



EGIDA Project

National Use Cases Workshop

An Italian S&T infrastructure for contributing to the GEOSS

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Rome, Italy – April, 18-19, 2011

The infrastructure relates to a partnership between GIIDA project and Sinanet.

GIIDA: Integrated and Interoperable Management of Environmental Data, is an inter-departmental project of the National Research Council of Italy (CNR) **aiming to the design and development of a multidisciplinary infrastructure** for the management, processing and evaluation of Earth and environmental data and research results. The GIIDA mission is the implementation of the Spatial Information Infrastructure (SII) of CNR, in the context of the main European and international initiatives related to the environment (GEO/GEOSS, INSPIRE , GMES).

Sinanet: the Italian Environmental Information and Monitoring System is a nationwide **cooperating network among the main institutions having competences on environmental data acquisition and management.**

Sinanet aims to operate on environmental monitoring and collecting data for the environmental phenomena understanding and decision makers support from local to national level. The scope of SINA is to provide high quality and timely data/information on state of environment and trends, to ensure public access to data/information and to promote data sharing via distributed systems.



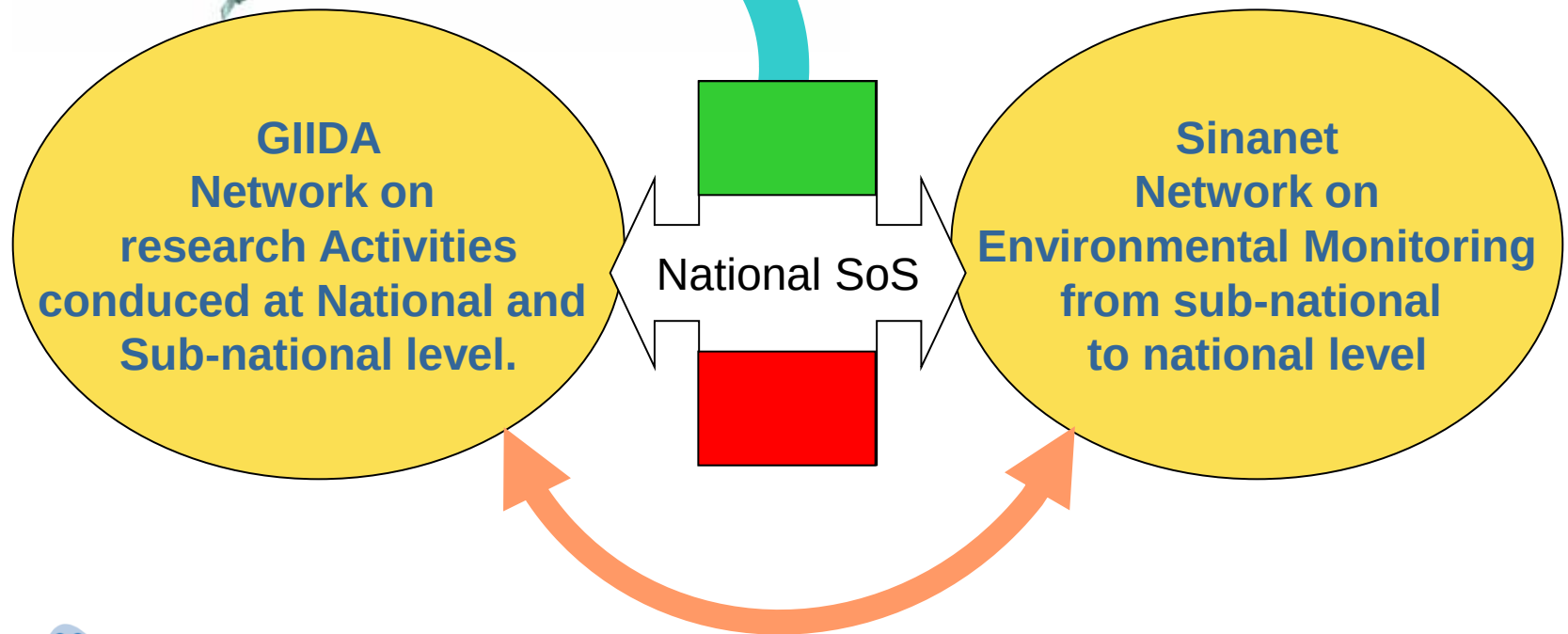
GIIDA network is composed by:

- 17 CNR Institutes from five different departments;
- 1 National Agency (State forestry);
- 4 other public research centers;
- 5 universities;
- 5 SMEs

Sinanet network is composed by:

- 21 Regional Focal Points (one for each Italian Region and Autonomous Provinces);
- 21 Environmental Agencies (one for each Italian Regions);
- Main Central Institutions (Ministry of Environment, Statistic Institute, River Basin Authority, Institute for ICT of PA, National Research Council)
- 24 National Reference Centres to communicate with European Topic Centres





To create a national hub to collect information on monitoring data availability and research activity results, a re-engineering process took place to achieve standardised interoperability among systems.

Developed by ESSI lab (Earth and Space Science Informatics - Laboratory), a broker catalogue (GI-CAT) has been adopted by different partners to share environmental information.

The SW is an implementation of a distributed catalog service that:

- allows clients to discover and evaluate geo-information resources over a federation of data sources;
- publishes different catalog interfaces (including CSW 2.0.2 /ISO 1.0 for INSPIRE Compliance), allowing different clients to use the discovery service accessing any of them;
- Supports both query distribution and metadata harvesting for each federated source;
- A data provider can deploy his/her own GI-cat instance, grouping together disparate data sources, to accommodate his/her users' needs.



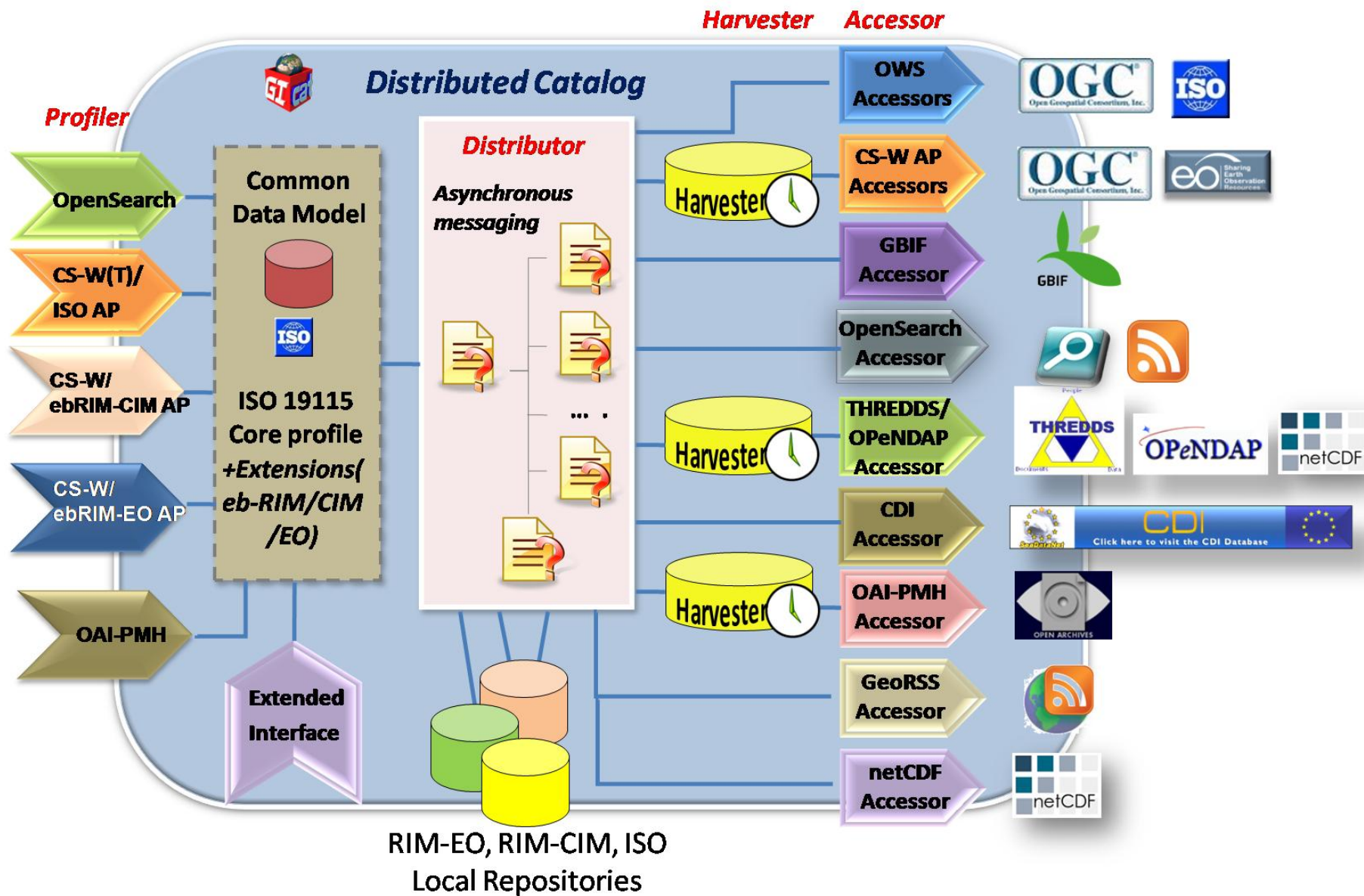
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- GI-cat may expose different standard interfaces, mapping metadata on different metadata models, including:

- OGC CSW/ISO
- OGC CSW/ ebRIM EO;
- OGC CSW/ ebRIM CIM
- ESRI Geoportal
- OAI-PMH
- OpenSearch 1.1; OpenSearch GENESI DR profile
- GI-cat extended interface

- GI-cat is able to federate several catalog and inventory services with different interfaces and metadata models, including:

- OGC WCS, WMS; WFS; WPS
- OGC CSW Core, CSW/ISO, CSW ebRIM/CIM, CSW/ebRIM/EO
- THREDDS
- CDI
- GBIF
- GeoNetwork, Degree, ESRI ArcGIS Geoportal
- OpenSearch 1.1
- GeoRSS 2.0





Since the beginnig of 2010, activities were conduced to:

Involve the National and sub-National Environmental Agencies and Authorities to share their information within the National SoS;

Involve those actors to conduce performance and interoperability test;

Implement new accessors to federete existing infrastructures.



Environmental Agencies and Actors involved for interoperability and performance test:

Piemonte, Toscana, Emilia-Romagna, Puglia, Marche.

Volunteers:

Regione Piemonte and Regione Toscana.



The results will be brought to the next Sinanet Plenary back-to-back with GIIDA workshop, where the conducted tests will be presented to the Environmental Agencies and will be propose to enlarge the network to the maximum numbers of sub-National parners.



Criticality

- Reticence by some partners to adopt new tools for data and information sharing (Response: seminars has been held to promote the benefits from data sharing).
- Being a volunteer approach (no funds), the re-engineering process has to be conducted with in-kind resources (Response: full ITC support provided by CNR and Sinanet to the partners involved).
- Even if CNR and Sinanet fully supported the re-engineering process, not all the partners involved where capable to accomplish interoperability. Lack of competences arisen to implement and maintain the system (Response: Meeting has been held for know-how transfer).
- Lacks on communication between different actors, eg. systems analysts and data&information providers (**is lack of communication just an Italian Problem?**).



From words to facts

Sinanet federated catalogue

<http://www.mais.sinanet.isprambiente.it>

CNR Catalog

<http://giida.cnr.it/gi-cat>



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