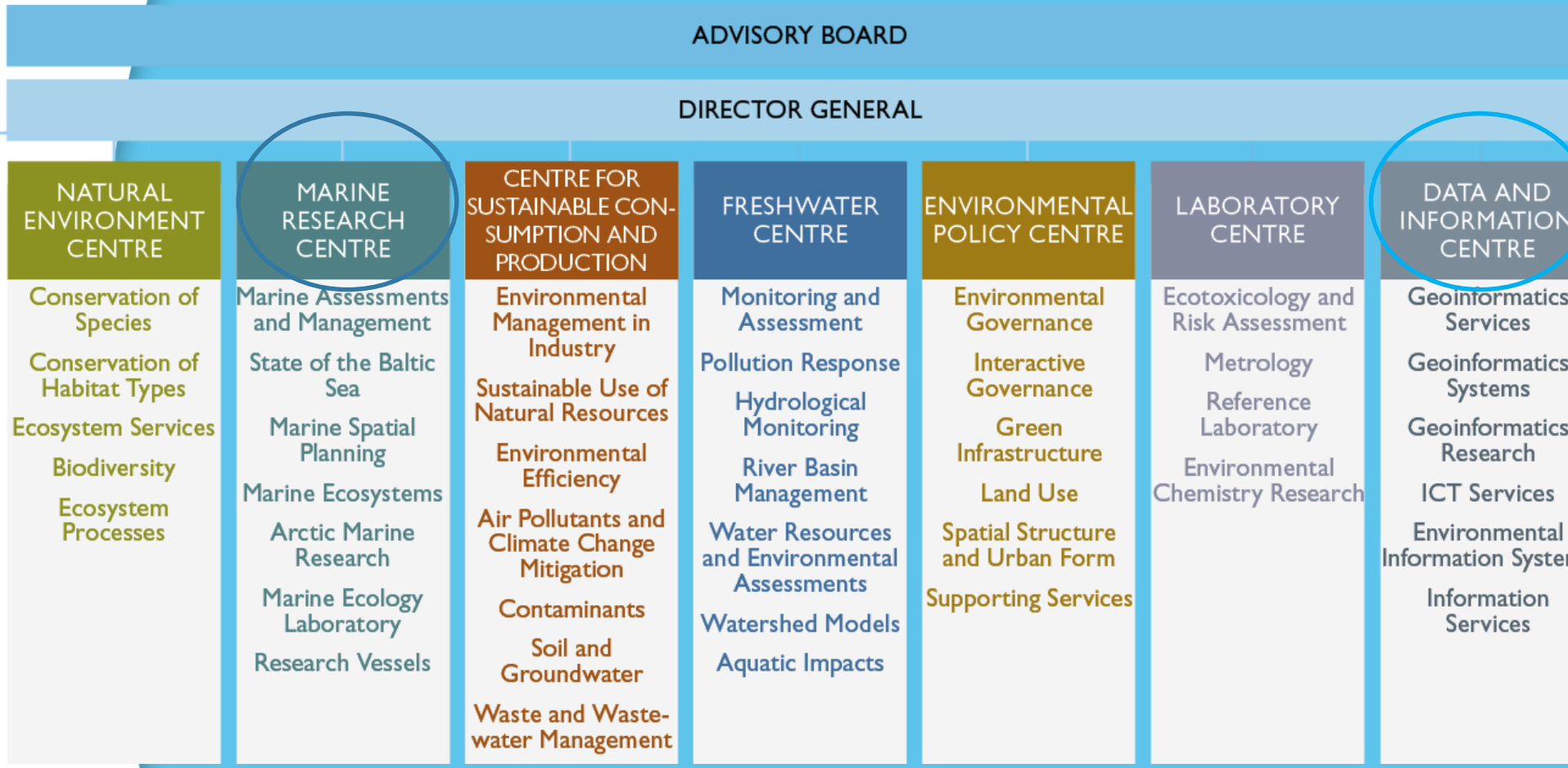
Finnish Environment Institute SYKE

Seppo Kaitala, Jani Ruohola, Lena Hallin-Pihlatie, Riikka Repo, Jukka Pajala

” We provide information, skills and services crucial to achieving sustainable development in Finland and globally. ”

