The SINA-NET in Open/Big data management
within ISPRA and SNPA

Perugia, November 22nd 2018

Giuseppina Monacelli

ISPRA

Outlines

- ISPRA within the international context

- Overview: Water JPI, PRIMA, INFO/RAC, WASAG

- The National Environmental Information System

- Data workflow management within the SINA

- Examples of Data Integration: National Biodiversity Network (NNB) and INFOAria

POLICY

EU Water Framework Directive
EU Floods Directive
Water Information System for EU

European Environment Agency

European Commission
environment

JRC
EUROPEAN COMMISSION

RESEARCH

PIANO

WATER JPI
WatEur
WaterWorks2014
WaterWorks2015
IC4WATER
WaterWorks2017

PRIMA

SINTAI
Sistema informativo Nazionale Acque Interne

MATTM

MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE
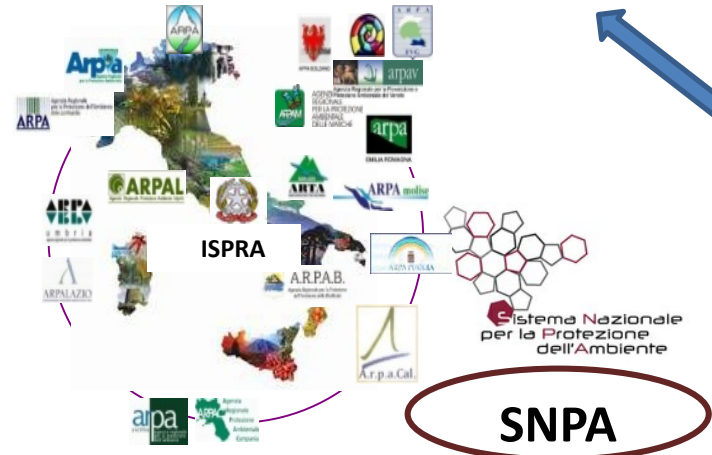
ISPRA
Istituto Superiore per la Protezione
e la Ricerca Ambientale

UNEP & FAO

INFO/RAC

WASAG

ISPRA

Sistema Nazionale per la Protezione dell'Ambiente

SNPA

SINA (PFR-SIRA)

SINAnet
Rete del Sistema Informativo Nazionale Ambientale

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INTERNATIONAL INITIATIVES

Water Joint Programming Initiative
Water challenges for a changing world

PRIMA - Partnership for Research and Innovation in the
Mediterranean Area

UNEP/MAP INFO-RAC - Regional Activity Centre
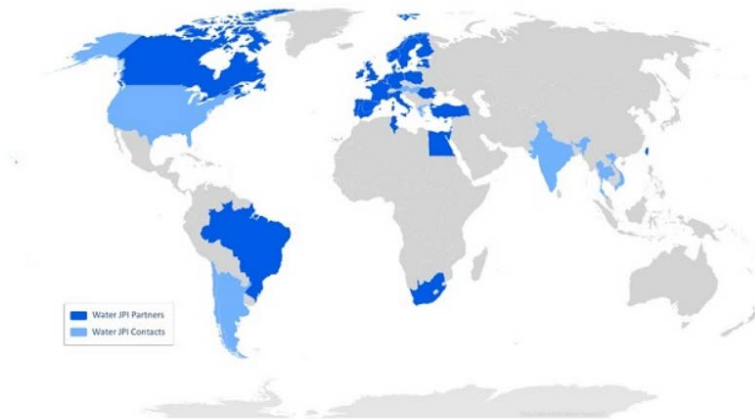for Information and Communication

WASAG - The Global Framework on WAter
Scarcity in AGriculture

WATERJPI: PARTNERSHIP AND THEMES

- Maintaining ecosystem sustainability
- Developing safe water system for the citizens
- Promoting competitiveness in the water industry
- Implementing a water-wise bio economy
- Closing the water cycle gap

NEW PARTNERSHIP MAP

Water JPI Members

Water JPI Observers

2018
22 member countries
3 observer countries

Water JPI Partners
Water JPI Contacts

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PRIMA: PARTNERSHIP AND THEMES

PRIMA can currently count on the partecipation of **19 Euro-Mediterranean countries**, including 11 EU-countries (Croatia, Cyprus, France, Germany, Greece, Italy, Luxembourg, Malta, Portugal, Slovenia and Spain) and **8 non-EU countries** (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia and Turkey).

