



EUROPEAN
REGIONAL
DEVELOPMENT
FUND



DAIMON2

Decision Support System for Marine Munitions

Ecological risk assessment of munitions dumped in the Baltic Sea

Training event on 15.4.2021

Simon van der Wulp – EGEOS GmbH



Decision Support System for Marine Munitions

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Support a case-to-case decision making of
munition findings

Fully operational Decision Support System

Web Application

Incorporate results and methods from
previous research projects

Risk assessments

Possible management options (measures &
standardized operating procedures)

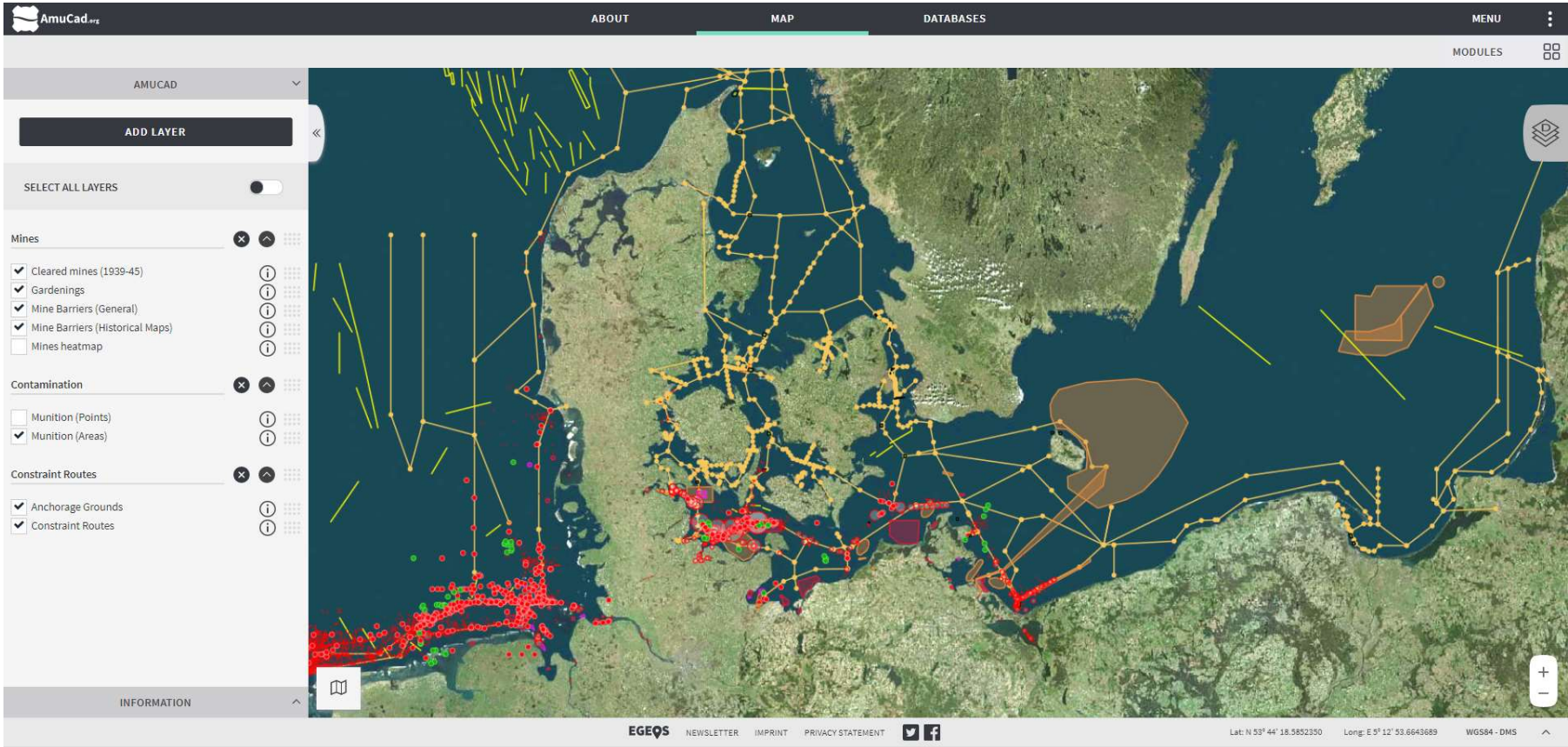




