

# ASADA LAB.

## [Advanced Underwater Acoustic Imaging]

Center for Integrated Underwater Observation Technology

<http://unac.iis.u-tokyo.ac.jp/>

Underwater Acoustic Systems Engineering

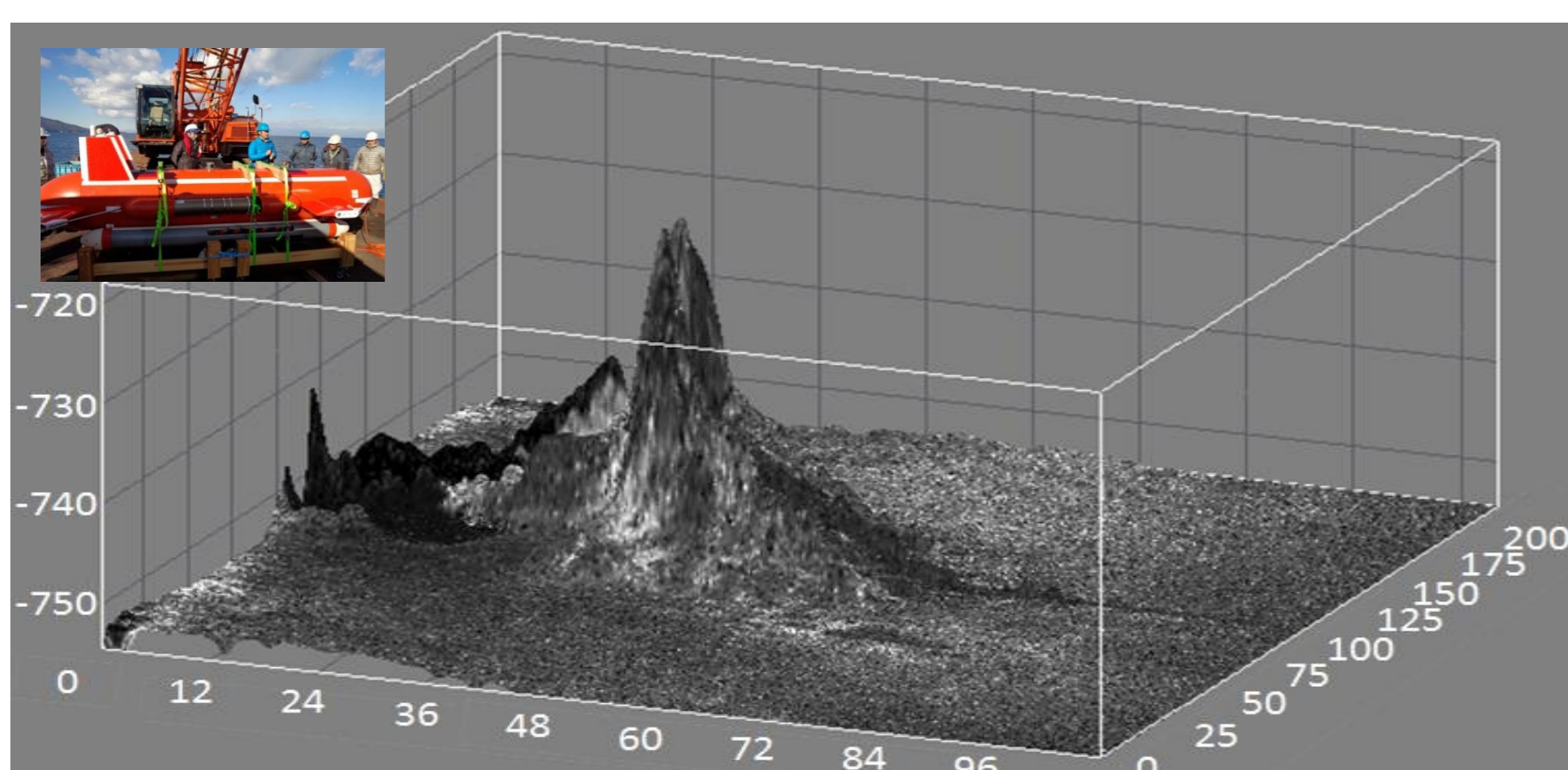
Department of Ocean Technology, Policy, and Environment, Graduate School of Frontier Sciences

