

Integration of DAIMON in AMUCAD

Visualization of the Decision Support System

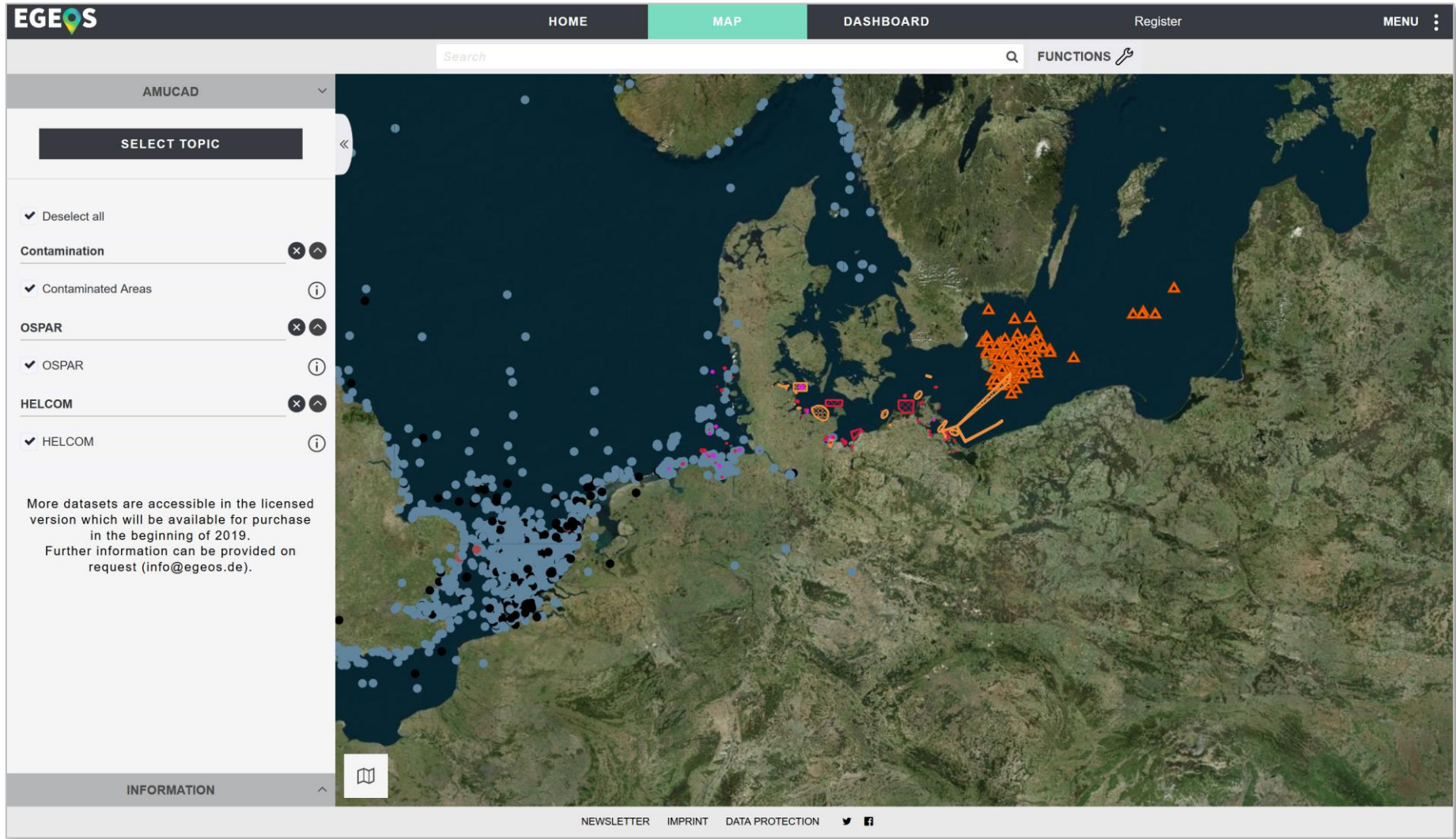
Jann Wendt, EGEOS GmbH
DAIMON Conference, Bremerhaven

