



Claus Böttcher
German Programme
on Underwater
Munitions

Online | 15-06-2021



The German Program on Underwater Munitions

Impact of Science by DAIMONs on Underwater Munitions' policy –Examples!

Claus Böttcher

www.munition-im-meer.de



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Who is speaking



- Environmental Engineer with State Marine Protection Unit
- Managing Director of German cross-administration working group
- Co-Author of national and Baltic Sea reports

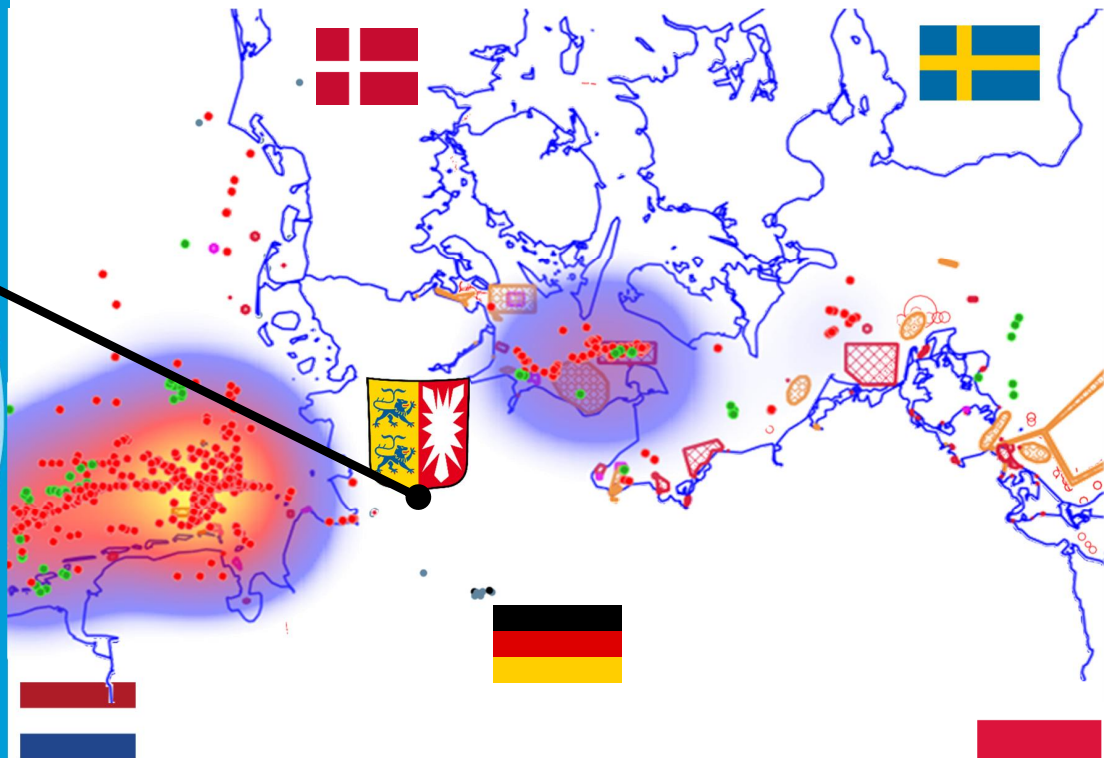
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The German Federal State with two coasts...



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Political targets for seas and oceans



HELCOM



OSPAR
COMMISSION

*Protecting and conserving the
North-East Atlantic and its resources*

Good environmental status by 2020



© German Life Saving Ass. – DLRG – www.cuxhaven.dlrg.de

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The German Program - multiple processes one objective -



