HOW PERVASIVE HUMAN PRESSURES MODIFY THE "FACE OF THE DEEP" IN THE VENICE LAGOON, ITALY

Federica Foglini, Fantina Madricardo and the ISMAR TEAM
Institute of Marine Sciences CNR, Italy

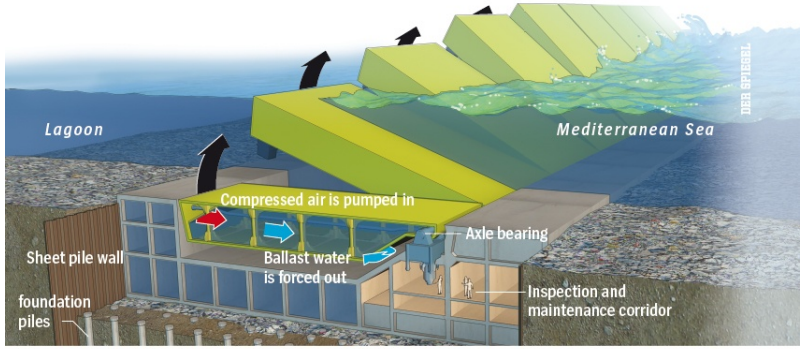
Canberra November 2018

THE LAGOON OF VENICE, ITALY

- It is the largest coastal transitional ecosystem in the Mediterranean (550 km2) km and, at the same time, one of the UNESCO World Cultural and Natural Heritage sites.
- It is characterized by a maze of channels (maximum depth exceeding 15 m), which cut across a large area of shallow waters (average depth of 1 m), fens and salt marshes.
- The morphology and extent of the Venice Lagoon has been **strongly influenced by humans** since remote times.

THE LAGOON OF VENICE IS IN RAPID EVOLUTION

- Major engineering interventions ongoing at the inlets (MoSE project) since 2003