Final Conference Meeting Bremerhaven, 06/02/2019

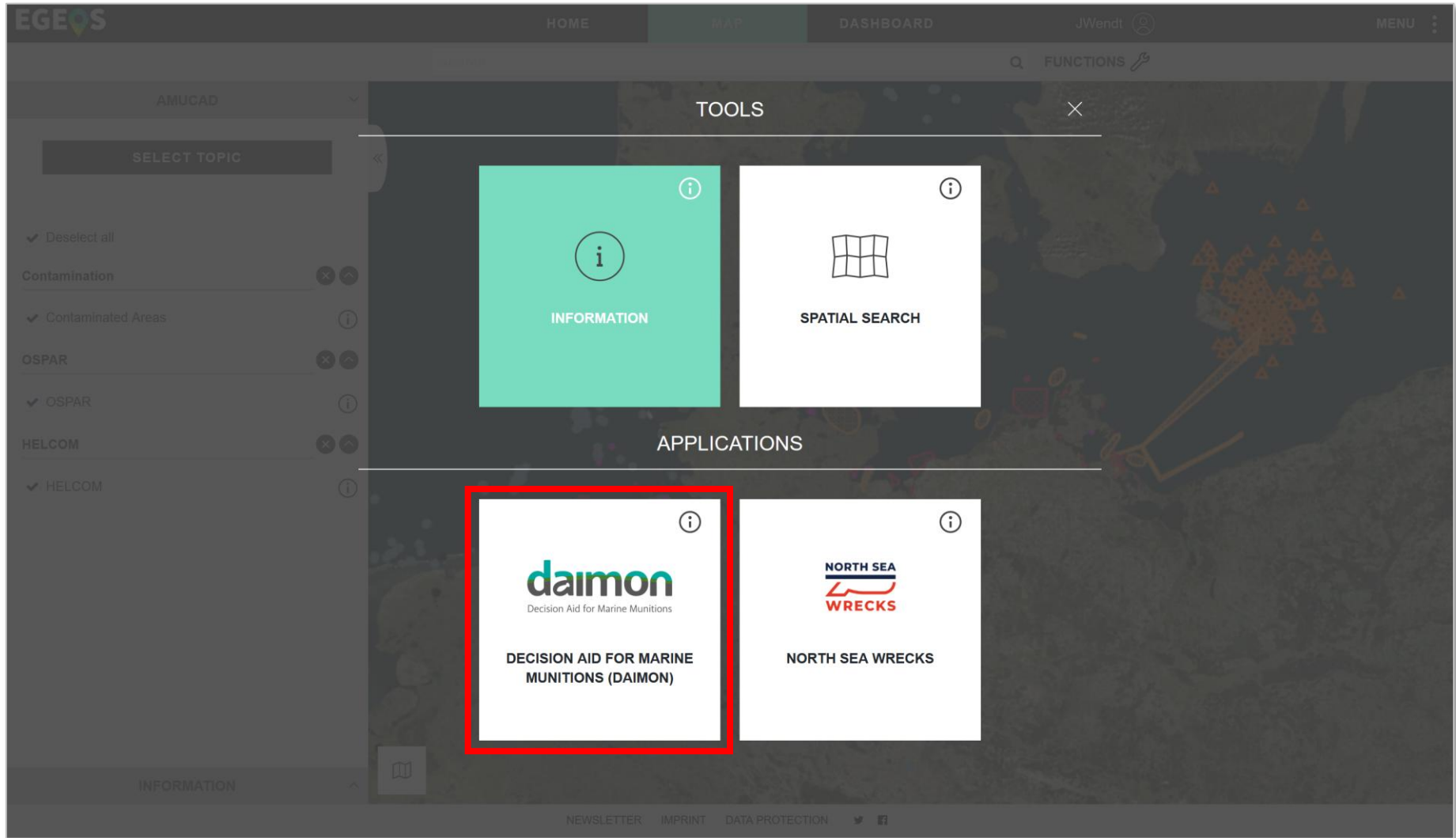
AMUCAD – Ammunition Cadastre Sea

The idea

- Acquisition and collection of datasets (historic and actual) related to ammunition in the sea;
- Visualization, assessment and analysis of these datasets
- Platform for monitoring of the ammunition situation
- Including and providing access to relevant research projects like DAIMON and North Sea Wrecks



AMUCAD.org



AMUCAD.org

daimon
Decision Aid for Marine Munitions

Integration of DAIMON

- DAIMON consists of two sections:
 - DATA VIEW & ADMINISTRATION/ANALYSIS

DAIMON – DATA VIEW

- DAIMON integrates several types of „Finding-Objects“:
 - Ammunition
 - Fish
 - Sediment
 - Mussel
 - Shellfish
 - Water sample

