Project of Strategic Interest NEXTDATA

Deliverable D2.1.5
Trial version of the specific portal; transfer of data to the General Portal.

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This document describes the activity dedicated to the implementation of the new version of the web-GIS system "NextData SHARE- GeoNetwork" in the framework of WP2.1 (http://geonetwork.nextdataproject.it).

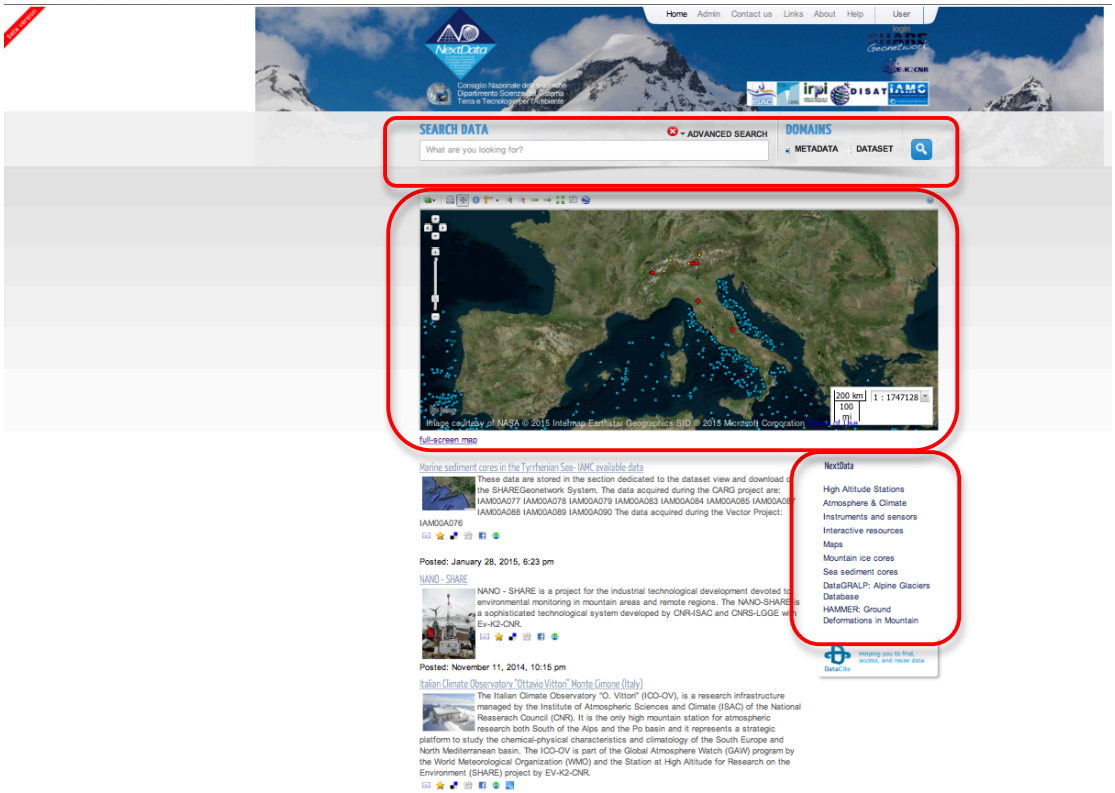

Fig. 1. Home page of the new SHARE-GeoNetwork system dedicated to the NextData Project. The three red boxes enhance the main sections of the system, as described in the text.

New system requirements resulted after the publication of the version of the developed service, and in particular:

- a specific system dedicated to the NextData Project (in the first version there were data from three projects accessible from the same interface, as reported in D2.1.3.);
- new categories for a better correlation with the specific data acquired in NextData and the integration of the two new Special Projects Datagralp and Hammer in the same system;
- implementation of a new function for a direct link between metadata and datasets;
- implementation of new queries for data access.

Furthermore, a new full screen map has been integrated in the home page with the possibility to manage and interact with the geographic data; finally, the update to the current release of Geonetwork has been provided.

During this year, in collaboration with IRPI- CNR, University of Pisa, University of Padua and University of Turin, the database developed in the Special Project DATAGRALP was inserted into the metadata platform.

Moreover, with the collaboration of the research group of IRPI–CNR (Perugia and Turin institutes) started the first activities related to integration of the HAMMER's Special Project data into the platform.

1. New interface of Nextdata SHARE-GEoNetwork system.

Three sections compose the new interface, as enhanced by the red boxes in Figure 1:

- the searching section;
- the interactive map;
- the direct access to the metadata – by categories.

The searching section is dedicated to the specific domains: metadata and dataset (Fig. 2).