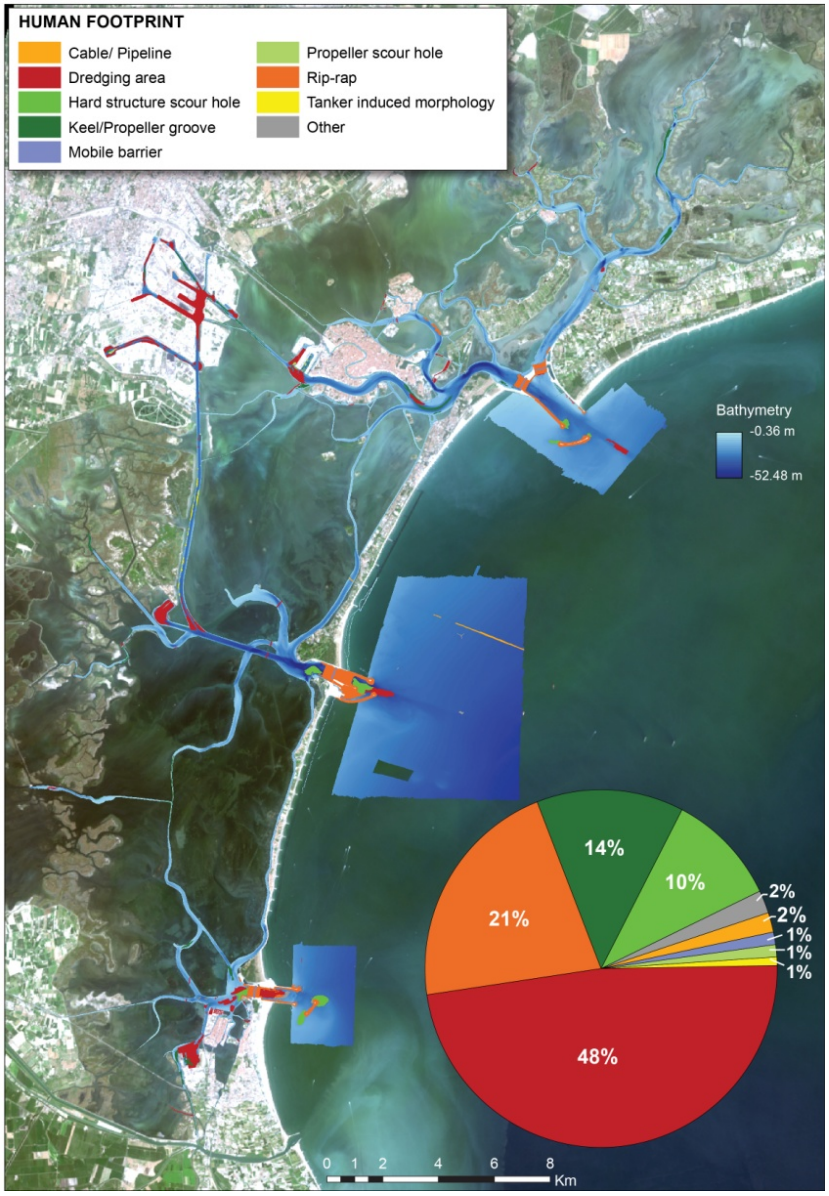


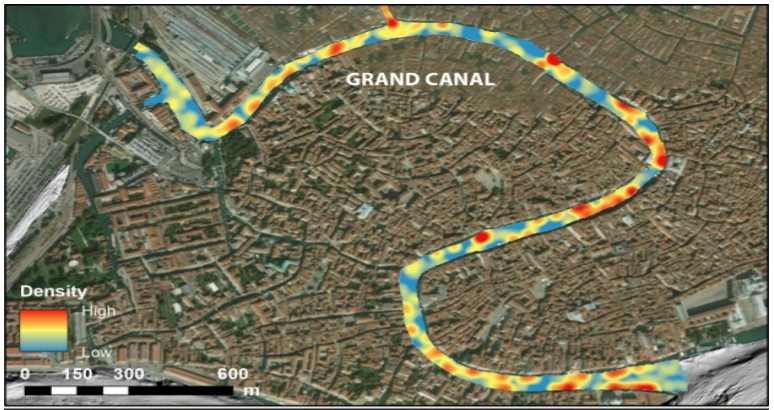
To protect the historical city of Venice from flooding

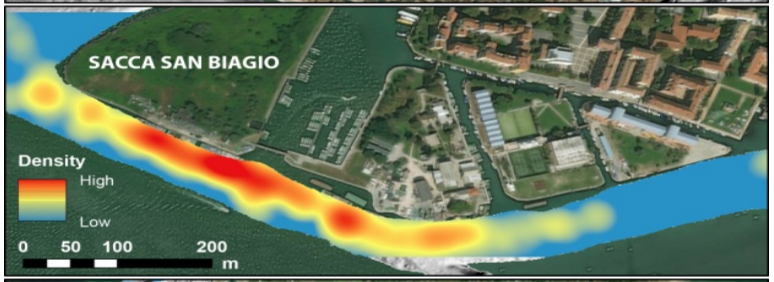
THE LAGOON OF VENICE IS IN RAPID EVOLUTION

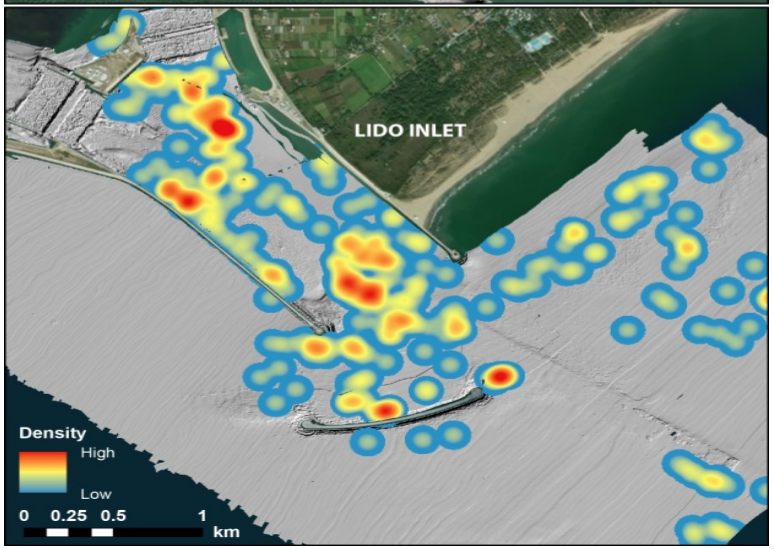
- Impact of large ship traffic inside the lagoon

