USEFUL MAPS

Through careful visualisation, it is possible to communicate spatial information objectively and clearly, avoid misunderstandings and enable justified evaluation of the data and the MSP results.

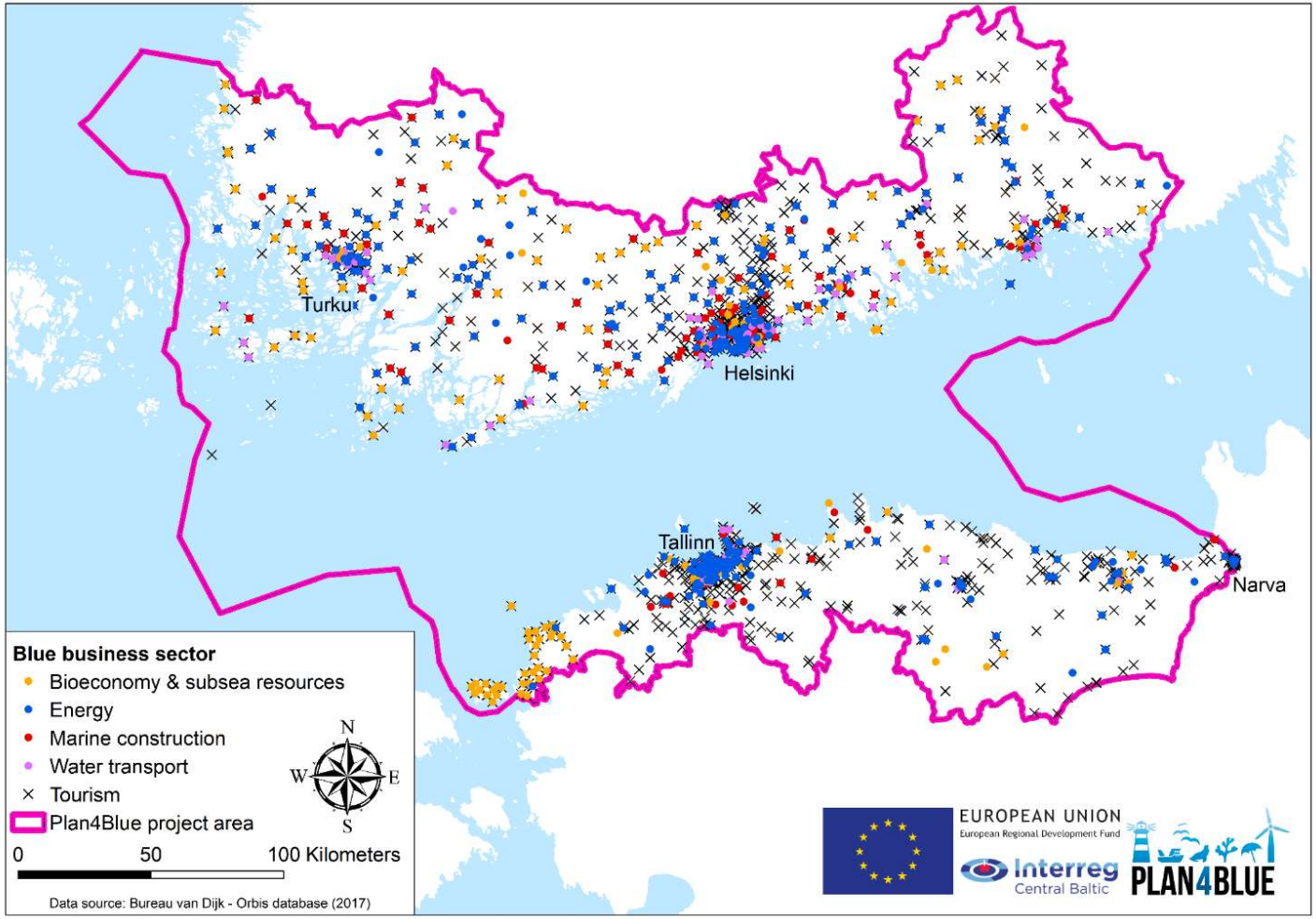




4. SOCIO-ECONOMIC PATTERNS CHALLENGING TO MAP

Socio-economic data are often underrepresented or exist in non-spatial formats.

Thus, this information requires special attention in the future.

