

SINA Platforms - BIG Data flow management

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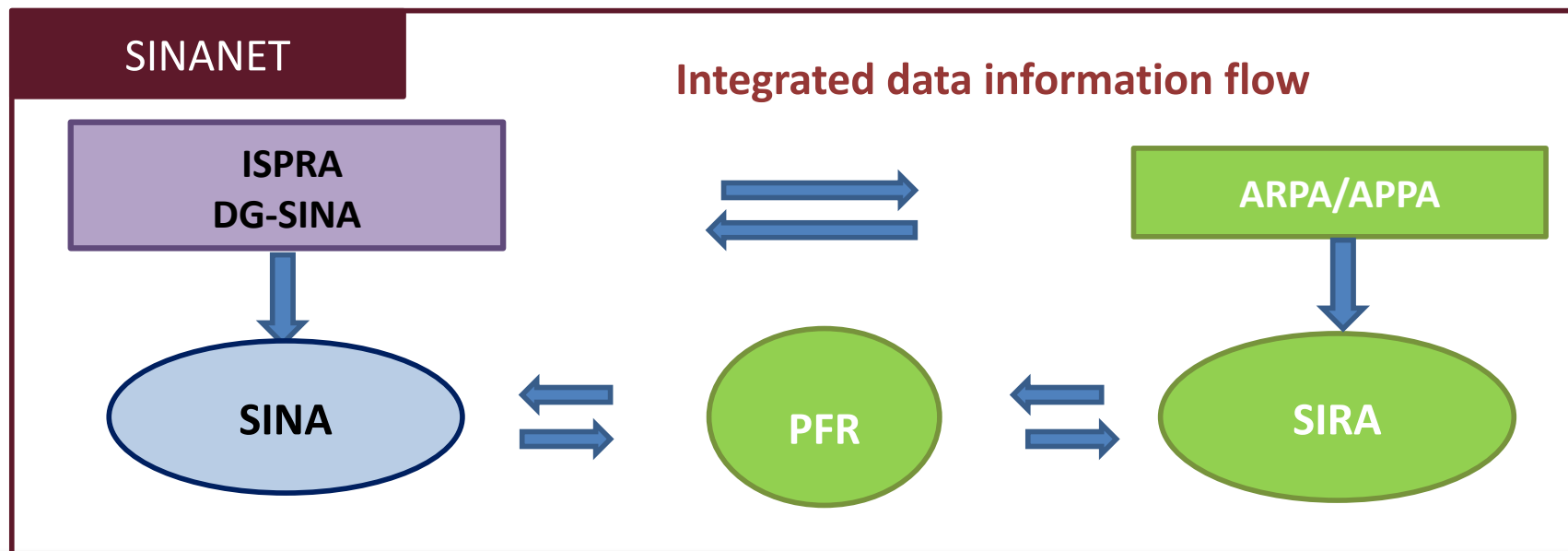
Environmental Legal reference

SNPA
L. 132/2016

Il SINA
Art. 11 comma 1



*L'ISPRA provvede, alla realizzazione e alla gestione del **SINA**, avvalendosi di poli territoriali costituiti da punti focali regionali (**PFR**), cui concorrono i sistemi informativi regionali ambientali (**SIRA**) e la cui gestione e' affidata alle agenzie territorialmente competenti. Il SINA, i PFR e i SIRA costituiscono la rete informativa nazionale ambientale SINANET*



Environmental Legal reference

SNPA
Lg. 132/2016

II SINA
Art. 11 comma 5
(comma 3)



ISPRA
DG-SINA



**ISPRA Geoportal
Metadata Catalogue**

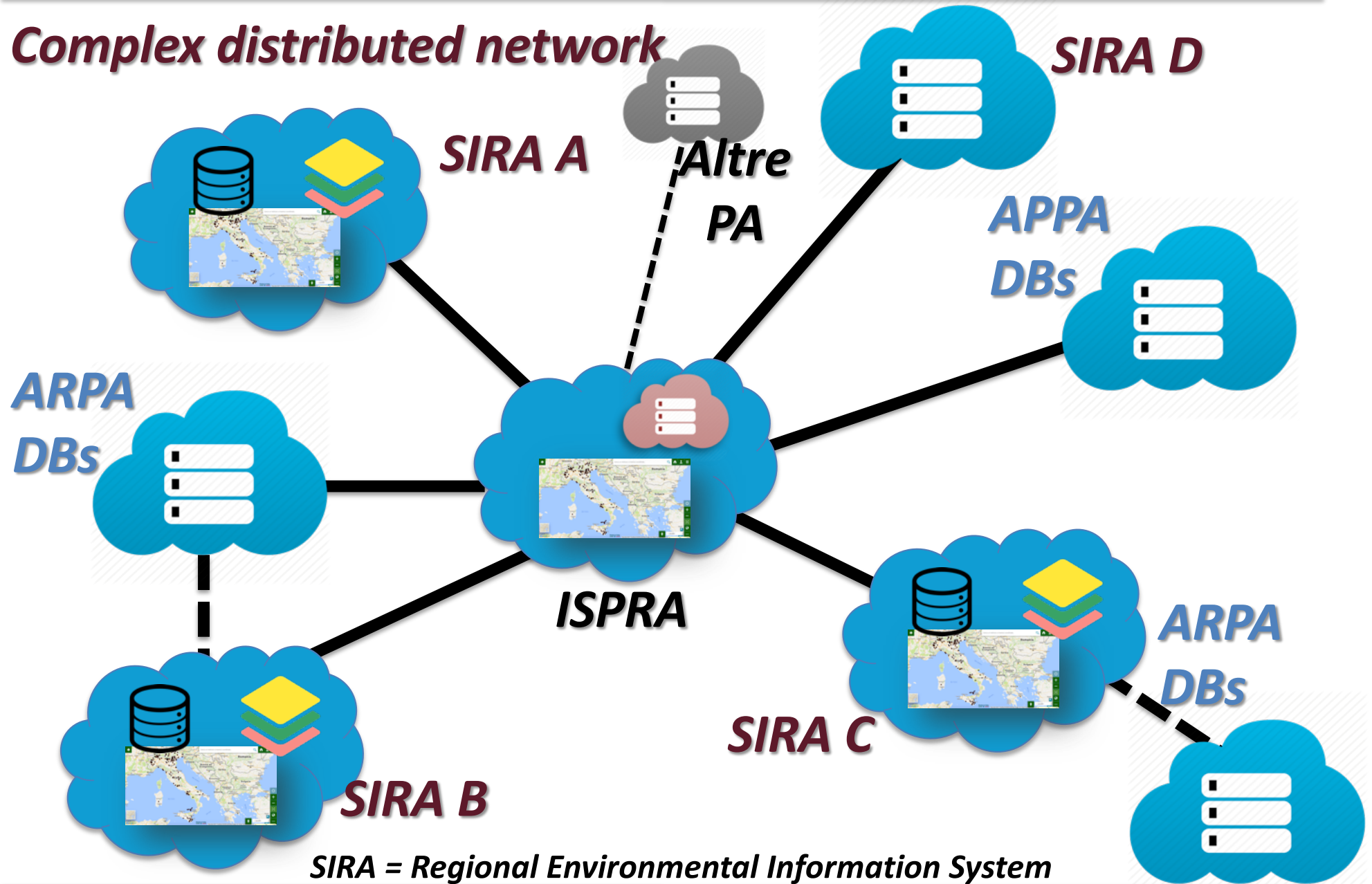
Il SINA concorre, per le materie di propria competenza, ...alle attività promosse e coordinate dall'ISPRA ai sensi del **comma 12-quaterdecies dell'articolo 23 del decreto-legge 6 luglio 2012, n. 95 (L. 135/2012)** per la catalogazione, la raccolta, l'accesso, l'interoperabilità e la condivisione, anche in tempo reale, dei dati e delle informazioni geografiche, territoriali e ambientali generati dalle attività sostenute, anche parzialmente, con risorse pubbliche. **Tali dati e informazioni devono essere forniti in forma libera e interoperabile.**



