



Polar View

Eox



DRIFT+NOISE

Polar Services

DestinE Sea Ice Decision Enhancement (DESIDE)

Release Review 3

Photo: Andreas Cziferszky



Norwegian Meteorological Institute



- The Danish
Meteorological
Institute



ILMATIETEEN LAITOS METEOROLOGISKA INSTITUTET FINNISH METEOROLOGICAL INSTITUTE



Funded by the
European Union



RR3 Meeting Agenda

- Schedule 5 Minutes
- Deliverables 5 Minutes
- Demonstrations 30 Minutes
- Onboarding 30 Minutes
- Next Steps 15 Minutes



Schedule



Work Package	Title	Project Month											
		1	2	3	4	5	6	7	8	9	10	11	12
		KO+1		RR1			RR2			RR3			FR
WP 1	Project Management												
WP 1.1	Project Management and Control		D5.1	D5.1		D5.1			D5.1				D5.1
WP 1.2	Client Communications												PR, QU
WP 1.3	Project Deliverables		PR	PR, QU	PR	PR	PR, QU	PR	PR	PR, QU	PR	PR	PR, QU, FR, CCD
WP 1.4	Project Meetings			M			M		M				M
WP 2	Agile Use Case Development and Demonstration												
WP 2.1	End-User Engagement			D5.2		D5.2		D5.2					D5.2
WP 2.2	Software Development		D5.3, SRS, SVVP, SRP	D5.3, SRS, SVVP, SVVR, SRF, SRP		D5.3, SRS, SVVP, SVVR, SRF, SRP		D5.3, SRS, SVVP, SVVR, SRF, SRP					D5.3, D5.4, SRS, SVVP, SVVR, SRF, SRP
WP 2.3	Open-Source Software Management												
WP 2.4	DESP Developer Liaison												
WP 3	Use Case Promotion												
WP 3.1	Use Case Promotion Package			D5.5		D5.5		D5.5					D5.5
WP 3.2	DestinE Participation												
WP 4	Use Case Exploitation												D5.6
WP 4.1	Use Case Exploitation Roadmap												



Deliverables

- | | | |
|--------|---|-----|
| • PMP | Project Management Plan | WP1 |
| • UCD | Use Case Description | WP2 |
| • UCAS | Use Case Application Software | WP2 |
| • SRS | Software Requirement Specification | WP2 |
| • SVVP | Software Verification and Validation Plan | WP2 |
| • SVVR | Software Verification and Validation Report | WP2 |
| • SRP | Software Release Plan | WP2 |
| • SRF | Software Reuse File | WP2 |
| • UCPP | Use Case Promotion Package | WP3 |
-
- [https://github.com/destination-earth/DestinE ESA DESIDE](https://github.com/destination-earth/DestinE_ESA_DESIDE)
 - [https://destination-earth.github.io/DestinE ESA DESIDE/](https://destination-earth.github.io/DestinE_ESA_DESIDE/)



Demonstrations

- DESIDE Landing Page <https://deside.polarview.org/>
- Dashboard
 - Climate Indicators
 - Harshness Index
 - Image Warping
 - Structure Icing
 - POLARIS Risk
 - Data Visualization and Analysis
 - Image Interpretation
- Polar TEP Workspace <https://workspace.deside.hub-otc.eox.at/>
- IcySea <https://icysea.app/deside.html>



DESIDE Landing Page

The screenshot shows the DESIDE landing page with a dark blue header. In the top left, there are logos for 'Destination Earth' and 'DESIDE'. The top right features a navigation bar with links to 'Home', 'DestinE', 'Dashboard', 'Polar TEP', 'IcySea', and a 'Login' button. A pink rounded rectangle highlights the 'Login' button.

The main content area has a large banner image of a ship sailing through sea ice at sunset. Overlaid on the banner are the 'Destination Earth' logo, the large 'DESIDE' title, and the subtitle 'Destination Earth Sea Ice Decision Enhancement'.