EGEOS HOME MAP DASHBOARD JWendt MENU

Search FUNCTIONS

DAIMON

NEW FINDING

✓ Deselect all

Findings

- ✓ Ammunitions
- ✓ Fishes
- ✓ Mussels
- ✓ Sediments

VISUALISATION TYPE

Normal

INFORMATION

NEWSLETTER IMPRINT DATA PROTECTION

The screenshot displays the EGEOS DAIMON web application. The top navigation bar includes links for HOME, MAP (highlighted), and DASHBOARD, along with a user profile for JWendt and a MENU. A search bar is positioned above the map. The map itself shows a satellite view of the Mediterranean Sea with a single orange finding marker. On the left, there are icons for a map layer and a book. The right sidebar, titled DAIMON, contains a NEW FINDING button, a Select all checkbox, and a Findings section with checkboxes for Ammunitions (checked), Fishes, Mussels, and Sediments. Each finding type has a corresponding icon and an information icon. Below this is a VISUALISATION TYPE dropdown set to Normal. At the bottom of the sidebar is an INFORMATION link. The footer of the application includes links for NEWSLETTER, IMPRINT, and DATA PROTECTION, as well as social media icons for Twitter and Facebook.

Dataset: Ammunition

DAIMON

INFORMATION

73. Position: 18.6549433, 55.9960433

Sample Code: G_4468

Object Type: Ammunition

Date of Detection: 21.10.2012, 02:00

Confidence of dataset: 100

User: JWendt

Organisation: Environmental Geographic Solutions

Object Parameters

Ammunition Type	Ground mines
Bio cover:	No value given
Sediment cover:	No value given
Corrosion level:	No value given

☐ Explosion effect calculation

Media Uploads

Video Uploads

C_G4468_so_21_okt_11_36

DAIMON

INFORMATION

Object Parameters

Ammunition Type	Ground mines
Bio cover:	No value given
Sediment cover:	No value given
Corrosion level:	No value given

☐ Explosion effect calculation

Media Uploads

Video Uploads

C_G4468_so_21_okt_11_36

DECISION SUPPORT SYSTEM

CONTAMINATION MODEL

VRAKA MODEL

Dataset: Ammunition

The screenshot displays the EGEOS DAIMON web application. The interface includes a top navigation bar with 'HOME', 'MAP', and 'DASHBOARD' tabs, a user profile 'JWendt', and a 'MENU' icon. A search bar is located below the navigation bar. The main content area features a map with several yellow and green location markers. A video player is overlaid on the map, showing a close-up of a metallic object, likely an ammunition component. The video player has a black border and a white text overlay in the top left corner with the following data:

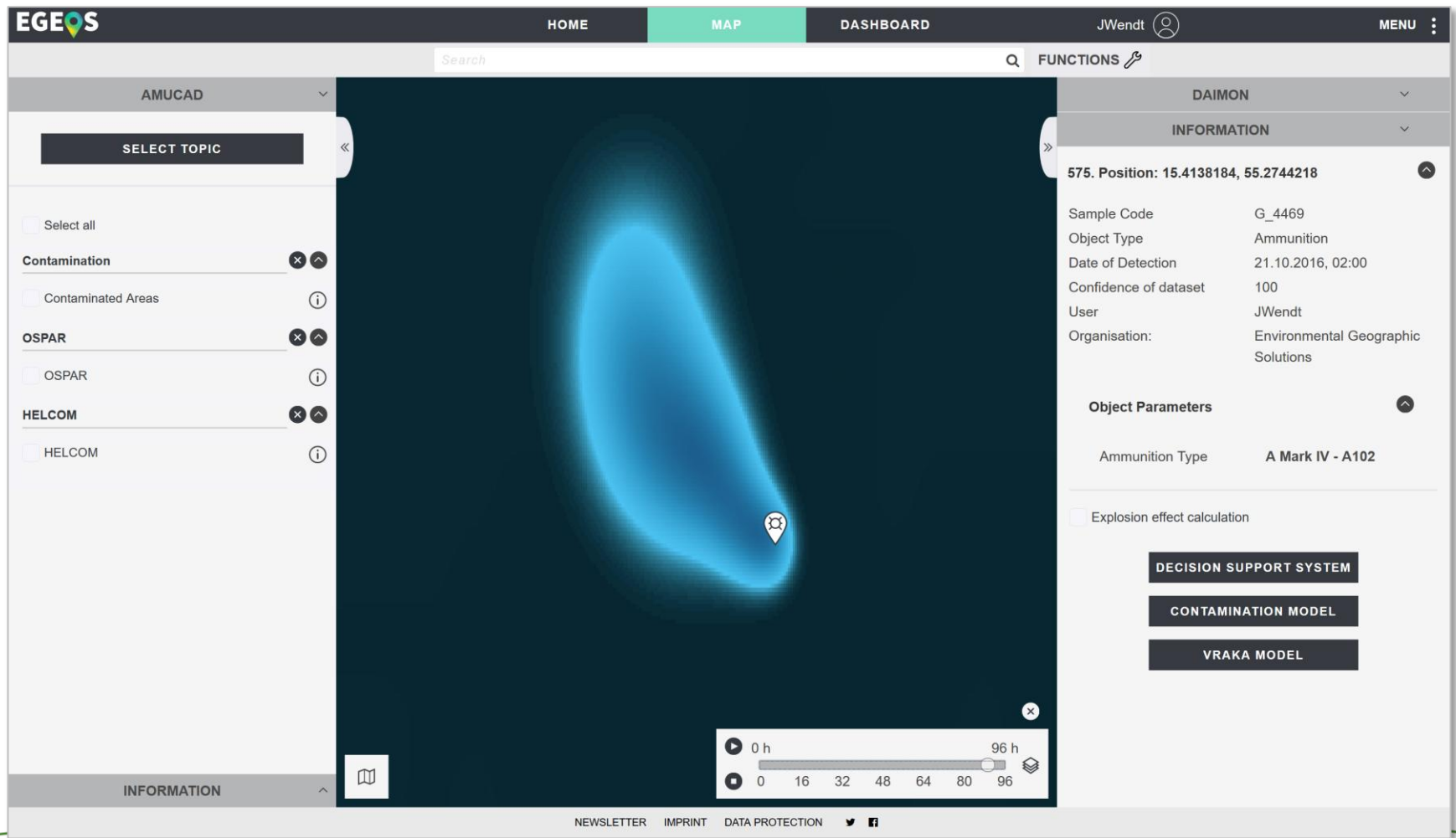
Roll:	Pitch:	Yaw:	Alt:	Roll:	Pitch:	Yaw:	Alt:	Date:	Time:
-0	-30	106.3m	162	1	121021	11:40:49			