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FUND



Ammunition Cadastre Sea



Ammunition Cadastre Sea

Marine Munitions

Historical Information

Hydrography

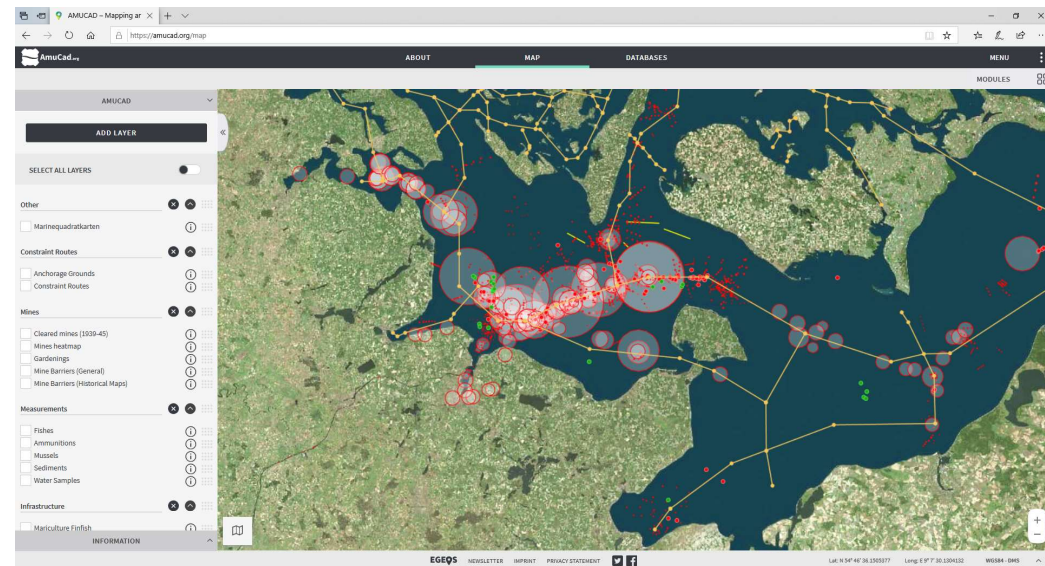
Infrastructure

Morphology

Human Activities



Environmental
Indicators

















Measurements



Ammunition Cadastre Sea



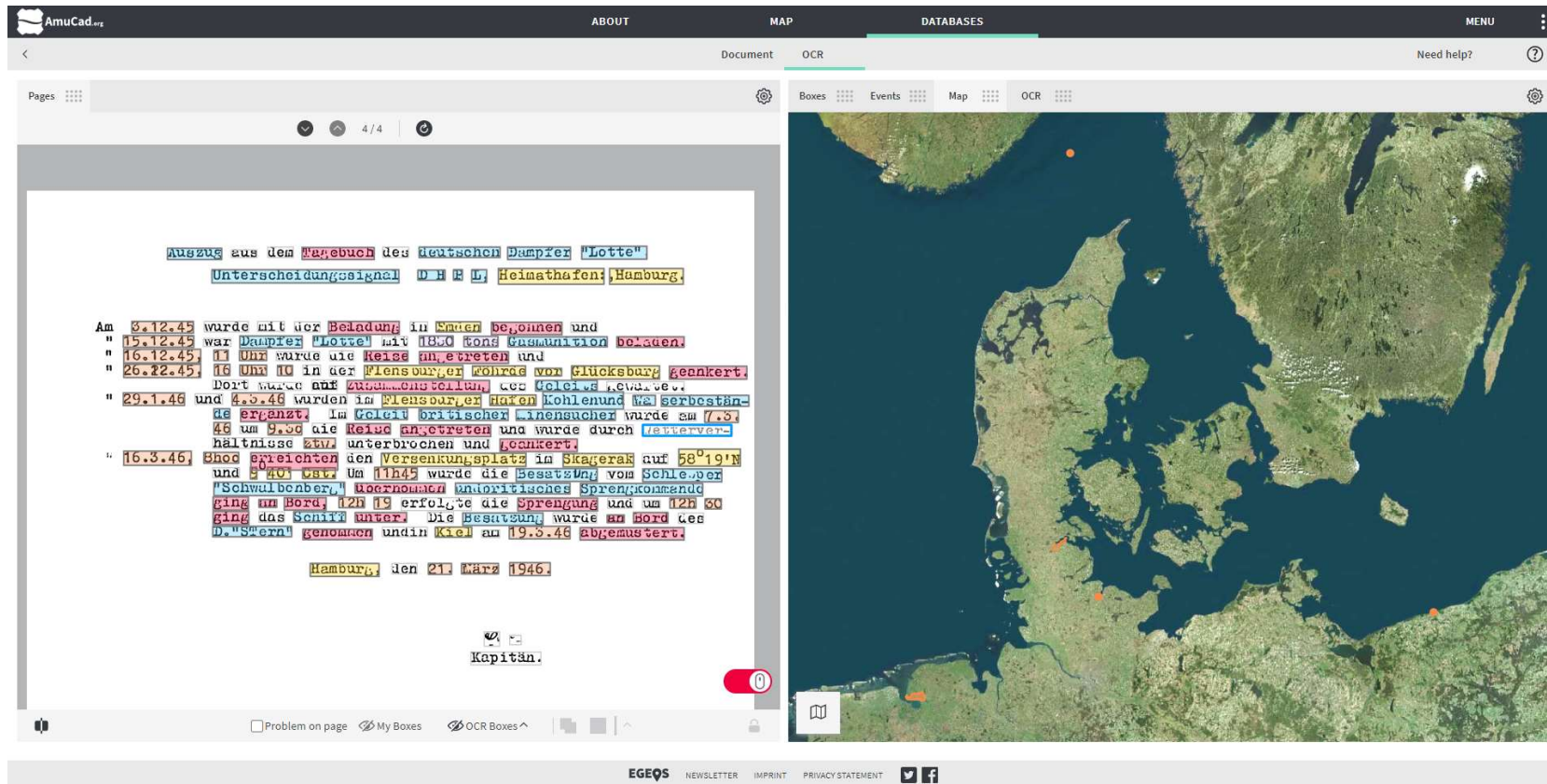
Select...  

#	Name	10 RECORDS
114	Circle100	 
115	Circle101	 
116	Circle102	 
117	Circle103	 
118	Circle104	 
119	Circle105	 
120	Circle106	 
121	Circle107	 

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CANCEL SAVE

Ammunition Cadastre Sea



AmuCad.org

ABOUT MAP DATABASES MENU

Document OCR Need help?