DESIDE Services

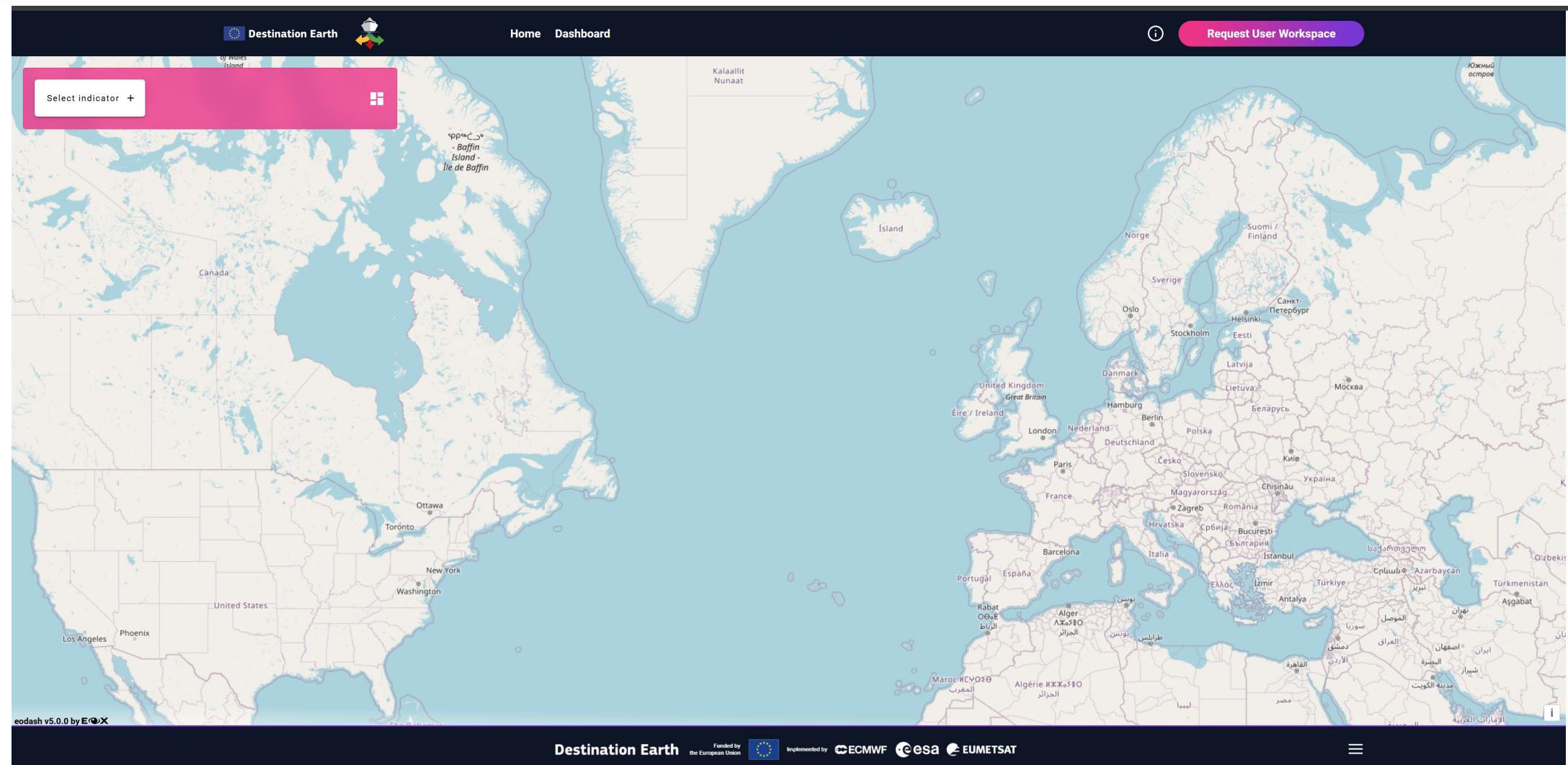
Three service cards are displayed:

- Dashboard**: Shows a small image of a ship in icy waters and the text 'Strategic decision support for policy analysts.'
- Polar TEP**: Shows a circular interface with the text 'polar tep' and 'Research platform for the private, academic, and public sectors.'
- IcySea**: Shows a person in a ship's bridge and the text 'Tactical decision support for ships operating in the polar regions.'

DESIDE Background



DESIDE Dashboard





Climate Indicators

Destination Earth

Home Dashboard Request User Workspace

Select indicator +

Overlay Layers Data Layers Climate indicator
Opacity layer 13743
 Base Layers

GREENLAND SEA NORWEGIAN SEA

ICELAND FAROE ISLANDS

2025-05-14

Climate indicator

Aquaculture Energy Shipping

Satellite: placeholder Agency: CMEMS
Sensor: placeholder Extent: 1970-01-01 - 2025-05-15

Description

Model | Scenario | Season
ACCESS-CM2 | ssp126 | DJF
CanESM5 | ssp126 | DJF
EC-Earth3-Reg | ssp126 | DJF
MIROC6 | ssp126 | DJF
MRI-ESM2-0 | ssp126 | DJF
NorESM2-LM | ssp126 | DJF
OSISAF | DJF

Sea Ice Extent (10^6 km^2)