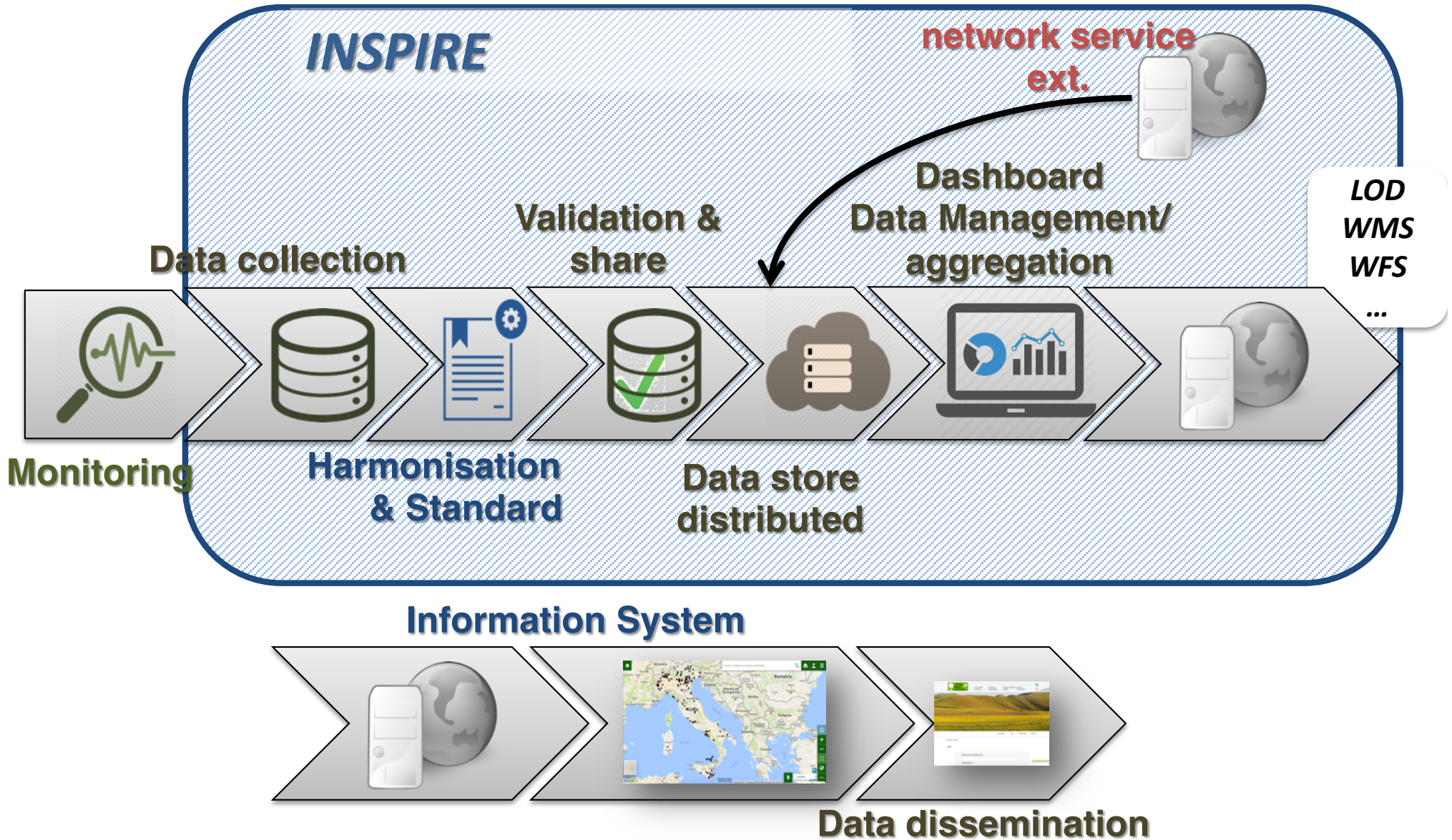
SINANET
Network nodes

SINANET Infrastructure view

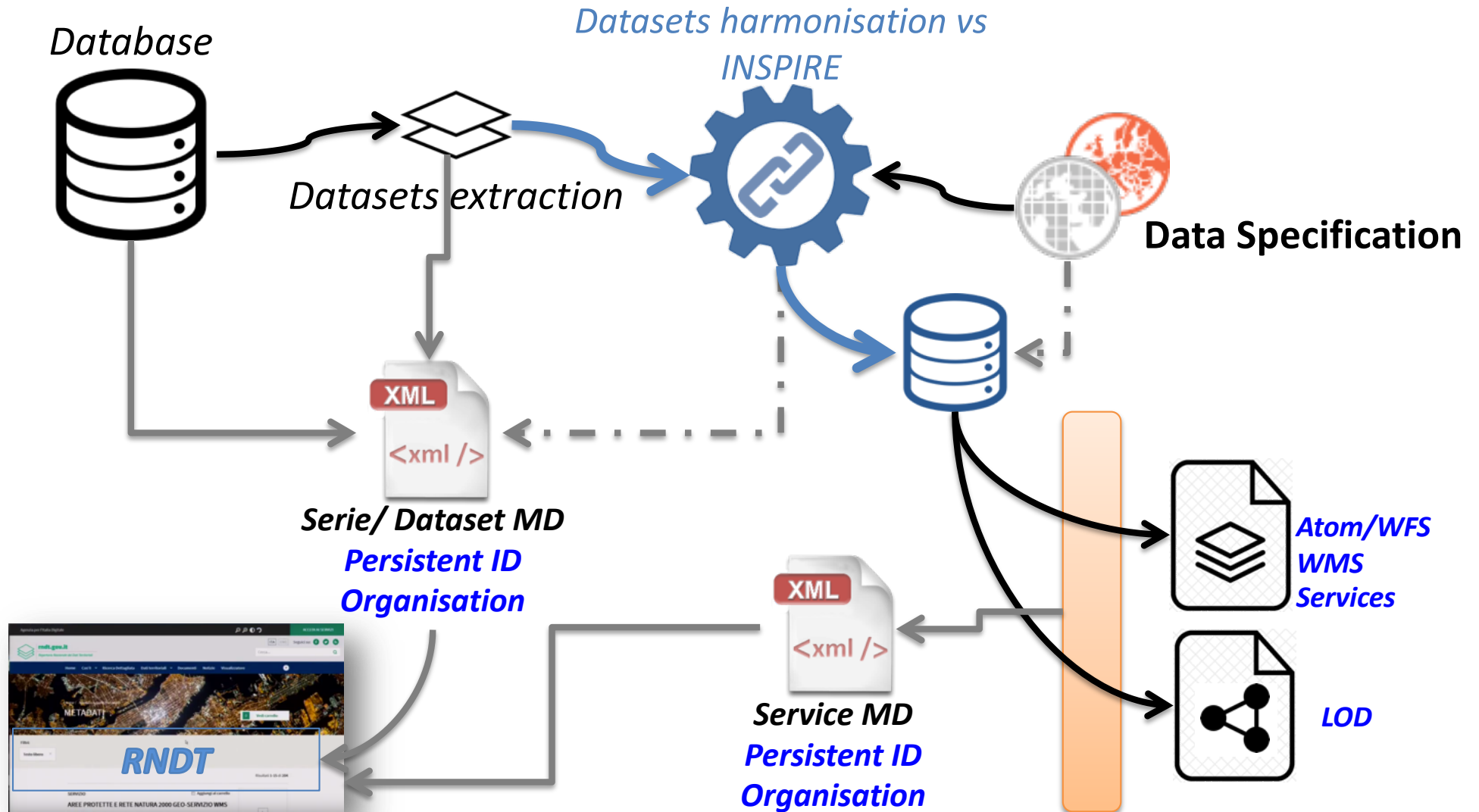
Complex distributed network



SINA/SINANET Strategic flow