Pages 4/4

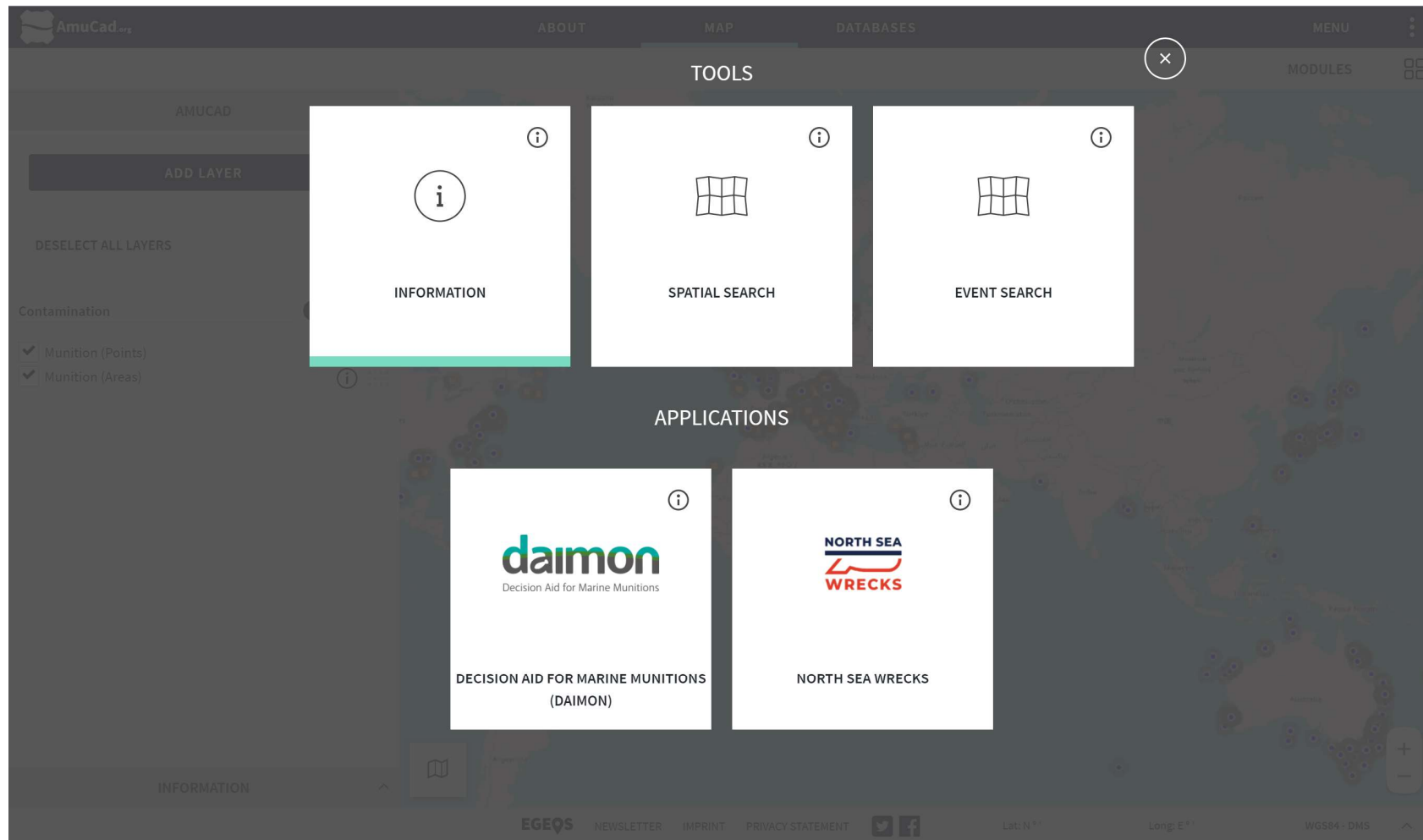
Auszug aus dem **Tagebuch** des deutschen Dampfer **"Lotte"**
Unterscheidungssignal **D H L**, **Heimathafen**, **Hamburg**

Am **0.12.45** wurde mit der **Beladung** in **Emmen** **be**g~~o~~nn~~e~~n und
" **15.12.45** war **Dampfer "Lotte"** mit **1800** **Kont** **Gesamm**lung **be**l~~a~~den.
" **16.12.45** **11** **Uhr** wurde die **Reise** **an** **et**reten und
" **26.12.45** **16** **Uhr** **10** in der **Flensburger** **Ko**h~~l~~e **von** **Glücksburg** **ge**ankert.
Dort wurde auf **Zusammenstellung** des **Geleits** **er**vollzogen.
" **29.1.46** und **4.3.46** wurden im **Flensburger** **Hafen** **Kohlen** und **Ma** **serbestän**de **er**gänzt. Im **Geleit** **britischer** **Minensucher** wurde am **7.3.46** um **9.00** die **Reise** **an** **et**reten und wurde durch **Wetterver**hältnisse **ktv** unterbrochen und **ge**ankert.
" **16.3.46** **8** **Uhr** **erreichten** den **Versenkungsplatz** in **Skagerak** auf **58°19'N** und **8°40' Ost**. Um **11h45** wurde die **Besatzung** vom **Schlepper "Schwulbenberg"** **über**nommen. **Antoniatisches** **Spreng**kommando **ging** **an** **Bord**. **12h 15** erfolgte die **Sprengung** und um **12h 30** **ging** das **Schiff** **unter**. Die **Besatzung** wurde **an** **Bord** des **D."Stern"** **ge**nommen und in **Kiel** am **19.3.46** **ab**gemustert.