The right sidebar contains a 'DAIMON' section with an 'INFORMATION' dropdown. Below this, there is a table for 'Object Parameters' with the following data:

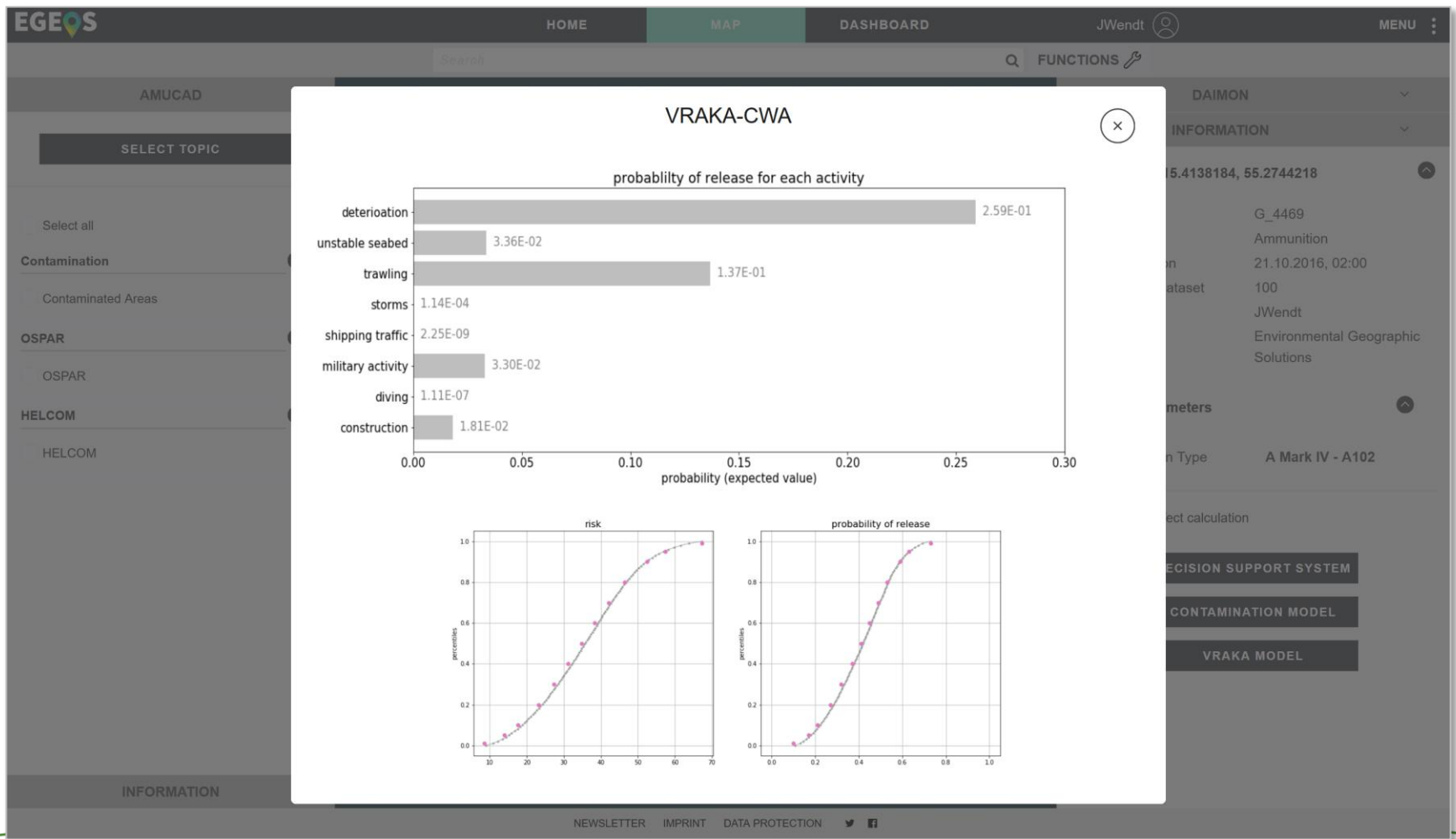
Parameter	Value
Ammunition Type	Ground mines
Bio cover:	No value given
Sediment cover:	No value given
Corrosion level:	No value given

