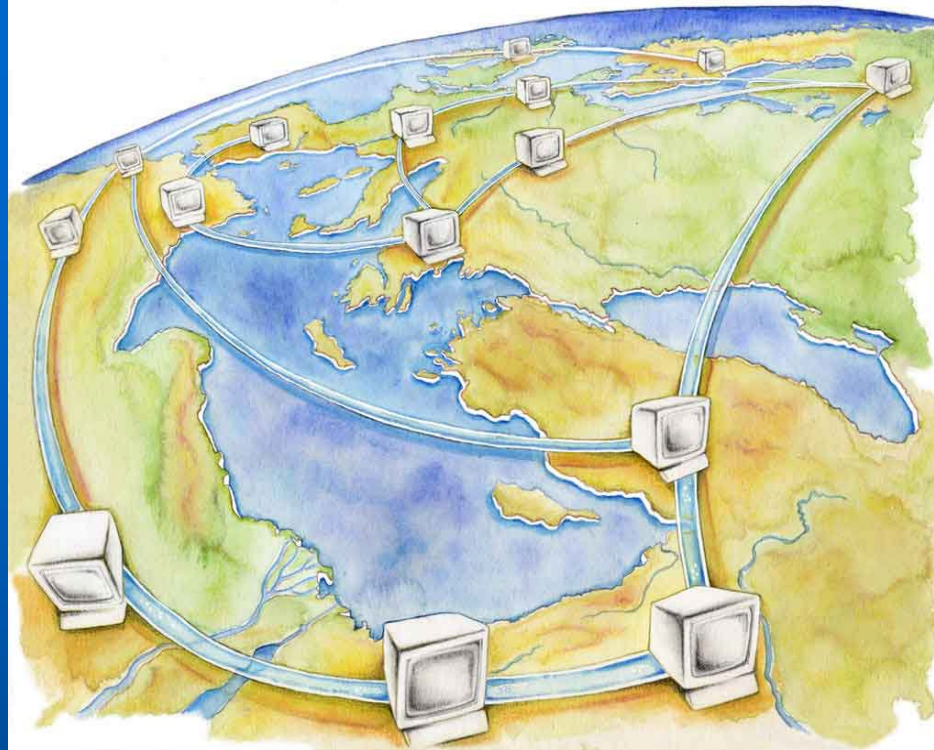


SEMIDE
EMWIS

SEMIDE

www.semide.net

Système Euro-
Méditerranéen
d'information sur les
savoir-faire dans le
domaine de l'Eau



النظام المعلوماتي الأورومتوسطي
للمعرفة في مجال المياه
Developing harmonized national water
information systems in the Mediterranean