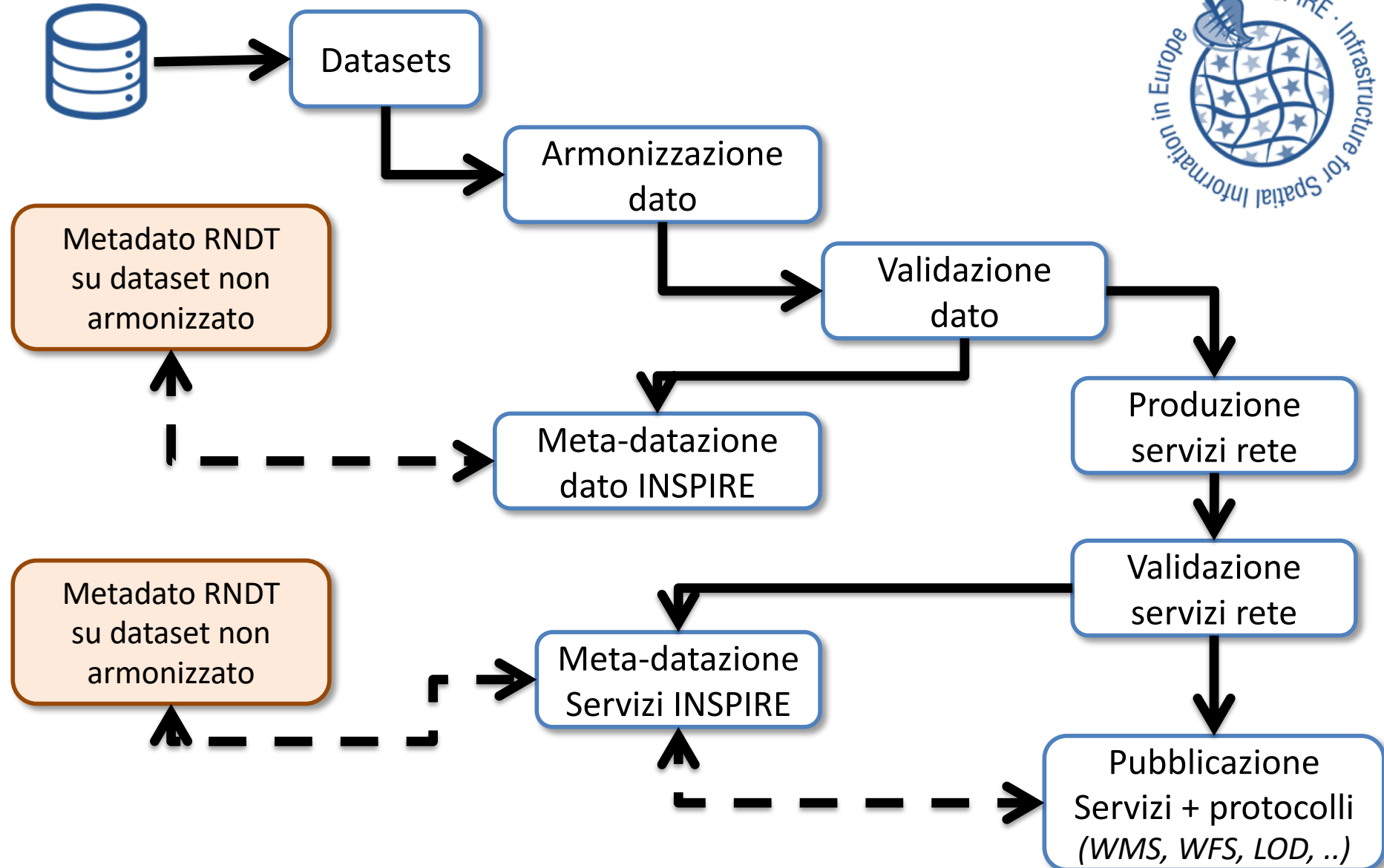


Production data flow



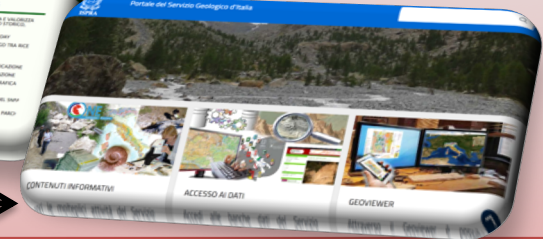
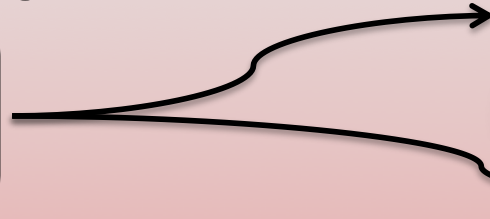
Standard production chain