## Advanced Underwater Acoustic Imaging

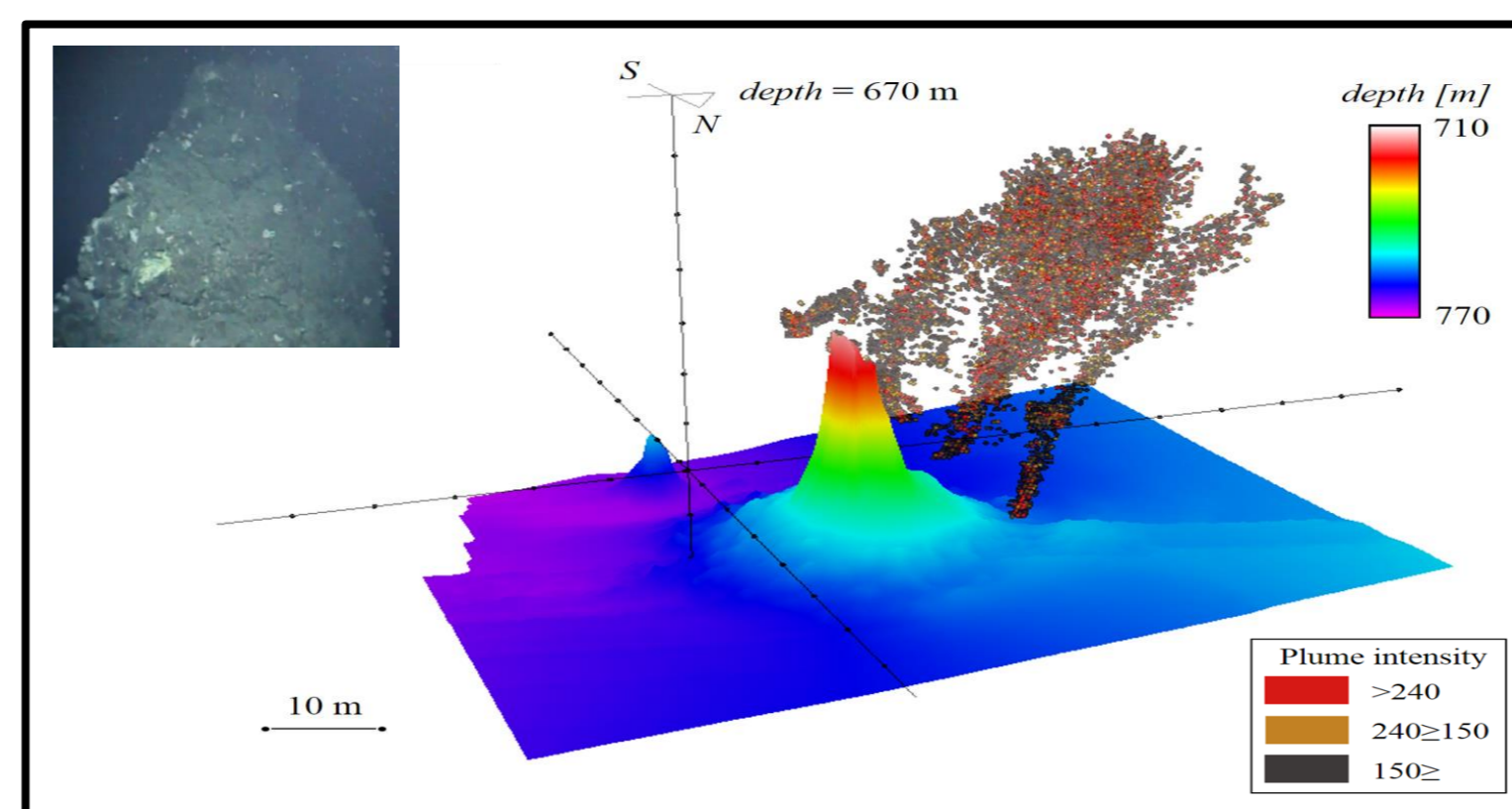
Visualization opens new idea for underwater world

Acoustic wave plays active roles in water. Asada Lab. has been developing a variety of advanced methods for measuring and imaging underwater phenomena with acoustics.

