CNR ISMAR CORE REPOSITORY

The ISMAR CORE REPOSITORY and connected laboratories are a multipurpose facility for the storage and non-destructive processing of sediment cores. The ISMAR CORE REPOSITORY contains one of the world's most unique and important collection of scientific samples from the shelves and deep seas.

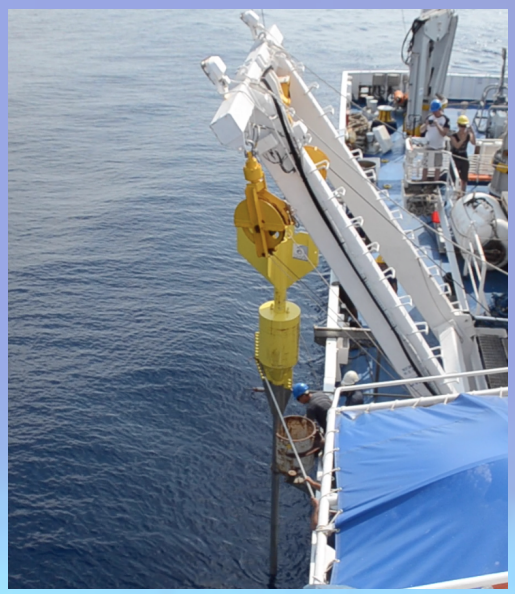
Strategic service to the scientific community in particular:

- national institutions (CNR, OGS, INGV, Ispra, PNRA, University)
- international institutions (UW, OSU, Stanford Univ, Canada BIO, USGS, etc. ..)

A walk-in refrigerator (kept at 5° C) of 750 m^3 in volume

A cold room (-20°C) of 36 m^3 in volume for sub-samples

The collection contains approximately:
6800 meters of core collected in
2100 sites of european seas and of world oceans



The repository is equipped with an alarm system in the event of anamalous behavior and guarded 24 hours a day

Cutting/sampling room of 280 square meters:

- longitudinal cut of cores, photography, subsampling, high-resolution scan of magnetic susceptibility (developed by CNR ISMAR)

X-radiography Lab:

- Protected lab room, industrial X-ray tube, thermostat desk, automatic processor

Sediment cores, why store them?

Geological research at sea is expensive (ships, complex instrumentation, technical staff). The potential value of information contained in the samples already collected should be fully exploited and the preservation of the core samples must be guaranteed in modern facilities. Major developments in our understanding of recent environmental change have come from material stored effectively in long-term core repositories.
The sediment cores are a source of information to characterize the seabed and the recent sedimentation.

What information can scientists learn from a sediment core?

Ocean sediments offer high-resolution archives to study the global environmental change and the geological hazard (landslides, tsunamis, earthquakes),
The sediment study provide essential information for geological mapping of the seas, the exploration of marine resources such as sandy sediment for beach nourishment coastal, for the deploiment of telecommunication cables, pipelines and offshore structures (eg offshore wind power plants) and coastal evolution studies, environmental pollution monitoring.