Database

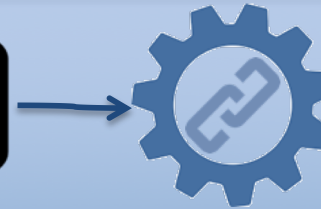


ISPRA Spatial Data Infrastructure

Metadata catalogue

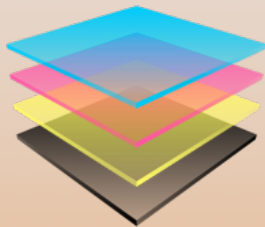


Database processing



DBs INSPIRE Schema DB Harmonisation

Web Services



RDF; CSV; ...

RESTful; WMS; WFS; Atom; WPS

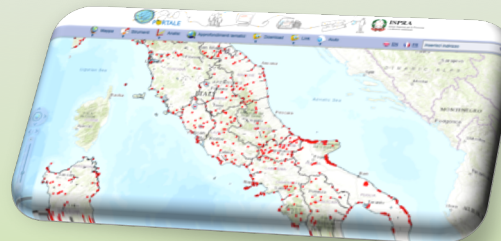


ArcGIS



GeoServer

Client/Platform



Data management

ISPRA data warehouse



13 database Air quality and industrial emission



60 database Nature conservation and Biodiversity



25 database Soil, Geology and Natural risk



12 database Coastal and Marine

[154 Database]



*20 database other
Environmental Data*

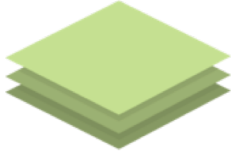


*24 projects database
Eu/International*

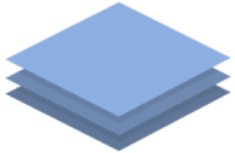
Network service management

[216 Service + 5 LOD]

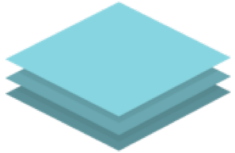
Network services OGC-INSPIRE - LinkedOpenData



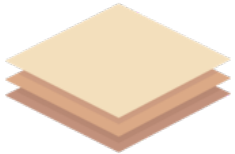
40 Services ArcGIS/WMS/WFS relate to Nature Conservation and Biodiversity