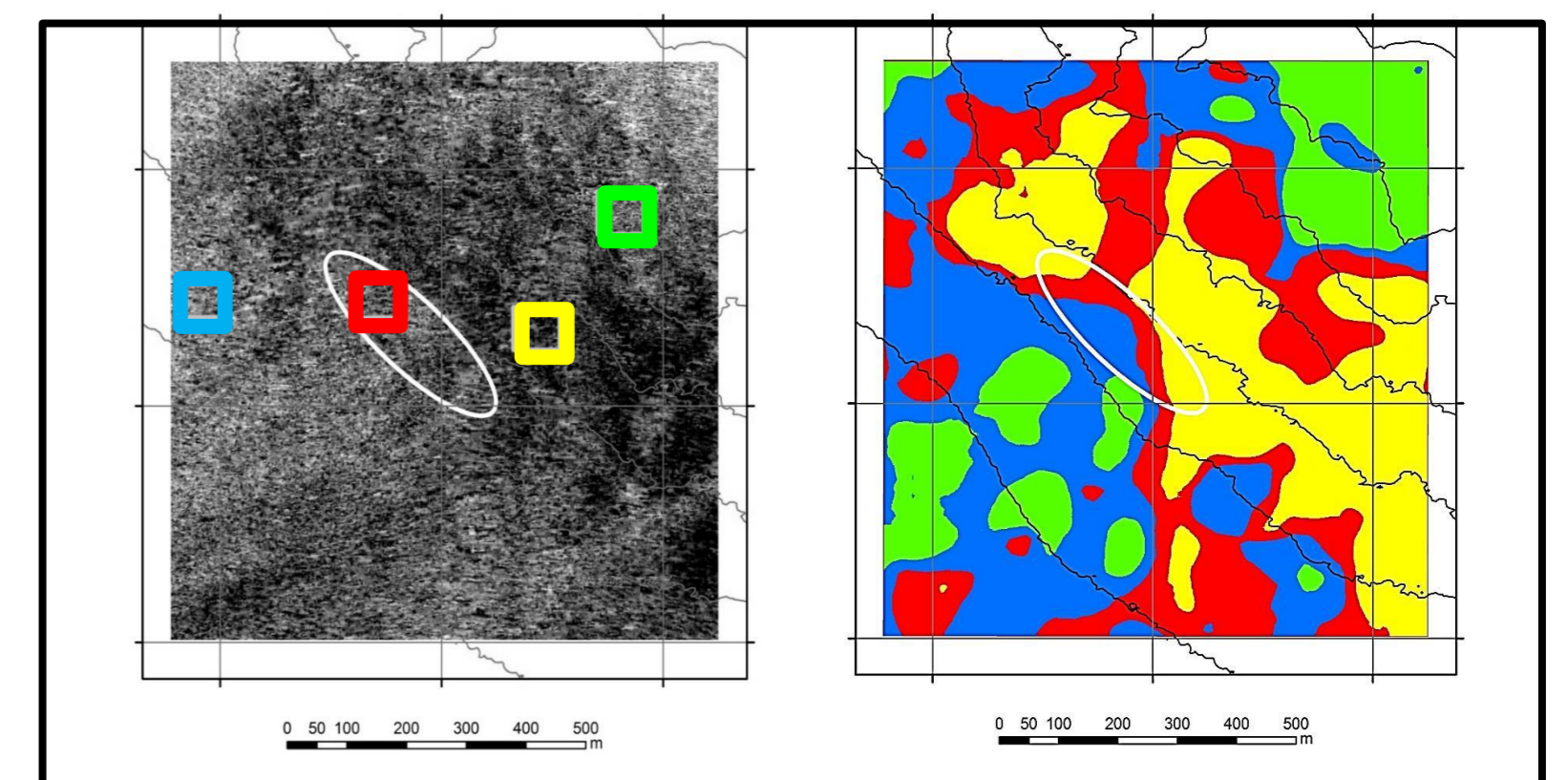
 Sonar system for exploration of seafloor resources