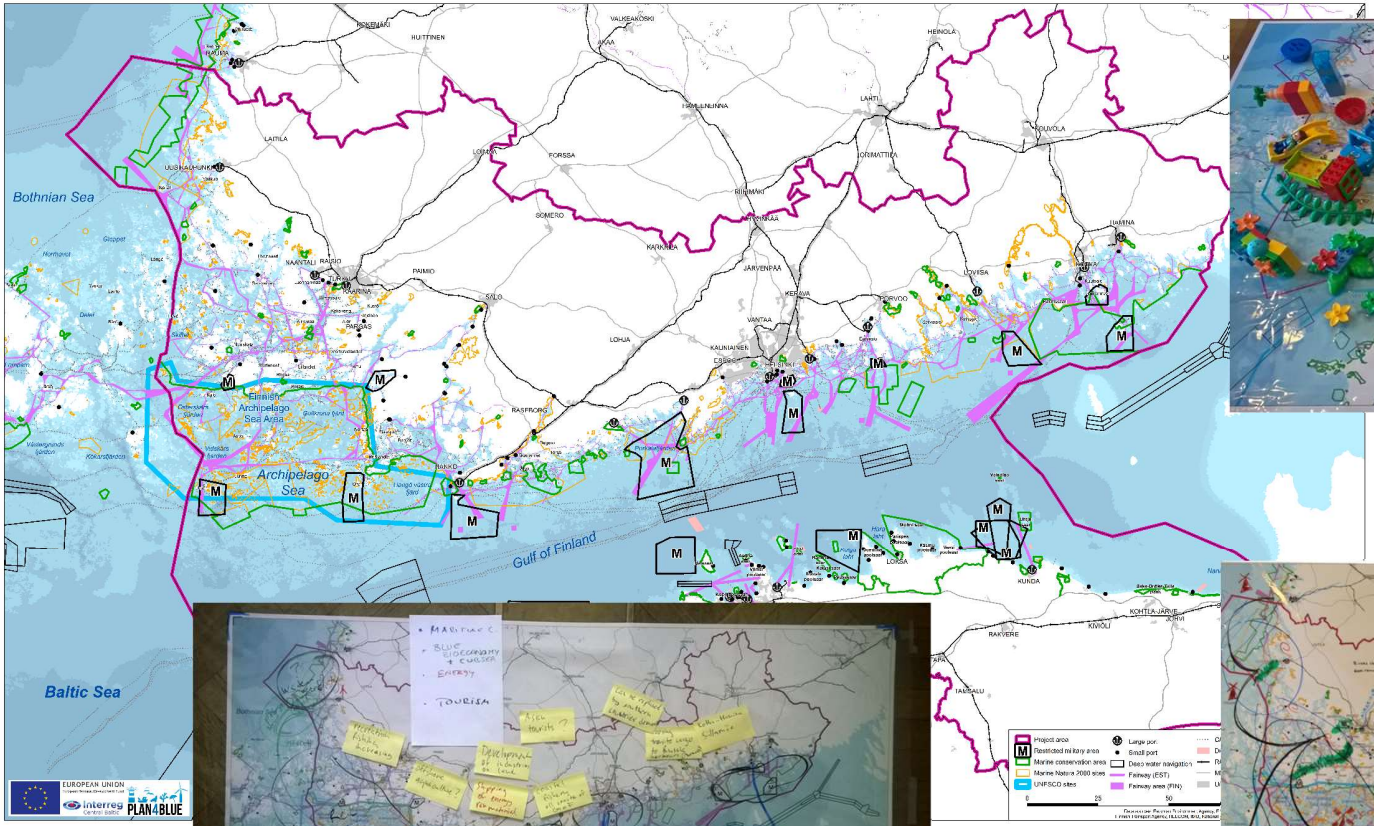


5. MAPS ARE NECESSARY IN STAKEHOLDER PARTICIPATION

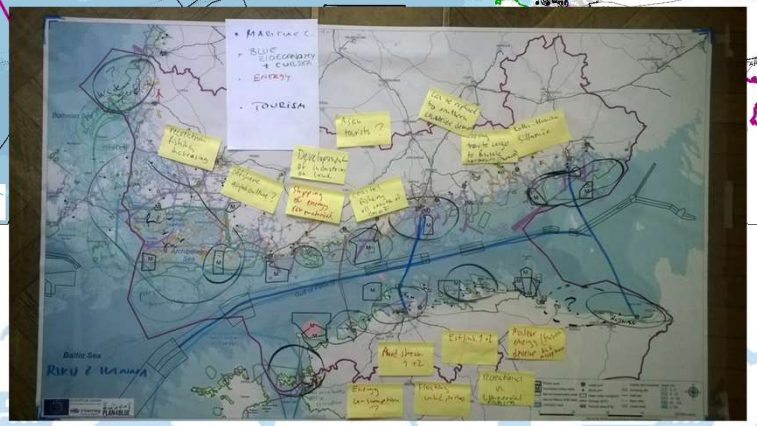
Stakeholder involvement is important in MSP. Well designed, simple and informative map printouts are necessary in the communication between different stakeholders

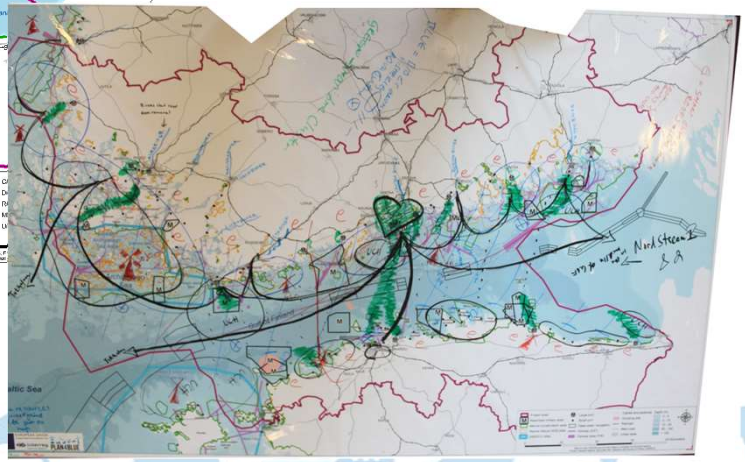
Plan4Blue workshop session with stakeholder-participation, March 13th, 2019.