SYKE

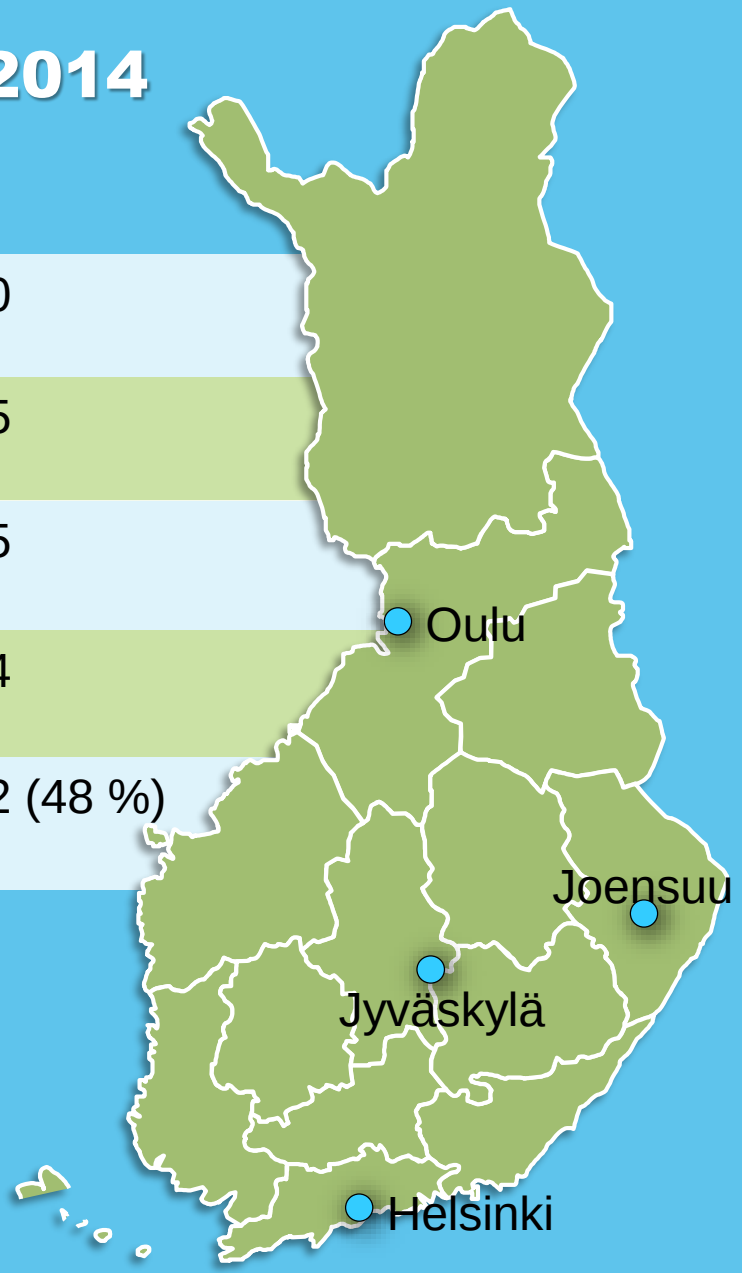
Organisation of SYKE



SYKE

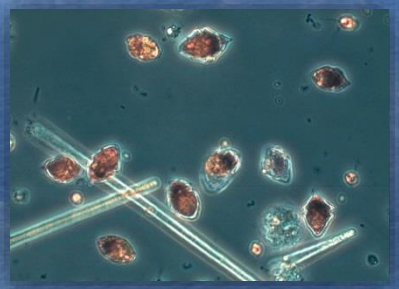
Personnel and funding 2014

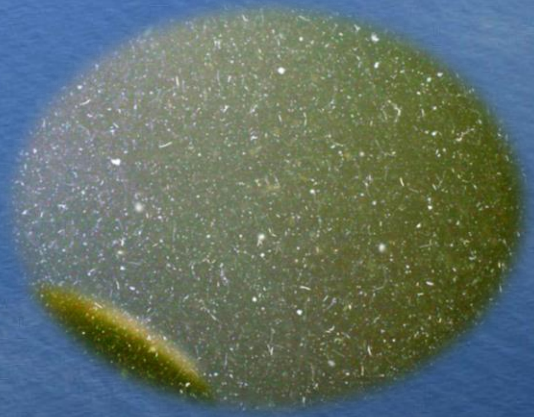
Personnel	660
Number of person years	635
Total funding (M€)	60,5
Direct budgetary funding (M€)	31,4
External funding (M€)	29,2 (48 %)



