Project of strategic interest NEXTDATA

Deliverable D2.4.3:
Database implementation and transmission of data to the General Portal

WP Coordinator: Luciana Ferraro
CNR-IAMC, Napoli

Authors:
L. Ferraro, I. Alberico, E. Anzalone
CNR-IAMC, Napoli

Contributors:
F. Lirer, M. Vallefuoco, D. Insinga, S. Bonomo
CNR-IAMC, Napoli

P. Petrosino
Università degli Studi di Napoli Federico II, Naples

Partners
F. Florindo, P.C. Lurcock
INGV, Roma

During the third project year a further upgrade of the metadata information from marine sedimentary cores for the Mediterranean Sea and the Atlantic Ocean (Strait of Gibraltar) was carried out to be included in the GeoNetwork platform. The climatic data recorded on WDB (Weather and Water Database) are related to the marine sedimentary cores collected by IAMC - CNR during the 2013 and 2014 oceanographic cruises and were successively published on the General Portal.

The conceptual scheme used for recording both the metadata and data processed during the first project year was partly modified to allow for the inclusion of new climatic proxies. In particular, both metadata and data can be exported from the database as ODBC database, dBASE, Excel files and text files of marine sedimentary cores to be added to the GeoNetwork platform and WDB.

During 2014, marine sedimentary cores were upgraded from 4416 to 8034 as follows:

- 7108 cores from the Mediterranean Sea.
- 926 cores from North Atlantic (Strait of Gibraltar).

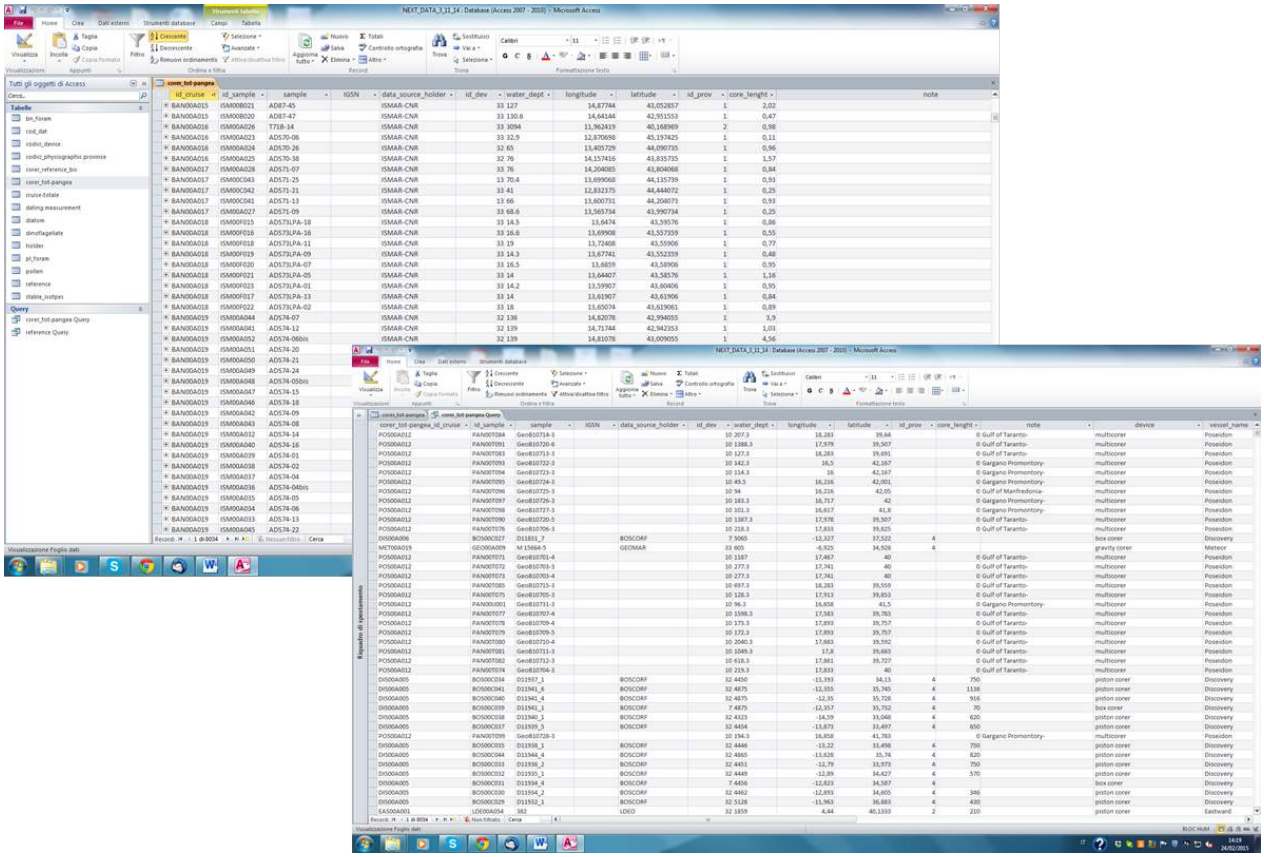

Fig. 1. Marine sedimentary cores collected for the Mediterranean Sea and Atlantic Ocean (Total number 8034) with related metadata.