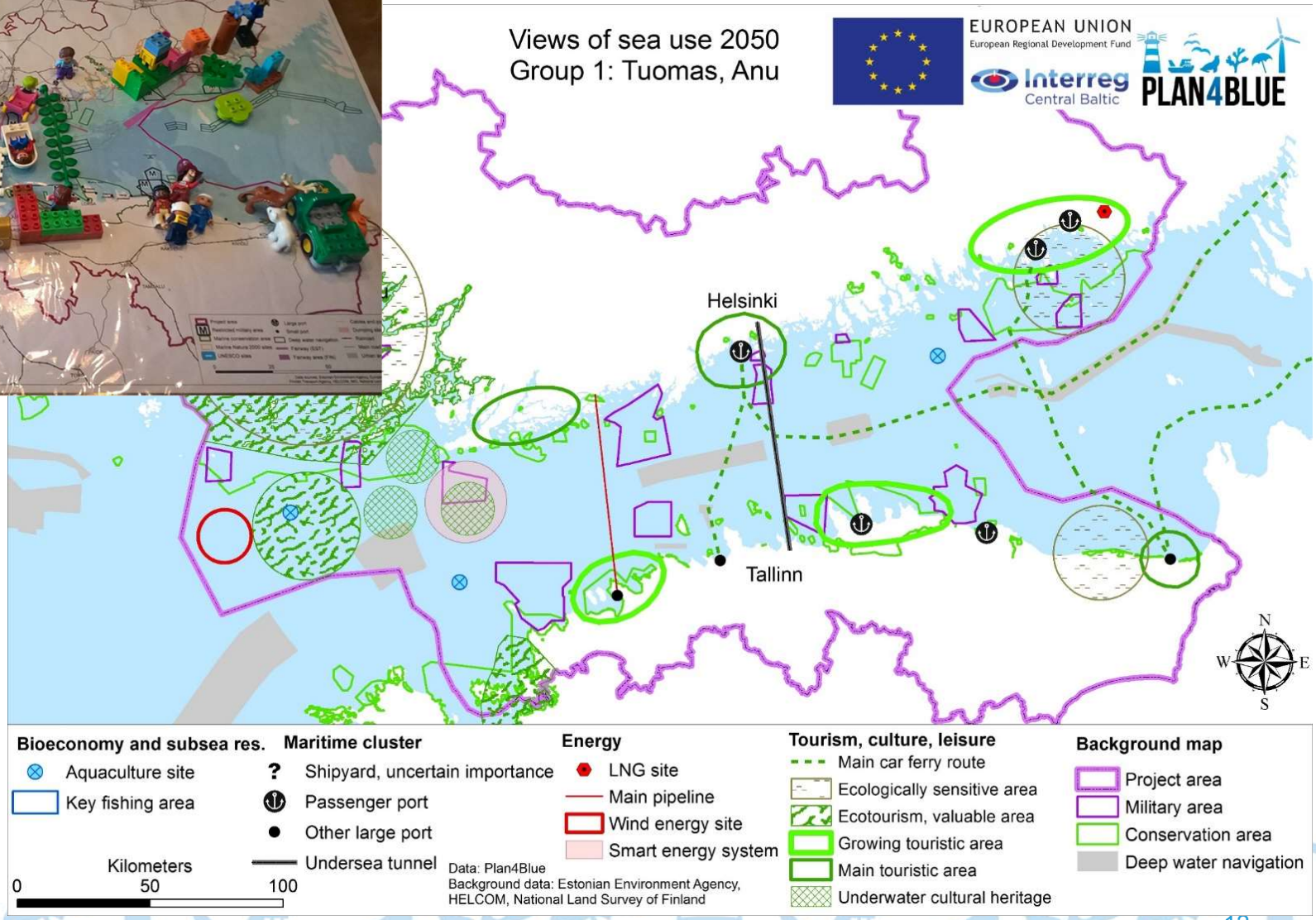
EXAMPLE: PRINTOUT FOR STAKEHOLDER BOARD GAME



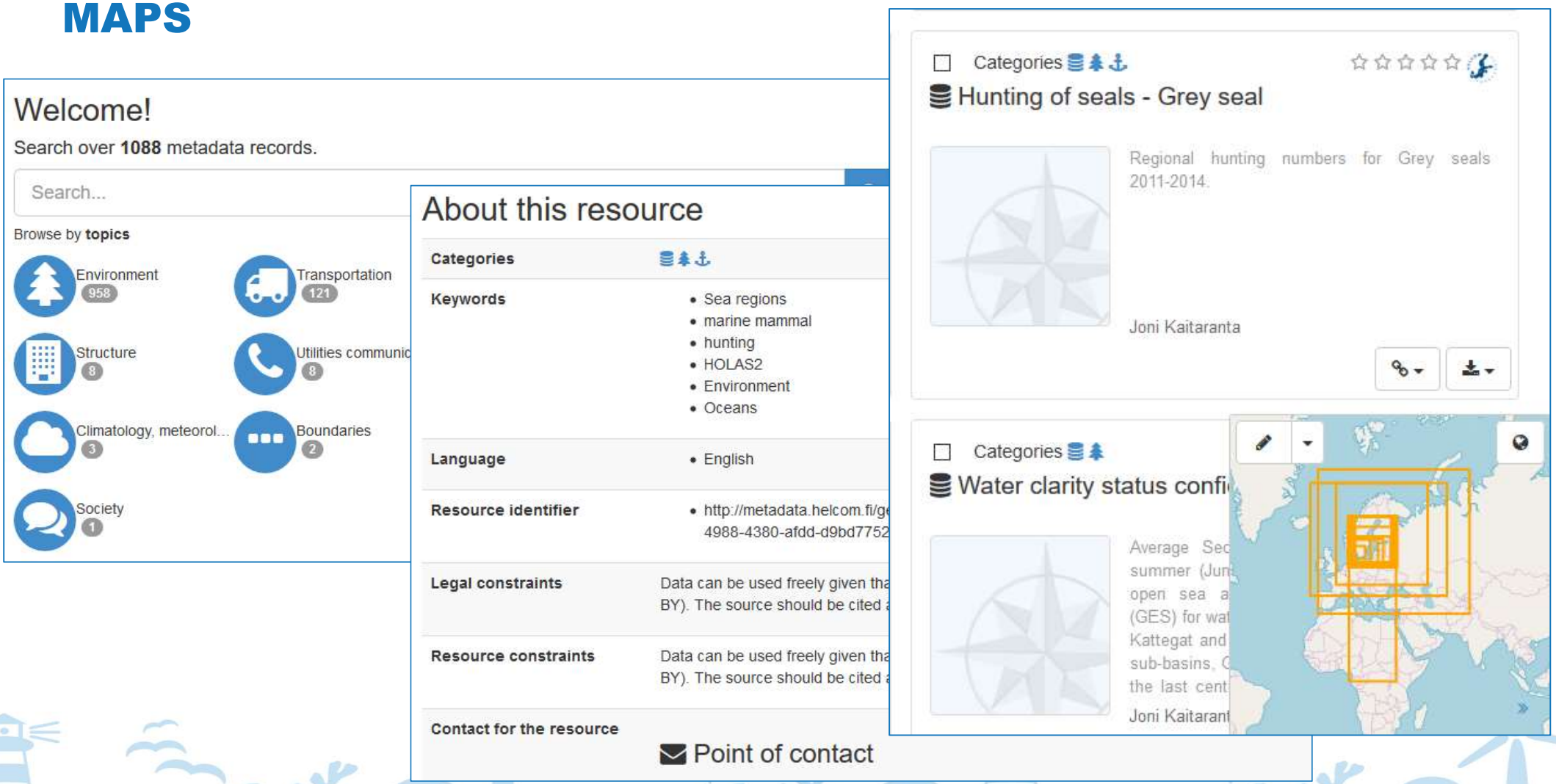
Data collection workshop for scenario building 15.-16.6.2017, Helsinki.






Views of sea use 2050
Group 1: Tuomas, Anu
EUROPEAN UNION
European Regional Development Fund
Interreg
Central Baltic
PLAN4BLUE
Helsinki
Tallinn
N
W
E
S
Bioeconomy and subsea res.
Aquaculture site
Key fishing area
Maritime cluster
Shipyard, uncertain importance
Passenger port
Other large port
Undersea tunnel
Energy
LNG site
Main pipeline
Wind energy site
Smart energy system
Tourism, culture, leisure
Main car ferry route
Ecologically sensitive area
Ecotourism, valuable area
Growing touristic area
Main touristic area
Underwater cultural heritage
Background map
Project area
Military area
Conservation area
Deep water navigation
Kilometers
0
50
100
Data: Plan4Blue
Background data: Estonian Environment Agency,
HELCOM, National Land Survey of Finland