SYKE

Alg@line FerryBox – a system for operative monitoring of the Baltic Sea

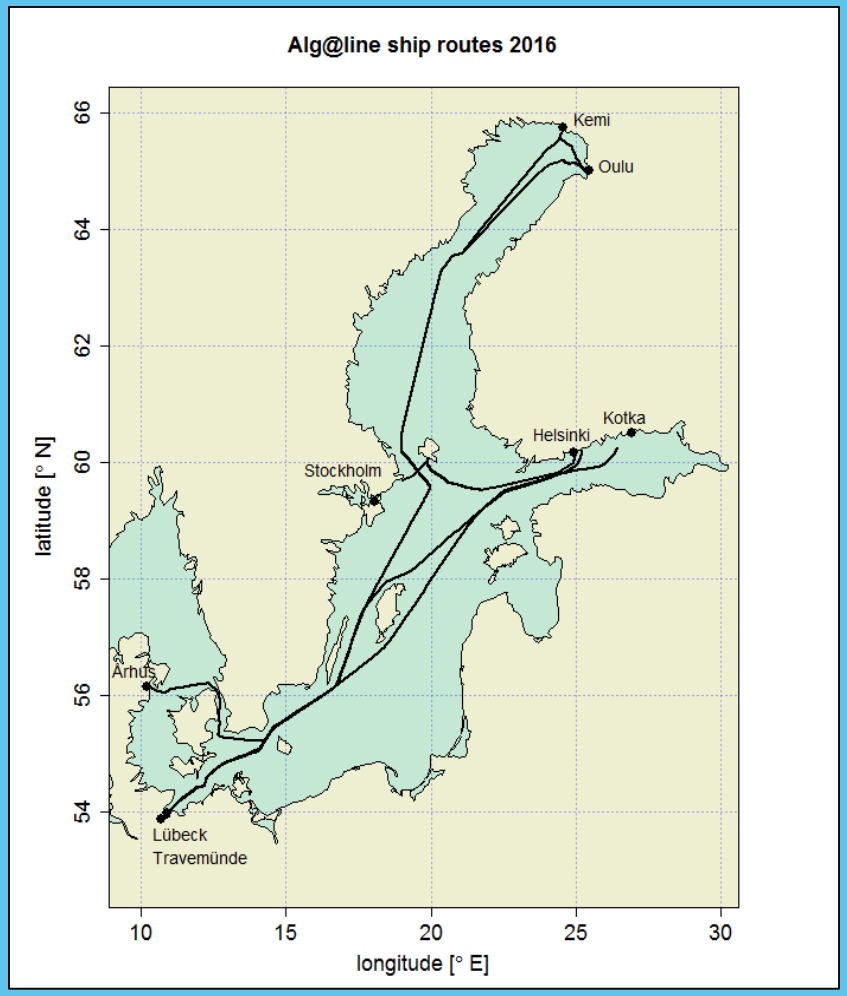




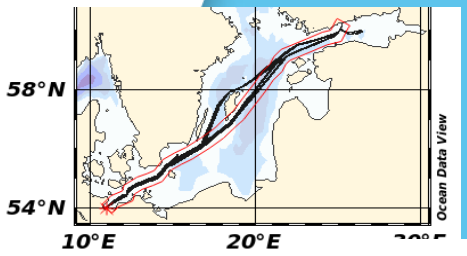
SYKE
Marine Research Centre

Ferries and routes

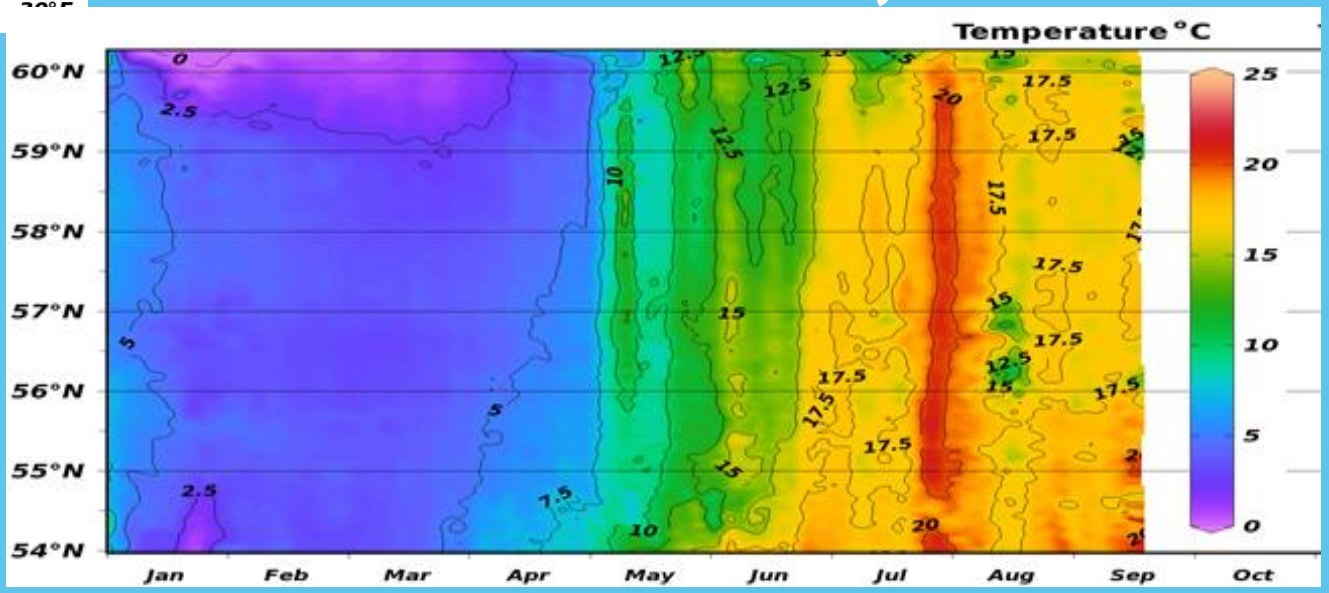
- M/S Finnmaid
  - Helsinki–Travemünde
- M/S Silja Serenade
  - Helsinki–Stockholm
- M/S TransPaper*
  - Oulu–Kemi–Lübeck