3D acoustic image measured by synthetic aperture sonar



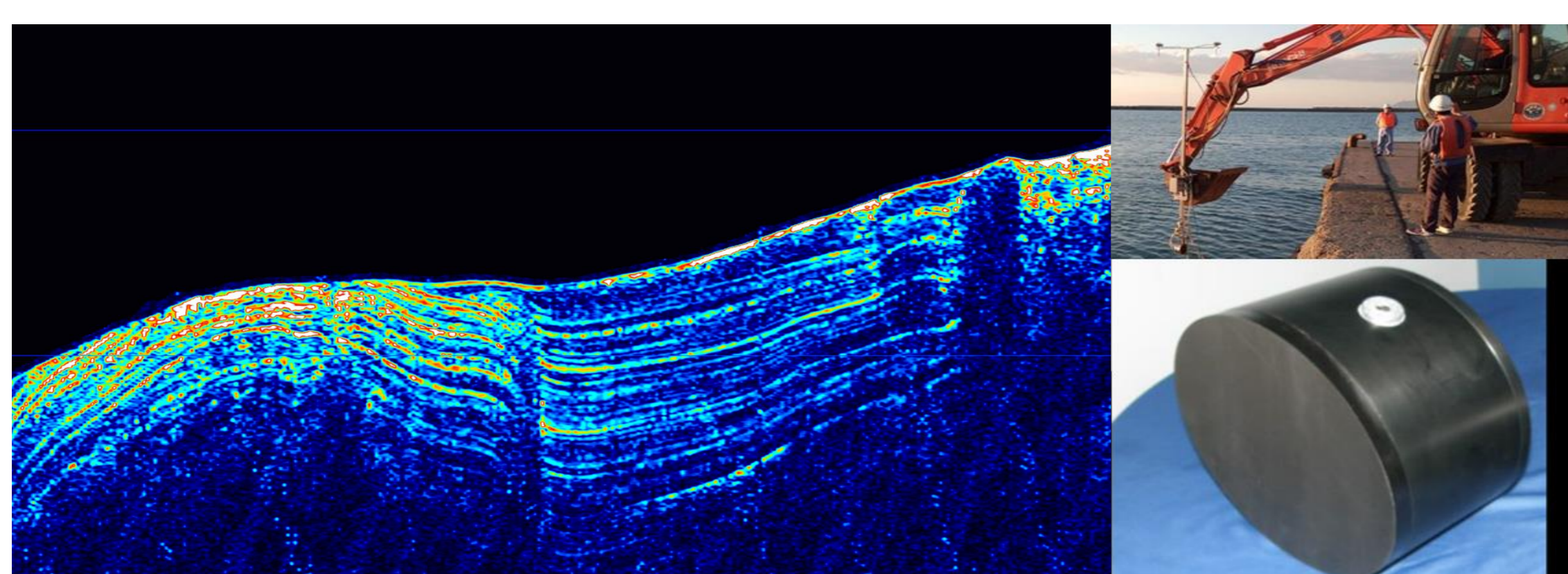
3D acoustic image measured by multi-beam sonar



Acoustic intensity (left) and clustering results(right)