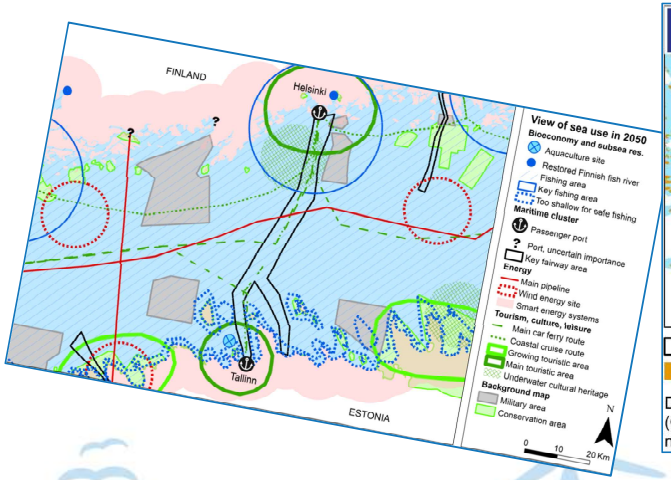
6. METADA AND DOCUMENTATION ESSENTIAL FOR USING MAPS

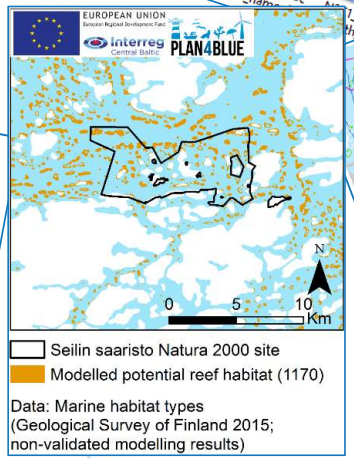


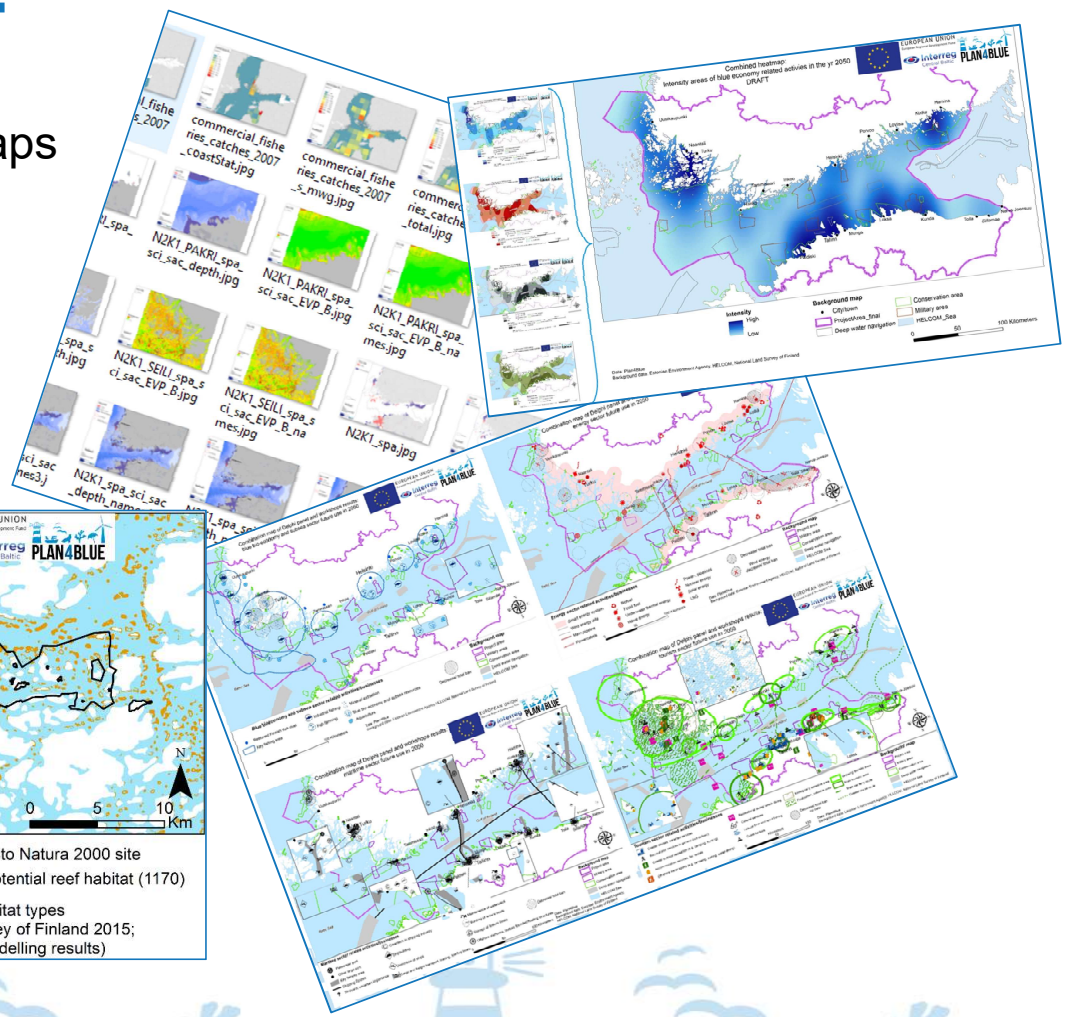
MAPS PRESENT AT EVERY STAGE IN MSP - MAKING MAPS IN THE PLAN4BLUE PROJECT

- Background / current status maps: 8 maps
- Future scenario maps: 16 maps
- Case analysis maps: 36 maps
- Workshop printouts:

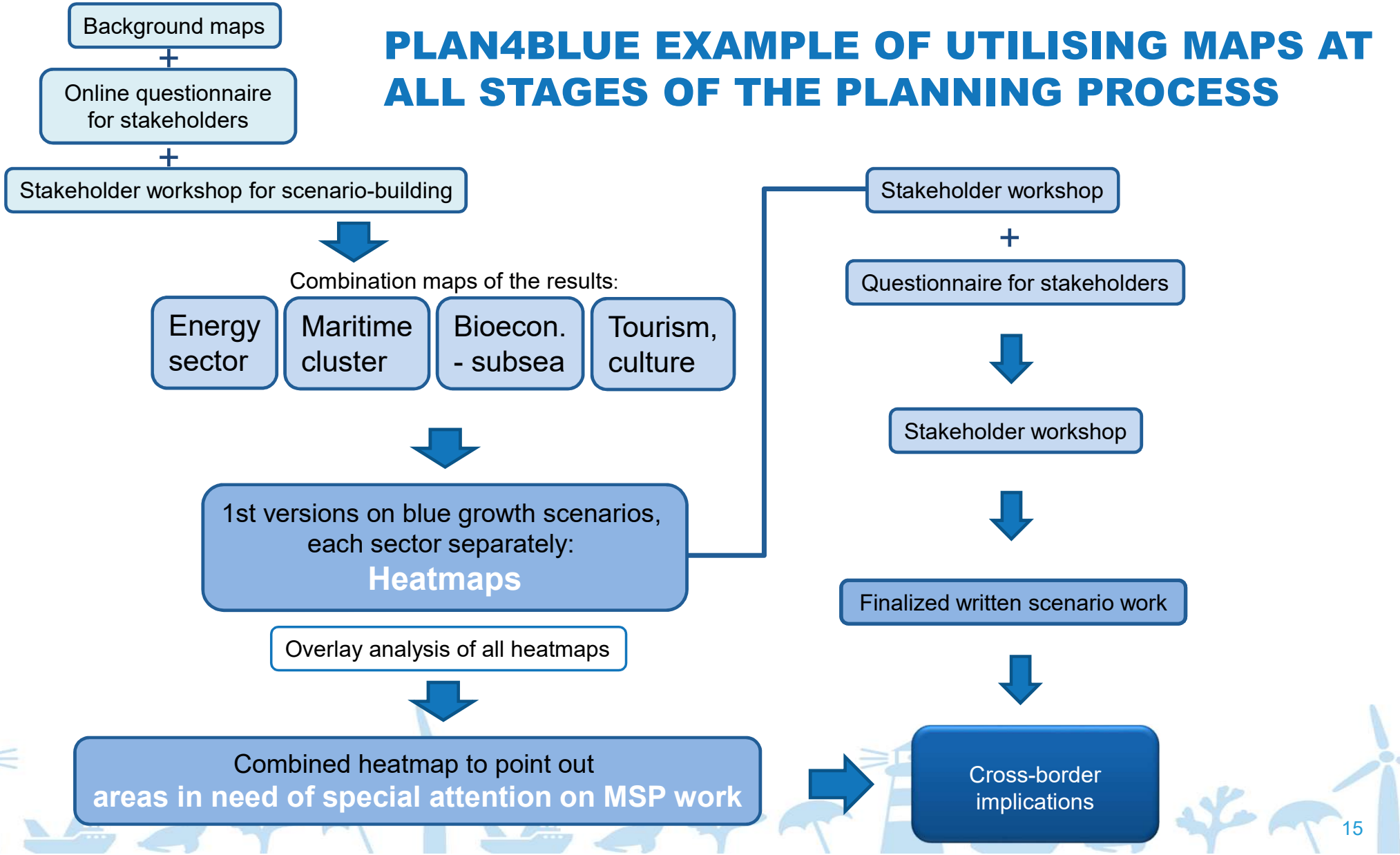
  boardgame canvas map, environmental pressures visualisation, planning options