Eric MINO

EMWIS

www.emwis.net

Euro-Mediterranean
Information System
on know how in the
water sector

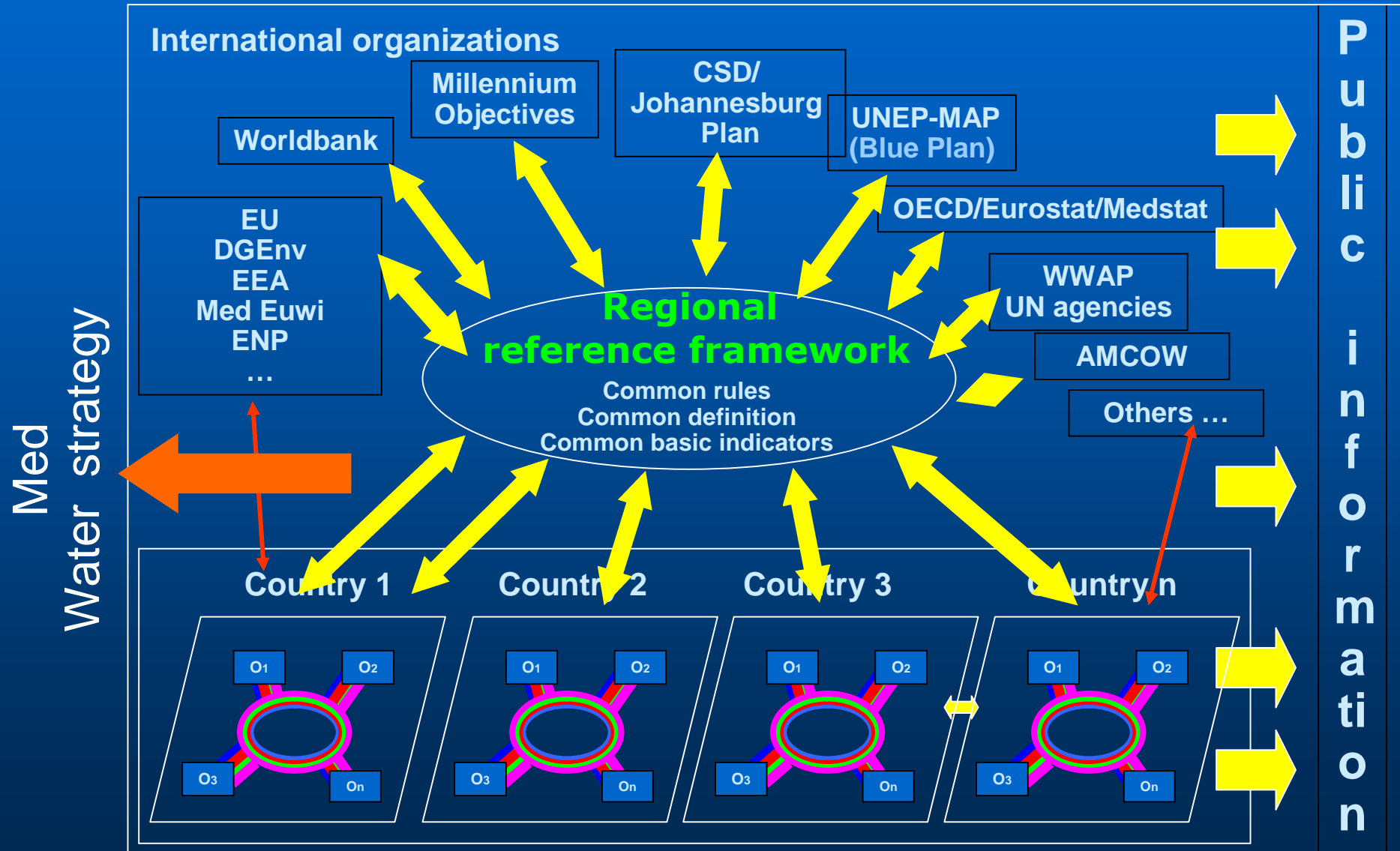


DG ENV

EURO-MEDITERRANEAN PARTNERSHIP



Overall Mediterranean vision





- *“An information system is a set of social stakeholders that records and transforms data representations via information technologies”*
 - => a National Water Information System should include all the stakeholders, directly or indirectly concerned by the water sector, who agree to exploit information technologies with common objectives.
 - => Each stakeholder generally has its own Water Information System which includes only one organisation and its subsidiaries around common objectives



