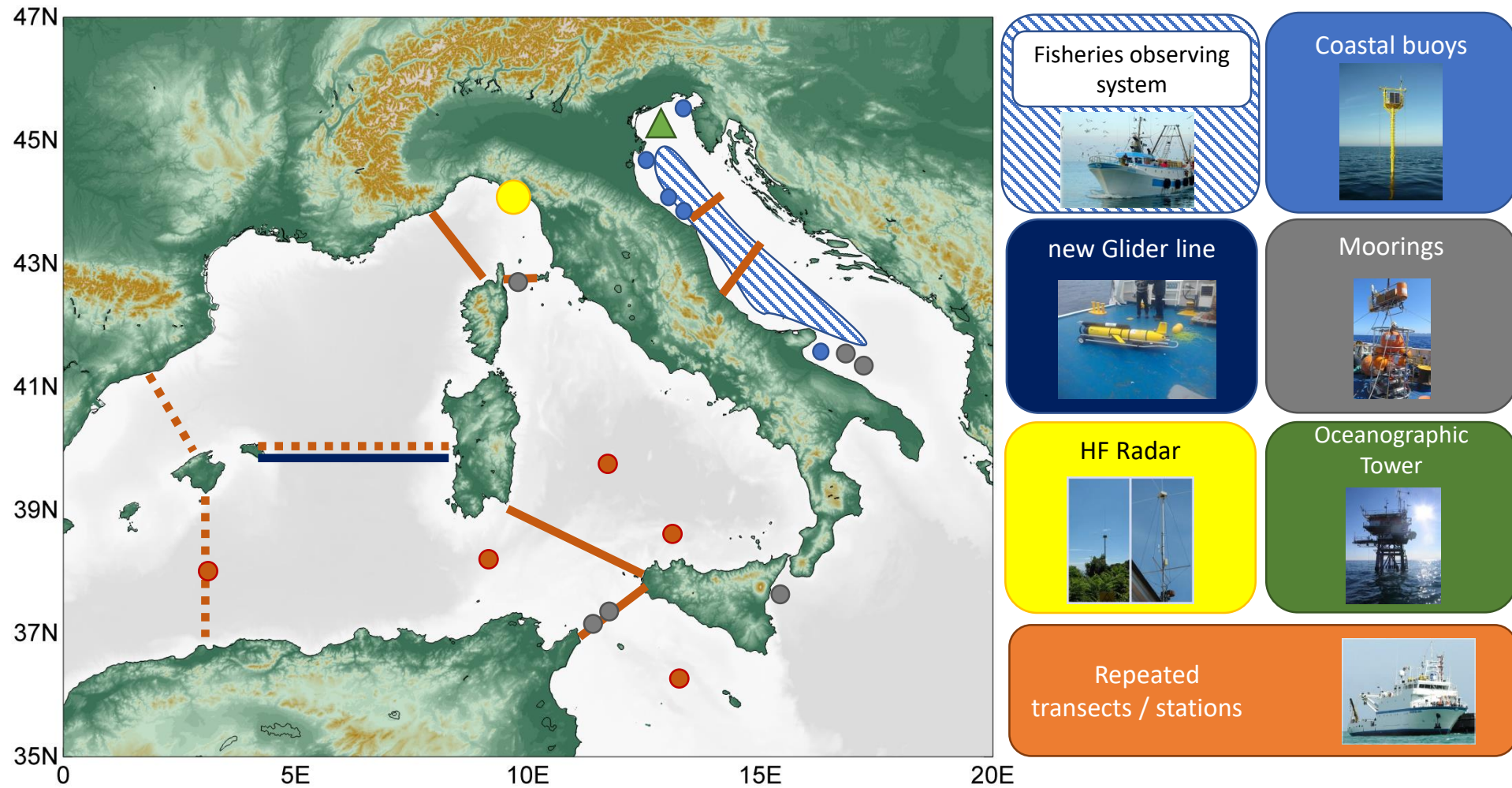


- integrated and transnational strategies of:
- long term observation from fixed stations
 - co-designed repeated surveys in response to events (either natural or anthropogenic)
 - 4D seafloor mapping to assess dynamic areas, environmental status, and (mostly unaware) human impacts