 Ultrasonic inspection for underwater structure

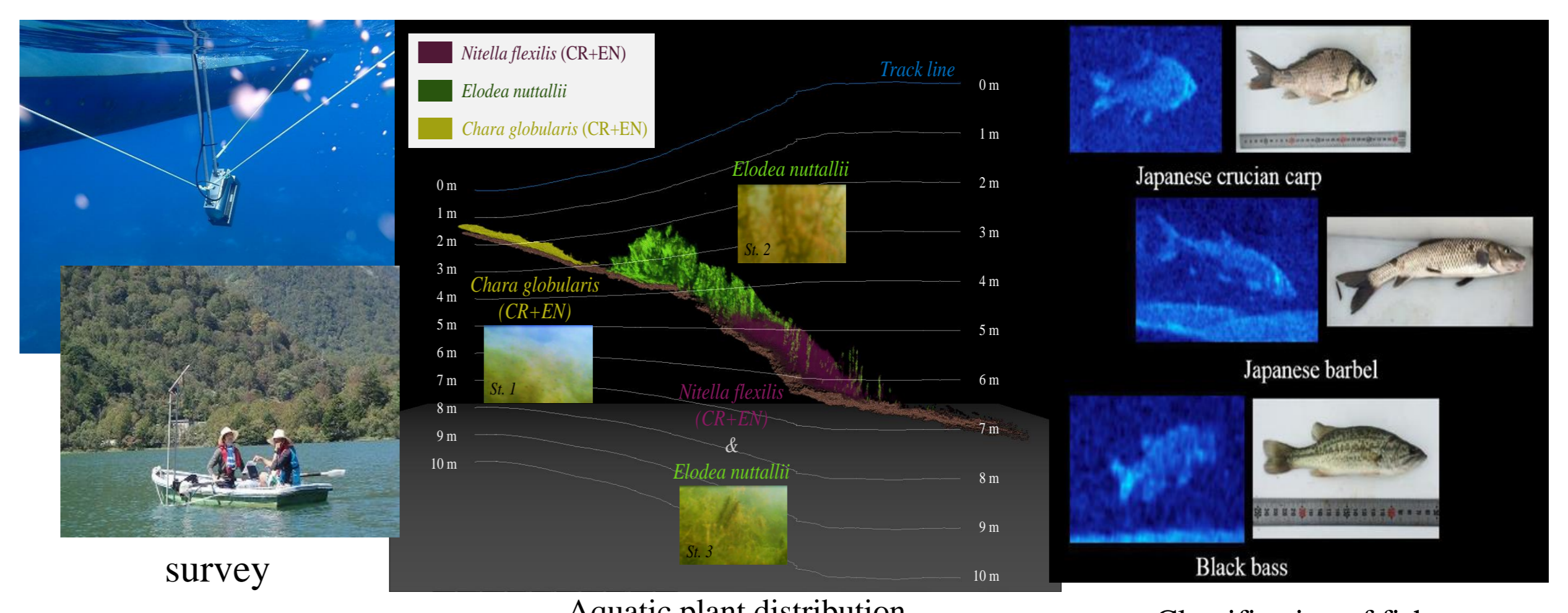
Development of non-contact inspection acoustic Method for underwater structures.



2D acoustic image measured by parametric sonar system

 Acoustic monitoring for underwater creatures

Development of acoustic monitoring system for fish and aquatic plants.



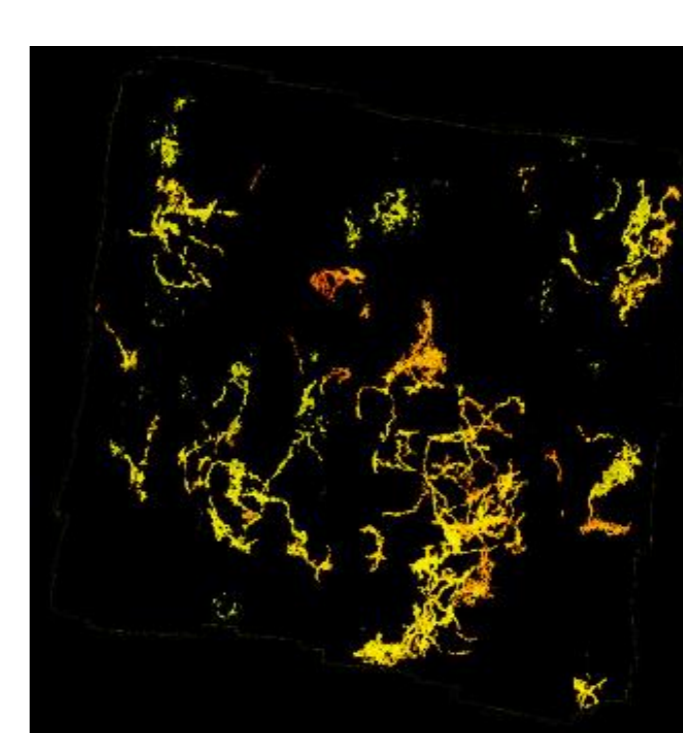
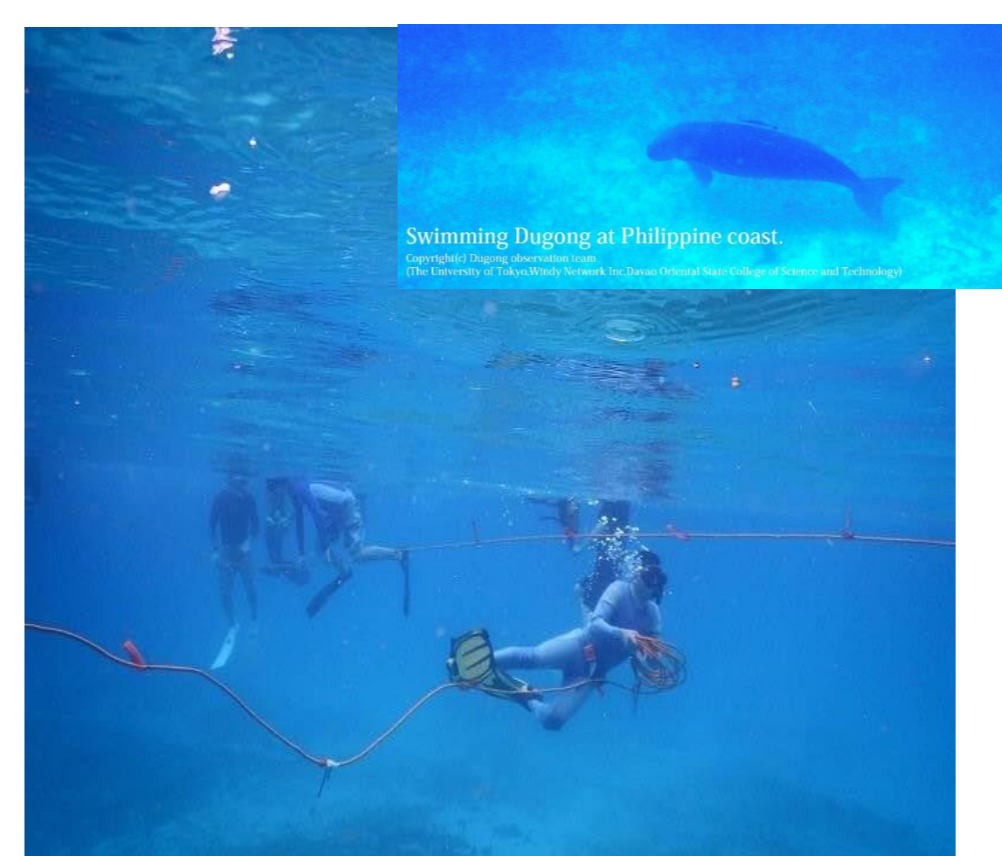
survey