21 Services ArcGIS/WMS/WFS/Atom relate to Marine, Coastal and Water



27 Services ArcGIS/WMS relate to other environmental data, base maps and project data



92 Services ArcGIS/WMS/WFS/Atom relate to Soil, Geology and Natural risk

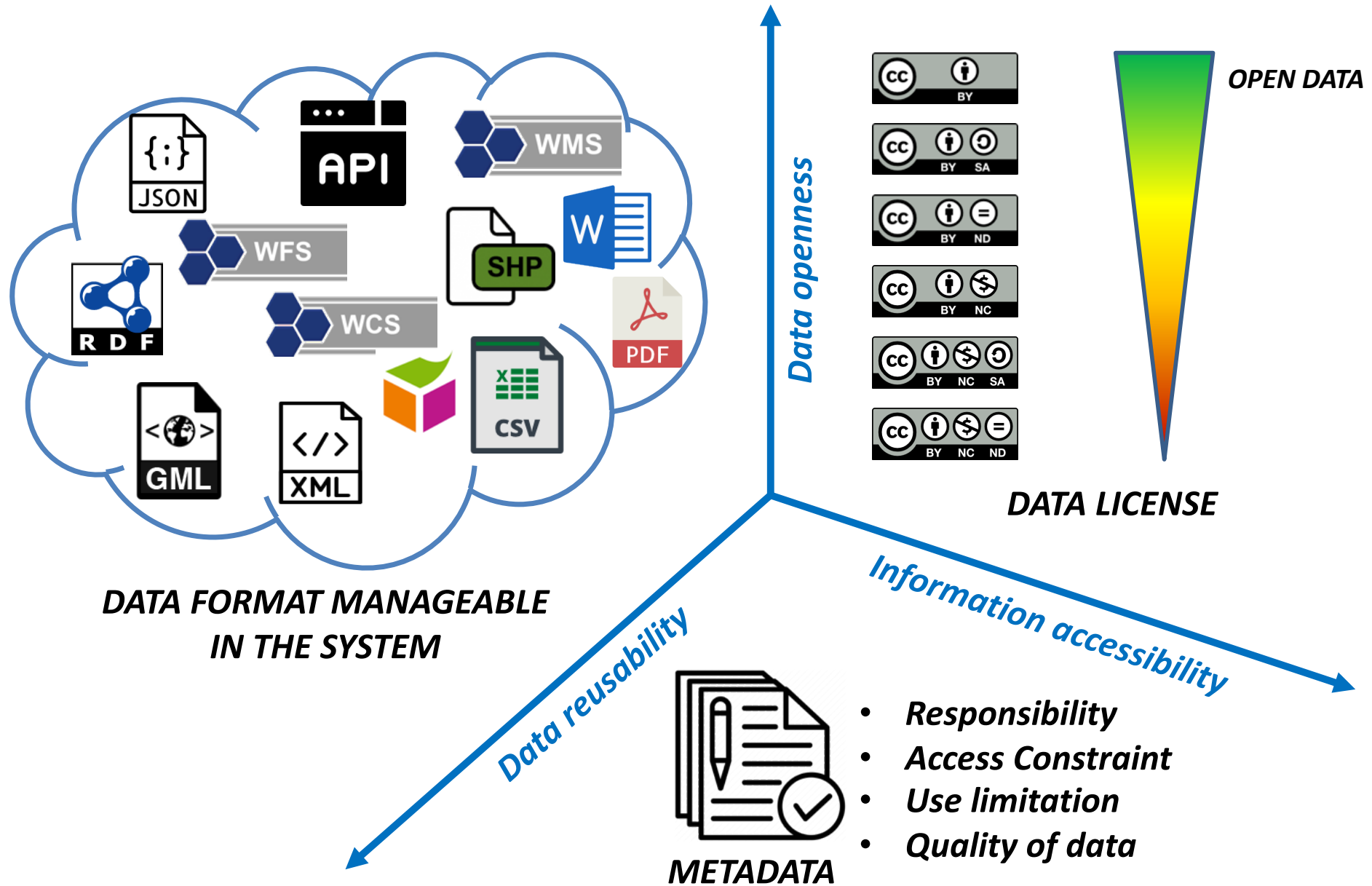


5 Linked Open Data
Datasets published

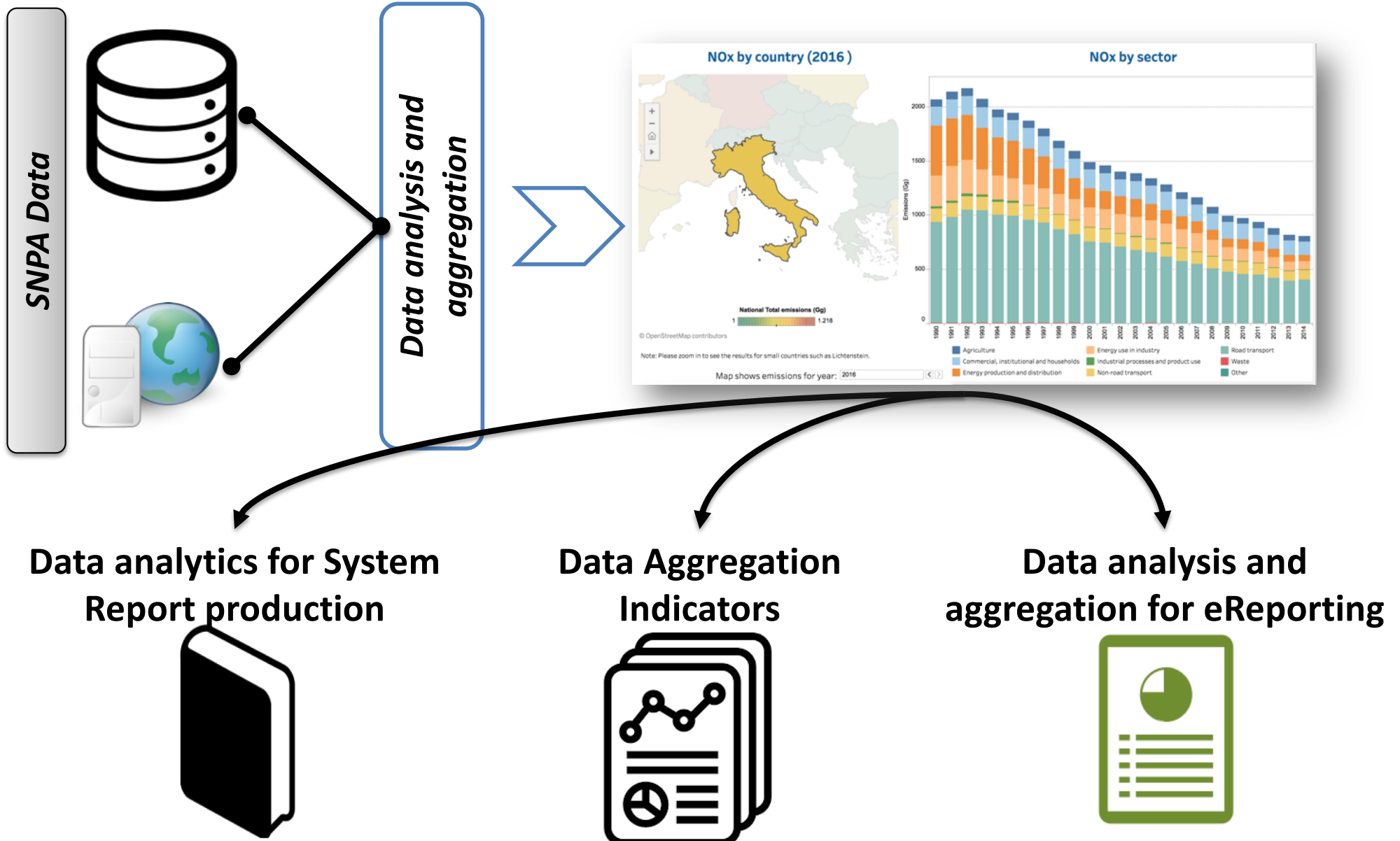


36 Utility services for
mobile or web
application

Data Management diagramm

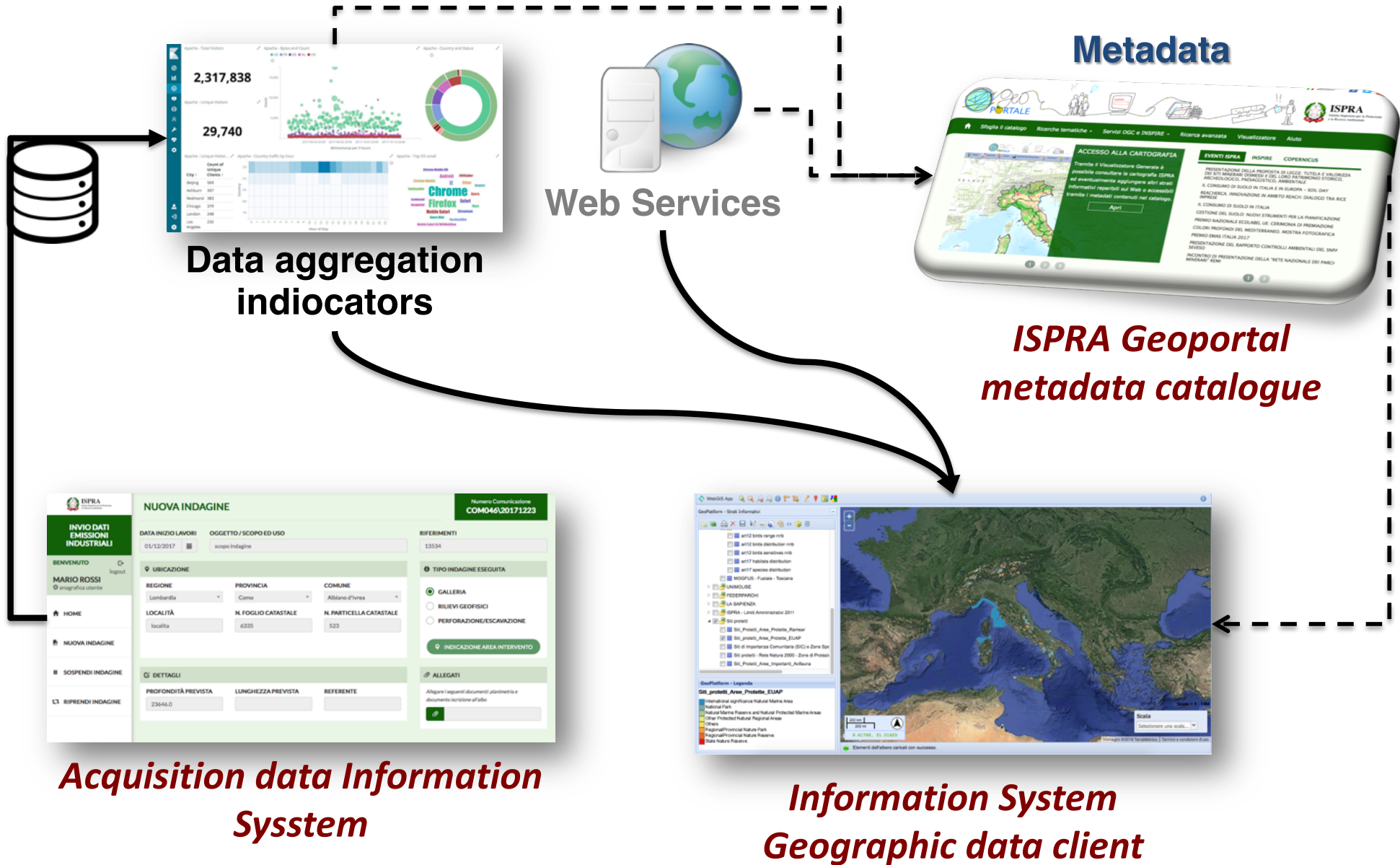


SINA internal Information System



i.g. Urban quality indicators i.g.Environmental Status indicators Es. Water Framework Directive

Multi-platform Information system





CERCA

SFOGLIA IL CATALOGO ISPRA

VISUALIZZATORE

Ricerca nella rete di cataloghi

Cerca

Risultati 1-15 di 135 record

[1](#) [2](#) [3](#) [4](#) [5](#) [>](#) [Ultima](#)

Espandi i risultati [Zoom ai risultati](#) [Zoom all'area di ricerca](#)

Records trovati in : Catalogo ISPRA

Fai click qui per selezionare un altro sito o configurare la ricerca.

Catalogo ISPRA

Seleziona i siti dove verrà distribuita la ricerca

Puoi selezionare fino a 5 siti.

- Catalogo ISPRA
- Catalogo del Servizio Geologico d'Italia
- Geoportale Nazionale
- Repertorio Nazionale dei Dati Territoriali
- Ricerca nella rete di cataloghi

[Opzioni aggiuntive](#) [Annulla](#)

QUANDO

Sovrapposto Compreso

Data di inizio: (yyyy-mm-dd)

[ITA_Aree_Naturali_Protette_EUAP](#)

VI Elenco Ufficiale Aree Naturali Protette (EUAP). Istituito in base alla legge 394/91, Legge quadro sulle aree protette, l'Elenco ufficiale attualmente in vigore è quello relativo al 6° Aggiornamento approvato con D.M. 27/04/2010 e pubblicato nel Supplem...

[Apri nel Viewer](#) [Anteprima](#) [Scheda Metadati](#) [Esplora](#) [Sito Web](#)