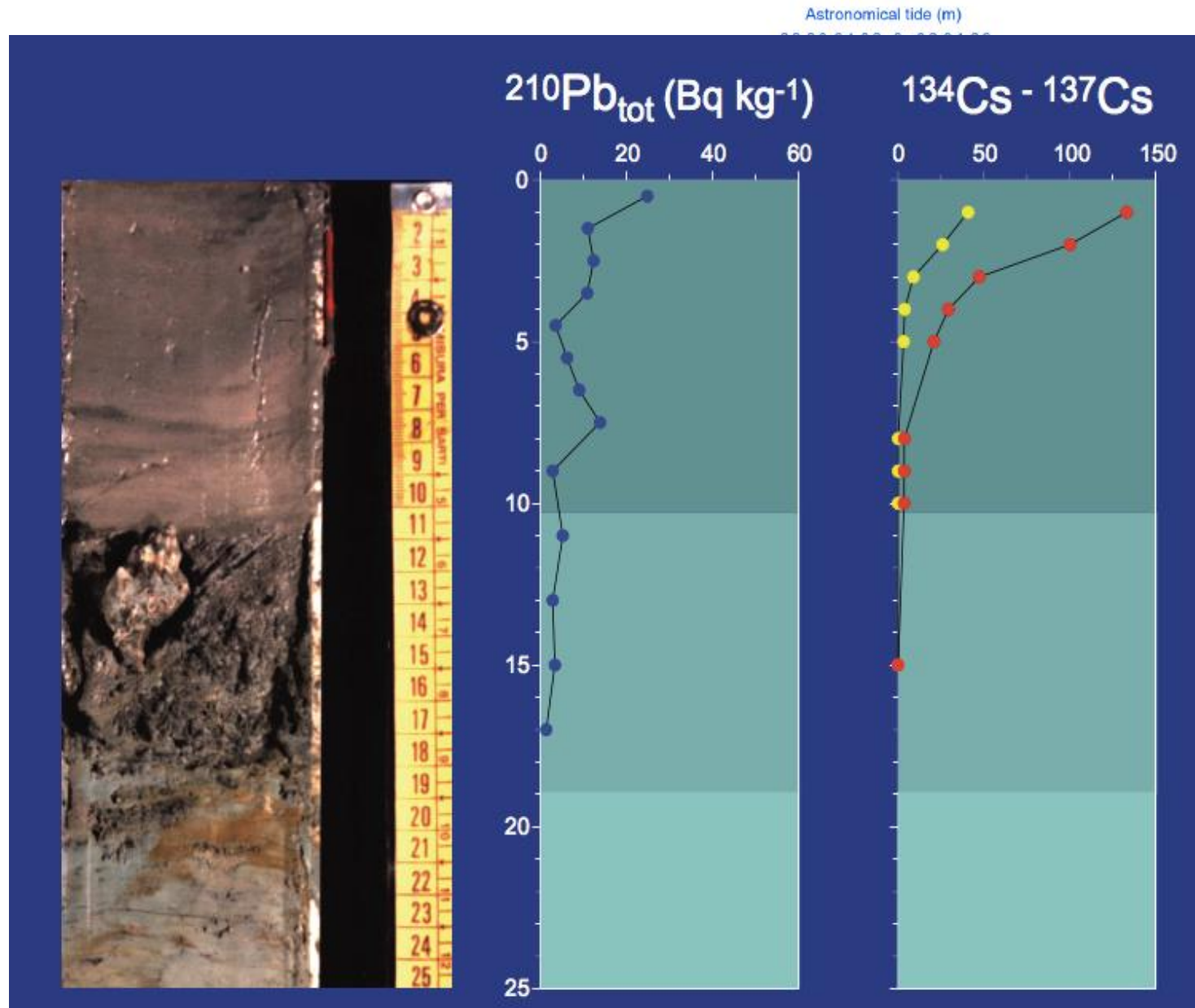
The logo for blueMed features the word "blue" in a dark blue, lowercase sans-serif font, followed by a stylized "M" symbol composed of three overlapping, curved lines in a lighter blue shade, and the word "Med" in the same dark blue, lowercase sans-serif font.

blueMed

Long term water-column observation (CNR Contribution)