MANAGEMENT OF WATER
Integrated and sustainable management of water for arid and semi-arid Mediterranean areas

FARMING SYSTEMS
Sustainable farming systems under Mediterranean environmental constraints

AGRO-FOOD VALUE CHAIN
Sustainable Mediterranean agro-food value chain for regional and local development

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UNEP MAP - INFO/RAC

The **Regional Activity Centre for Information and Communication** (INFO-RAC) was established in 2005. INFO-RAC was mandated to establish a common information management infrastructure to facilitate and support information and communication activities across MAP.
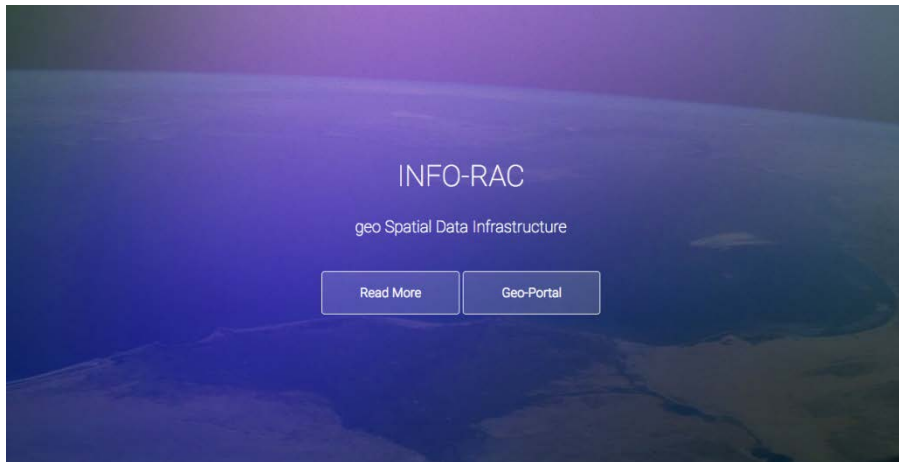
InfoMap
is the UN Mediterranean knowledge platform conceived to provide and share data, information services and knowledge.

WASAG: WORKING GROUPS AND THEMES

- WASAG is open to a broad range of entities, such as States, international organizations, civil soicety organizations, academia, private sector entities and trade associations.

- Within the Italian partners (CREA, CNR, CIHEAM, ENEA and MATTM), ISPRA is in charge of the **Assessment of Climate Change Impacts** and the WG on the **Innovative Financial Mechanisms.**

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Further International Interactions

7 th EAP
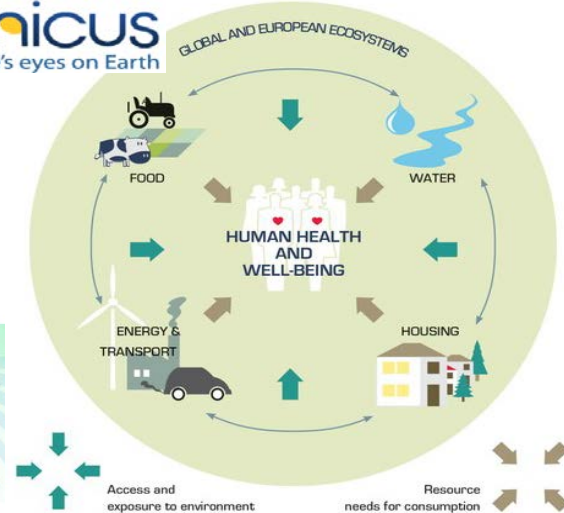
National Environmental Information System

- SINA implementation and management by the Regional Environmental Information Systems (SIRA).