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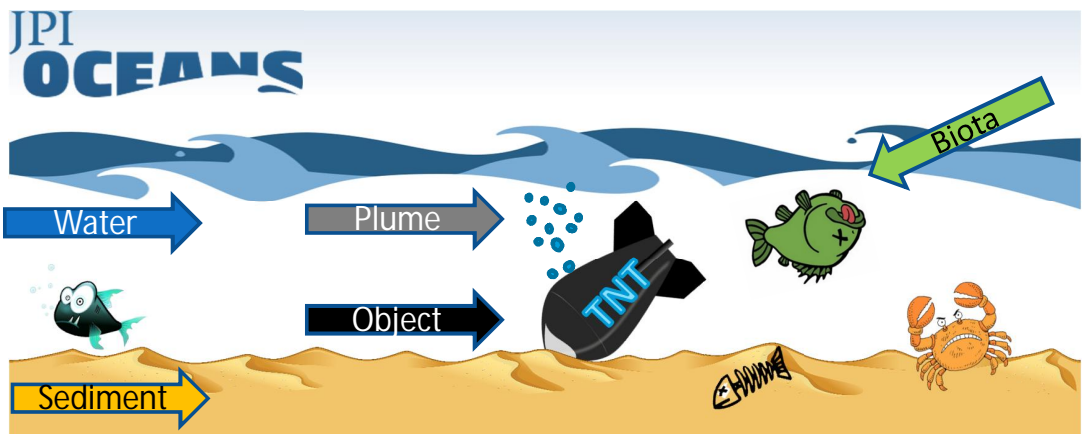
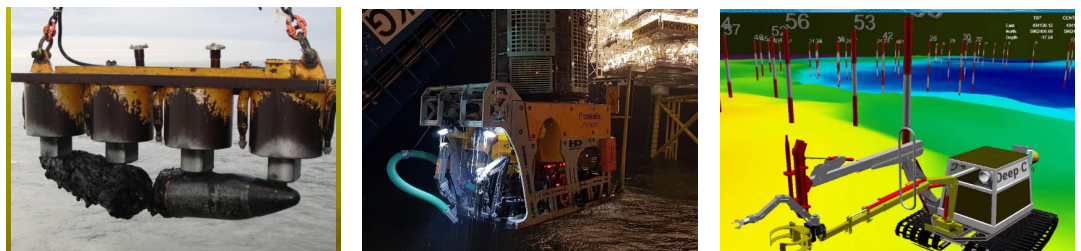


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Science - base of progress and evidence for decisions



Dr. Hainer Wackerbarth, Laserlabor

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European science matters!

North Sea
WRECKS

UDEM

BASTA

daimon
Decision Aid for Marine Munitions

daimon
Decision Aid for Marine Munitions

MODUM
TOWARDS THE MONITORING
OF DUMPED MUNITIONS THREAT

CHEMSEA
CHEMICAL MUNITIONS
SEARCH & ASSESSMENT

Interreg
North Sea Region
NSW
European Regional Development Fund

EUROPEAN UNION

Interreg
Baltic Sea Region
EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT
FUND

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German Project RoBEMM (2016-19) - Robotic remediation -



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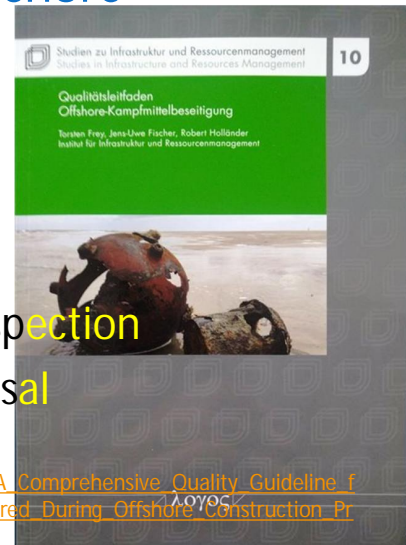


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Quality Guideline for UXO offshore operations

- A comprehensive Quality Guideline for the Treatment of Unexploded Ordnance Encountered During Offshore Construction Projects
- Definitions per phase
 - (I) Desk top study
 - (II) Site survey
 - (III) Individual MILCO inspection
 - (IV) Clearance and disposal of UXO identified



Web: https://www.researchgate.net/publication/333115488_A_Comprehensive_Quality_Guideline_of_the_Treatment_of_Unexploded_Ordnance_Encountered_During_Offshore_Construction_Projects/citation/download

