GSEU DAY

GEOLOGICAL SERVICE FOR EUROPE

COASTAL VULNERABILITY

&

OFFSHORE WINDFARM SITING

Sytze van Heteren (TNO)

& the Coastal Vulnerability and Offshore Windfarm Siting Group

Funded by the European Union

Coastal & Marine Geology: What Lies Beneath?

Not just descriptive,
also explanatory and predictive

Coastal & Marine Geology: Why Does It Matters?

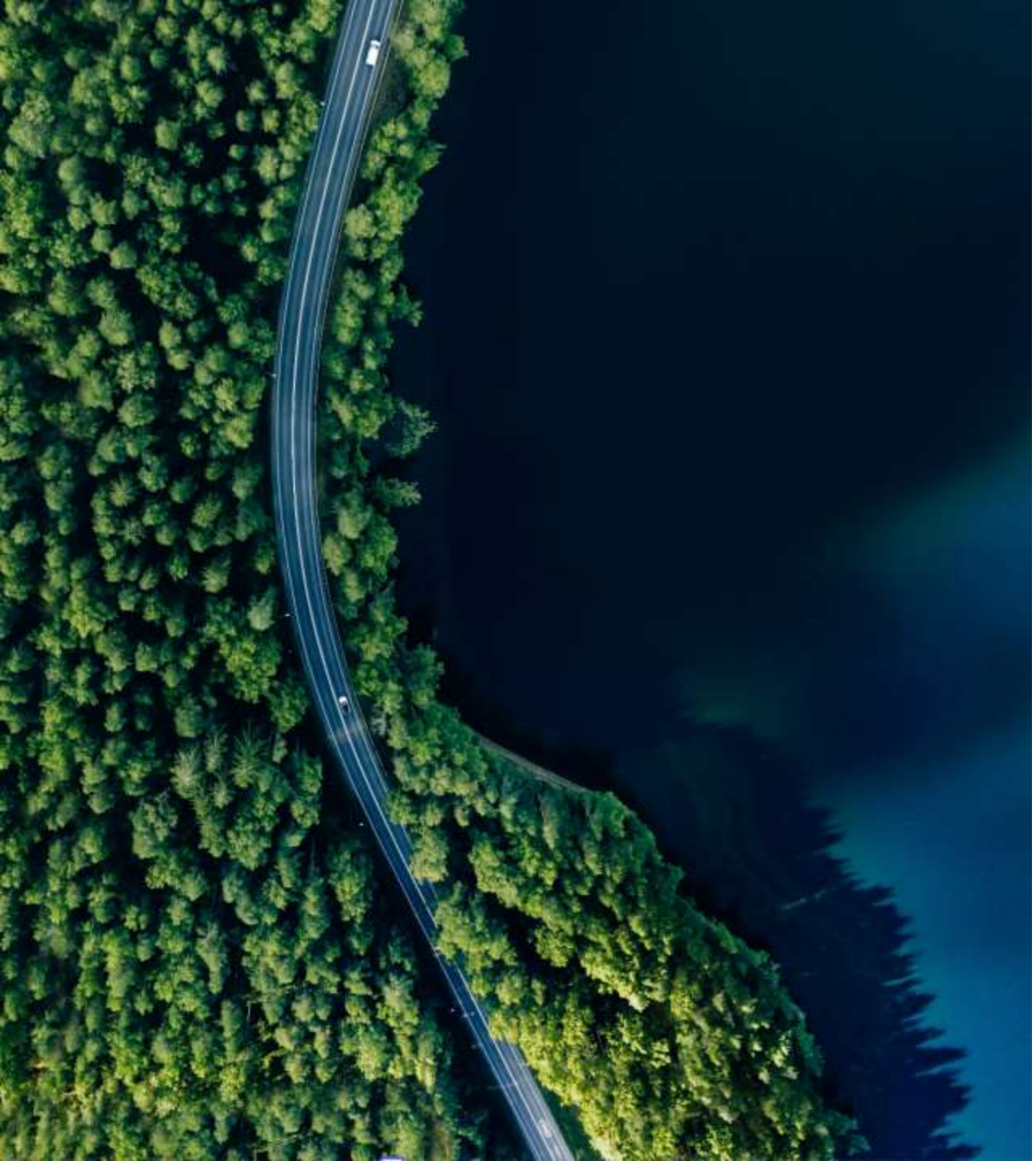
- Insufficiently compiled
- Seldom rasterized
- Not tailored to end use
- Not enough proofs of concept
- Not formally qualified

- Reduced sense of urgency needed
- Conflicting interests & governance

- Explanatory
- Predictive

- Helps reduce risk
- Helps reduce cost

Geological data, information and knowledge are underused in the coastal-vulnerability assessments and offshore-windfarm siting.