Shared Water information Systems

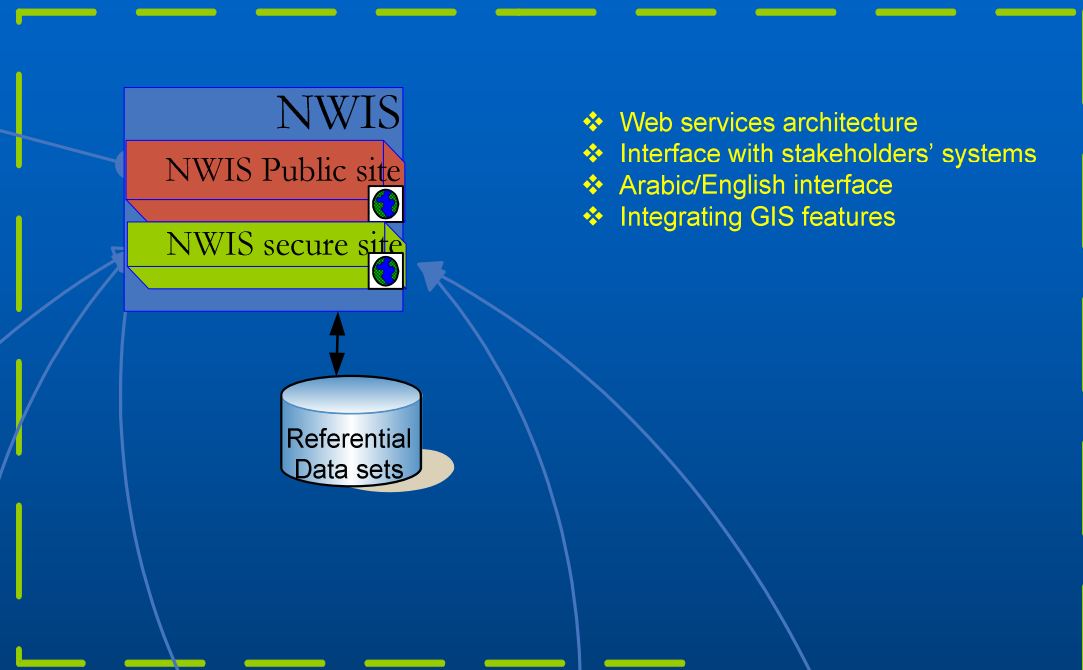
NWIS Management

Data access right defined by data owners

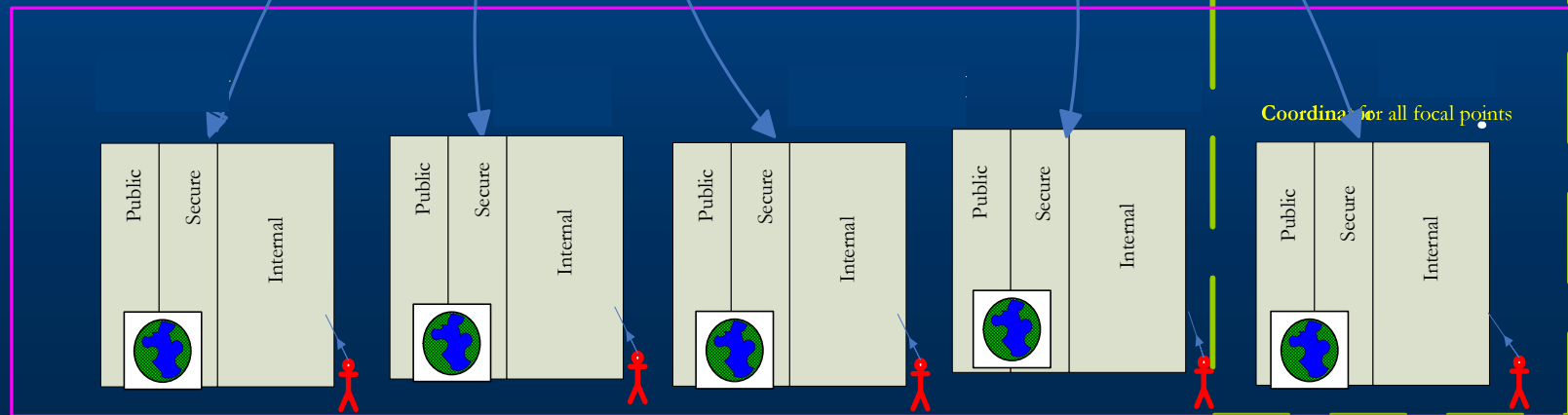
Data exchanges can be restricted to a close group of stakeholders