Year: 1980, 2000, 2020, 2040, 2060, 2080, 2100

DOWNLOAD

eodash v5.0.0 by EOx

Destination Earth Funded by the European Union Implemented by



Harshness Index

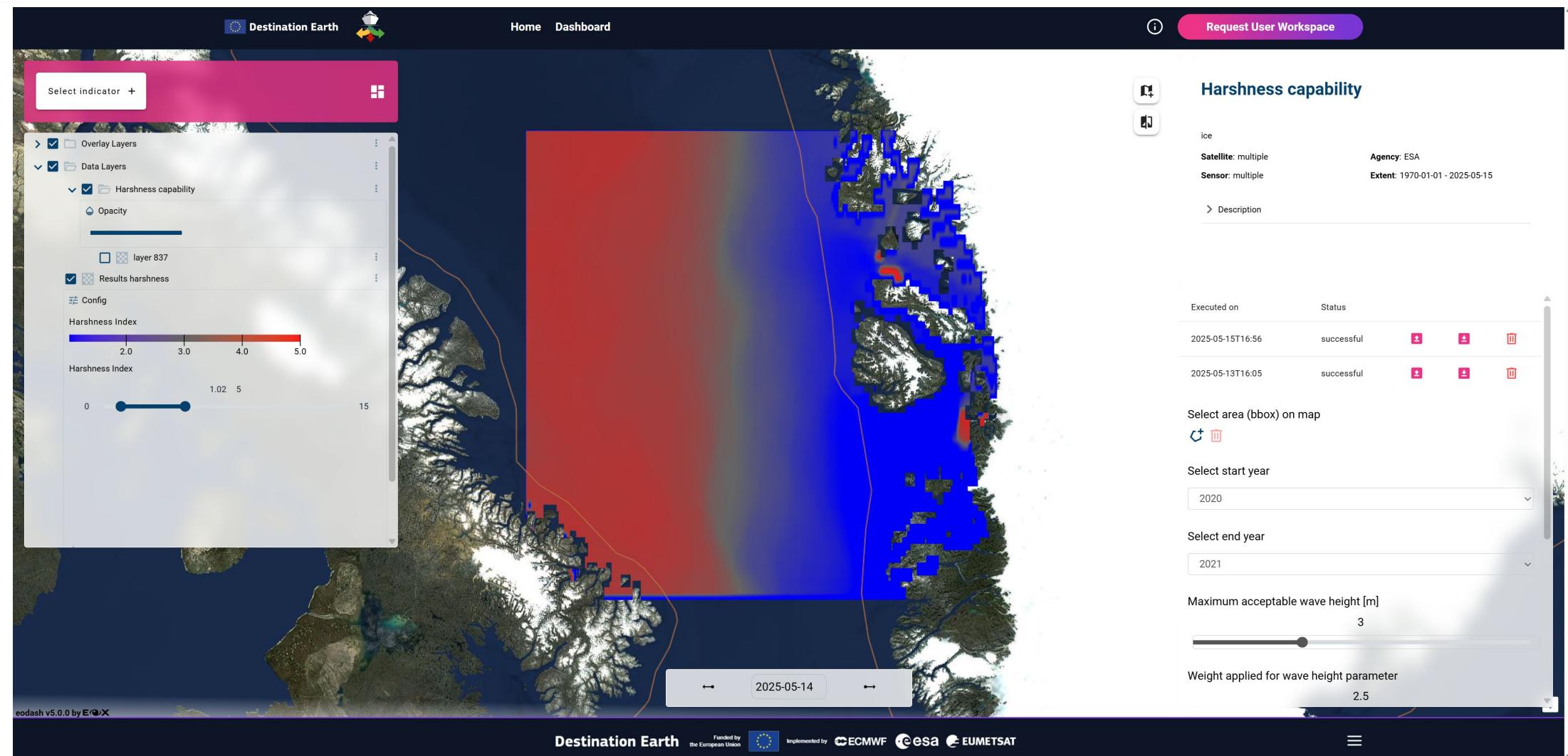




Image Warping

Destination Earth

Home Dashboard

Request User Workspace

Select indicator +