Hamburg, den **21. März 1946**.

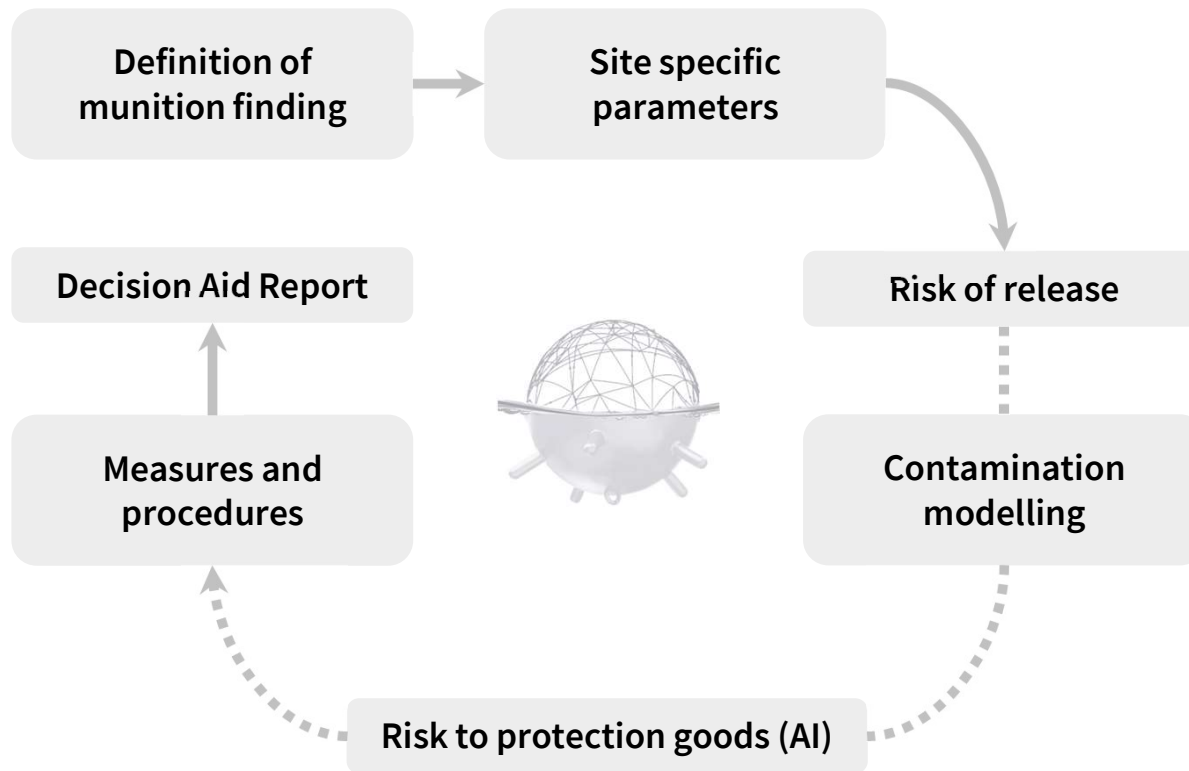
Kapitän.

EGEQS NEWSLETTER IMPRINT PRIVACY STATEMENT





Decision Support System - Overview



User

AmuCad.org daimon
Decision Aid for Marine Munitions

DAIMON findings can be accessed by the AmuCad map interface.

DAIMON Finding (new/existing)

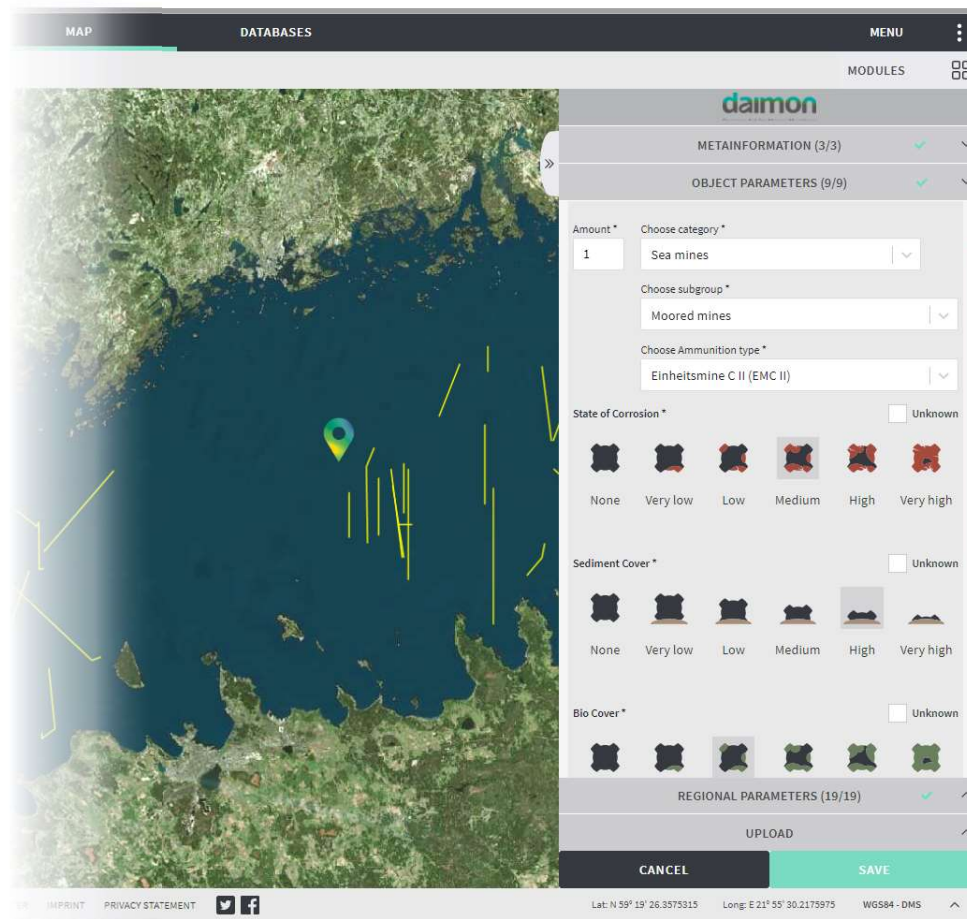
- Location
- Time of finding
- Object parameters
- Regional parameters
- Photo & Video