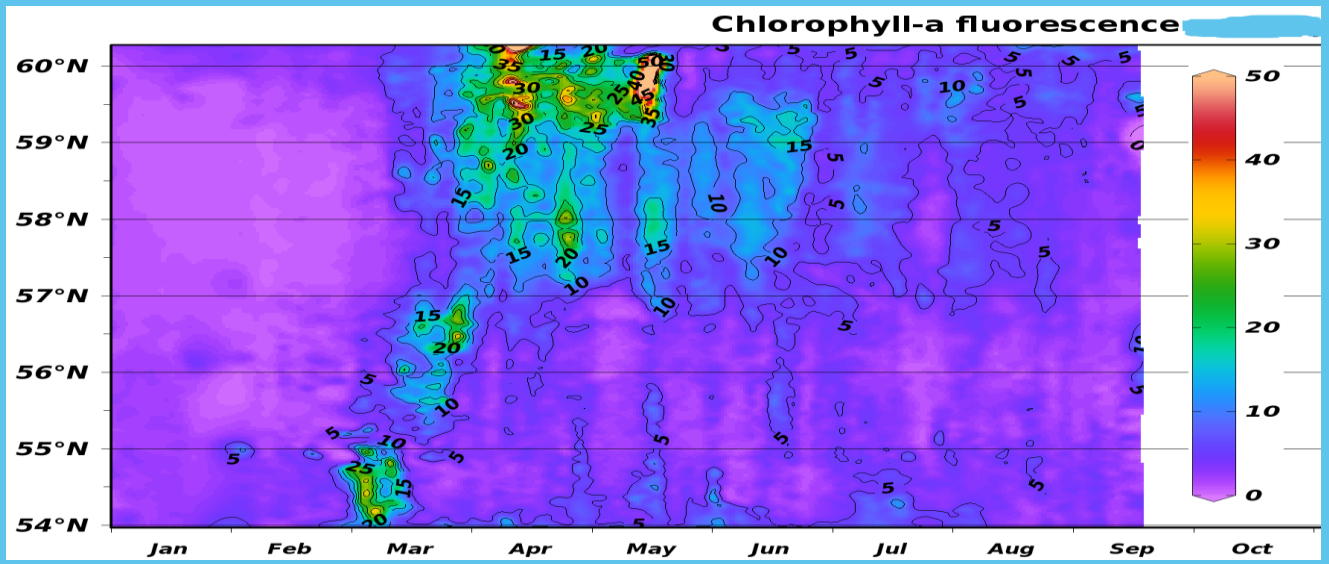


*co-operation with Swedish Meteorological and Hydrological Institute



Finnmaid trajectory records with 200m resolution, 2016

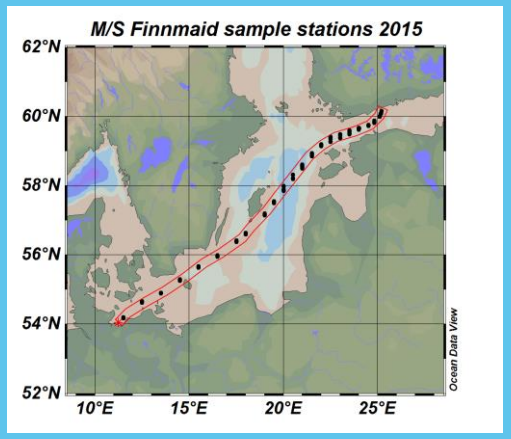


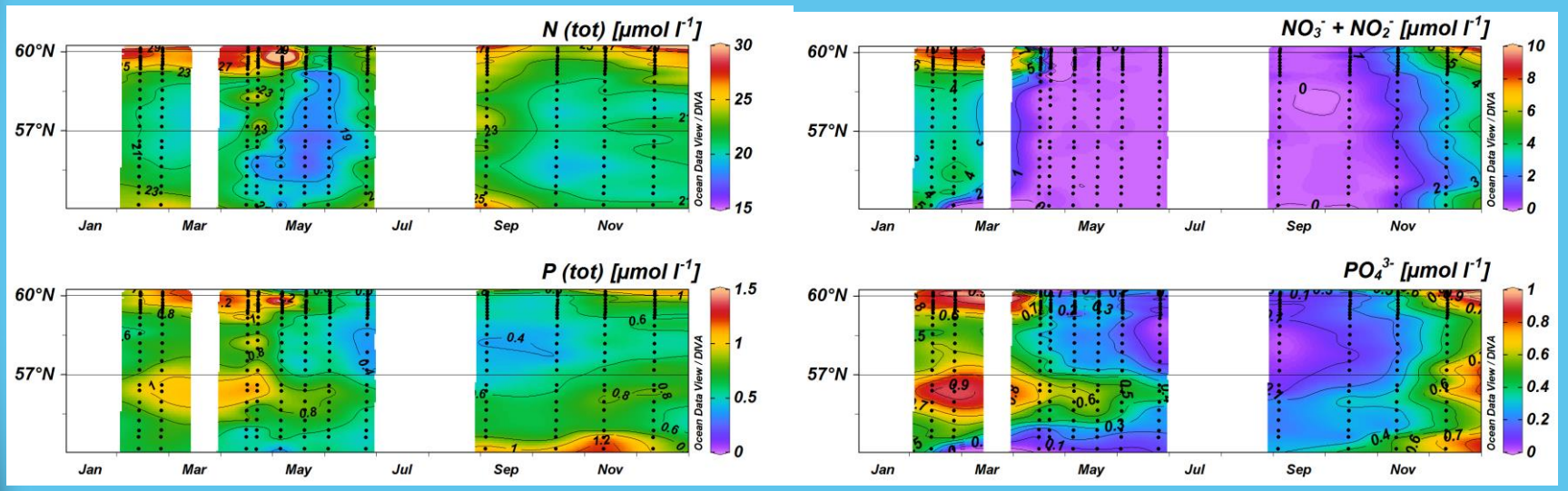


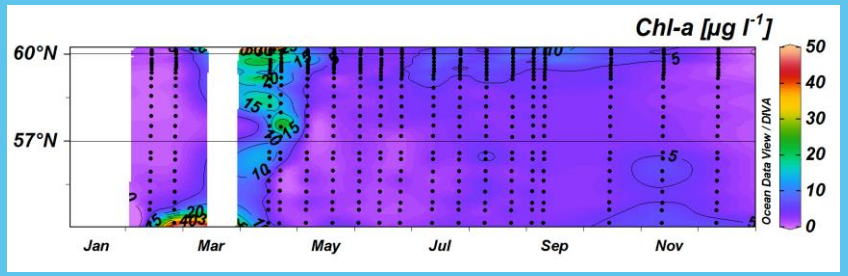
SYKE

Example data

- M/S Finnmaid
