



GEO: a special collection for Earth Science community

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The GEO Project

From the IGG Collection to GEO Digital Library*

- A common target of the CNR IGG and CNR ISTI** is to create a digital library to disseminate and promote the visibility and the use of its contents not otherwise accessible

**Institute for Geosciences and Earth Resources of the CNR*

<http://www.igg.cnr.it>

***Institute of Information Science and Technologies of the CNR*

<http://www.isti.cnr.it>





The origin

A Collection on Earth Science

- Based on Articles and Grey Literature (GL) by national and international experts
- Born at the beginning of the '60s in the Center of Geothermal Studies (CNR, Pisa)
- Developed since 1970 by the International Institute of Geothermal Research
- Now managed and enhanced by IGG



The origin (cont.)

Collection contents

Technical and research papers produced in the fields of applied research:

- geothermal energy
- hydrogeology
- geology
- environmental geochemistry
- containment of greenhouse gases
- volcanology
- geophysics





The origin (cont.)

Bibliographic sources identified by

- Searching by specific keywords and descriptors
 - owned journals, conferences, books
 - Current Contents indexes
 - Technical and Project Reports (GL)
- Selecting the most relevant works
- Acquiring and storing the selected paper materials
- Cataloguing through the library automation system



The Digital Library

Steps by steps

- Analysis and categorization of the contents
- Identification of papers produced by IGG authors
- Import of IGG bibliographic records in PUMA*
- Import of the remaining records in a special instance of PUMA: GEO**

*PUMA-Puma Management <http://puma.isti.cnr.it>

**GEO-DL <http://geo.isti.cnr.it>



The Infrastructure

PUMA

- Developed by ISTI to manage a network of institutional repositories, looking at the Open Access European vision
- Based on “open source” software and international standards, user-and-service oriented
- Operated by two independent systems, working together:
 - ✓ PUMA/OCTOPUS “Digital Library System”
 - ✓ MetaPub/MIXER “Information Retrieval System”
- Today contains 51 CNR collections covering different disciplines (IGG is one)



The infrastructure (cont.)

PUMA functionalities:

- easily self-archiving of documents
- checking the formal quality of data
- managing of the stored contents to fulfill scientific and administrative issues
- providing worldwide easy web access
- ensuring the preservation of the documents
- reusing of contents
- ensuring the interoperability with OAI-PMH protocol



The GEO DL

Sharing collections ...



GEO DL allows the logical sharing and management of two distinct collections:

- geo-db.int (thematic) - physically located in Puma
- cnr.igg (institutional) - physically located in GEO

Librarians and users can use, view and search the DL as a unique collection through a common user interface



The collection

Browsing collections ...

	GEO - Digital Library
3722	International Digital Library -
2567	Istituto di Geoscienze e Georisorse - Pisa

- geo.db.int/1900-B0-001
Lotti B. *I soffioni boraciferi della Toscana*. In: Estratto dalla Rassegna Mineraria, vol. XII (13) pp. 0 - 7. Tipografia G.U. Cassone succ. G. Candeletti, Torino, 1900.

- geo.db.int/1949-B0-001
Ippolito F., Cotecchia V. *Su taluni pozzi trivellati nella zona industriale di Napoli*. In: Bollettino della Societa dei Naturalisti, vol. LVIII pp. 1 - 12. 1949.

- geo.db.int/1949-A0-001
Bloss F., Barth T. *Observations on some Yellowstone Geysers*. In: Bulletin of the Geological Society of America, vol. 60 (5) pp. 861 - 886. Geological Society of America, 1949.

- cnr.igg/2011-A0-025
Bolognesi L. *The oxygen isotope exchange between carbon dioxide and water in the Larderello geothermal field (Italy) during fluid reinjection*. In: Geothermics, vol. 40 (3) pp. 181 - 189. Elsevier, 2011.

- geo.db.int/2011-A0-006
Dikici A., Akbulut A. *An exergetic performance evaluation of multiple source heat pump systems*. In: Energy Sources. Part A, vol. 33 (12) pp. 1117 - 1138. Taylor & Francis, 2011.



The collection (cont.)

Today ...

- The collection stored in paper copy at IGG consists of 10.800 bibliographic descriptions and corresponding documents (since 1900)
- GEO DL contains 6289 bibliographic records and 4661 documents (daily growing)



Future objectives

Enhancing GEO...



- Discovering and digitizing the greatest number of grey materials as possible
- Linking the scientific contents to related resources such as database of rough data
- Linking documents to related Projects, if any
- Linking repositories of the same discipline in order to create a knowledge based network in Earth Science