Decision Support

- Risk assessments
(based on AI)
- VRAKA: Probability of substance release
(based on statistics)
- Contamination model
(based on dispersion calculation)

Munition findings

- Location
- Munition Type
- Corrosion
- Sediment cover
- Biofouling
- In side a wreck?
- Confidence



Regional parameters

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Hydrography

Physical features

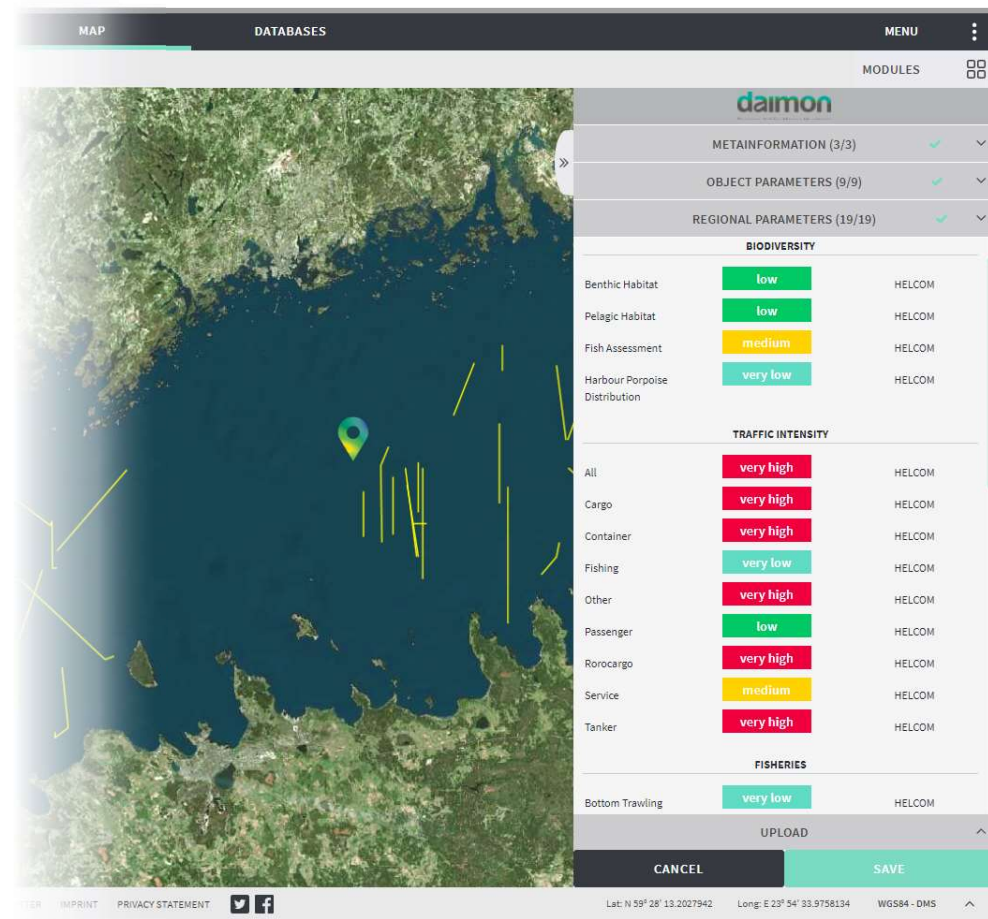
Biota

Sediments

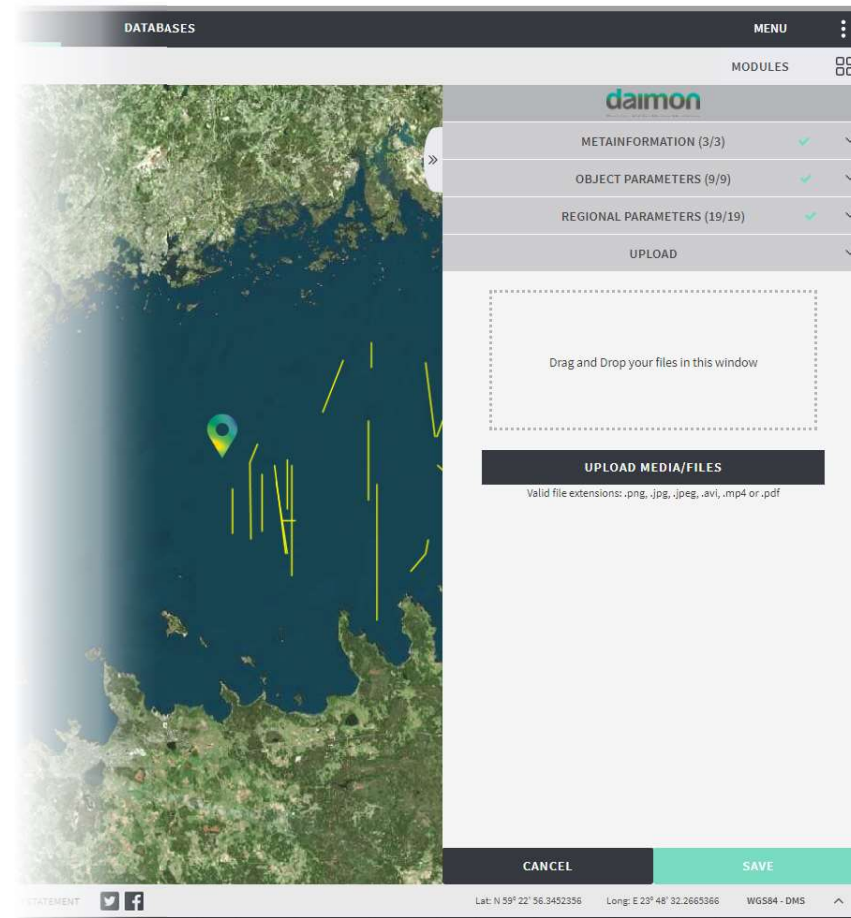
Shipping intensity

Fishing intensity

Infrastructure



Media & Documentation



Risk of Release – VRAKA – CWA

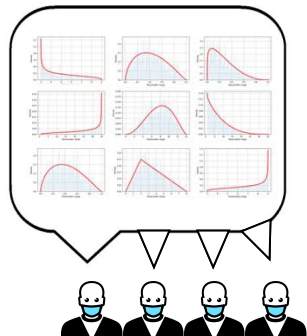
Statistical approach

Activities

Indicators

Probability of release

Amount of toxic substance that could be released (risk)