Coastal Vulnerability

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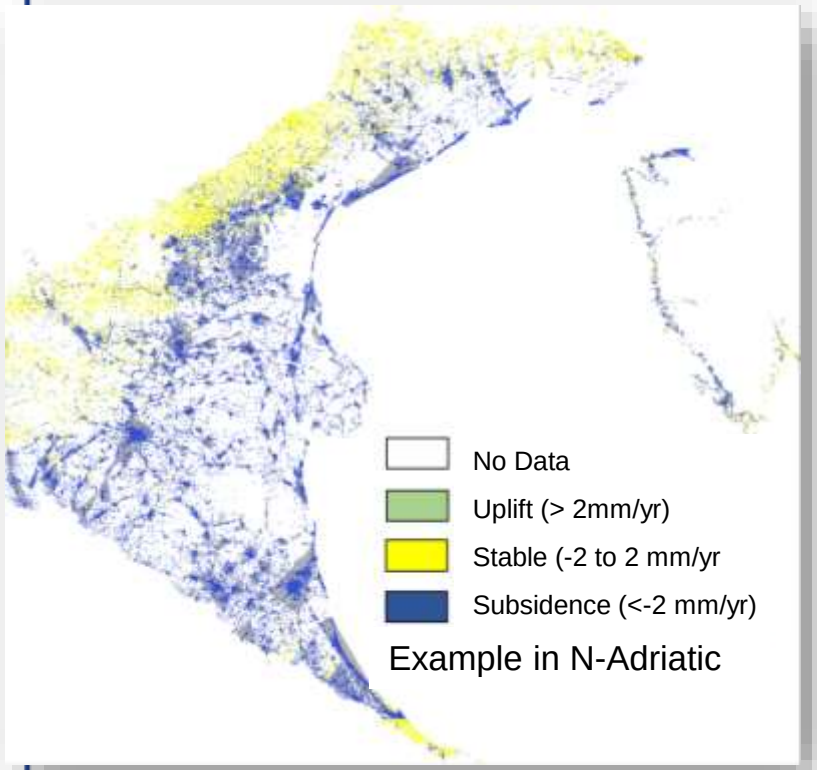
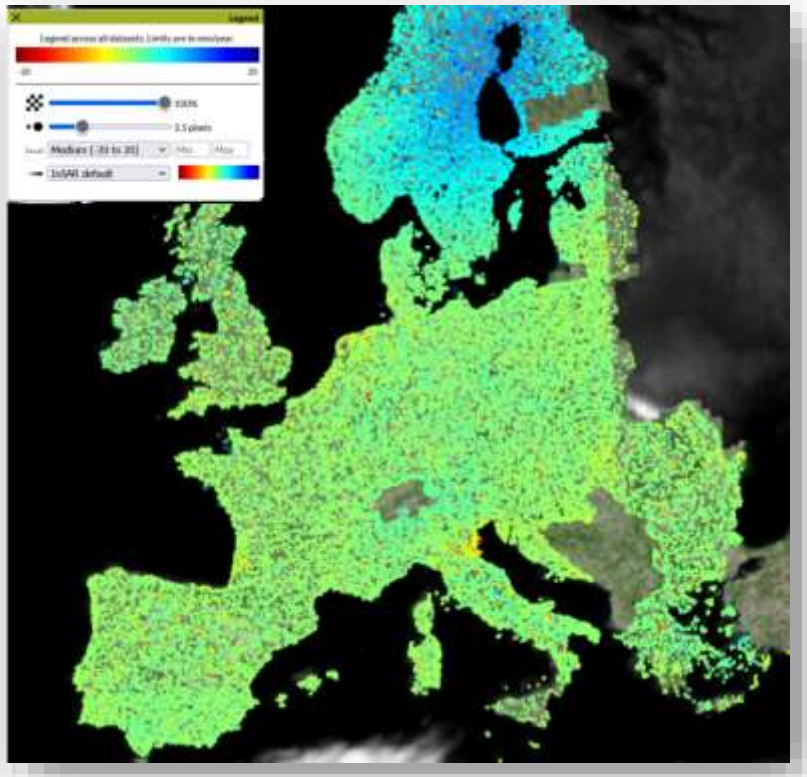
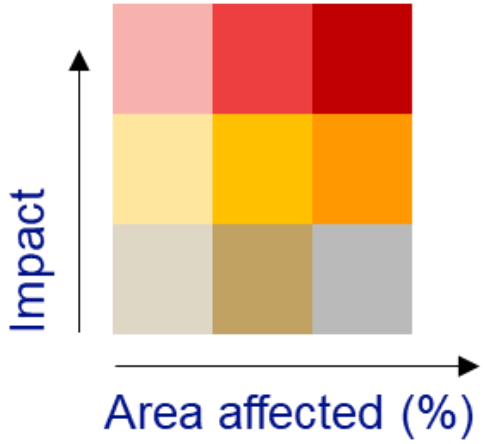
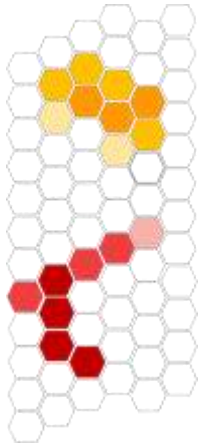
Coastal Vulnerability & Climate Change