- Water samples from 2015







End products

- Basic research, long time series
- Data for international marine data infrastructures (e.g. EMODnet)
- Blue-green algae bloom forecasts
- Calibration and validation of remote sensing products and ecosystem models

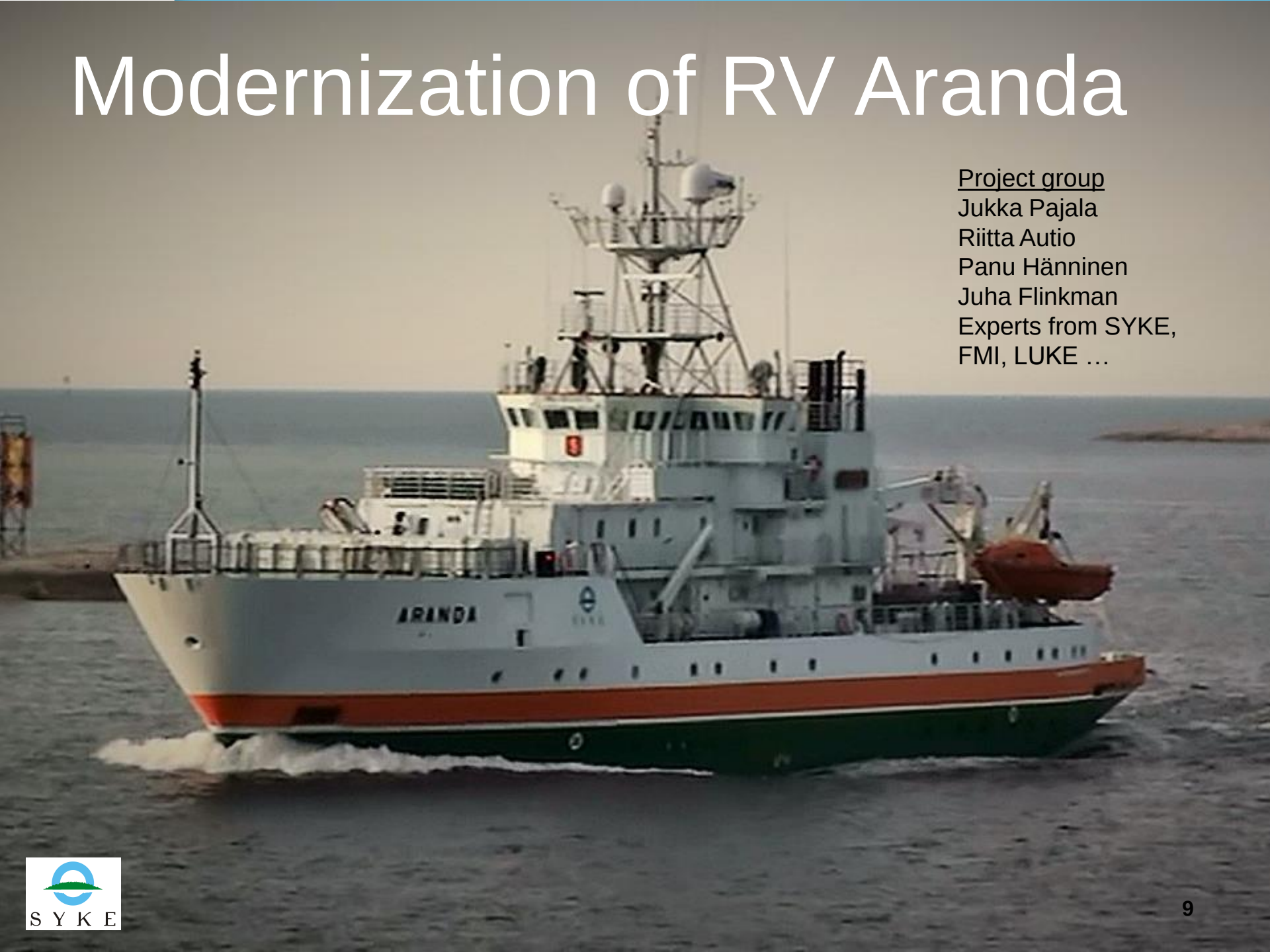
EMODnet
European Marine Observation and Data Network