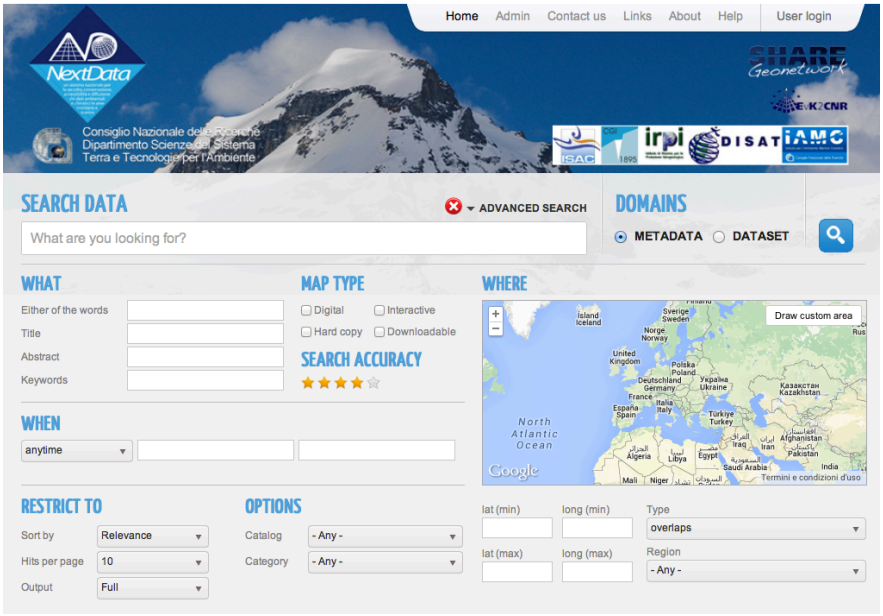

Fig. 2. The advanced Metadata searching

With the activation of the metadata domain it is possible to make a simple search by keywords or an advanced search putting all or some of the required information: the output is the list of the metadata records (Fig. 3).

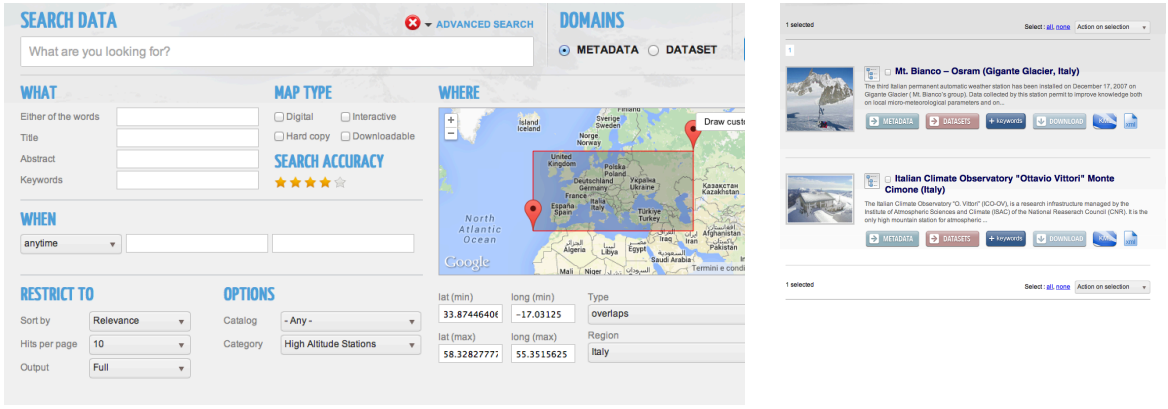

Fig. 3. Example of advanced search and output results.

In the metadata visualization, the new "datasets function" permits to access the dataset searching section (Fig. 4).