Below the table, there is a section for 'Explosion effect calculation' and 'Media Uploads'. At the bottom of the sidebar, there are three buttons: 'DECISION SUPPORT SYSTEM', 'CONTAMINATION MODEL', and 'VRAKA MODEL'. The bottom of the application features a footer with links for 'NEWSLETTER', 'IMPRINT', 'DATA PROTECTION', and social media icons for Twitter and Facebook.

Dataset: Ammunition



Dataset: Ammunition



Dataset: Fish

DAIMON

INFORMATION

318. Position: 10.8078333, 54.5528333

Sample Code WH0401/B01/19/1/EXT

Object Type Fish

Date of Detection 11.12.2016, 12:00

Confidence of dataset

User ThuenenUser

Organisation: Thünen-Institut

FDI **Medium**

CF Assessment **Low**

ERY Assessment **Low**

HB Assessment **Low**

GLU Assessment **Low**

HCT Assessment **Medium**

Object Parameters

Water O2 saturation
Percentage: 94.65

Water temperature
Temperature: 23.96
celsius

Water salinity
Practical salinity unit:
6.48 %

Water depth

DAIMON

INFORMATION

Water salinity
Practical salinity unit:
6.48 %

Water depth
Depth: 19 meter

Fish: 9606, Cod (Unknown)

Total length Length in centimetre (in cm): = 78	Total weight Weight (in gram): = 5300
Fish disease index: = 5.4404	Condition factor (CF): = 1.116842833
Erythrocytes Erythrocytes (in Mio/mL): = 1.69	Hemoglobin Concentration (in mg/dL): = 6.22
Glucose Concentration (in mmol/L): = 3.4	Hematocrit Percentage: = 30

DECISION SUPPORT SYSTEM

DAIMON – ADMINISTRATION/ANALYSIS

- DAIMON ADMINISTRATION/ANALYSIS:
 - Protection Goods
 - Risk Assessment
 - Measures

DAIMON – ADMINISTRATION/ANALYSIS

- Protection Goods:
 - E.g. Tourists, Ship traffic, Divers, Flora and Fauna, Fisheries

DAIMON – ADMINISTRATION/ANALYSIS

- Protection Goods:
 - Idea of „Object – Action - Protection Good“

DAIMON – ADMINISTRATION/ANALYSIS

- Protection Goods:
 - Idea of „Object – Action - Protection Good“
 - e.g. Mine explodes in area with high shipping intensity

DAIMON – ADMINISTRATION/ANALYSIS

- Protection Goods:
 - Idea of „Object – **Action** - Protection Good“
 - e.g. Mine **explodes** in area with high shipping intensity

DAIMON – ADMINISTRATION/ANALYSIS

- Protection Goods:
 - Idea of „Object – Action - **Protection Good**“
 - e.g. Mine explodes in area with high **shipping** intensity

EGEOSHOMEMAPDASHBOARDJWendtMENU

AMUCAD

MANAGEMENT

MY PROFILE

USER ADMINISTRATION

ORGANISATIONS

DAIMON

RISK ASSESSMENT

PROTECTION GOODS

MEASURES

NORTH SEA WRECKS

PROTECTION GOODS

FILTER

COMBINATIONS

NEW PROTECTION GOOD

Protection Good	Object type	Action	Active Parameters	10 RECORDS
Shipping	Ammunitions	Explosion	2	