JERICO-NEXT

FINMARI
Finnis Marine Research Infrastructure

Copernicus
The European Earth Observation Programme

Modernization of RV Aranda



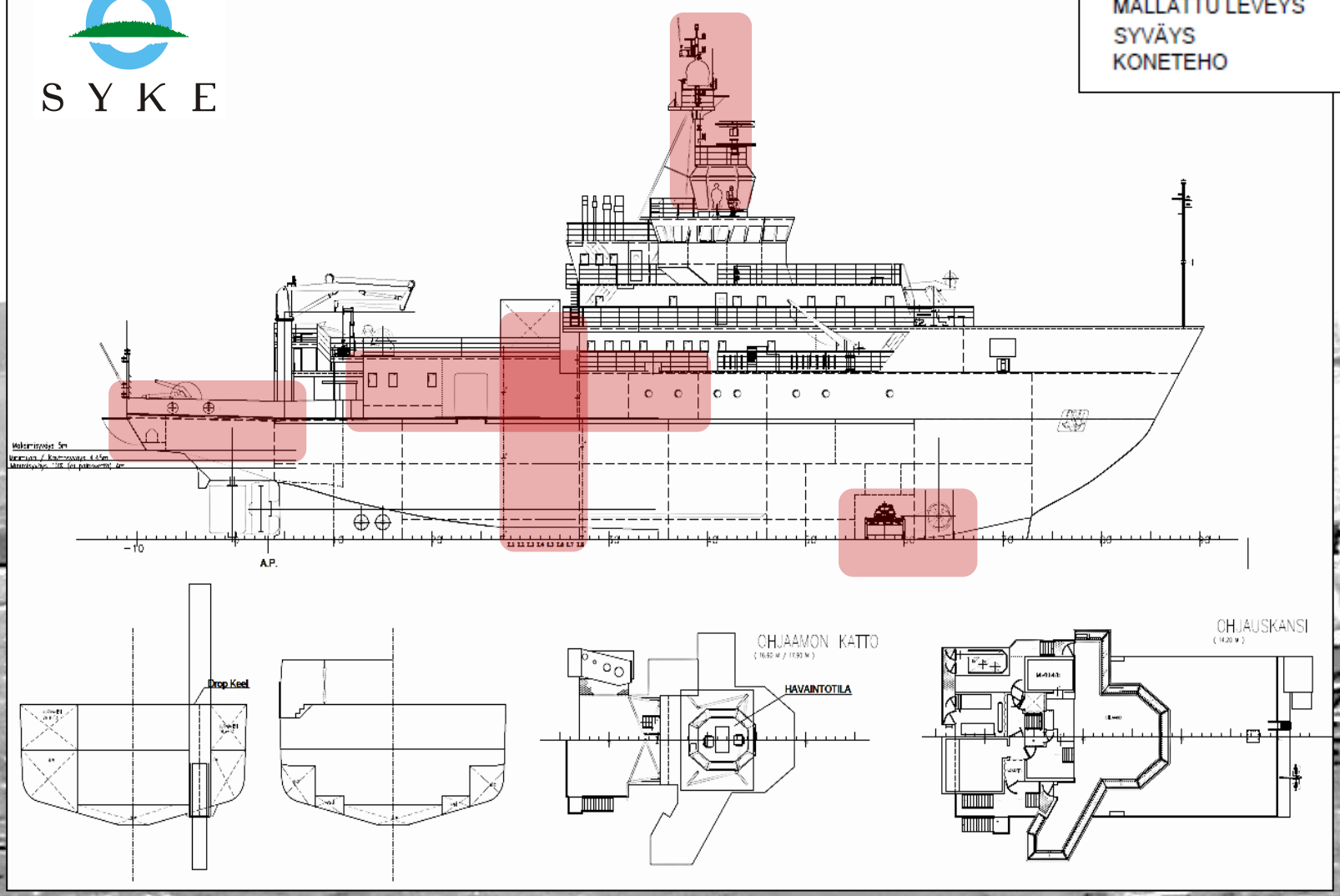
Project group
Jukka Pajala
Riitta Autio
Panu Hänninen
Juha Flinkman
Experts from SYKE, FMI, LUKE …