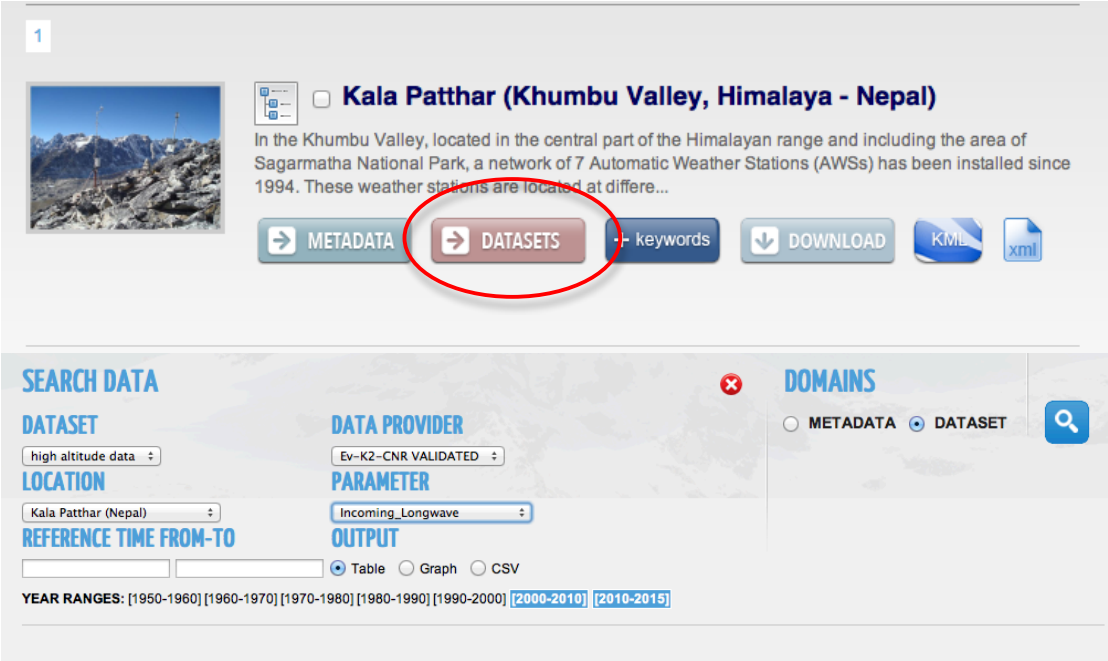

Fig. 4. The metadata record and the new function to link the datasets searching.

Moreover, in this new release, for each dataset (parameter) the period of acquisition is enhanced to facilitate the searching.

2. The web GIS component- the map

The geo-data can be viewed with two kind of maps:

- a simple map
- a full-screen map

The simple map consists of the functions for the visualization of the layers, for the simple querying by typing the objects with "Get Feature Info" and the tools for navigate in the map (Figures 5 and 6).

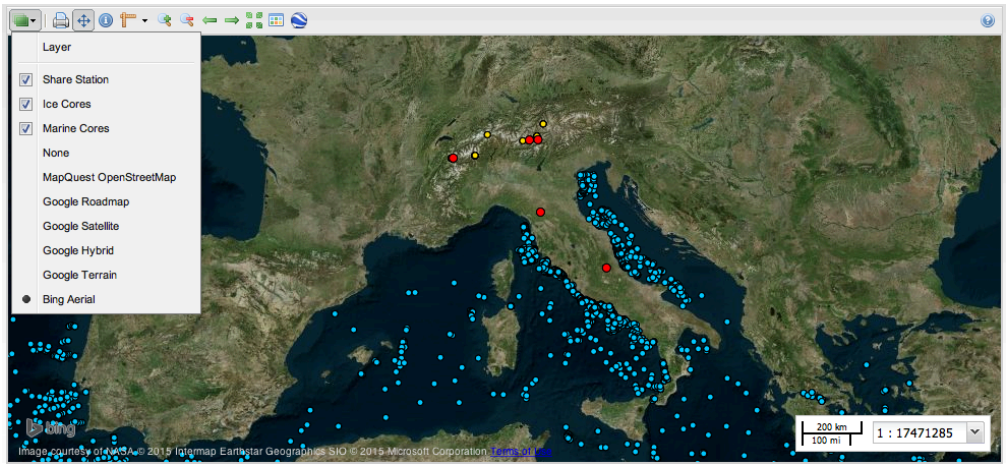

Fig. 5. The map in the home page.