1

NEWSLETTERIMPRINTDATA PROTECTION

AMUCAD

MANAGEMENT

MY PROFILE

USER ADMINISTRATION

ORGANISATIONS

DAIMON

RISK ASSESSMENT

MEASURES

NORTH SEA WRECKS

PROTECTION GOOD WEIGHTING

Protection Good	Shipping	Action Explosion	Object Type	Ammunitions
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FILTER

Regional parameters (11)

Objekt parameters (1)

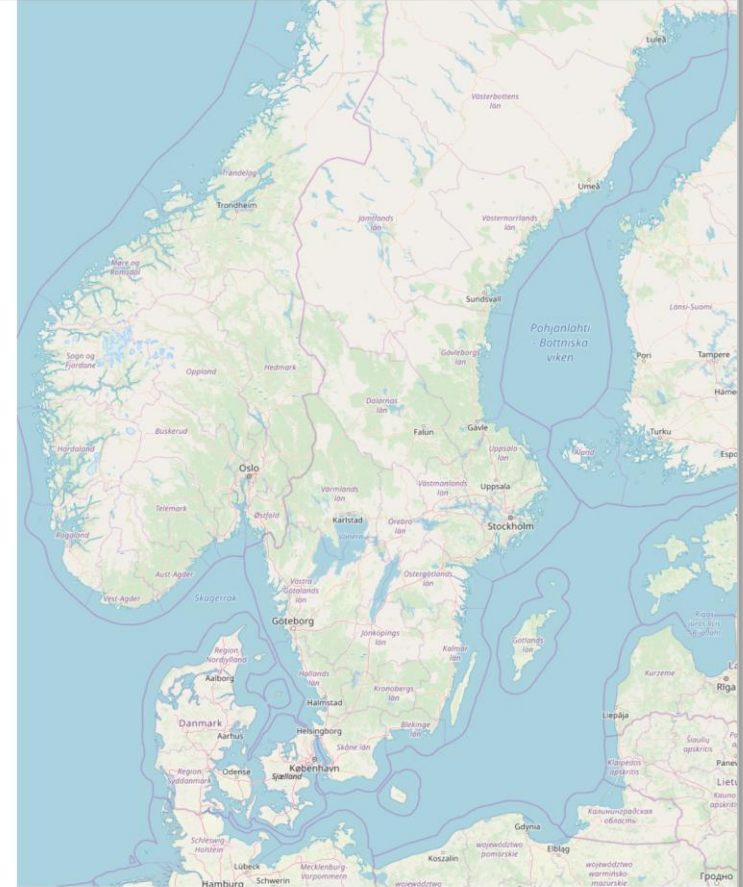
Service	✓	1	1	船	🔍	📄
Tanker	✓	1	1	船	🔍	📄
Rorocargo	✓	1	1	船	🔍	📄
Passenger	✓	1	1	船	🔍	📄
Other	✓	1	1	船	🔍	📄
Fishing	✓	1	1	船	🔍	📄
Cargo	✓	1	1	船	🔍	📄

PHYSICAL FEATURES

Oxygen Level Probability	<input type="checkbox"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	  
Anoxic Probability	<input type="checkbox"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	  
Temperature	<input type="checkbox"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	  
Salinity	<input type="checkbox"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	  
Seabed Slope	<input checked="" type="checkbox"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	  
Current Velocity	<input type="checkbox"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	  