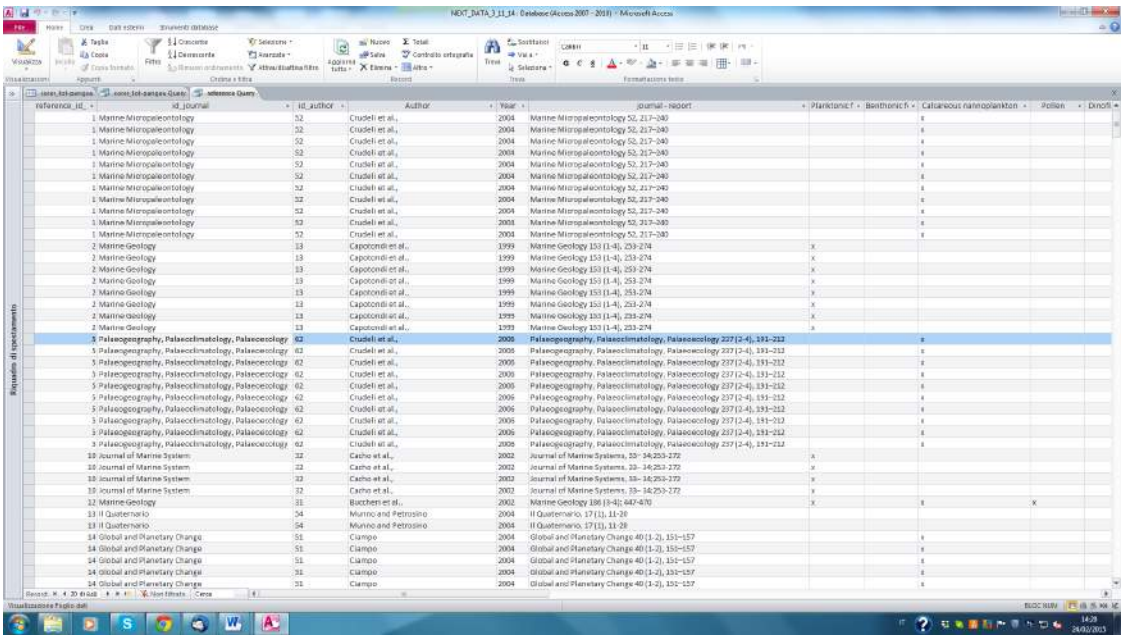

Fig. 2. References related to the marine sedimentary cores collected for the Mediterranean Sea and Atlantic Ocean (Total number 640).

The specific Seas where the marine sedimentary cores were acquired at the end of 2014 over the Western and the Eastern Mediterranean Basins are reported in Table 1 and labeled in Figures 3 and 4.

Mediterranean Sea - Western basin	Mediterranean Sea, Eastern Basin
Strait of Gibraltar, Alboran Sea, Balearic Sea, Ligurian Sea, Tyrrhenian Sea	Adriatic Sea, Strait of Sicily, Ionian Sea, Aegean Sea

Tab. 1. Regional origin of the sedimentary cores extracted over the Western and Eastern Mediterranean seas