Web navigator



Stakeholders





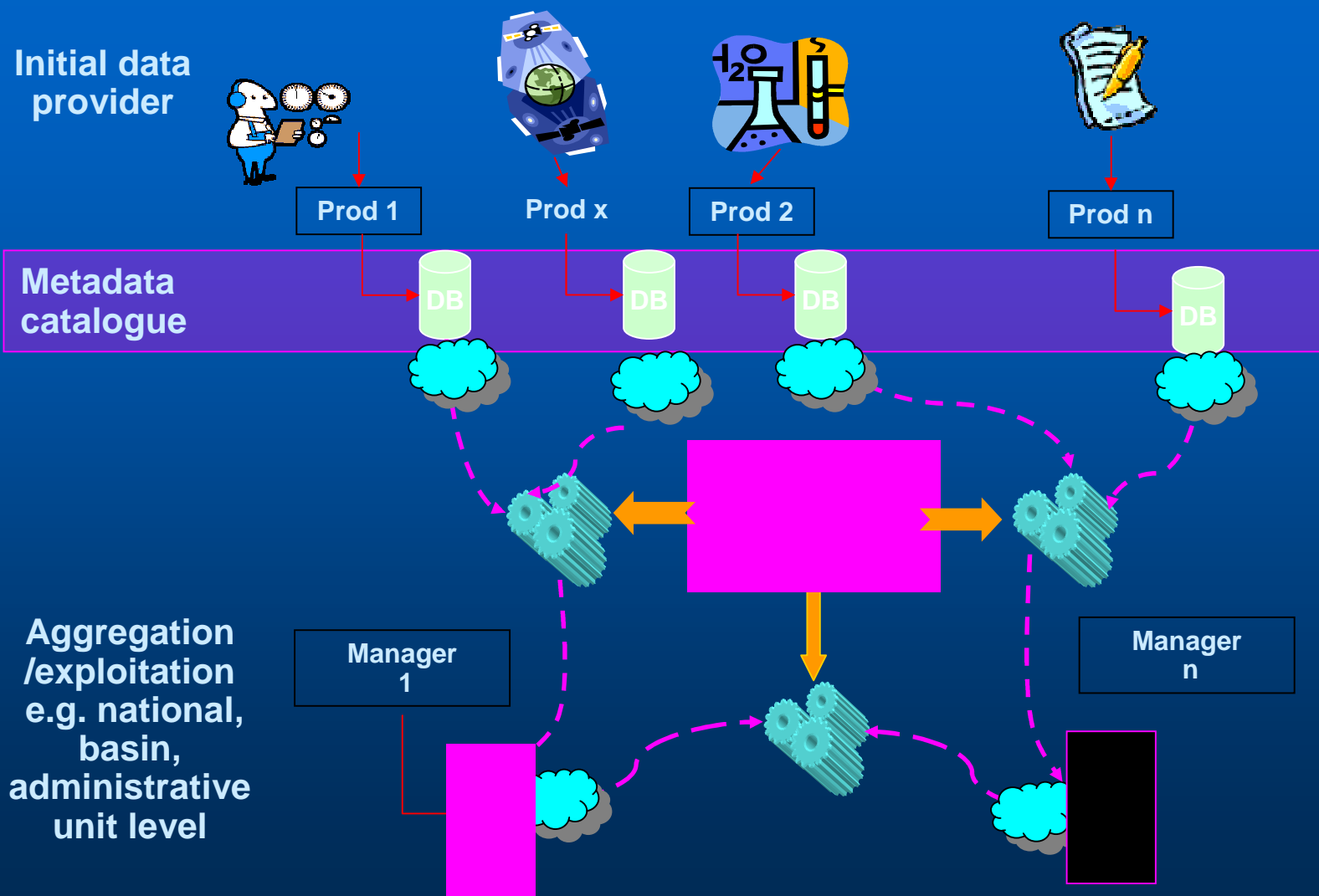
Constraints

- Lack of legal framework for reporting water data
- Many international initiatives and political processes
- “Observation”/“monitoring” seen as intrusive for national water management

Opportunities

- Strong demand of international stakeholders
- Commitment to NWIS, but not yet developed (information necessary for daily management)
- Common basic data used for the calculations of indicators
- Organisational problems rather than lack of data
- Union for the Mediterranean (Mediterranean Water Strategy)

Organising data exchanges



Content of a reference data framework



- **Referential datasets**
 - Hydrological networks (e.g. rivers, watersheds, lake, aquifers)
 - Water management areas (e.g. protected areas, administrative units)
 -
- **Data dictionaries (data models, reference lists)**
 - => Generic conceptual data model developed
- **Definition of indicators, data collection methods**
 - => Pilot activity on going on water quantities
- **Geo-catalogue of data sources and data services**
 - ⇒ Prototype available with a Mediterranean profile
 - ⇒ Linked map viewer under development
- **Interoperability specifications (exchange formats/ service protocols)**
 - => Recommendations on standards to be used (for SEIS/WISE/INSPIRE interoperability)



NWIS basic principles

- **Information should be managed as close as possible to its source**
 - Multiple partners/providers
- **Information collected once and shared with others for many purposes**
 - Different aims / user categories
 - Interoperability, geographical scales
- **Provision to the public of aggregated data**
- **Unique provider for each data type**
- **Gouvernance**
 - Strategic -> needs
 - Technical -> referential data sets
 - Basins (or management units) -> data collection