2022 2023 2024 2025

Opacity

Results polarwarp_sentinel1

Config

S1 Scene

prediction_hour

S1 warped predictions

0 1000 3000

Opacity

Base Layers

2025-05-14

Polar warp capability

ice 1970-01-01 - 2025-05-15

Description

Executed on Status

2025-05-13T20:19 successful

Select area (bbox) on map

Select start date

2025-02-25

Select GCPs 4

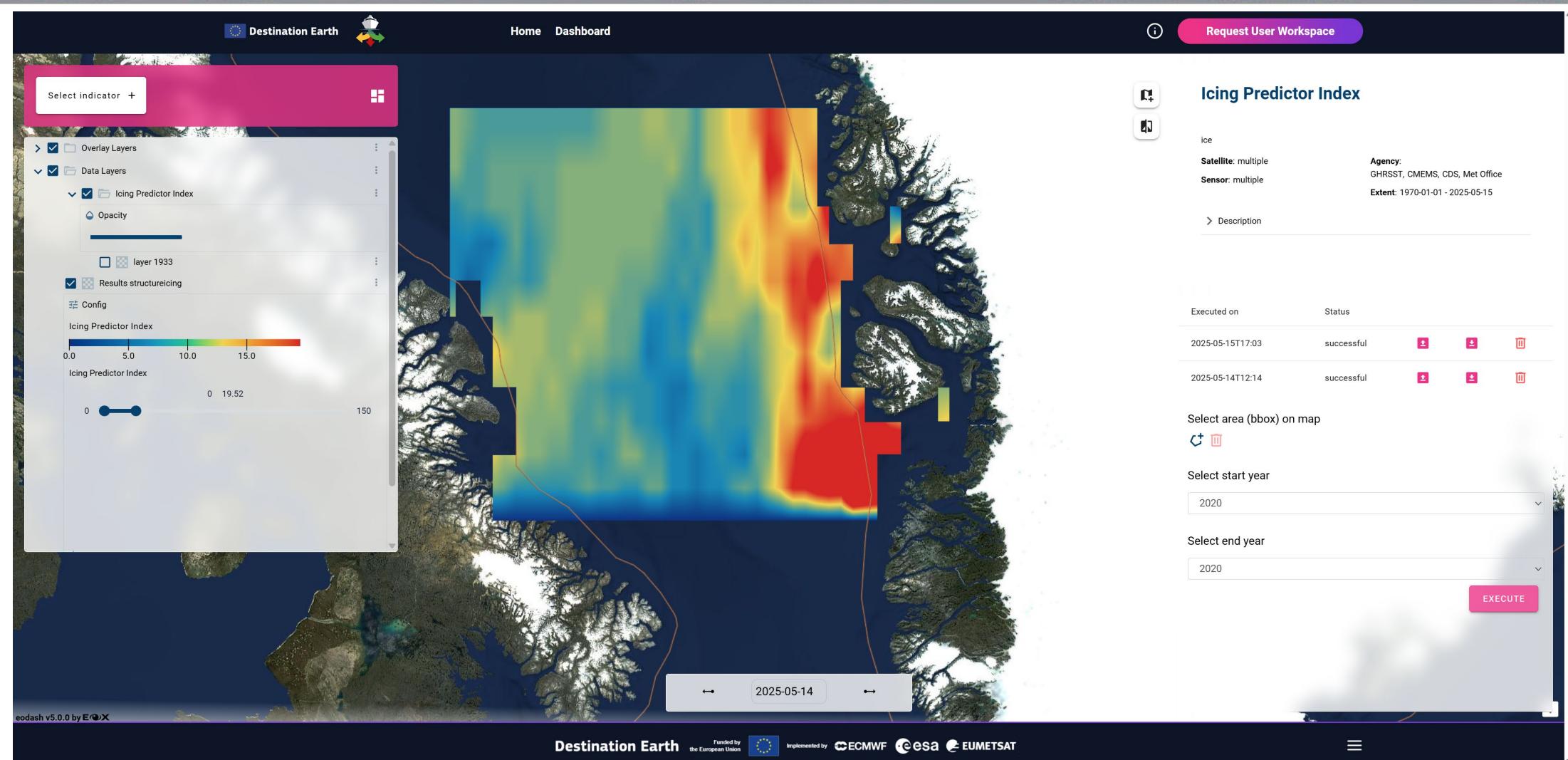
EXECUTE

eodash v5.0.0 by EOx

Destination Earth Funded by the European Union Implemented by ECMWF esa EUMETSAT



Structure Icing





Polaris Risk

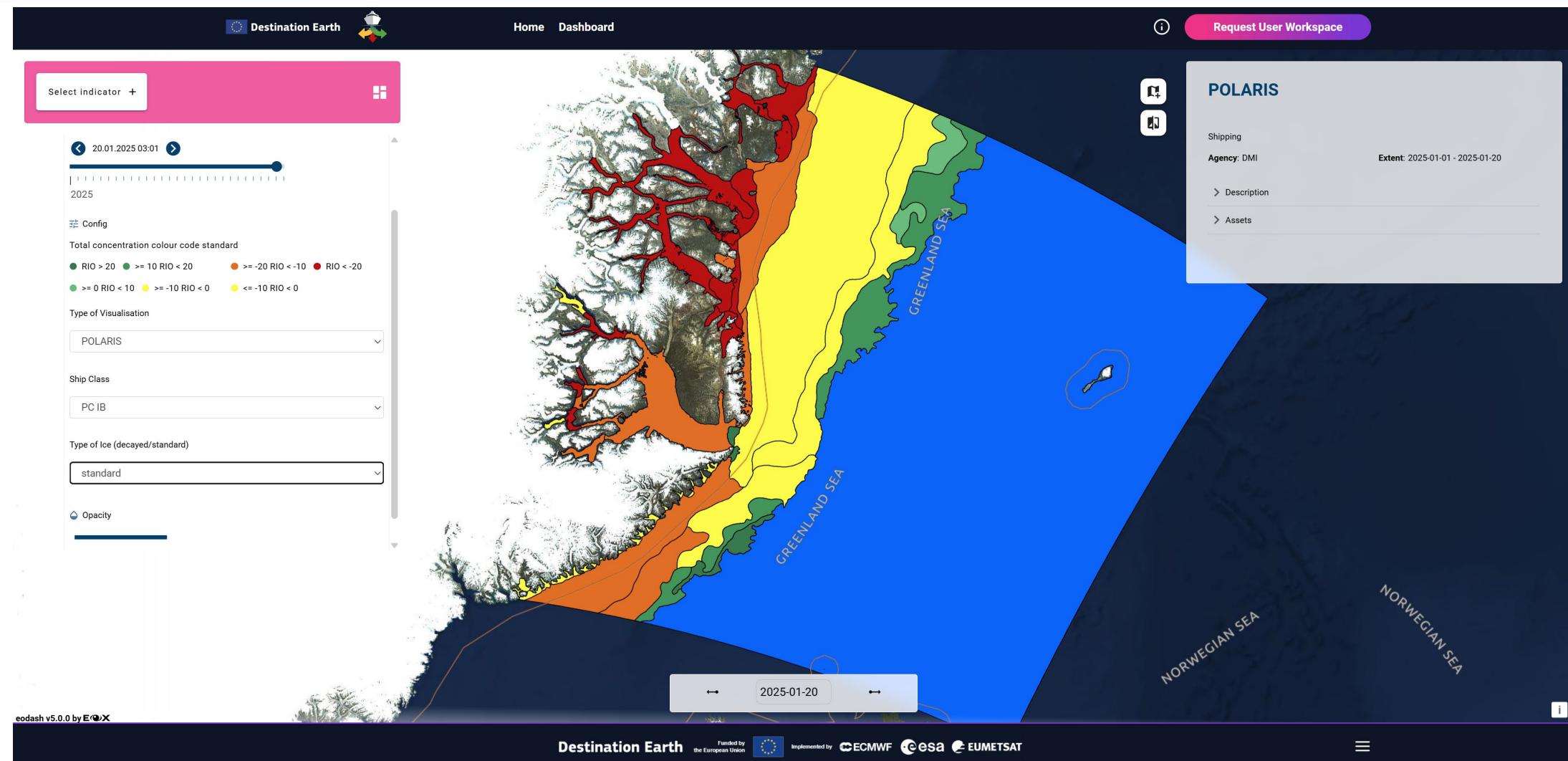
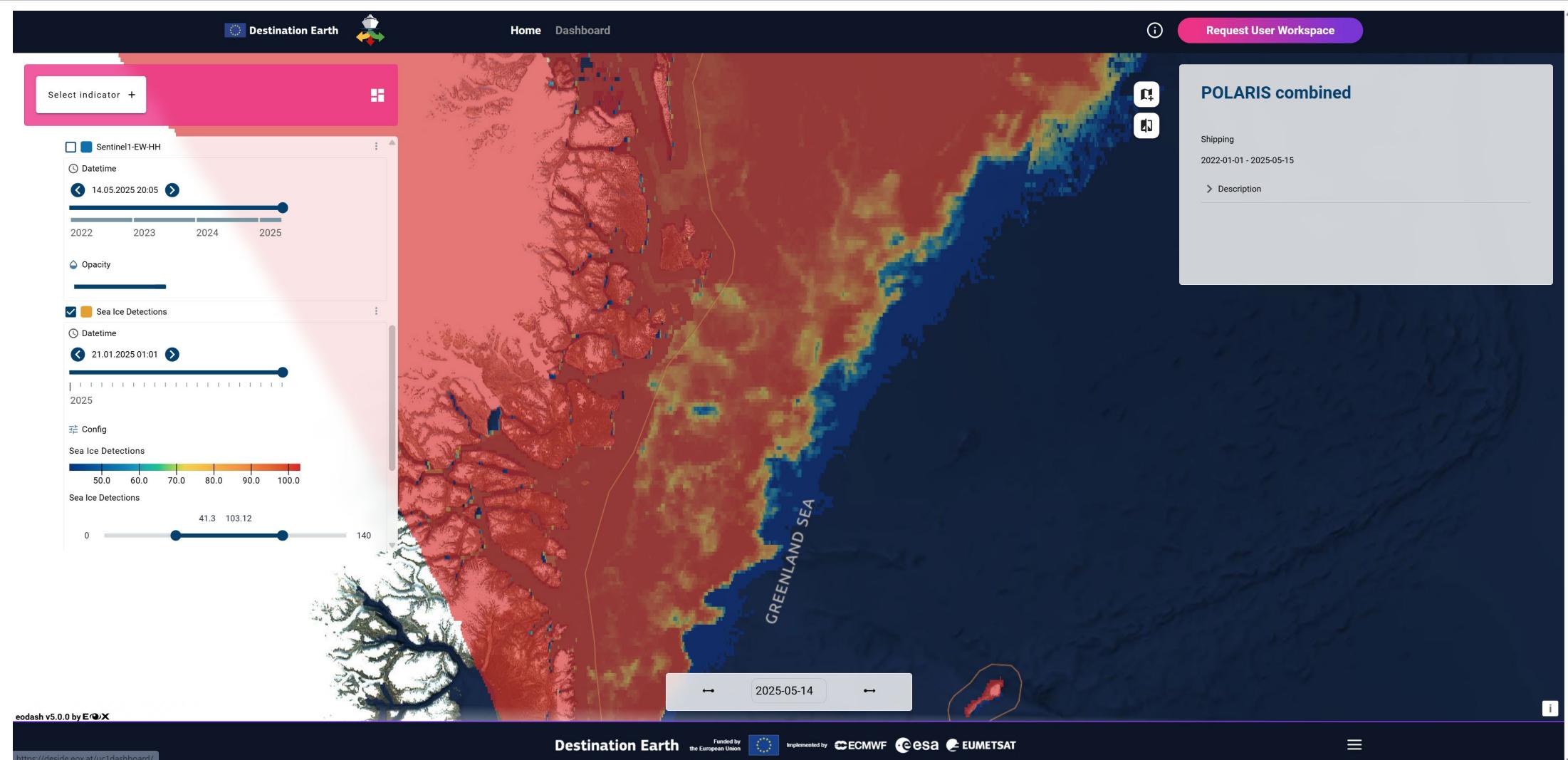