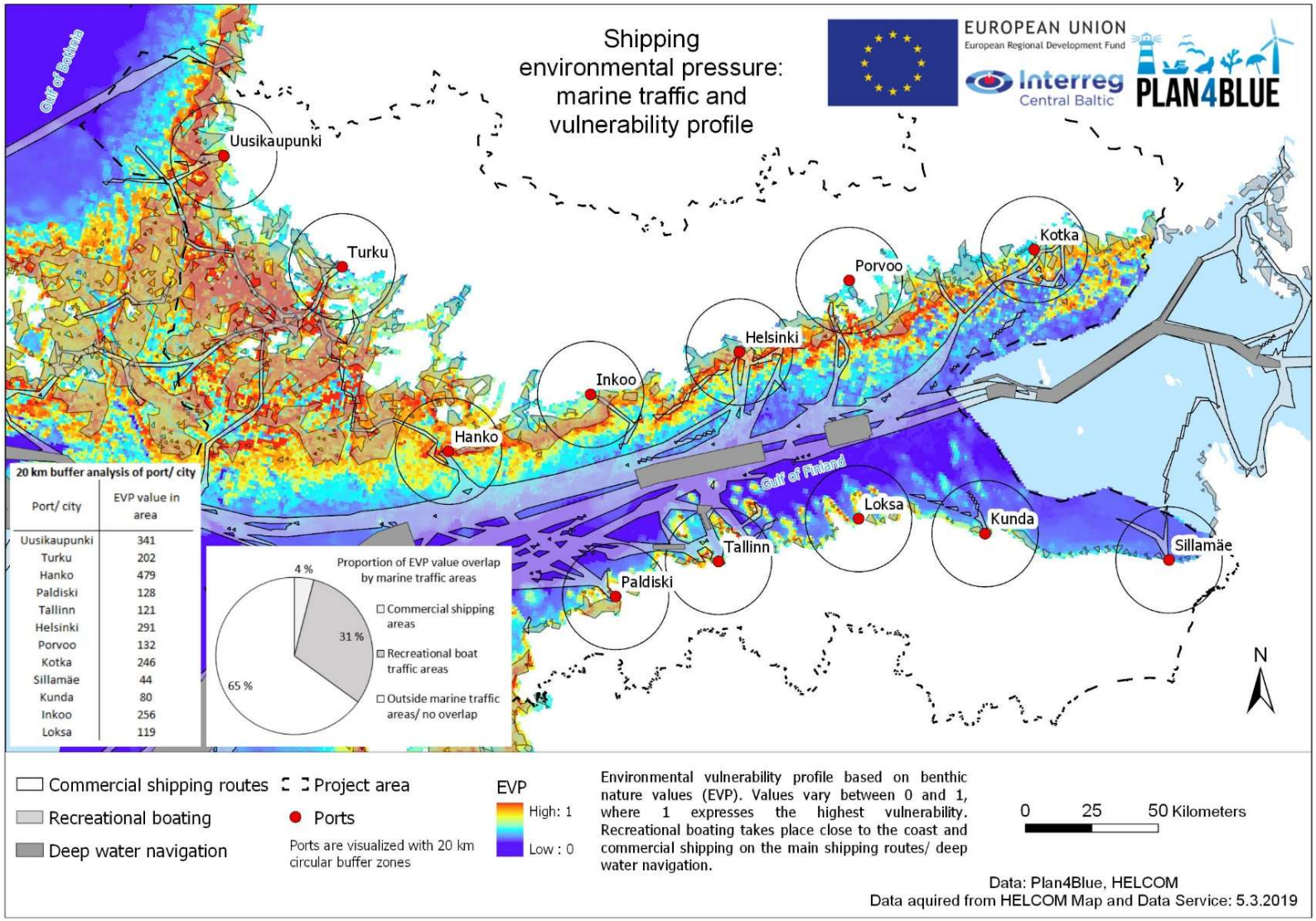




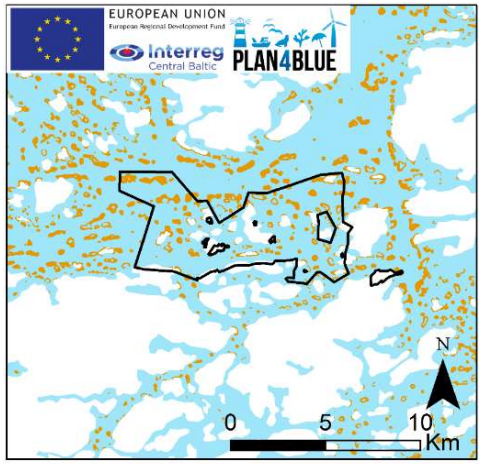
PLAN4BLUE EXAMPLE OF UTILISING MAPS AT ALL STAGES OF THE PLANNING PROCESS



MAPS OF ANALYSIS RESULTS, EXAMPLE 1



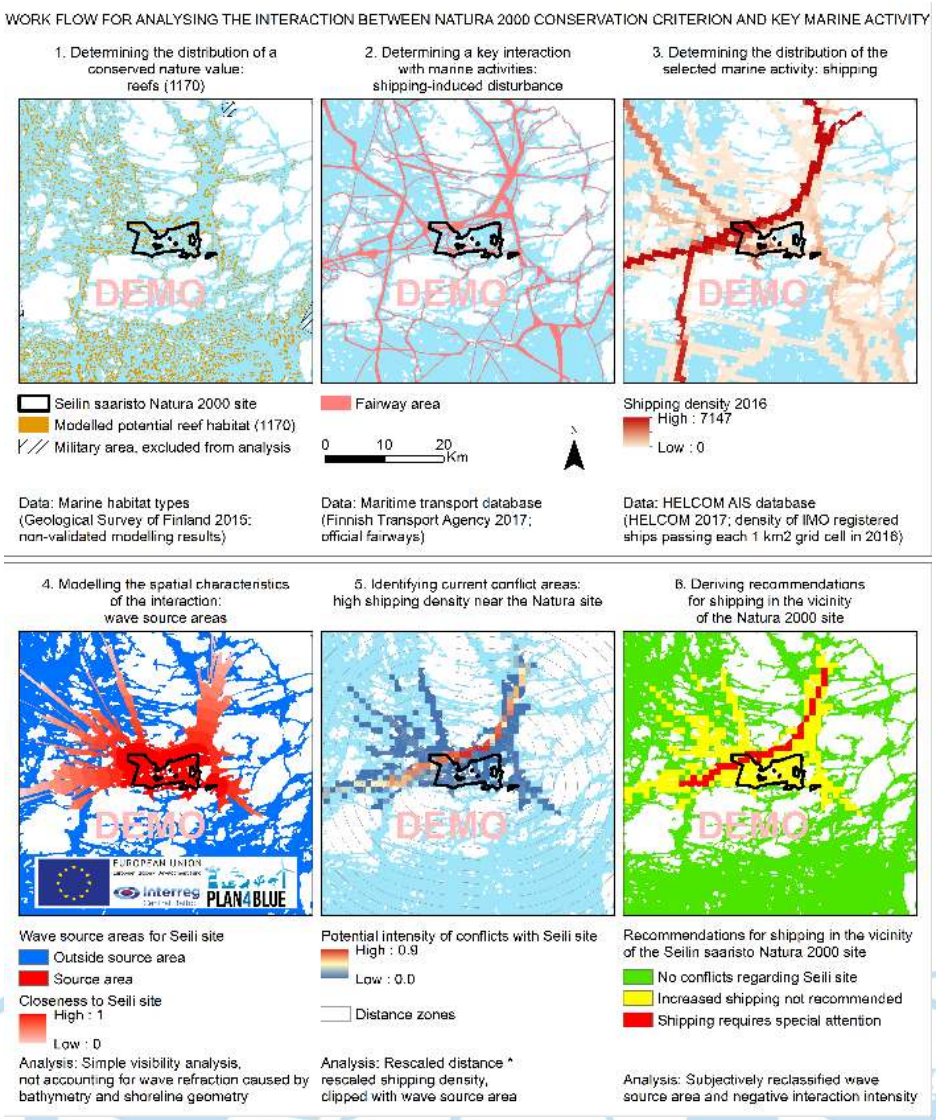
MAPS OF ANALYSIS RESULTS, EXAMPLE 2



Seilin saaristo Natura 2000 site

Modelled potential reef habitat (1170)

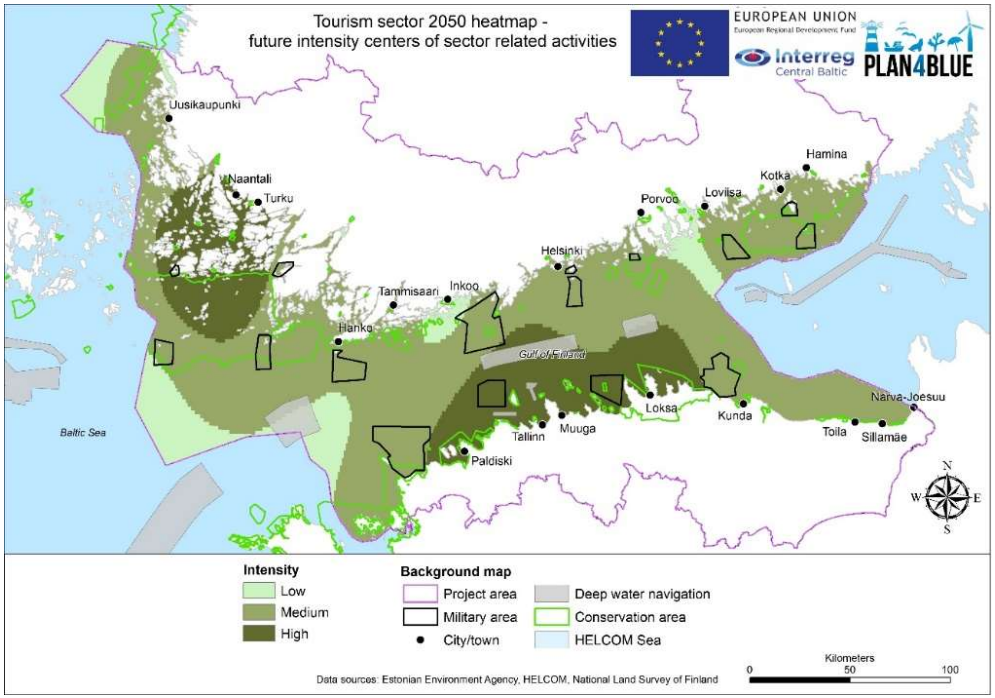
Data: Marine habitat types
(Geological Survey of Finland 2015;
non-validated modelling results)



PLAN4BLUE MAP SHOWCASE

Map results as reports:

- Basic and thematic maps of background information to support socioeconomic analysis (Nylén & Tolvanen 2017)
- HARAVA-questionnaire and participatory workshop maps (Roose et al. 2017)
- Combination and scenario maps derived from participatory data collection: first versions of blue growth scenarios for 2050 (Roose et al. 2017) –
- Blue growth visualisation maps (Roose et al. 2017)
- First MSP option maps (Suominen et al. 2018)
- Case analysis maps: examples of overlay, neighbourhood, wave source (visibility) analysis (Haanpää et al. 2019, Lusenius et al. 2019)



PLAN4BLUE REPORTS ON MAPS AND SPATIAL ANALYSES

- Haanpää, S., Lees, L., Roose, M., Vuorsalo, A. (2019). Maritime transport and Maritime Spatial Planning. Plan4Blue report.
- Lusenius, H., Nylén, T., Kuris, M., Karvinen, V. & Vikström, S. (2019). Marine Natura 2000 areas and Maritime Spatial Planning. Plan4Blue Draft report.
- Nylén, T., Tolvanen, H. 2017. Collection of contemporary Gulf of Finland maps for scenario building - For use in Delphi panel and scenario workshop. Plan4Blue report D.T3.5.1.
- Roose, M., Nylén, T., Uusitalo, H., Tolvanen H. 2017. Maps visualizing first versions of blue growth scenarios. Plan4Blue report D.T3.6.1.
- Suominen, T., Nylén, T., Tolvanen, H. 2018. First versions of case options maps - Workflow for optimizing sea use with priority maps. Plan4Blue report D.T3.7.1.
- Tolvanen, H., Erkkilä-Välimäki, A., Nylén, T. From silent knowledge to spatial information – mapping blue growth scenarios for maritime spatial planning. Unpublished manuscript.

Thank you!

MORE INFORMATION

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