An example from the modern Po delta



Maselli et al., 2020 Geology

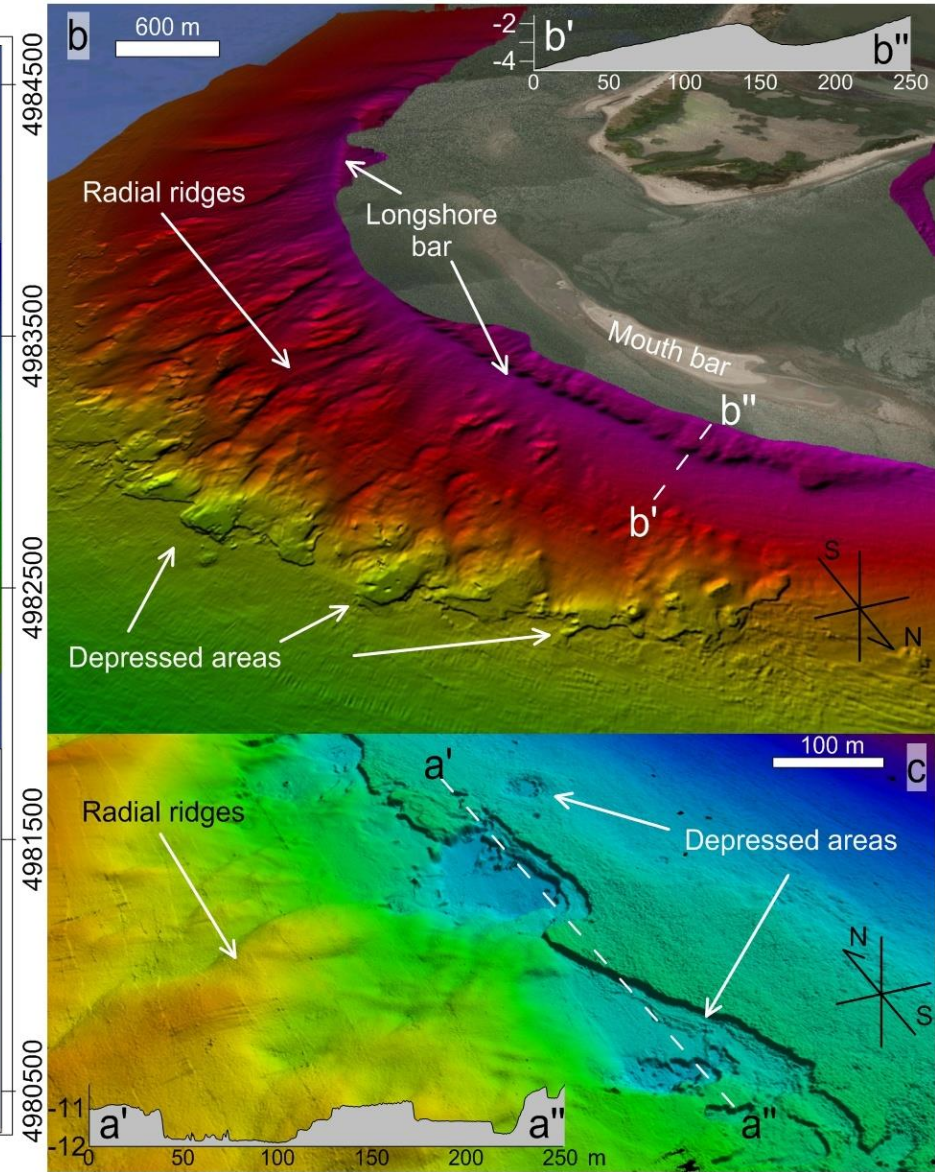
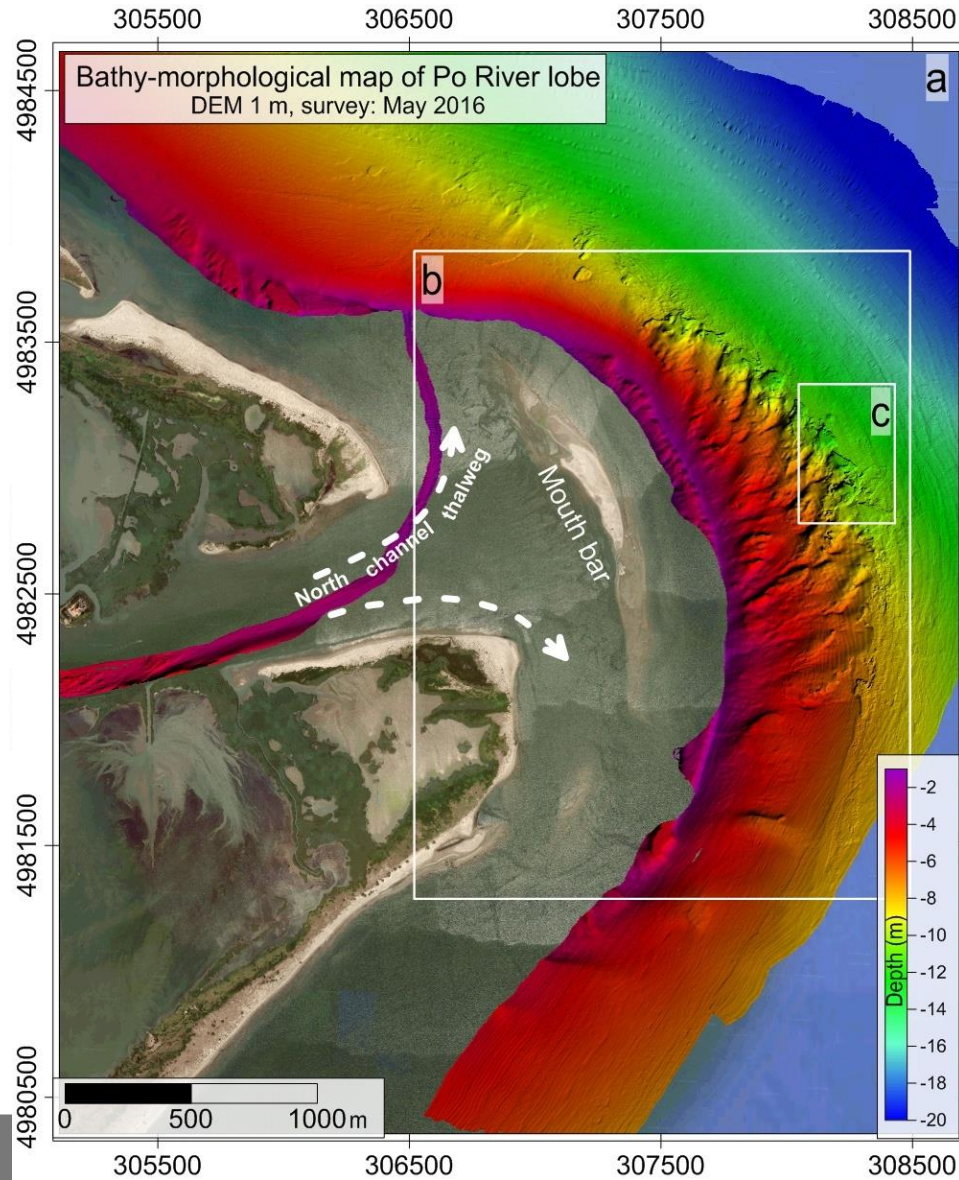
We need to understand the spatial dimension