Aquatic plant distribution

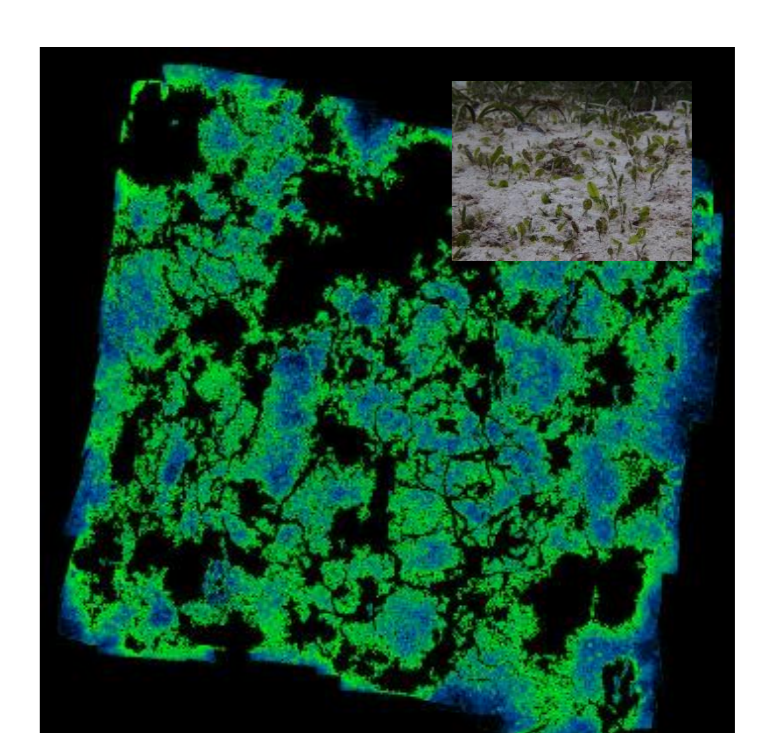
Classification of fish

 International collaboration

International research cooperation for aquatic environment through the acoustic technologies.



Distribution of dugong trail



Seagrass distribution