Pan-European analysis of relative sea-level changes in Europe considering VGMs based on trends retrieved from the European Ground Motion Service (EGMS).









EMODnet
European Marine Observation and Data Network

Offshore Windfarm Siting

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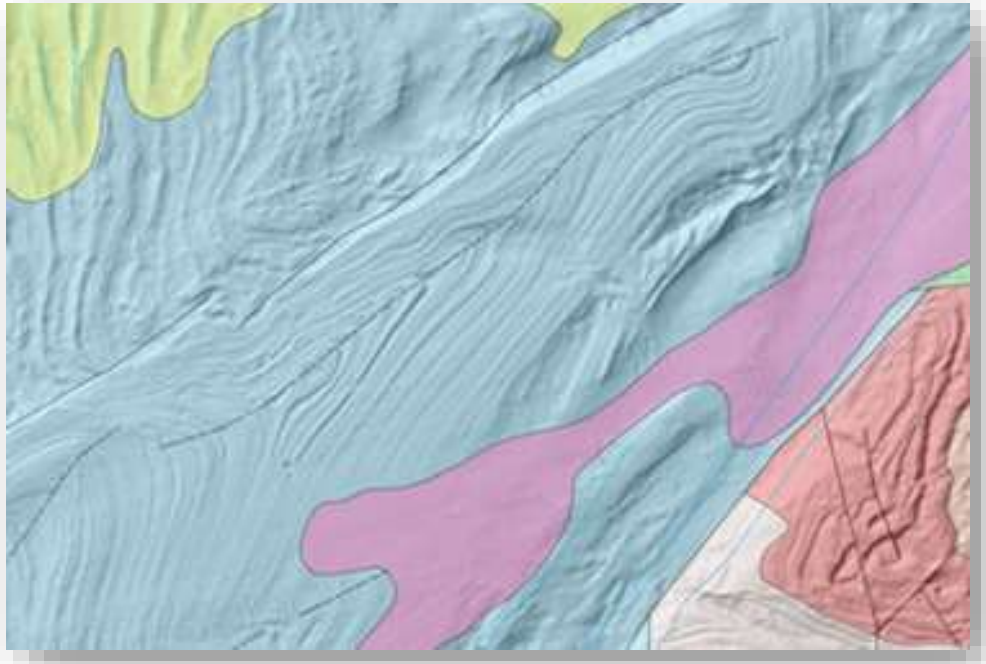
Suitability & Impact Assessment

Superficial and subsurface parameters influencing cost, stability and performance of windfarms

Sediment thickness and quality models to establish the availability of suitable aggregates.