MAP OF THE HUMAN FOOTPRINT ON THE SEAFLOOR



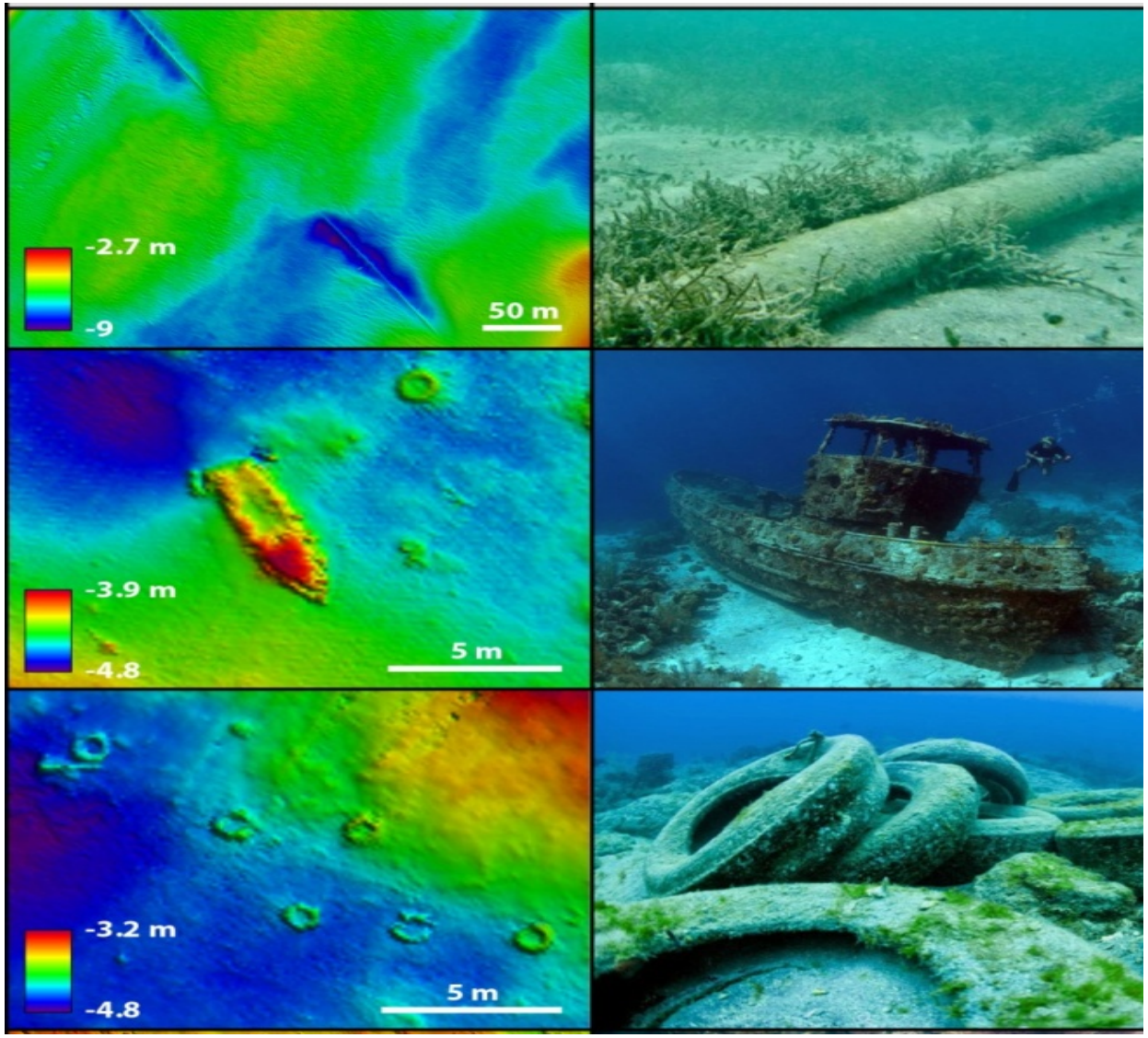






Madricardo et al. submitted to Sci.Rep.