[Metadati-XML](#) [Servizio WMS](#) [Servizio WFS](#) [Servizio di download](#)
[Zoom a](#)

[ITA_Aree_Ramsar_2018](#)

[ITA_SpeciesDistribution_Bird2013](#)

[Siti di Importanza Comunitaria \(SIC\) e Zone Speciali di Conservazione \(ZSC\) - Dataset](#)

[ITA_ReportingWFD_RiverBasinDistrict2016](#)

DB Management - InfoARIA

ISPRA InfoAria Fabio Baiocco ISPRA

NEAR REAL TIME Sintesi giornaliera i risoluzione errori


	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
PIEMONTE	⚠	✓	✓	✓	✓	✓	✓	✓	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	
VALLE D'AOSTA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LOMBARDIA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VENETO	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	?	
FRIULI VENEZIA GIULIA	?	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	
LIGURIA	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	
EMILIA ROMAGNA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TOSCANA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
UMBRIA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MARCHE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	?	?	?	?	?	?	?	
LAZIO	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ABRUZZO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MOLISE	✓	⚠	✓	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	⚠	✓	✓	⚠	⚠	⚠	⚠	⚠	⚠	⚠	
CAMPANIA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PUGLIA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

193.206.192.124/ispria/#

Daily monitoring Near-real Time packages


- 1 package per hour 24 times for daily hours and 21 times related to Regions/Autonome Province
- More than 800 monitoring station with more sensors