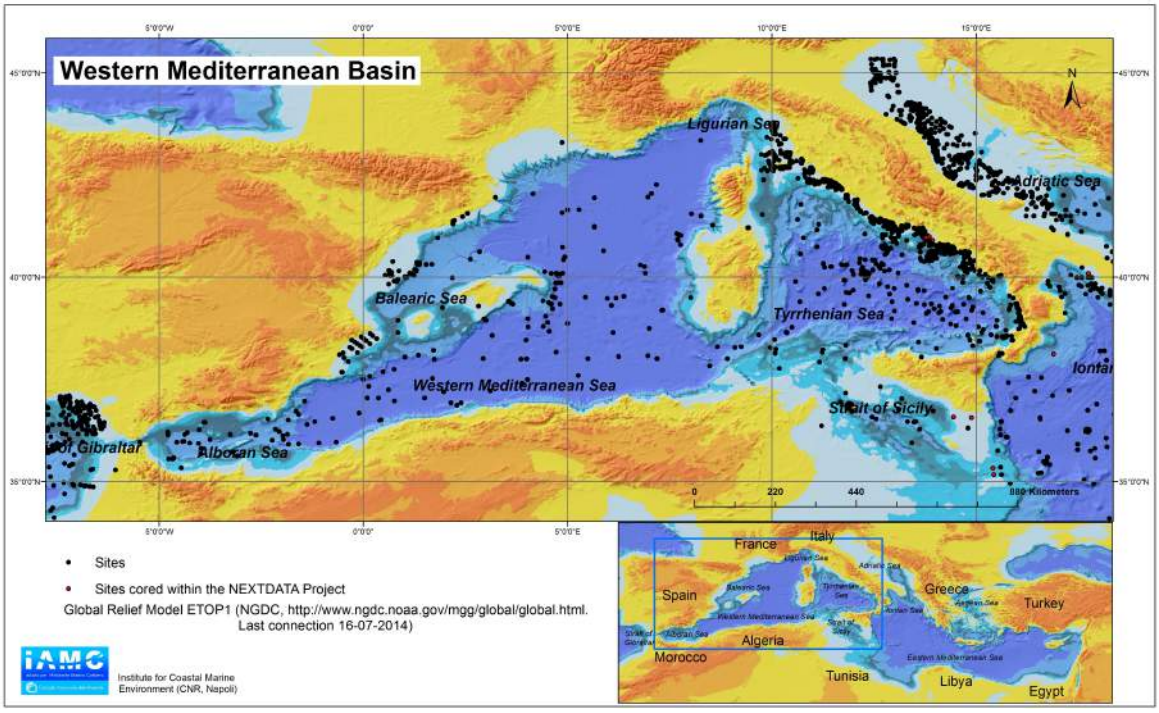

Fig. 3. Marine sedimentary cores acquired for Mediterranean Sea Western Basin as reported in the SHARE GeoNetwork platform.

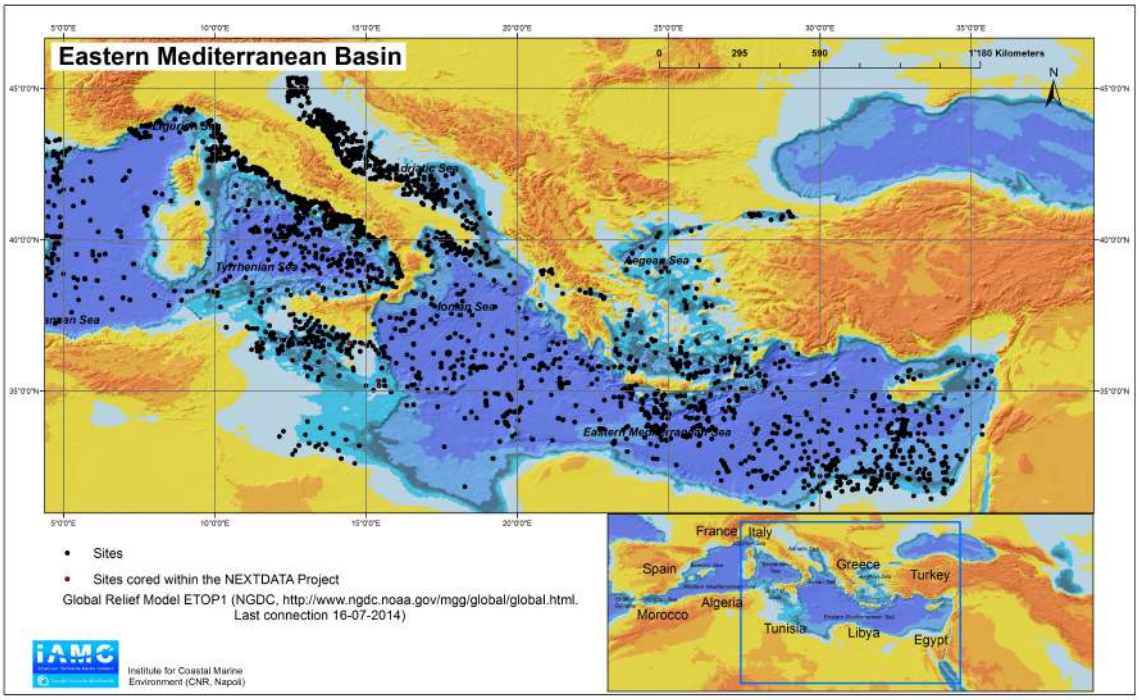

Fig. 4. Marine sedimentary cores acquired for Mediterranean Sea Eastern Basin as reported in the SHARE GeoNetwork platform.

The climatic data archived in WDB during the third project year are related to the marine sedimentary cores collected by IAMC - CNR during the oceanographic cruises "NEXTDATA-2013" and "NEXTDATA-2014" as follows:

OCEANOGRAPHIC CRUISE NEXTDATA-2013:

CORE	*CLIMATIC PROXY*
SW104_C5_02	pollens
C6	planktonic foraminifera
C6_SW104	magnetic susceptibility
SW104_C13	magnetic susceptibility

OCEANOGRAPHIC CRUISE NEXTDATA-2014:

CORE	*CLIMATIC PROXY*
ND2_1	magnetic susceptibility
ND5_bis	magnetic susceptibility
ND6	magnetic susceptibility
ND9	magnetic susceptibility
ND10	magnetic susceptibility
ND11	magnetic susceptibility
ND13	magnetic susceptibility

During 2014, detailed information related to the tephra layers and AMS 14C dating were also recovered from the literature for the implementation of database, because these proxies have

a key role to evaluate the synchrony/diachrony of the climatic changes in the Mediterranean and represent a constraint for age modelling of marine sequences.
In this framework, the WDBPaleo database represents a potentially useful tool and an invitation for the scientific community to share data, facilitating their comparison and integration in common repositories.