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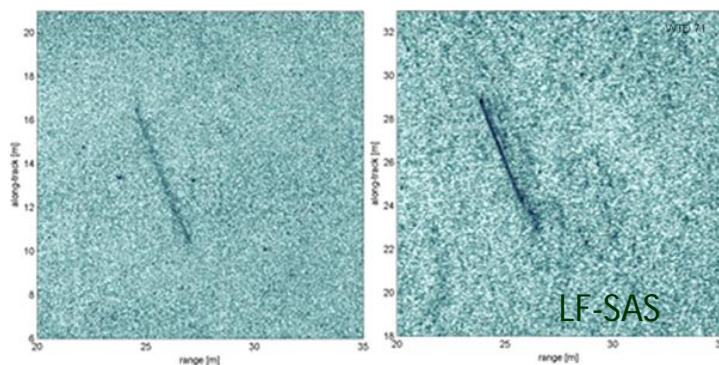
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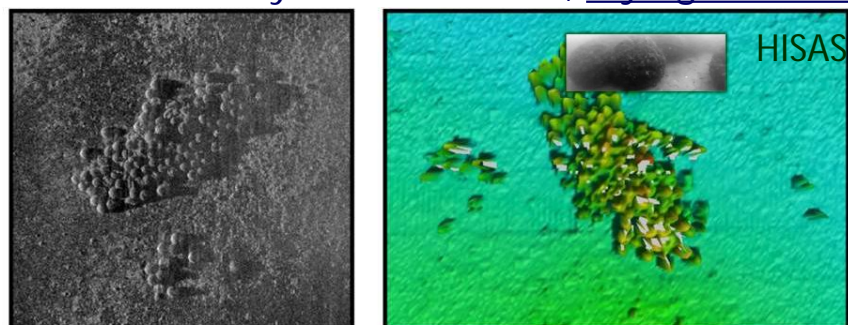


SONAR – UXO Detection / Classification

Torpedo, flush-buried in sediment



Approx. 70 Germany moored mines, laying on the sea bed



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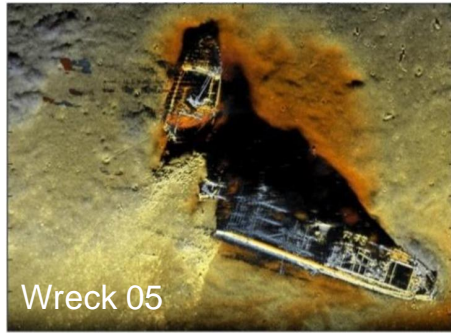


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Science matters: State of the art

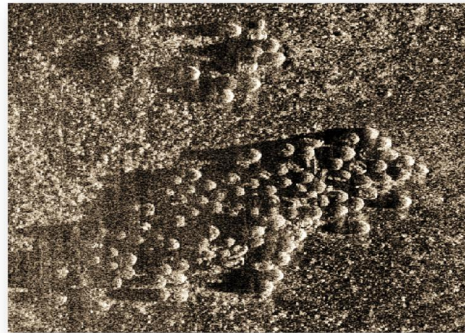


Wreck 05

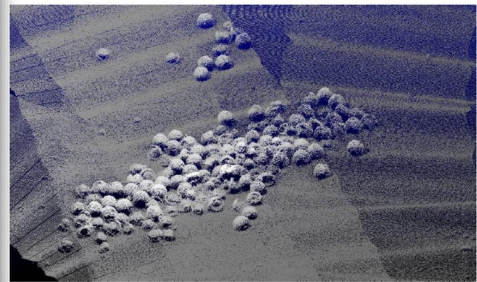


Courtesy FFI and Norwegian Coastal Administration

2012 – HUGHIN (SAS)



2020 – System EGGERS



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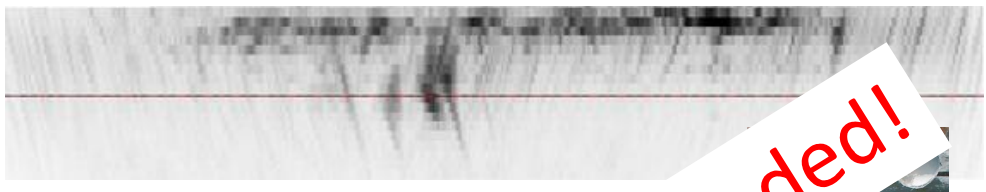
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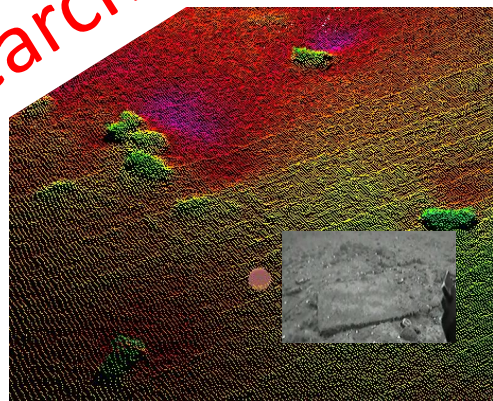
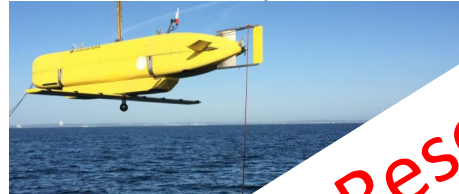


Limited Capabilities for Detecting / Classifying Buried Objects

BOSS Sonar



DD AUV SeaHorse (Atlas Elektronik)



Further Research needed!