- **1. The seafloor in 3D:** new technologies allow mapping with centimetric resolution
- **2. The seafloor in 4D:** we must identify the most dynamic areas where seafloor is rapidly transformed
- **3. Assaulting the obvious:** the Anthropocene seafloor worldwide is heavily impacted but nobody seems to care

Sampling strategies to define the «status» of the seafloor and its evolution through time should take fully into account these facts

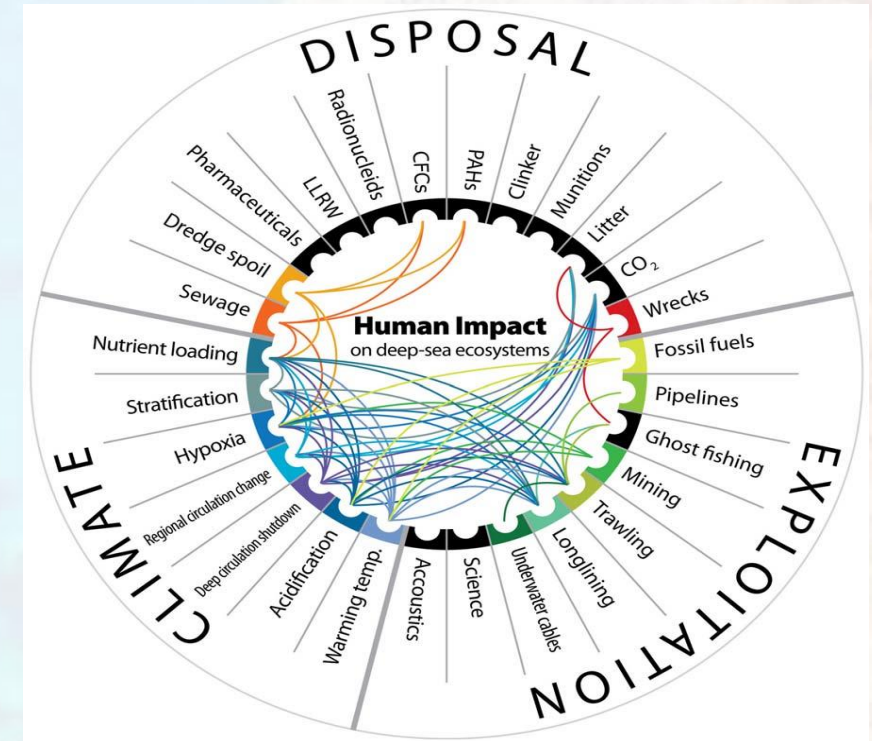
Ephemeral submarine landscapes in dynamic areas