MAP OF THE HUMAN FOOTPRINT ON THE SEAFLOOR

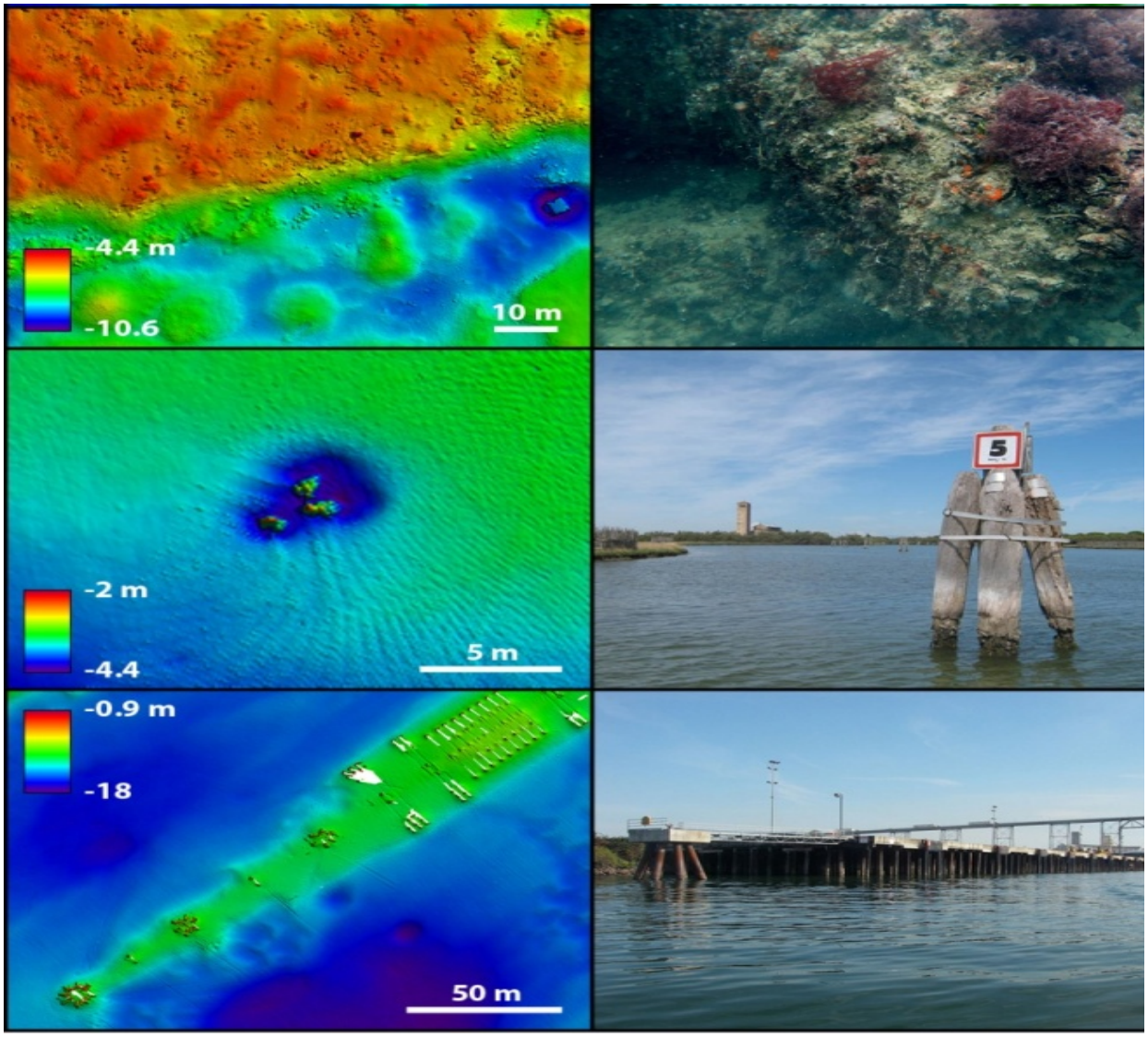


CABLES

WRECK

MARINE MACRO LITTER

MAP OF THE HUMAN FOOTPRINT ON THE SEAFLOOR



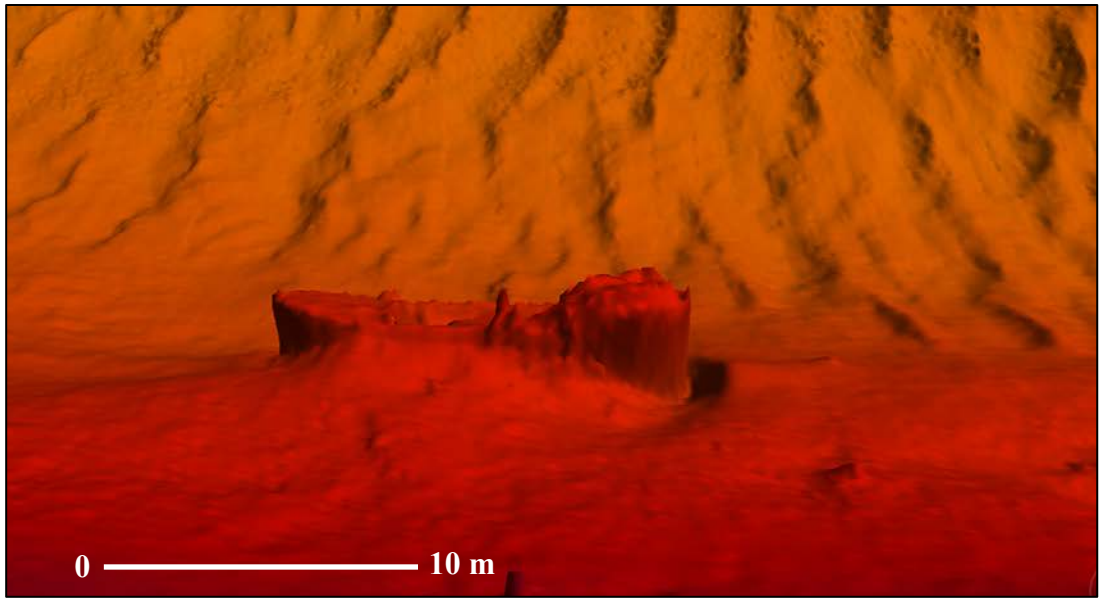
RIP RAP DEBRIS

BRICOLA

DOCK PILE

MAP OF THE HUMAN FOOTPRINT ON THE SEAFLOOR

UNDERWATER ARCHAEOLOGY