- Cooperation ISPRA – ARPA/APPA – regional and local autonomous authorities, in data collection and management.

- Free dissemination and access to SINANET.

Workflow SINA/SINANET

INSPIRE

External web services

LOD
WMS
WFS
...

Data collection

Exchange &
validation

Dashboard
Data management/aggregation

Monitoring

Armonization &
Standard

Data storage

Information system

Data dissemination

Two examples of data integration

- **National Network for Biodiversity (NNB)**

- **National platform for air quality InfoARIA**

National Network for Biodiversity (NNB)

The shared data management system consists of **a central node**, which allows research and data management, and of **peripheral nodes** to ensure consultation and the efficient integration of information on biodiversity, all without the physical transfer of data, which always reside at cooperating institutions which retain all legal rights. The databases owned by the individual nodes differ in structure (different fields) and architecture (different DBs, such as Access, Oracle, Mysql, etc.), but **they are able to communicate through the BioCASe Protocol.**
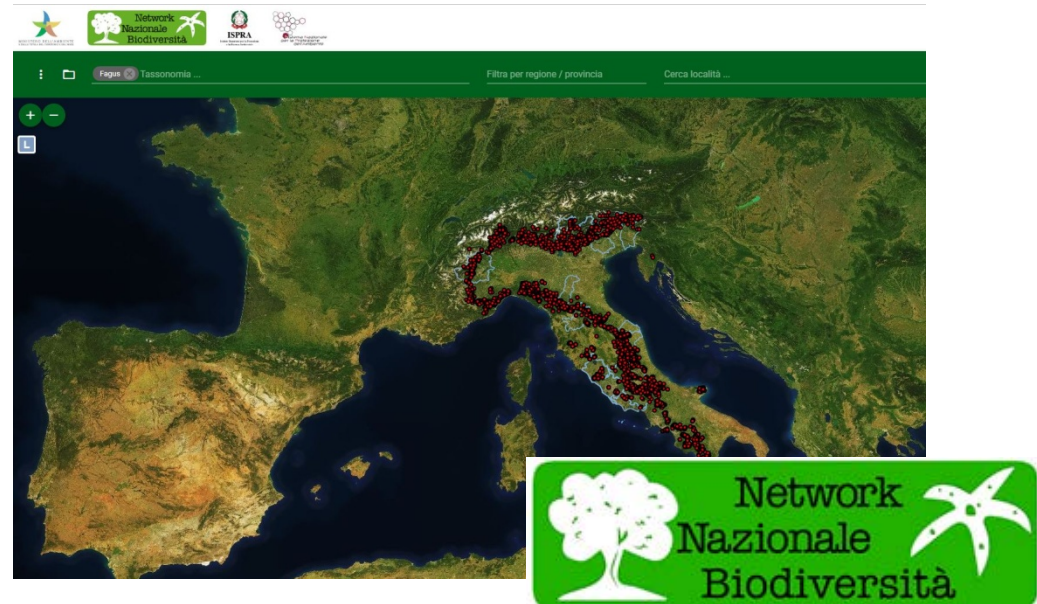
The National Biodiversity Network integrates and enhances data (open data license) of the most important international projects of **Citizen Science** International, such as Global Biodiversity Information Facility (GIBIF) and iNaturalist.