Bosman et al., 2019
Trincardi et al., 2020



Gli usi (che non «vediamo») del fondale marino

- **Sfruttamento**
 - Materiali minerali
 - Pesca (a strascico)
- **Area di abbandono rifiuti**
 - Siti di dumping (legali e illegali)
 - Spazzatura diffusa
- **Interfaccia per altri sfruttamenti**
 - Fondazione di infrastrutture (piattaforme di perforazione o per energia «pulita»)
 - Base per i network globali (pipelines, cavi, fibra ottica)



Ramirez-Llodra et al., 2011

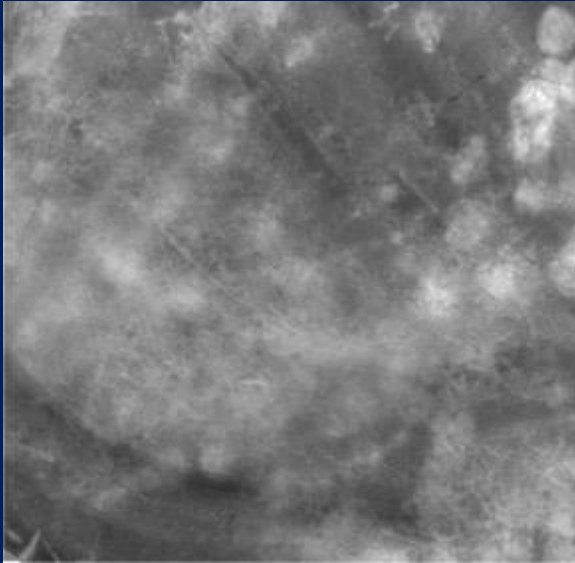
The Mediterranean “seascape” (which we need to map)



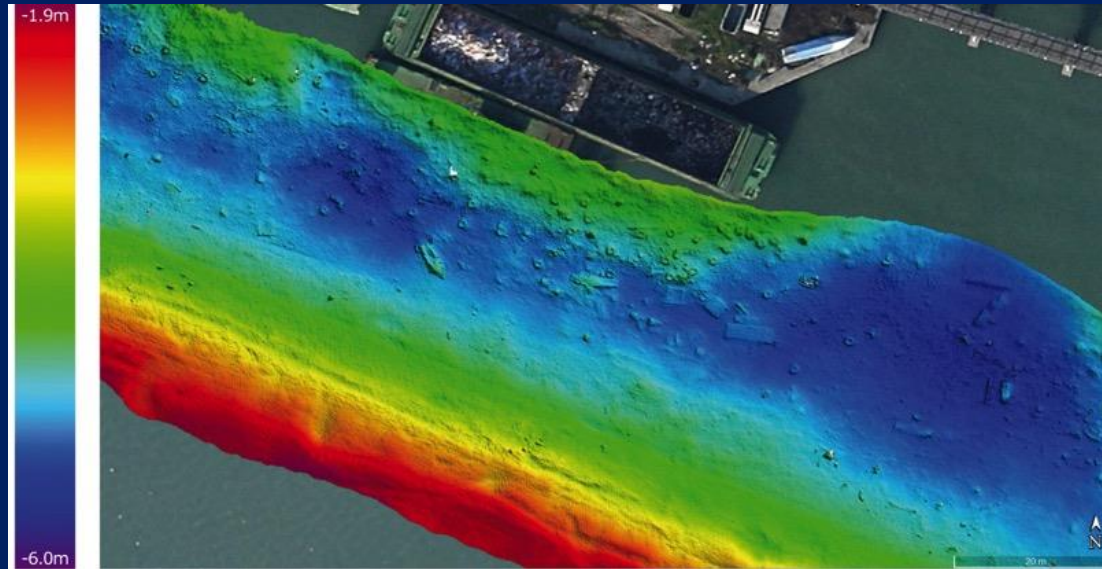
Sophisticated geophysical images (morphology and backscatter) of the seafloor show the equivalent of potholes and asphalt patches in the streets of Rome

Areas of illegal dumping on the continental slope off Gioia Tauro, Tyrrhenian Sea

Illegal dumps and littering on the sea floor



Chemical dumps in a trawling area on the continental shelf North of Milazzo, Sicily (100-130 m)



“Garbage” on the bottom of the Venice Lagoon
3-6 m water depth

Madricardo et al., 2019 Sci. Reports