BATHYMETRY

Depth ☒ 1 1




CANCEL


EGEOS

HOME

MAP

DASHBOARD

JWendt 

MENU 

AMUCAD

MANAGEMENT

MY PROFILE

USER ADMINISTRATION

ORGANISATIONS

DAIMON

RISK ASSESSMENT

PROTECTION GOODS

MEASURES

NORTH SEA WRECKS

PROTECTION GOOD WEIGHTING


Protection Good

Shipping

Action Explosion










Object Type

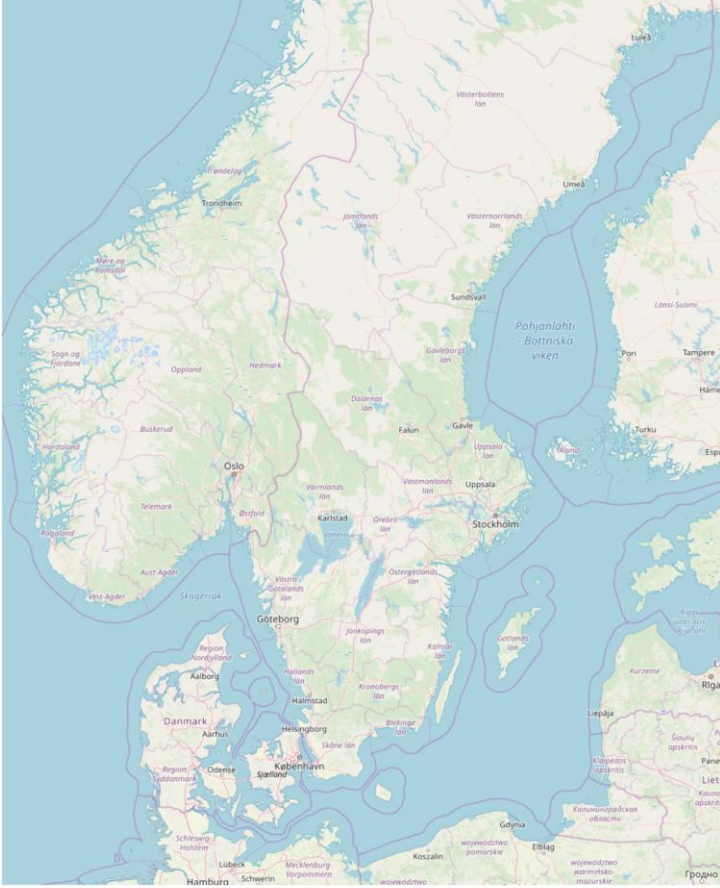
Ammunitions

FILTER 

Regional parameters (11)

Objekt parameters (1)

Name	Active	Wgt. DAIMON	Wgt. Organisation	
Corrosion level	<input type="checkbox"/>	<div>1</div>	<div>1</div>	  
Sediment cover	<input checked="" type="checkbox"/>	<div>1</div>	<div>1</div>	  
Bio cover	<input type="checkbox"/>	<div>1</div>	<div>1</div>	  




CANCEL


SAVE

NEWSLETTER

IMPRINT

DATA PROTECTION





DAIMON – ADMINISTRATION/ANALYSIS

- Risk Assessment:
 - „Training Objects“ will be created based on expert knowledge
 - Set of „Regional“ and „Object“ parameters for description
 - Assessment of specific objects

FINDING OBJECT

Finding Object: G_4468 (7468)

1 / 5

MEASURES

Monitoring x

Ammunitions

OBJECT PARAMETERS

Parameters

Media

Metadata

Label	G_4468
Type of Finding	Ammunitions
Date of Finding	21.10.2012
Confidence	100
User	JWendt
Organisation	EGEOS
Description	

Ground mines

Bio cover	= Unknown Percentage
Sediment cover	= Unknown Percentage
Corrosion level	= Unknown Percentage

REGIONAL PARAMETERS

Marine traffic

All	Very low	HELCOM	Passenger	Very low	HELCOM
Cargo	Very low	HELCOM	RoRo-Cargo	Very low	HELCOM
Container	Very low	HELCOM	Service	Very low	HELCOM
Fishing	Very low	HELCOM	Tanker	Very low	HELCOM
Other	Very low	HELCOM			

Fisheries

Surface and midwater

RISK ASSESSMENT

Explosion

Action

Risk assessment

Fisheries

Unknown

Shipping

Unknown

1

✓ Zoom to location

CANCEL

FINDING OBJECT

Finding Object: G_4468 (7468)

1 / 5

NORTH SEA WRECKS

HVDC: 5.91km

Unknown

1

EGEOS

HOME MAP DASHBOARD JWendt MENU

AMUCAD

FINDING OBJECT Finding Object: G_4468 (7468) 1 / 5

MANAGEMENT

MY PROFILE

USER ADMINISTRATION

ORGANISATIONS

DAIMON

PROTECTION GOODS

MEASURES

NORTH SEA WRECKS

RISK ASSESSMENT Finding Object: G_4468 (7468) 2/2

Metadata

Label	G_4468	Ground mines	
Type of Finding	Ammunitions	Bio cover	= Unknown Percentage
Date of Finding	21.10.2012	Sediment cover	= Unknown Percentage
Confidence	100	Corrosion level	= Unknown Percentage
User	JWendt		
Organisation	EGEOS		
Description			

REGIONAL PARAMETERS

Marine traffic

All	Very low	HELCOM	Passenger	Very low	HELCOM
Cargo	Very low	HELCOM	RoRo-Cargo	Very low	HELCOM
Container	Very low	HELCOM	Service	Very low	HELCOM
Fishing	Very low	HELCOM	Tanker	Very low	HELCOM
Other	Very low	HELCOM			

Bathymetry

Depth	-110.54
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0

X V

NEWSLETTER IMPRINT DATA PROTECTION

CANCEL SAVE

1 / 5

NORTH SEA WRECKS

HVDC: 5.91km

☒ Zoom to location

DAIMON Report

- Report including multiple datasets/information:
 - Metadata about the object
 - Regional parameters
 - Risk assessment of specific objects