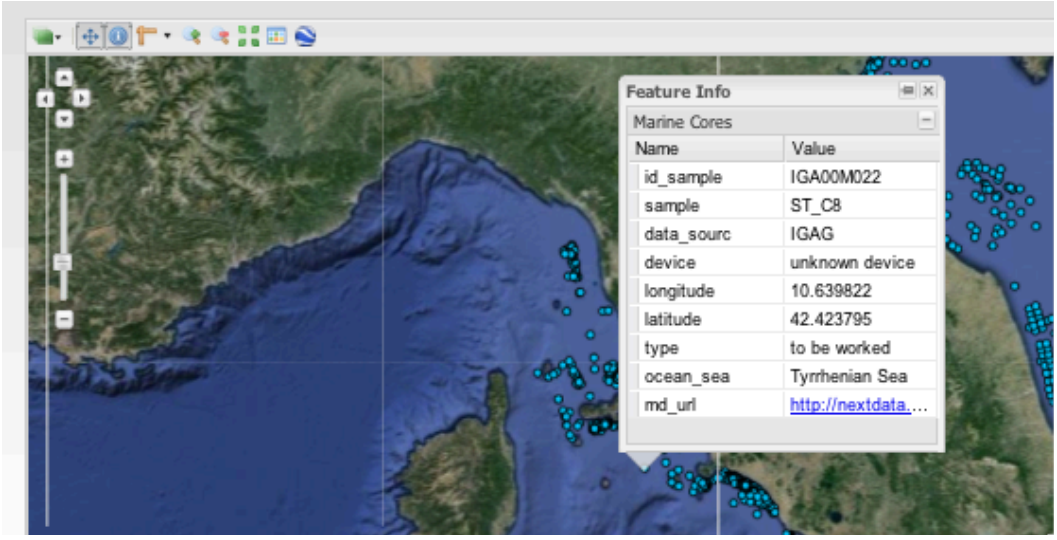

Figure 6. The function "Get features Info".

The full-screen map is a web application that allows to interact with the map using the tools developed in the GeoExplorer Project (http://suite.opengeo.org/opengeo-docs/geoexplorer/): *"GeoExplorer is a web application, based on the GeoExt framework, for composing and publishing maps. With GeoExplorer you can quickly assemble maps from GeoServer or any OGC Web Mapping Server (WMS) and integrate with hosted maps such as Google Maps and OpenStreetMap. You can also edit map styling information, embed the maps you compose in any web page, or output the maps in PDF format".* There are several tools for editing the features and add and modify the layers and specific tool for querying (Figures 7 and 8).

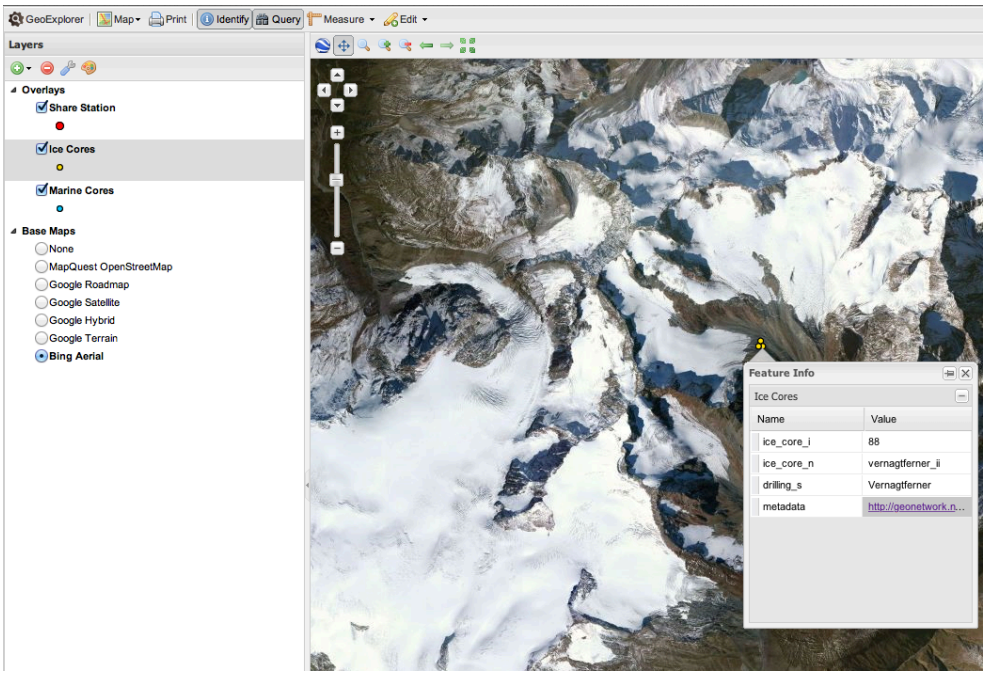

Fig. 7. The full-screen map with the pop-up for the info.

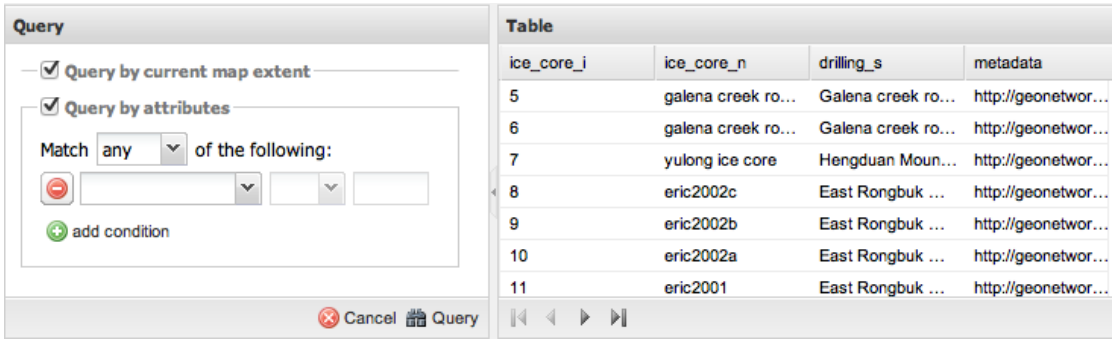

Fig. 8. The query window

3. The categories

In the home page the Category section is published on the right side of the page. In this section a list of themes, which represent the main topics covered by the metadata, is reported:

- High Altitude Stations.
- Atmosphere & Climate.
- Instruments and sensors.
- Interactive resources.
- Maps.
- Mountain ice cores.
- Sea sediment cores.
- DataGRALP: Alpine Glaciers Database.
- HAMMER: Ground Deformations in Mountain.

This list was updated in this new release and it is possible to integrate it in the future during the Project. Using these links the user accesses to the records of metadata specified by the topic (Figure 9).

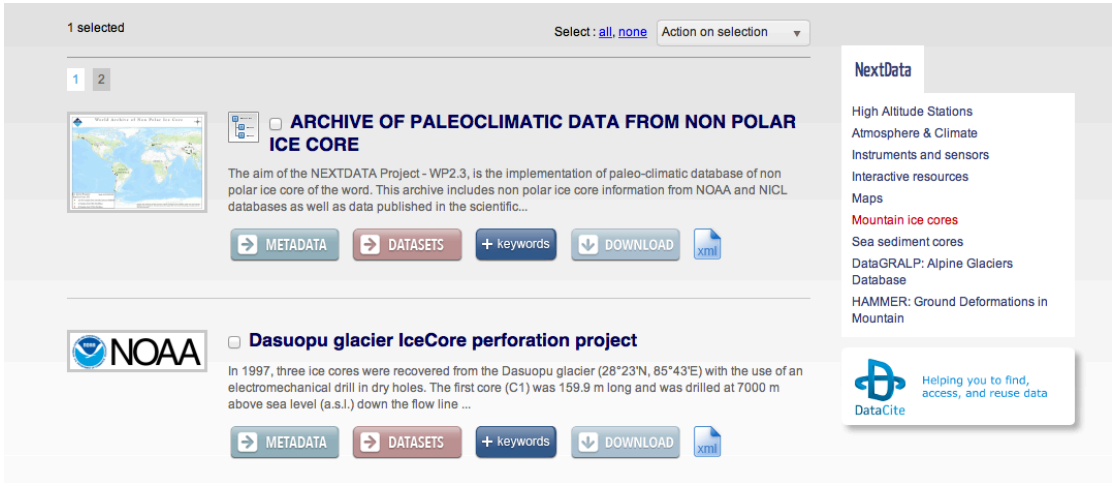

Fig. 8. On the right in the picture, the list of categories and two of the output records extracted from the category "Mountain Ice Cores".

4. Conclusions

The system is under testing and it is published as a "beta release". It is installed in a server at the University of Cagliari and a complete copy is stored at the Dipartimento Scienze del Sistema Terra e Tecnologie per l'Ambiente – CNR, Rome.

The system is ready to be integrated in the General Portal. Since the NextData General Portal is not fully functional yet, the transfer of data has not been activated. In any case, the system developed in this WP follows the guidelines of interoperability and standards required by the NextData Project.

Meetings and conferences attended in 2013

MELIS MT, LOCCI F., DESSÌ F., FRIGERIO I., STRIGARO D., VUILLERMOZ E.: NextData Project: development of a web system for climate and paleoclimate data sharing.
The study was presented as part of the *'87th Congress of the Italian Geological Society*, held in Milan on 10 to 12 September 2014,

Publications

LOCCI F., MELIS M.T., DESSÌ F., STOCCHI P., AKINDE M.O., BØONES V., BONASONII P., VUILLERMOZ E., (2014): Implementation of a webGIS service platform for high mountain climate research: the SHARE GeoNetwork project. *Geoscience data journal*. doi: 10.1002/gdj3.14

MELIS M.T., LOCCI F., DESSÌ F., FRIGERIO I., STRIGARO D., VUILLERMOZ E., (2014): NextData Project: development of a web system for climate and paleoclimate data sharing. In: Ames, D.P., Quinn, N.W.T., Rizzoli, A.E. (Eds.), Proceedings of the *7th International Congress on Environmental Modelling and Software*, June 15-19, San Diego, California, USA. ISBN: 978-88-9035-744-2.