Image Interpretation





Data Visualization and Analysis

Destination Earth

Home Dashboard Request User Workspace

Select indicator +

Overlay Layers

Data Layers

Ice concentration

Datetime: 31.12.2024 19:12

Legend: Ice concentration (0.0 to 1.0)

Opacity

Base Layers

2024

Ice concentration

Aquaculture Energy Shipping

Sensor: Numerical model Extent: 2024-01-01 - 2025-01-26

Agency: CMEMS

Description

Providers 2

Assets 1

Select area on map

Select start date: 2024-01-01

Select end date: 2024-12-31

value

date

EXECUTE

eodash v5.0.0 by EOx

2024-12-31

Destination Earth

Funded by the European Union

Implemented by ECMWF esa EUMETSAT

ICV SEA

FMI

Meteorologisk institutt

DMI

DRIFT+NOISE Polar Services

EOX

Polar View



Polar TEP Workspace

DESIDE ▾

File Edit View Run Kernel Git Tabs Settings Help Conda-Store

Home Argo Workflows conda-store JupyterHub

+ / Name Modified shared 7s ago

Launcher Current folder: / Filter Create Empty

Notebook Terminal Console Markdown File Text File Python File VS Code [x]

Launch New Notebook

Kernel	Debugger	Environment	Last Used
default *	true	default	Never

Launch New Console

Kernel	Debugger	Environment	Last Used
default *	true	default	Never

Contact support Simple 0 Mem: 193.46 / 2048.00 MB Powered by EoXHub Launcher Spellcheck off 1



IcySea

Destination Earth DESIDE ICY SEA

Home

Services

Onboarding

Updates

About

Support



IcySea is a map-based application designed to display near-real time ice relevant information for operational purposes in the polar regions. Covering both the Arctic and Antarctic, it offers comprehensive data layers and risk assessment tools, integrating high-resolution satellite imagery. It is explicitly suited for low-bandwidth connections on board ships.

Visit our [website](#) for more details, including tutorial videos to help you get started.

► Start IcySea

Access token



Load and run IcySea

If you're interested in exploring IcySea as a new user and your company or institute is not yet an IcySea contract partner, we offer a 14-day free trial with no obligation to buy. Simply [register](#) below.