SYKE

RV Aranda in the future

SUURIN PITUUS	65,67	m
PERPENDIKKELIPITUUS	55,59	m
MALLATTU LEVEYS	13,80	m
SYVÄYS	5,00	m
KONETEHO	3000	kW

SYKE



ARANDA2020

SYKE: Experienced Open Data provider

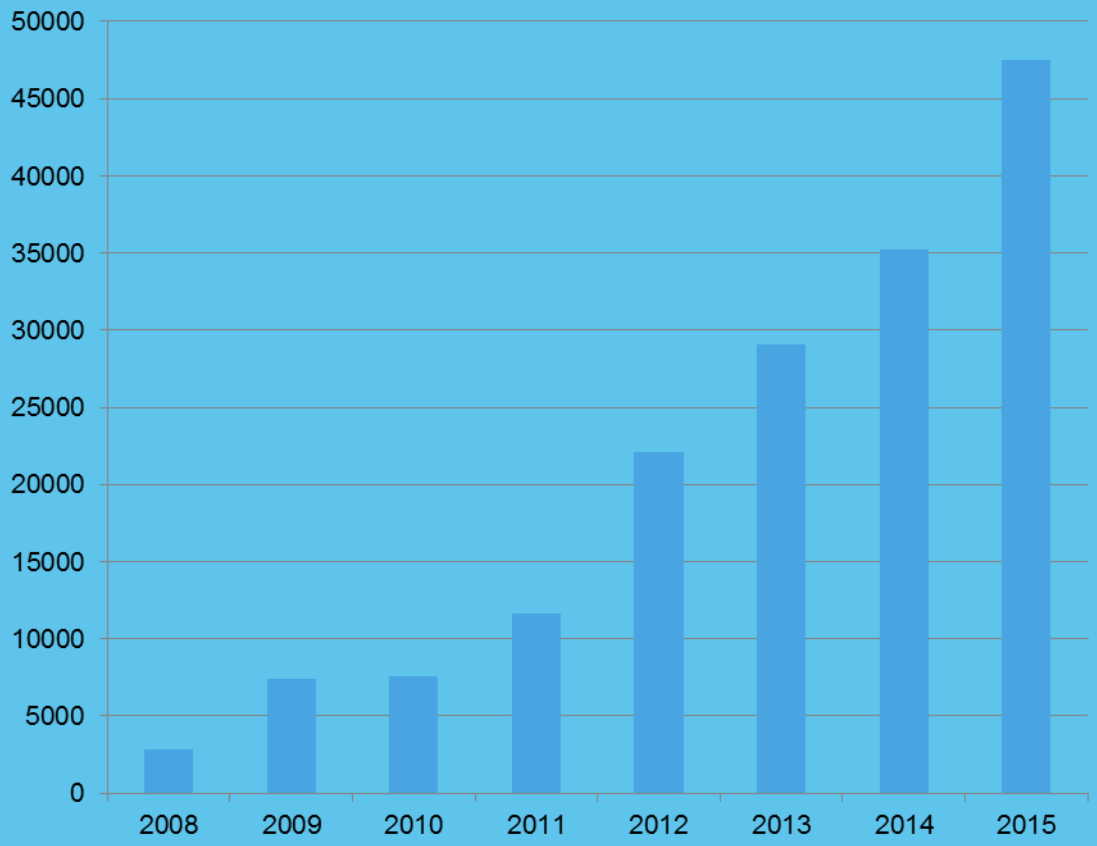
- SYKE was among the first public organisations in Finland to open environmental spatial data in 2008
- SYKE applies Creative Commons By 4.0 International license for open datasets