Data Management - InfoARIA


ISPRA InfoAria

ANNO 2018

REGIONE TUTTE LE REGIONI


Fabio Balocco
ISPRA

NEAR REAL TIME

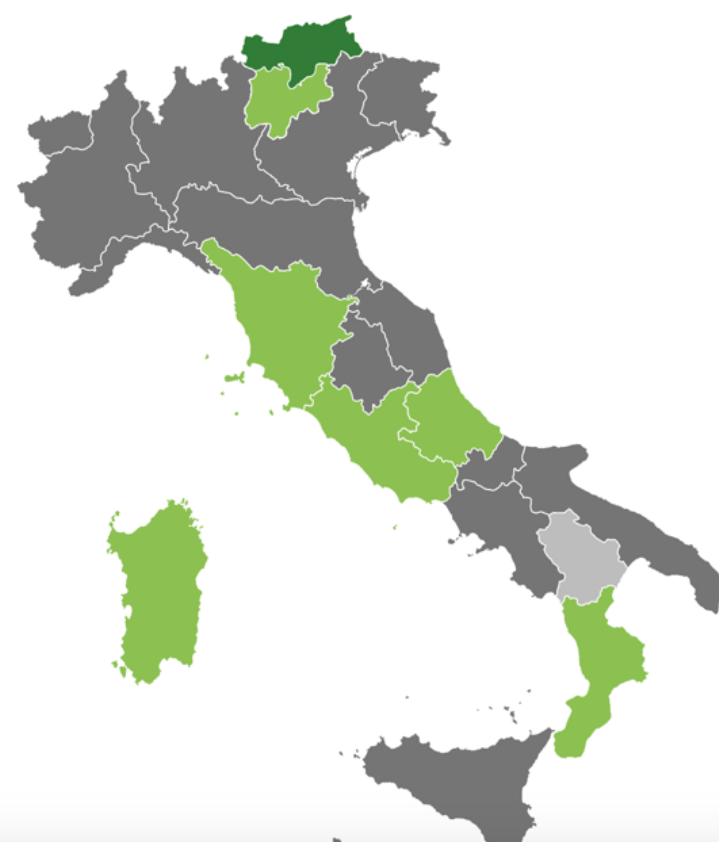
DATASETS

PIANI E PROGRAMMI

Dataset B

FEATURES STATO INFO

REGIONI	STATO	
Piemonte	RIAPERTO	
Umbria	RIAPERTO	
Marche	RIAPERTO	
Lazio	APPROVATO	✎
Abruzzo	APPROVATO	✎
Molise	RIAPERTO	
Campania	RIAPERTO	
Puglia	RIAPERTO	
Basilicata	IN COMPILAZIONE	
Calabria	APPROVATO	✎
Sicilia	RIAPERTO	
Valle d'Aosta	RIAPERTO	
Sardegna	APPROVATO	✎
Lombardia	RIAPERTO	
Provincia Autonoma Bolzano	ESPORTATO	✎
Provincia Autonoma Trento	APPROVATO	✎
Veneto	RIAPERTO	
Friuli Venezia-Giulia	RIAPERTO	
Liguria	RIAPERTO	
Emilia-Romagna	RIAPERTO	



ESPORTA

National datasets management on the Air Quality

- More or less 18000 records per hour => 430000 daily records for the Near-Real-Time
- Annual Database more than 300 millions of record
- Temporal series 2017-2019 (NRT) - 2002-2019 (National Datasets)

Dataset RON e RMN

<http://dati.isprambiente.it/id/website/ronRmn>

ENTITÀ DI TIPO: Dataset

RESOURCES

ispra:MeasureStation

76 risorse

- Cagliari Buoy (RON 2009)
- Cagliari tide gauge (RMN 2009)
- Carloforte tide gauge (RMN 2009)
- Catania Buoy (RON 1989)
- Catania Buoy (RON 2002)
- Catania Buoy (RON 2009)
- Catania tide gauge (RMN 2009)
- Cetraro Buoy (RON 1989)
- Cetraro Buoy (RON 2002)
- Cetraro Buoy (RON 2009)

National datasets management on the Mareografica Network

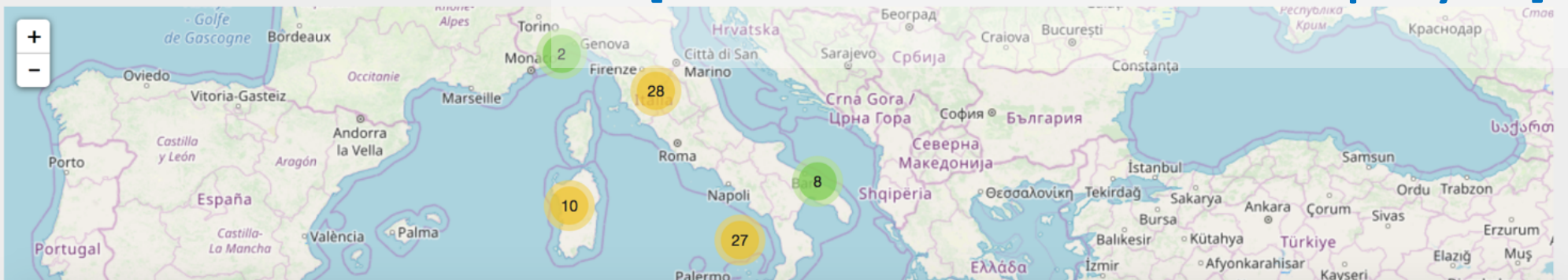
➤ Real-Time packages on 36 stations

➤ Every 10 second on Idrometric level

➤ Every 10 minute on Wind (direction and velocity)

➤ Every 1 hour on Temperature, humidity and pressure

[More than 3 milion of records per year]



LOD Platform

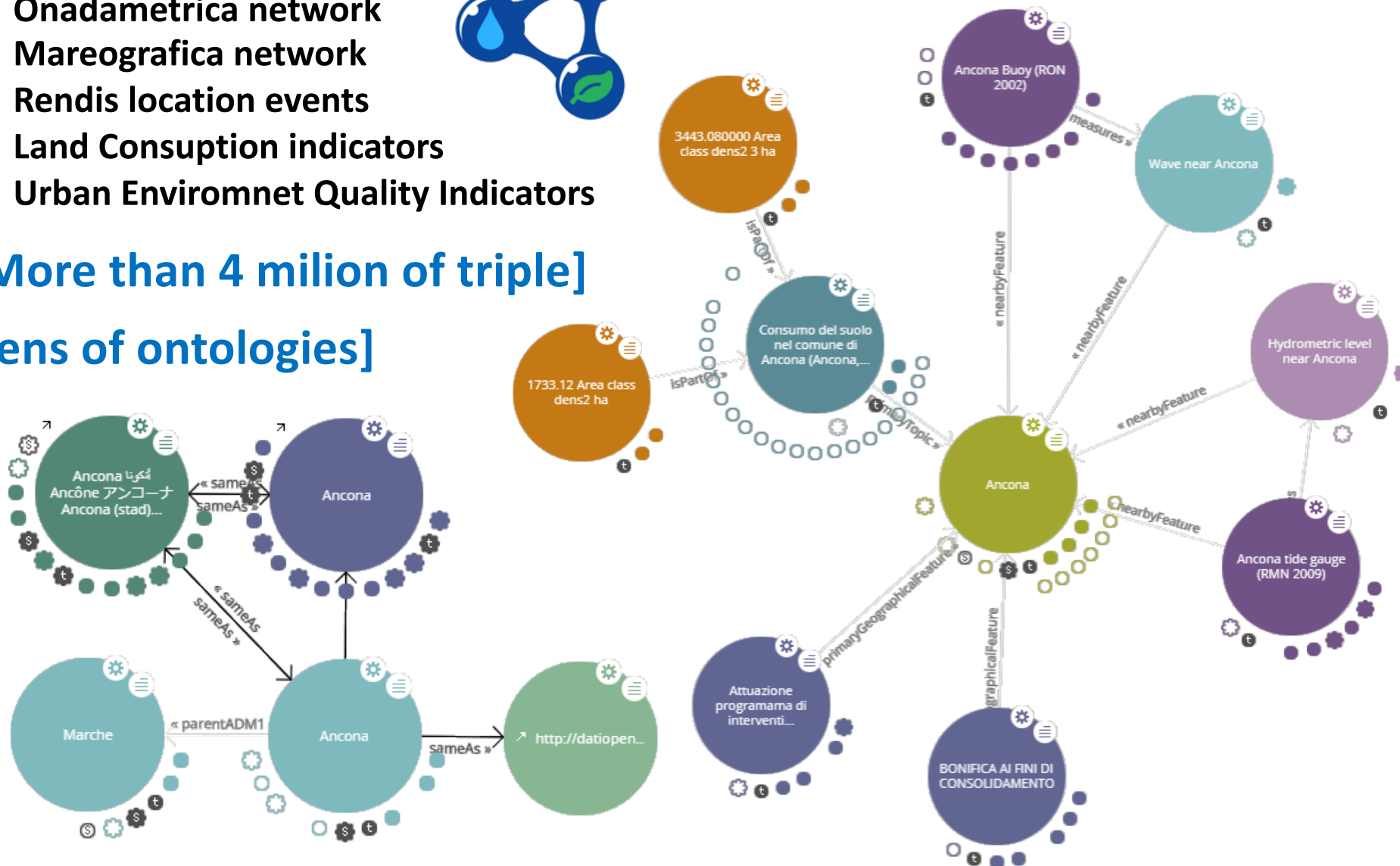
5 datasets management:

- Onadametrica network
- Mareografica network
- Rendis location events
- Land Consumption indicators
- Urban Enviromnet Quality Indicators



[More than 4 milion of triple]

[tens of ontologies]





Mappe e applicazioni



Adattamento ai Cambiamenti
Climatici



Info Aria Base layer



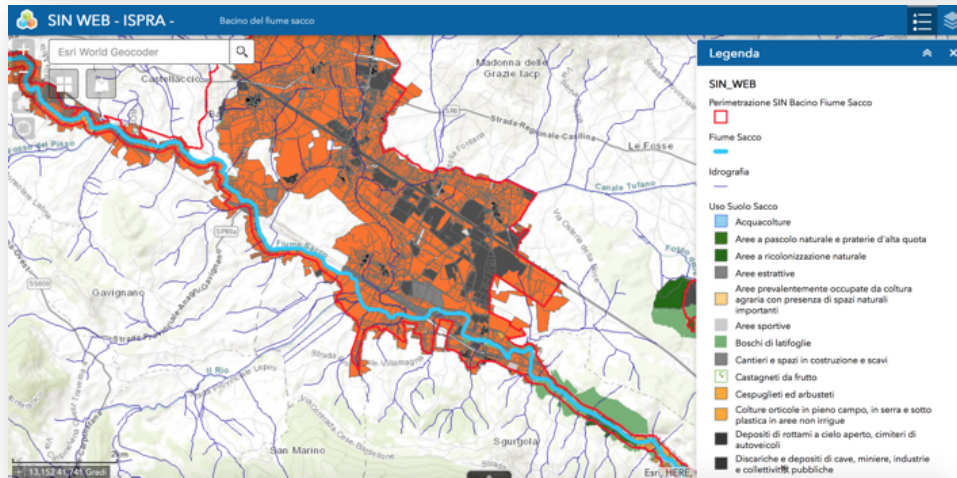
Progetto IFFI



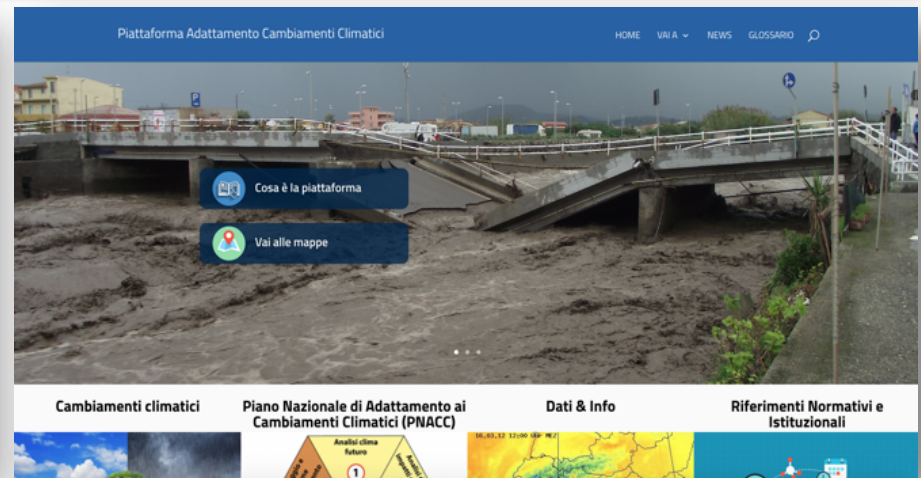
SIN_WEB

<https://sinacloud.isprambiente.it/portal/>

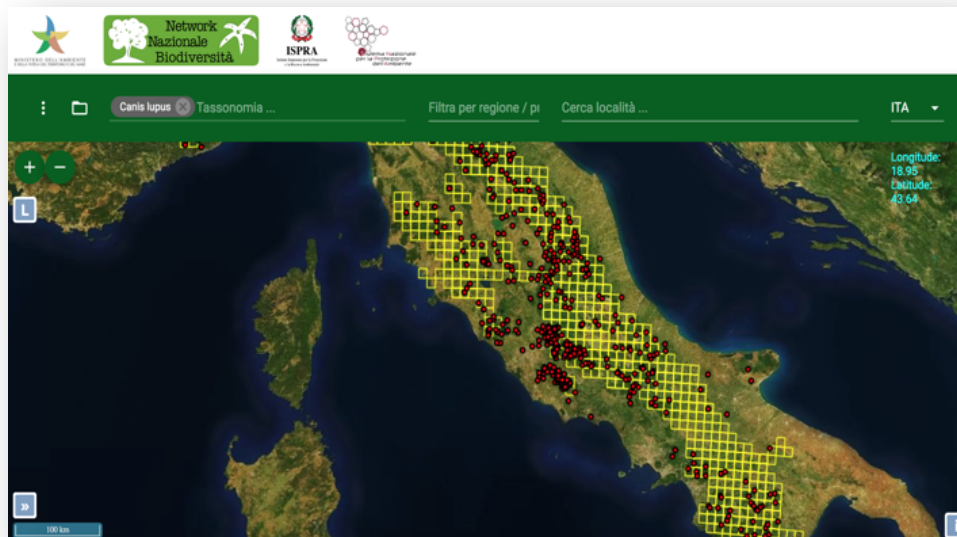
Web Application/platform



National contamination sites Applications



Climate Change Adaptation National Platform



National Network on Biodiversity Platform



Marine Strategy Information System

спасибо
danke 謝謝
ngiyabonga
teşekkür ederim
dank je
gracias
tapadh leat
bedankt
hvala
mauruuru
thank you
mochchakkeram
dziękuje
sagolun
sukriya
kop khun krap
go raibh maith agat
arigatō
takk
dakujem
merci
obrigado
terima kasih
ευχαριστώ
merci
мерси

Questions...