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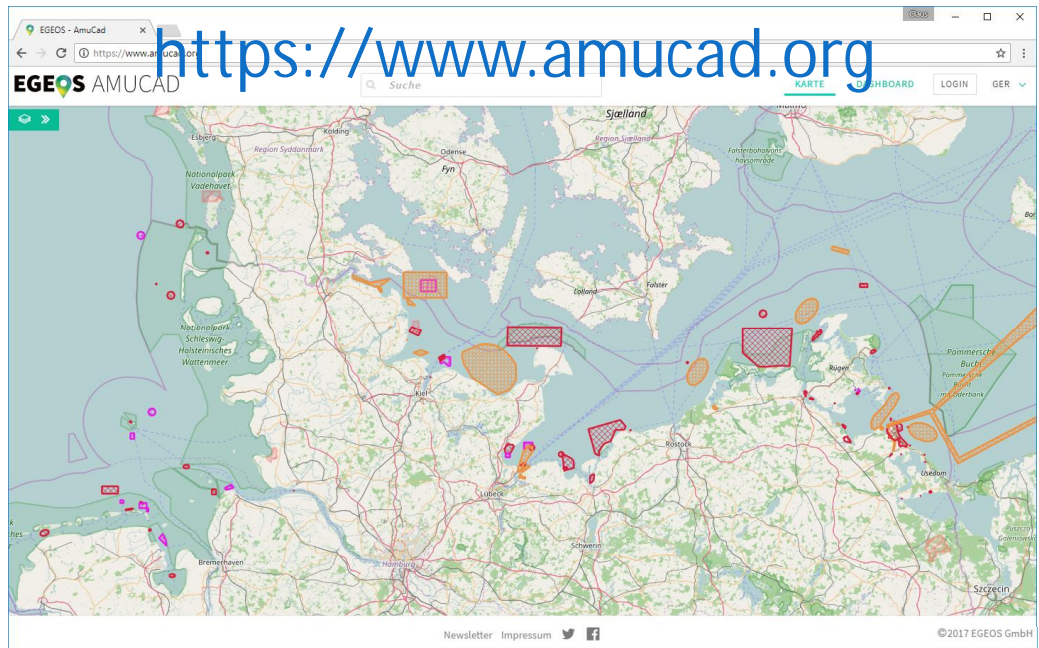


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Coastal economy

LÜBECK Kurbetrieb Travemünde

Ostseeküste Schleswig-Holstein in Zahlen 2019



Übernachtungen in
Beherbergungsbetrieben
ca. 28,137 Mio. p.a.



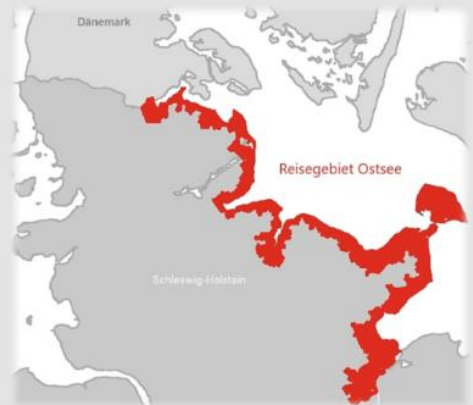
Touristische Umsätze
Übernachtungsgäste
2.262,5 Mio. €



touristisches Einkommen
von 1.982,1 Mio. €
Beschäftigte 83.130



Mehrwert- und Einkommensteuer
387,9 Mio. € bei
Bruttoumsatz 4,2 Mrd. €



Baltic Sea Coast – State of Schleswig-Holstein

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German Federal Parliament, Mai 2021



FDP und Grüne wollen Munitionsaltlasten in den Meeren bergen



Deutscher Bundestag
19. Wahlperiode

Drucksache 19/26339
01.02.2021

**ACCEPTANCE
RECOMMENDED**

Antrag
der Fraktionen FDP und BÜNDNIS 90/DIE GRÜNEN

Munitionsaltlasten in den Meeren bergen und umweltverträglich vernichten

Deutscher Bundestag
19. Wahlperiode

Drucksache 19/29283
04.05.2021

Der Bundestag wolle bes:

I. Der Deutsche Bund

Auf dem Meeresboden de
ca. 1,6 Millionen Tonnen
1,3 Millionen Tonnen kor
zen in der Ostsee. Hinzu
schen Meerestierweissen.
kann Beschädigung und die
wurde von Bundes- und
gegangen. Jährlich neu
einen immensen Finanz
sich seit den 1990er Jahr
Einnah der Gewässer. Von
rbarkeit von Menschen u

Antrag
der Fraktionen der CDU/CSU und SPD

Adopted

Verantwortungsbewusster Umgang mit Kampfmitteln in Nord- und Ostsee –
Technologien der maritimen Wirtschaft nutzen

Public Committee hearing

- for Environment and nuclear Safety (f)
- for Economy and Energy
- for Defence and for Education, Science and Technology Assessment

in deutschen Gewässern der Nord- und
den Tonnen Munition, davon konven-
tionelle Kampfmittel. In der Ostsee
ca. 300.000 Tonnen im Ostseebereich
chemische Kampfmittel. In der
meist chemische Munition (Säugerak-
tivität, davon rund 90 Tonnen in der
der Ostsee wurden ca. 50.000 Tonnen
(Borboron-Bioten, Giftschmelze,
wässern. Diese gefährlichen Kriegs-

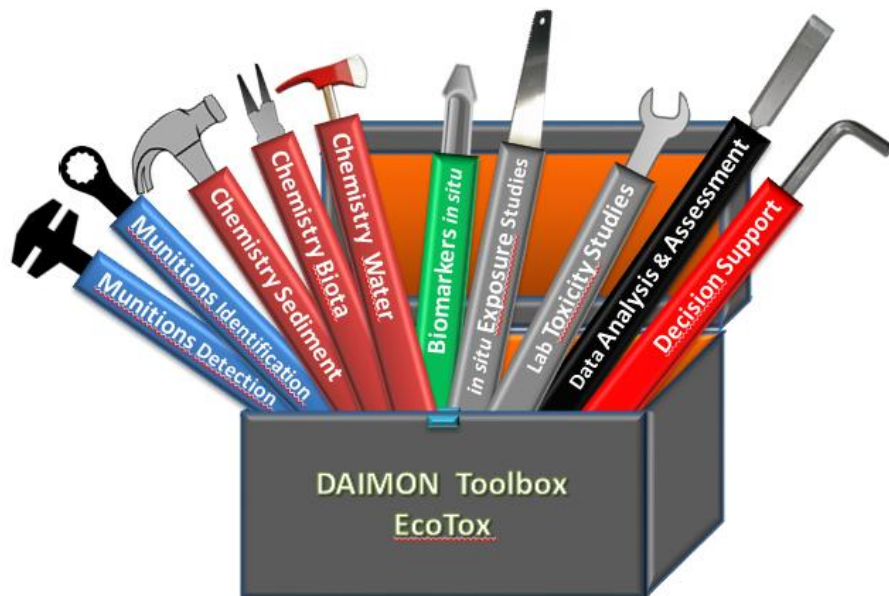
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From science to policy