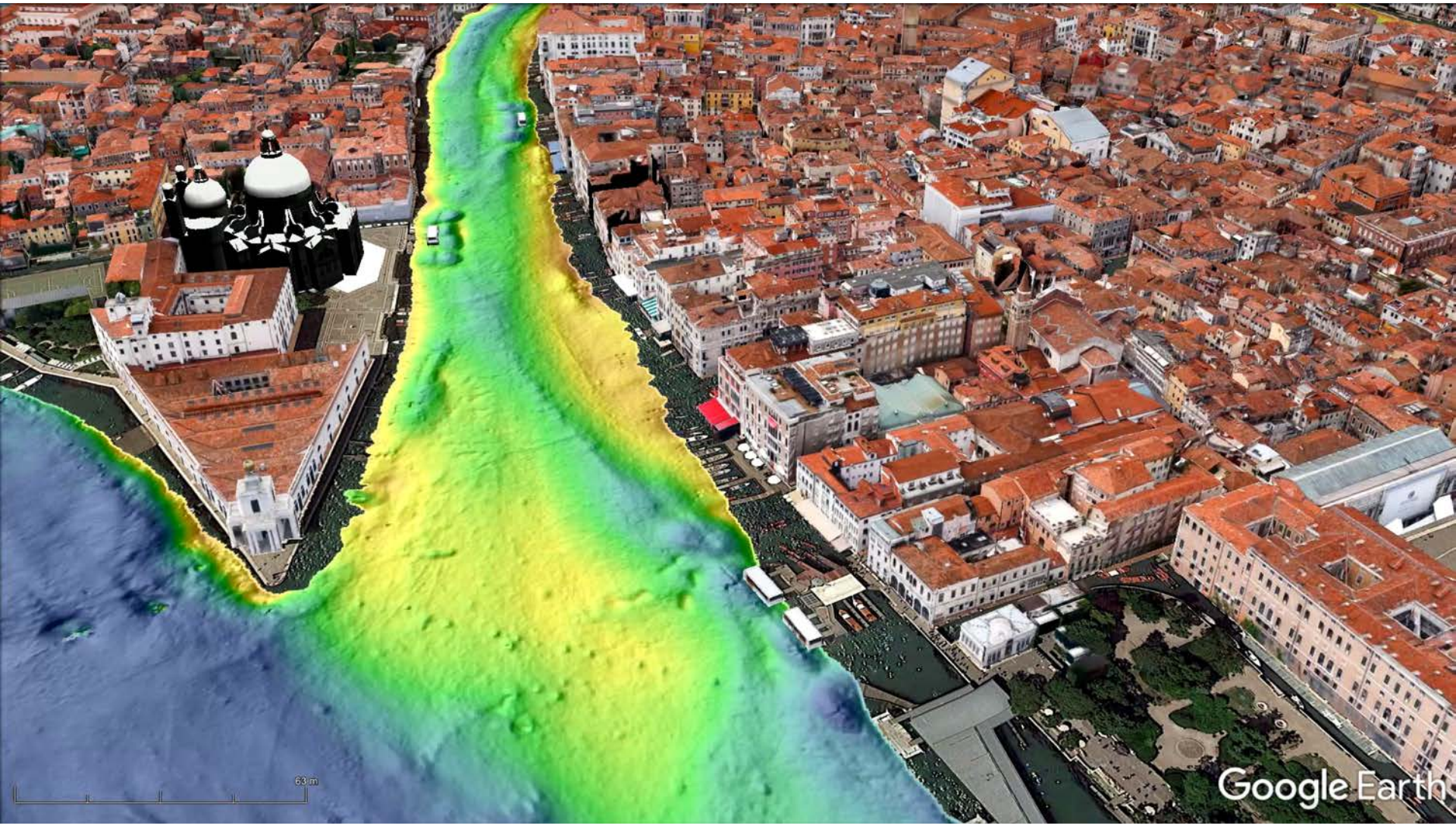
Wreck in the Canale delle Scoasse (Malamocco),
Grid resolution 20 cm, vertical exaggeration:7 x.

We are classifying all the possible interesting objects on the seafloor together with Soprintendenza Archeologia, Belle Arti e Paesaggio per il Comune di Venezia e Laguna

Data open and downloadable

Described in *Madricardo, F. et al. High resolution multibeam and hydrodynamic datasets of tidal channels and inlets of the Venice Lagoon. Sci. Data 4:170121 doi: 10.1038/sdata.2017.121 (2017)*

THANK YOU FOR YOUR ATTENTION!!

QUESTIONS??

MAP OF THE HUMAN FOOTPRINT ON THE SEAFLOOR