DECISION SUPPORT REPORT - AMMUNITIONS



JWendt Environmental Geographic Solutions 2016-10-21, 02:00
15.4138184, 55.2744218

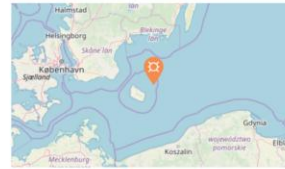
OVERVIEW

Coordinates
15.4138184, 55.2744218

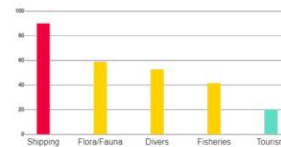
Geometry type
Point

Date, Time
2016-10-21, 02:00

Description

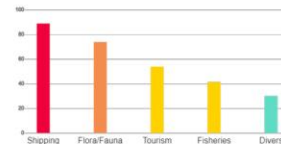


TOP 5 RISKS - EXPLOSION



Protection Good	Risk	Training-Datasets
Shipping	89	13
Flora/-Fauna	58	68
Divers	52	29
Fisheries	41	65
Tourism	20	32

TOP 5 RISKS - CORROSION



Protection Good	Risk	Training-Datasets
Shipping	89	62
Flora/-Fauna	58	30
Divers	52	98
Fisheries	41	33
Tourism	20	11

MEASURES

CONTACT

Title	Title
Organisationname	Organisationname
Department	Department
Contact Person	Contact Person
Street, Housenumber	Street, Housenumber
Postalcode, City	Postalcode, City

DECISION SUPPORT REPORT - AMMUNITIONS



JWendt

Environmental Geographic Solutions

2016-10-21, 02:00

15.4138184, 55.2744218

DAIMON OBJECT PARAMETERS

MOORED MINES

Gross Weight: No Data	Corrosion Level: n/a	Sediment Coverage Level: n/a	Category - Sub Group: Sea mines
Bio Mass Coverage: n/a	Netto Explosive Mass: No Data	diameter: No Data	Amount: 3
Origin: No Data	Material: No Data	Anchor: No Data	Charge: No Data
Safety Mechanism: No Data	Fuze: No Data		
Explosion		Corrosion	
Fisheries	n/a	Fisheries	n/a
Shipping	n/a	Shipping	n/a
Tourism	n/a	Tourism	n/a

REGIONAL PARAMETERS

Physical Features			
Seabed Slope	0.0000		IOW
Depth	-73.7000		EMODnet
Probability for anoxic conditions	sehr hoch		IOW
Probability for low oxygen	sehr niedrig		IOW
	Mean	Standard Deviation	Source
Salinity	16.4942	1.1123	IOW
Temperature	8.0257	2.5285	IOW
Current Velocity	0.0114	0.0110	IOW
Species Distribution			
Schweinswale	niedrig		HELCOM

DECISION SUPPORT REPORT - AMMUNITIONS



J.Wendt

Environmental Geographic Solutions

2016-10-21, 02:00

15.4138184, 55.2744218

MARINE TRAFFIC



Traffic Intensity (HELCOM)

All	very low
Cargo	very low
Container	very low
Fishing	low
Other	very low
Passenger	very low
Rorocargo	very low
Service	low
Tanker	very low

Fisheries (HELCOM)

Surface and Midwater	medium
Bottom Trawling	very high
Coastal and Stationary	very low

Biodiversity (HELCOM)

Pelagic Habitat	medium
Fish Assessment	medium
Benthic Habitat	very low

DECISION SUPPORT REPORT - AMMUNITIONS



JWendt

Environmental Geographic Solutions

2016-10-21, 02:00

15.4138184, 55.2744218

INFRASTRUCTURE (HELCOM)



Type: Bathing
No Data

Type: Cables
No Data

Type: Constructions
No Data

Type: Wind Farms
No Data

Type: Oil Platforms
No Data

Type: Oil Platforms
No Data

Name	Distance	Name	Distance
pipeline (gas)	1.45 km	Unknown	2.81 km

AMUCAD

DECISION SUPPORT REPORT - AMMUNITIONS


EGEOS

JWendt

Environmental Geographic Solutions


2016-10-21, 02:00
15.4138184, 55.2744218

AMUCAD - HISTORICAL DATA



21 EVENTS FOUND

NO VALID LICENCE



72 MAPS FOUND

NO VALID LICENCE

daimon AmuCad

5 / 5



Decision Aid for Marine Munitions

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- www.egeos.de
- www.amucad.org



EUROPEAN UNION

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DEVELOPMENT
FUND