► Register



Destination Earth

Funded by
the European Union



Implemented by



FMI



Meteorologisk
institutt



DMI



DRIFT+NOISE
Polar Services



Polar View



Jira Board

OpenSIS Your work Projects Filters Dashboards Teams Apps Create

Search

DESP On-Boarding Service Integration Follow-up / DOSI Roadmap

Service Integration

Integrate the external Services (e.g. Use Cases) in DESP.

deside

DT A AP Atos C

Epic Quick filters Clear filters

GROUP BY None Insights View settings

Start stand-up Complete sprint ...

PLANNING

- DOSI Roadmap Board
- Timeline
- Backlog
- Active sprints **1**
- Calendar
- Reports
- Summary
- List
- Forms
- Goals
- All work

DEVELOPMENT

- Components...
- Development **BETA**
- Releases

Project pages

You're in a company-managed project

Learn more

TO DO 6/88

- [DESIDE] Service Verification **DESIDER** DOSI-159 **DT**
- [DESIDE] Service Security assessment **DESIDER** DOSI-160 **DT**
- [DESIDE] On-Boarding Plan **DESIDER** DOSI-161 **DT**
- [DESIDE] New Access Group policy implementation **DESIDER** DOSI-162 **DT**
- [DESIDE] DEMO Session **DESIDER** DOSI-214 **DT**
- [DESIDE] DESP Ops Integration **DESIDER** DOSI-216 **DT**

IN PROGRESS 4/42

- [DESIDE] IAM Service Integration **DESIDER** DOSI-154 **DT**
- [DESIDE] Web Portal Integration - Documentation **DESIDER** DOSI-156 **DT**
- [DESIDE] Infrastructure selection and Integration **DESIDER** DOSI-158 **DT**
- [DESIDE] DESP Header&Footer Standardization **DESIDER** DOSI-215 **DT**

BLOCKED

DONE 2/86

- [DESIDE] Service Registry Integration **DESIDER** DOSI-155 **DT**
- [DESIDE] Service Desk Integration **DESIDER** DOSI-157 **DT**

CLOSED

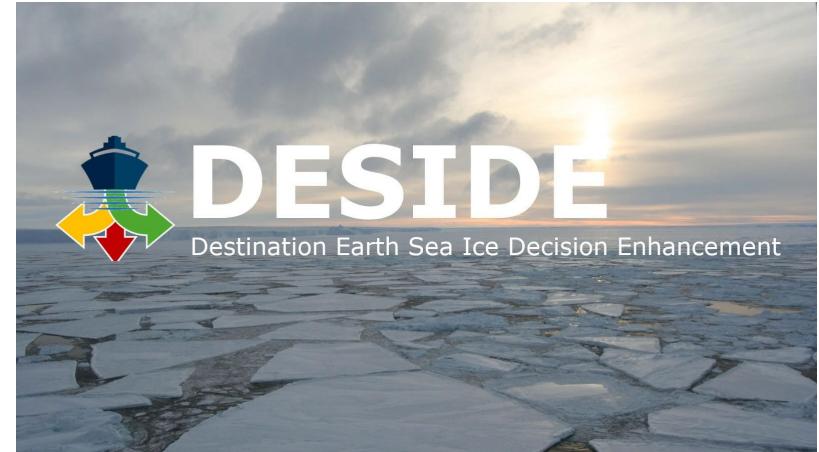
Onboarding Status

- Completed
 - Service Registry Integration
 - Service Desk Integration
 - DESP Header & Footer Standardization
- In Progress
 - IAM Service Integration
 - Infrastructure Selection and Integration
 - Web Portal Integration – Documentation
- To Do
 - On-Boarding Plan
 - Service Verification
 - Service Security Assessment
 - New Access Group Policy Implementation
 - DESP Ops Integration
 - DEMO Session