Contamination Model

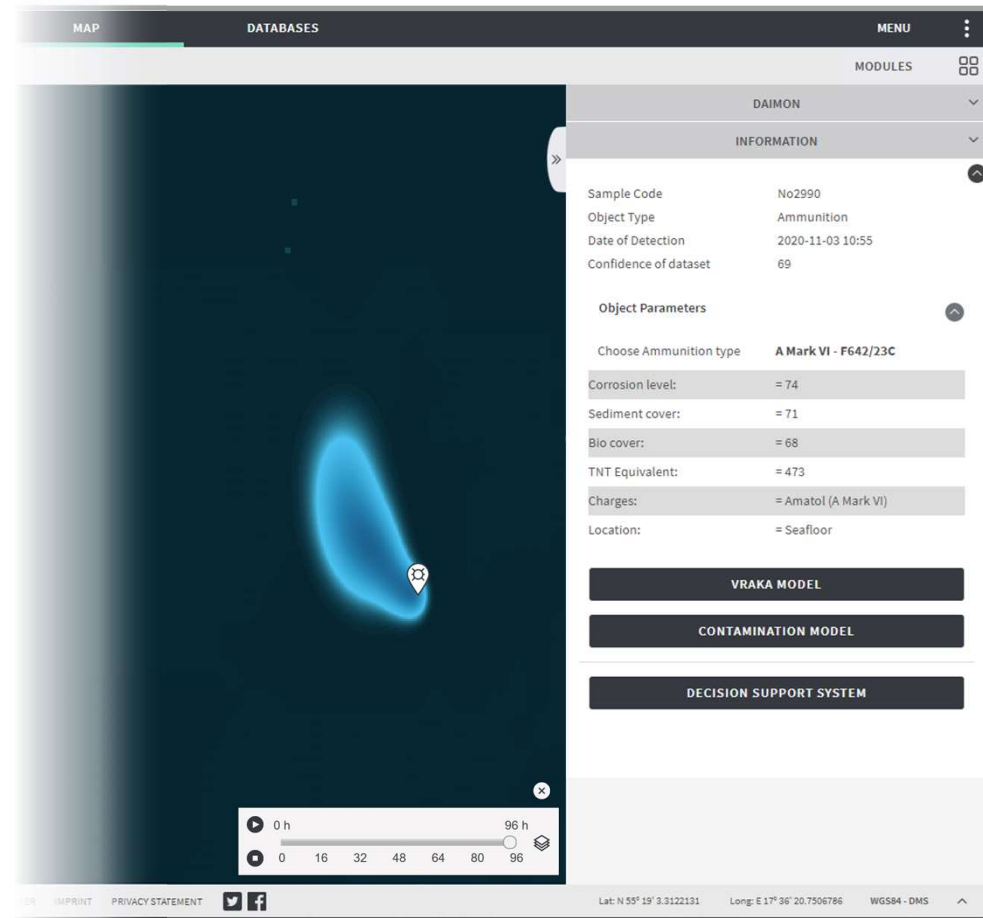
15

Dispersion modeling

Simulated release

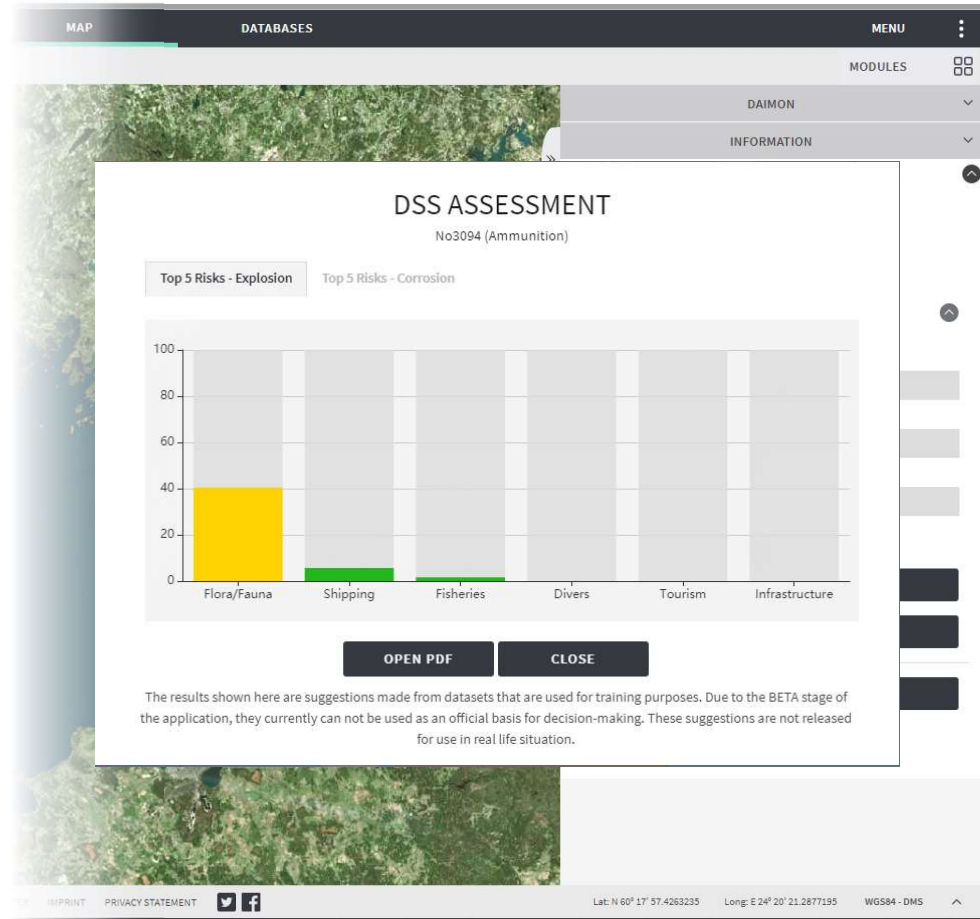
Advection-Dispersion

Shows flume of released substance

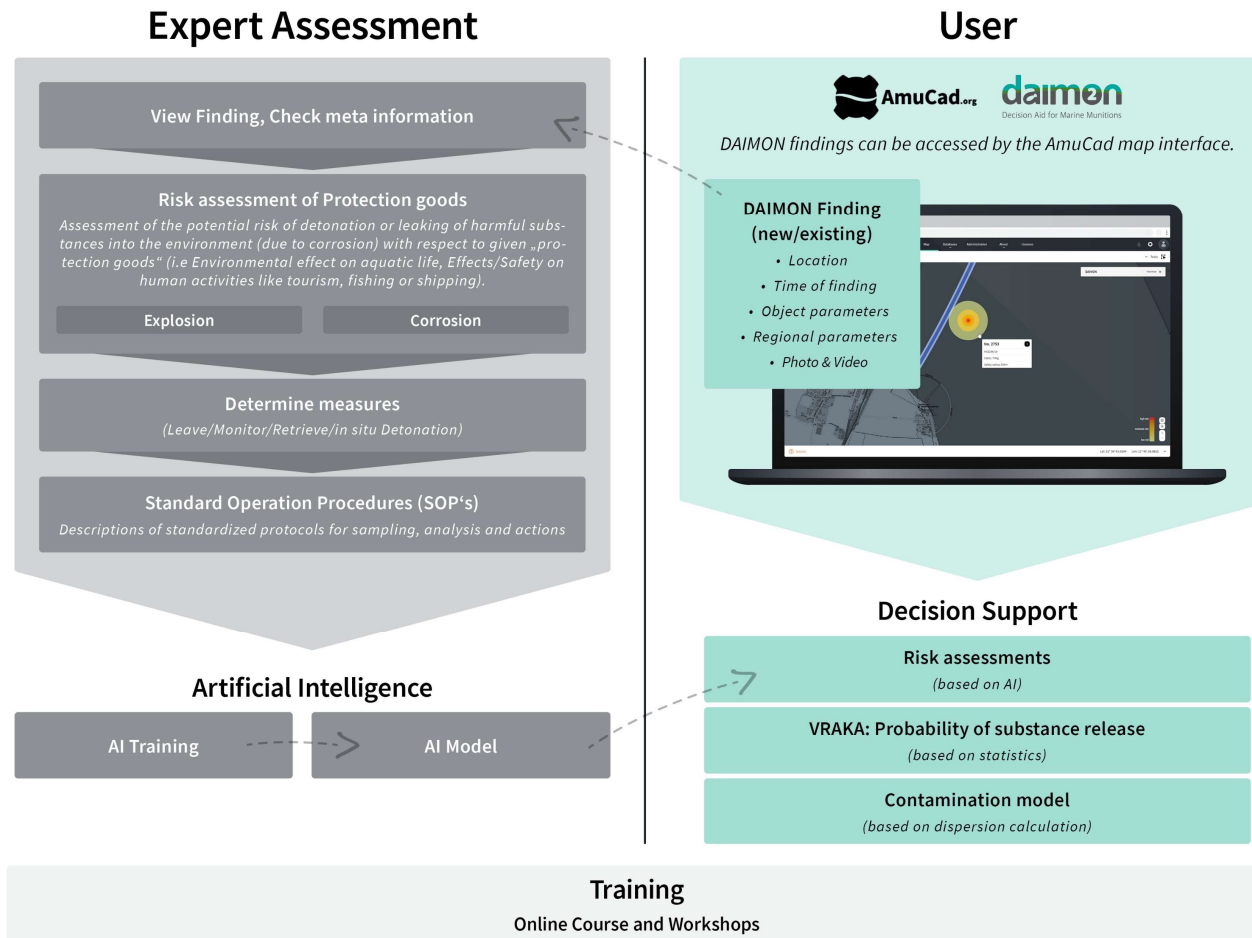


Risk to protection goods (AI)

- Protection goods
- Explosion / Corrosion
- Artificial Intelligence