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INFOARIA
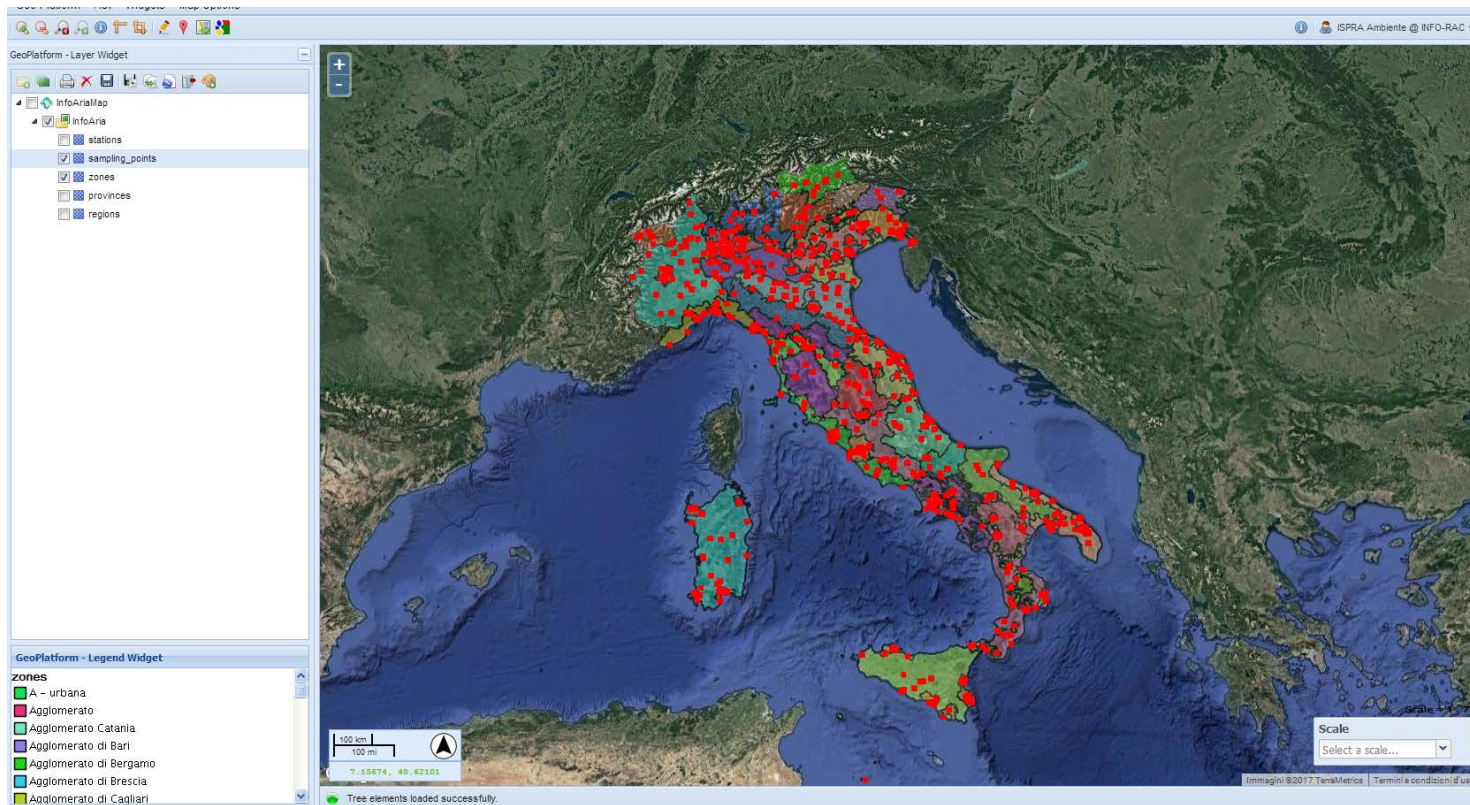
A national information system developed for the management of data and information about air quality, **integrating information of 800 stations**, for the production of reporting data in compliance with the European Directives.

The management of big data is not about quantity but about their integrated analysis.

Thank you for your attention!

Contacts

Giuseppina Monacelli

ISPRA – DG SINA

giuseppina.monacelli@isprambiente.it

www.isprambiente.gov.it

www.geoportale.isprambiente.it