- Open Data policy has increased the usage of our data and services

SYKE

Statistics of Open Spatial Data downloaded

Spatial data packages downloaded from SYKE's Open Data Portal in 2008-2015



AVOIN TIETO
Open data

Downloads TOP 5 in 2015

1. Corine Land Cover
2. Nature protected ares
3. Natura 2000 areas
4. Groud Water Areas
5. River Basin Districts

SYKE

Statistics: SYKE/Data and Information Centre/Riikka Repo

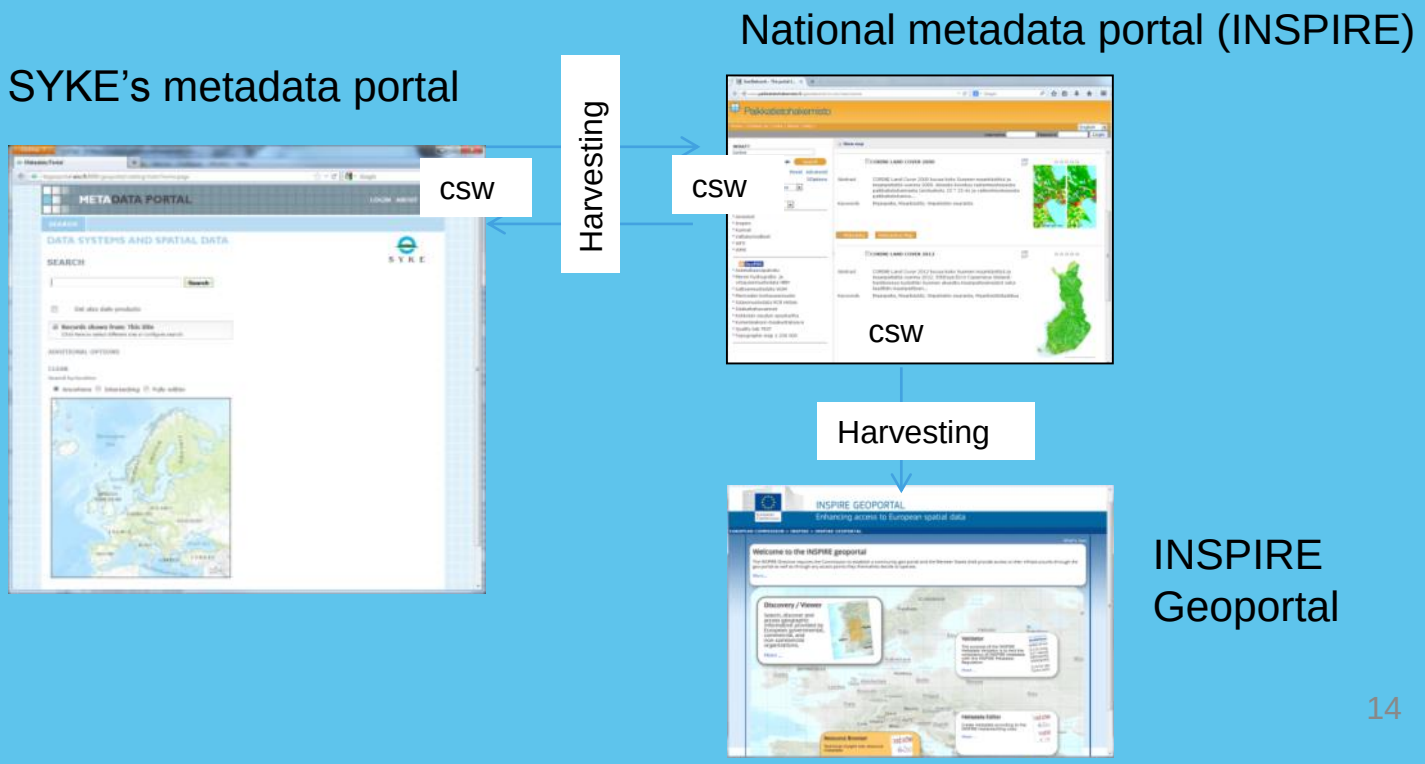
SYKE and INSPIRE in brief

- Legally Mandated Organisation within INSPIRE
- One of the biggest INSPIRE data providers in Finland in numbers of different datasets and themes
- Active participant in the national GI/INSPIRE network, for example
  - Facilitator of an activity focusing on making national data products INSPIRE compliant
- Part of the INSPIRE Maintenance and Implementation Group (MIG) through activity MIWP14 INSPIRE Thematic Clusters
  - Facilitator of the Land Cover and Land Use Cluster

SYKE

SYKE: Provision of Metadata

- SYKE's Metadata portal was launched in 2012: *http://metatieto.ymparisto.fi/geoportal*
- Supports the creation and use of metadata according to several standards (ISO, INSPIRE)
- Supports harvesting (CSW Interface)



SYKE's INSPIRE View Services

AVOIN TIETO
Open data

- SYKE has published several INSPIRE compatible WMS services
- Number of requests 2012-2015

SYKE's INSPIRE WMS Services	2012	2013	2014	2015
ELEVATION	9 977 745	36 878 918	27 951 518	30 874 127
PROTECTED SITES	4 701 690	8 969 923	12 129 251	16 141 698
HYDROGRAPY	4 860 695	7 392 199	10 315 080	16 127 996
GEOLOGY	2 406 134	5 116 132	11 635 858	16 964 171
ORHOIMAGERY	1 064 992	1 906 033	1 209 387	768 077
AREA MANAGEMENT AND REPORTING UNITS 1		1 948 016	3 148 868	4 024 743
NATURAL HAZARDS		1 910 472	3 587 542	4 427 981
ENVIRONMENTAL MONITORING FACILITIES		1 437 017	2 592 326	2 799 358
LAND COVER	470 544	636 728	784 670	1 355 782
BIOGEOGRAPHICAL REGIONS		308 506	597 677	720 265
AREA MANAGEMENT AND REPORTING UNITS 2		253 189	968 841	1 534 613

SYKE

www.syke.fi
” We have the skills, ambition and courage to open new avenues for improving the environment.”
SYKE