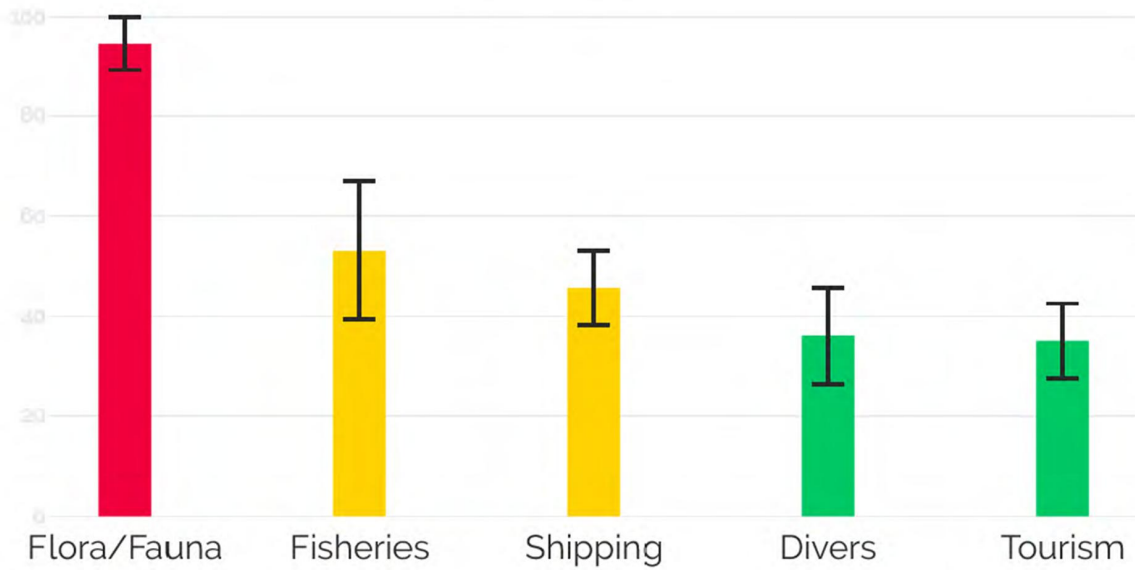
daimon

Decision Aid for Marine Munitions

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DSS ASSESSMENT

UI-5929/98



OK

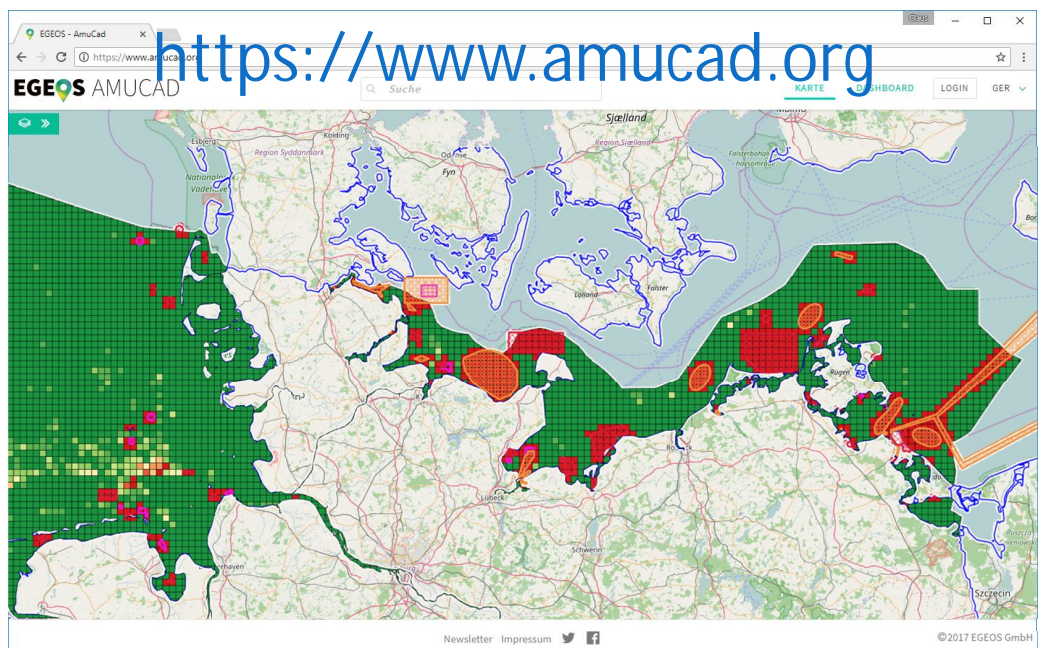


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Protecting nature – maintain human future



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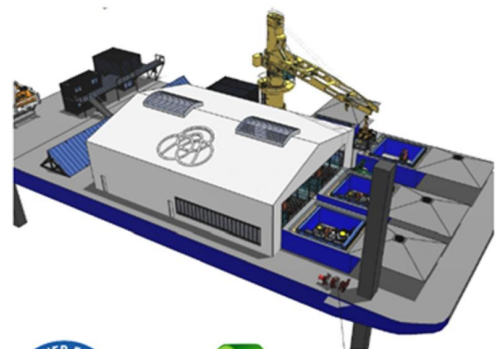
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Dissemination & Progress



JPI
OCEANS

Disintegration and
high temperature
incinerations
directly at sea



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Co-ordinated approach



Image: Seppo Leinonen <http://www.seppo.net/e/aboutseppo> (c)HELCOM, 2018

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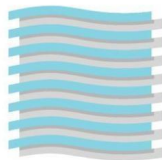
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Keys for progress

JPI
OCEANS



BSPC | Baltic Sea Parliamentary Conference



Join / contribute to

- *HELCOM-Expert Network SUBMERGED*
- *JPI-O Knowledge Hub*
- *Parliamentary hearings*

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