Seabed Mapping for seabed anomalies such as seismic faults or geological seabed movements.

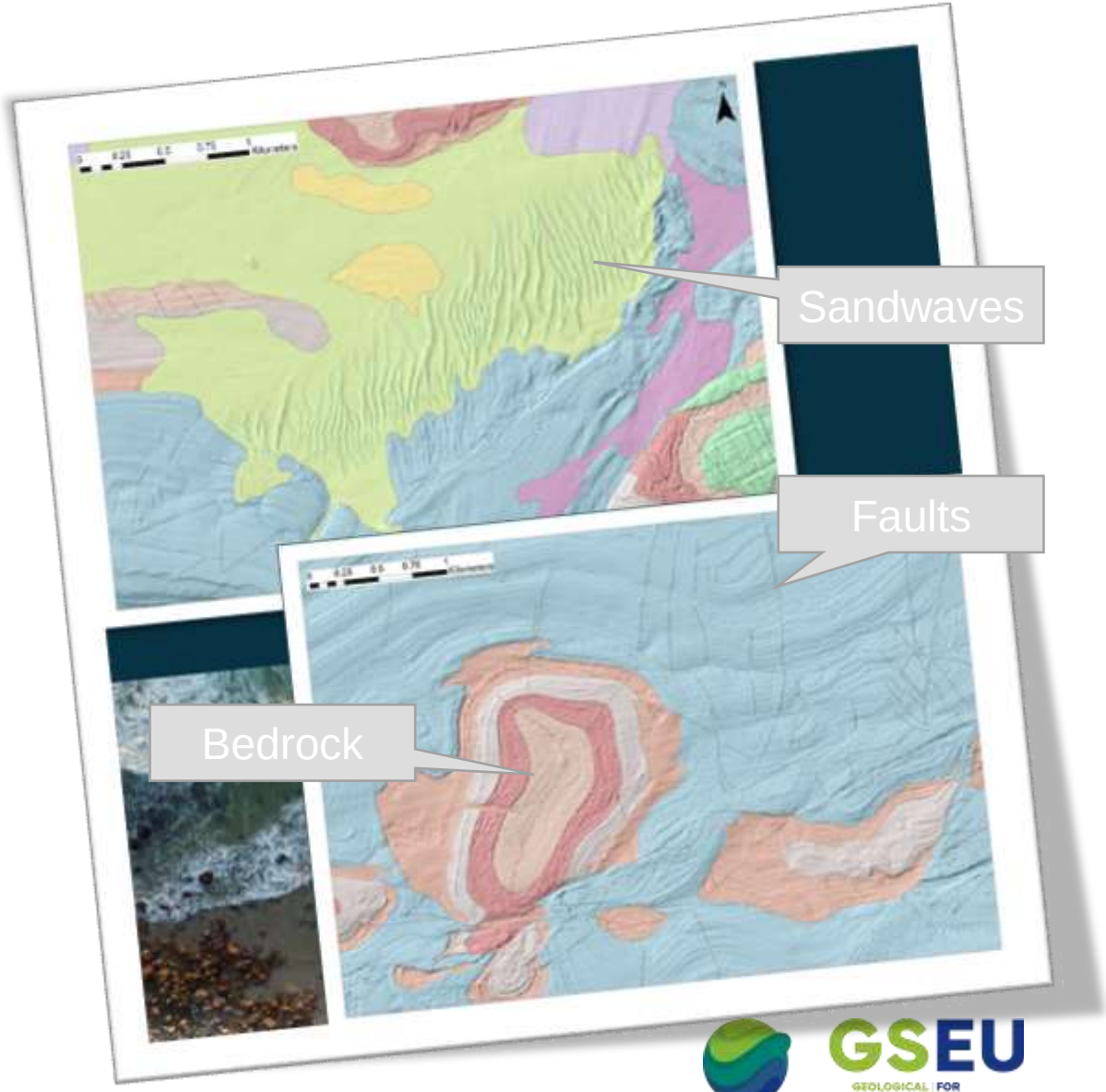


Source: https://www.windpowerengineering.com/

High Resolution Seabed Mapping

Create maps showing geological features using bathymetry data and any other available datasets.

Create secondary ‘traffic light’ maps.

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