- Training dataset
- Risk Assessments
- Measures
- Standard Operating Procedures



Risk to protection goods (AI)



Summary of all information

Risk assessments

Measures

Standard Operating Procedures

PDF – printable report

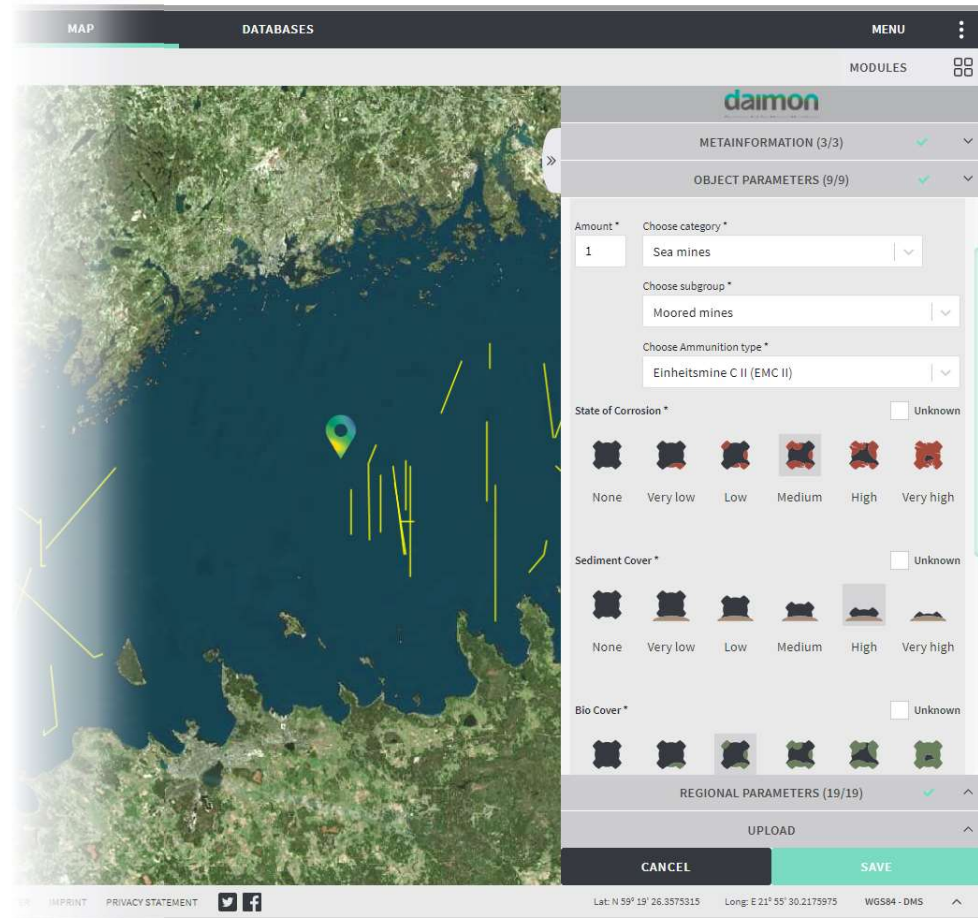


Finalizing stages

Currently in Beta Version

Contamination Model

Risk-assessments to train the AI



daimon

Decision Aid for Marine Munitions
PRACTICAL APPLICATION

 **Interreg**
Baltic Sea Region



EUROPEAN UNION
EUROPEAN
REGIONAL
DEVELOPMENT
FUND

Kiel Munitions Clearance Week : 6 – 10 September, Kiel, Germany

www.munitionclearanceweek.org

jwendt@egeos.de

svanderwulp@egeos.de

www.AmuCad.org

www.daimonproject.com