DOSI-155 Service Registry Integration

- Survey completed
- Image provided



Field Name	Field Description
Name (3-40 characters)	Destination Earth Sea Ice Decision Enhancement
Thumbnail	Representative Image of the Service, this will present the Service in the Service discovery list. Must have a clean layout and contain the name of the service, a service logo with a short payoff under the name of the service, not exceeding the length of logo + name Requested format: 1600x900, 72dpi, max 150kb. Please send image via mail attachments or attached to dedicated JIRA issue. → DESIDE_DESP.jpg
Gallery	Representative Images/videos of Service Features, These images will be visible in the Service Detail Page of the Service Registry. Requested format: 1600x900, 72dpi, max 150kb. Please send images via mail attachments or attached to dedicated JIRA issue. → DESIDE_DESP.jpg
Description (50-150 words)	Ships operating in the polar regions encounter hazards that present elevated levels of risk and more severe consequences when accidents occur. The "Destination Earth Sea Ice Decision Enhancement" (DESIDE) service utilizes Destination Earth system capabilities and data to provide comprehensive sea ice and related information for policy and operational decision makers in the Baltic Sea, European Arctic Ocean, and other polar regions. Benefits to polar operations and society include: <ul style="list-style-type: none">* Increased Safety: Accurate information supports strategic and tactical decision-making, enhancing safety of life and property.* Pollution Reduction: Efficient route optimization minimizes fuel consumption and emissions.* Protection of Sensitive Environmental Areas: Better forecasts can help policymakers protect environmentally sensitive areas affected by changing polar conditions.
Short Description (20-40 words)	"Destination Earth Sea Ice Decision Enhancement" service providing comprehensive sea ice and related information for policy and operational decision makers in the Baltic Sea, European Arctic Ocean, and other polar regions.
Main Contact Address	polar@eox.at
Organization name (3-40 characters)	EOX IT Services GmbH
Organization type	Industry
Keywords	EO, Polar, Sea Ice

Field Name	Field Description
Software Name (3-40 characters)	eodash
Software Version	v5.0.0-rc.1
Access Policy	Demo available to Unregistered Users
Data Offer	N/A
Type	GUI
Existing Documentation	https://gtif-cerulean.github.io/deside-client/u1dashboard/
Existing Material	https://deside.polarview.org
Technical Contact Point	polar@eox.at



DOSI-157 Service Desk Integration

- Contact point provided
 - Email: polar@eox.at



DOSI-215 Header & Footer

- Documentation is confusing, however after looking at other examples, it seems straightforward.
- Header & Footer has been implemented for all DESIDE sites



DOSI-154 IAM Service Integration

- Survey completed
- Questions answered
- Requires ESA approval
- Waiting for approval

	Admin	Admin	Admin	Admin
First Name, Last Name	Josef Prenner	Stephan Meißl	Stefan Achtsnit	Daniel Santillan
Email	josef.prenner@eox.at	stephan.meissl@eox.at	stefan.achtsnit@eox.at	daniel.santillan@eox.at
Country	Austria	Austria	Austria	Austria
Gender	M	M	M	M
User Profile Description				

Field	Description
Name	Polar TEP
Description	The Polar Thematic Exploitation Platform (Polar TEP) provides a complete working environment where users can access algorithms and data remotely, obtain computing resources and tools that they might not otherwise have, and avoid the need to download and manage large volumes of data. This new approach removes the need to transfer large Earth Observation data sets around the world, while increasing the analytical power available to researchers and operational service providers.
Application Type	4) Federation
Home URL	https://workspace.deside.hub-otc.eox.at/
Valid Redirect URIs	https://hub-otc.eox.at/auth/realms/nebari/broker/keycloak-oidc/endpoint
Valid Post Logout redirect URIs	https://workspace.deside.hub-otc.eox.at/*



DOSI-158 Infrastructure Selection

- Option 1: Hosting on DESP Runtime Platform
 - Required elevated privileges only available via GitLab service user
 - Not compatible with current deployment architecture
 - We pay for resources we are not using!
- Option 2: Hosting on OVH for DESP
 - 30% more expensive than OVH
 - Eligible for booster service
 - Resources must be arranged and paid for outside of the dashboard
 - Seeking clarification on differences from Option 3; clarification from Serco pending
- Option 3: Hosting on a European cloud provider
 - Not eligible for booster service



DOSI-156 Documentation

- Provide Service User Guide/Manual in Sphinx format
- Provide Service APIs (exposed to Users) in Swagger format
- In preparation



DOSI-161 On-Boarding Plan

- “Document describing the timeline for having the mandatory integrations in place”
- Pointless, since the time needed for the onboarding process is unknown and out of the control of our team



DOSI-159 Service Verification

- Service Verification Test Plan
- Service Verification Test Report
- Concerns:
 - We suggest applying only to user facing APIs



DOSI-160 Service Security Assessment

- Concerns:
 - We suggest applying only to user facing APIs



DOSI-162 New Access Group Policy

- Type B Service (allow downloading DPAD)
- Blocked by IAM Service Integration
- Concerns:
 - We do not understand



DOSI-216 DESP Ops Integration

- Monitoring Requirement:
 - Service Availability
 - Service Reliability
 - Active Users
- Concerns:
 - Should be straightforward



DOSI-214 DEMO Session

- After completing all integrations and Jira tasks
- Purpose:
 - Review the implemented features and tasks.
 - Provide valuable feedback or comments.
 - Request any necessary clarifications.



Next Steps

- Data Descriptions
- Onboarding Tasks
- LPS Poster



For More Information

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