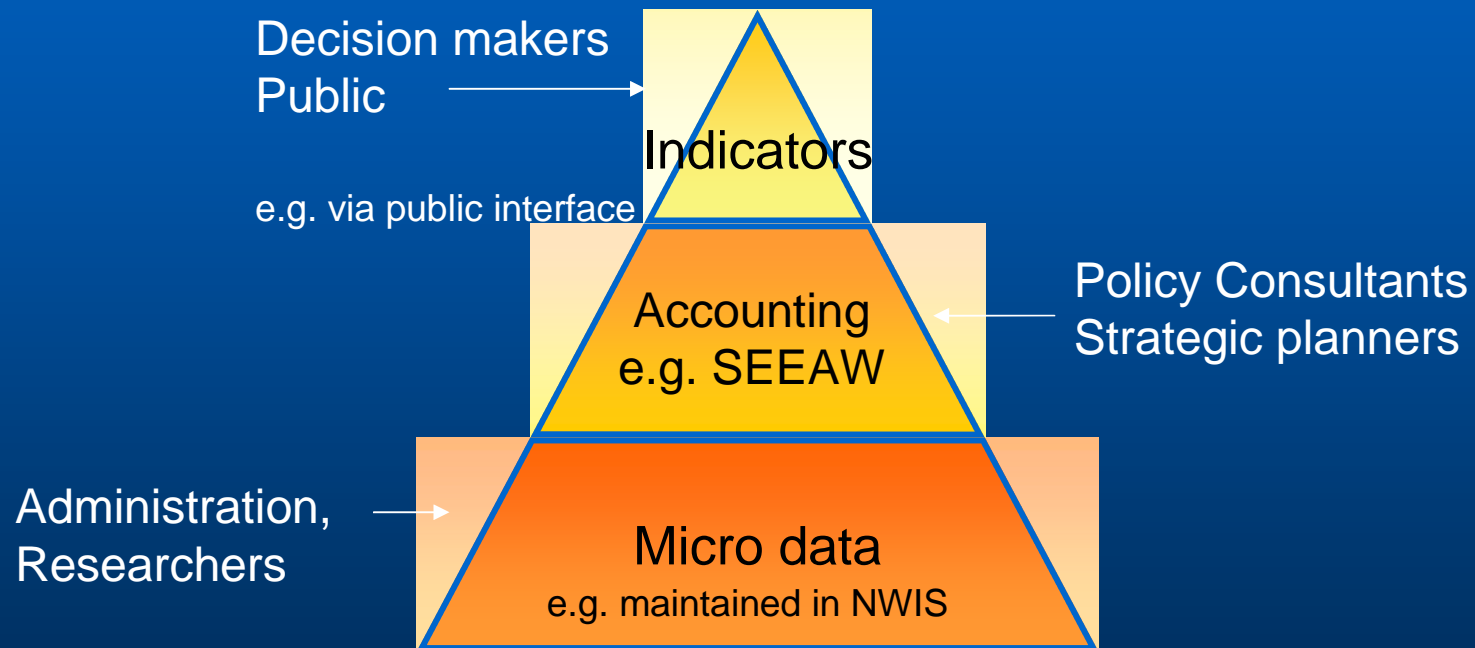


NWIS vision

- **Governmental system**
 - ❑ Interministerial intranet
 - ❑ Limited public access
 - ❑ Sub-systems managed by each partner
 - ❑ Node of a broader system
- **User categories**
 - ❑ Executive / decision makers (incl. other ministries)
 - ❑ Experts
 - ❑ General public
- **Technical issues**
 - ❑ Web based system integrating thematic sub-systems
 - ❑ Graphical user interface, geographical data access
 - ❑ Using international data standards

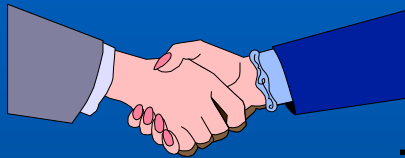


Data aggregation vs user groups





Policy Framework Agreement
(main objectives, priorities)



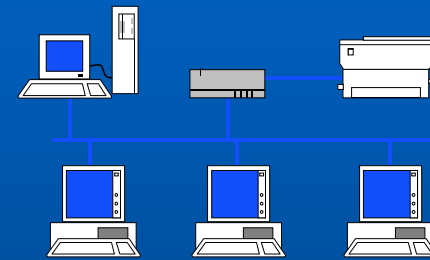
Common language



Specific need definition / agreements on procedures



System development
(e.g. interconnection capacities)



A specific legislation

can support sustainability, clarify responsibilities
but must be flexible

not necessary to launch the process

MoU or partnership agreements

more flexible

can include MoU between sub-groups of actors



NWIS governance

- **Interministerial body:**
 - ❑ Rely on an existing body
 - ❑ MoU on management / data sharing rules
 - ❑ Specific agreements on datasets to be shared, incl. publications
 - ❑ Defining priorities and further developments
 - ❑ System validation
 - ❑ Fund raising requests
 - ❑ Members: public institutions partners of the NWIS

- **Technical coordination committee**
 - ❑ In charge of implementation and system management
 - ❑ Definition of thematic developments and reference data sets
 - ❑ Involving focal points from each stakeholder



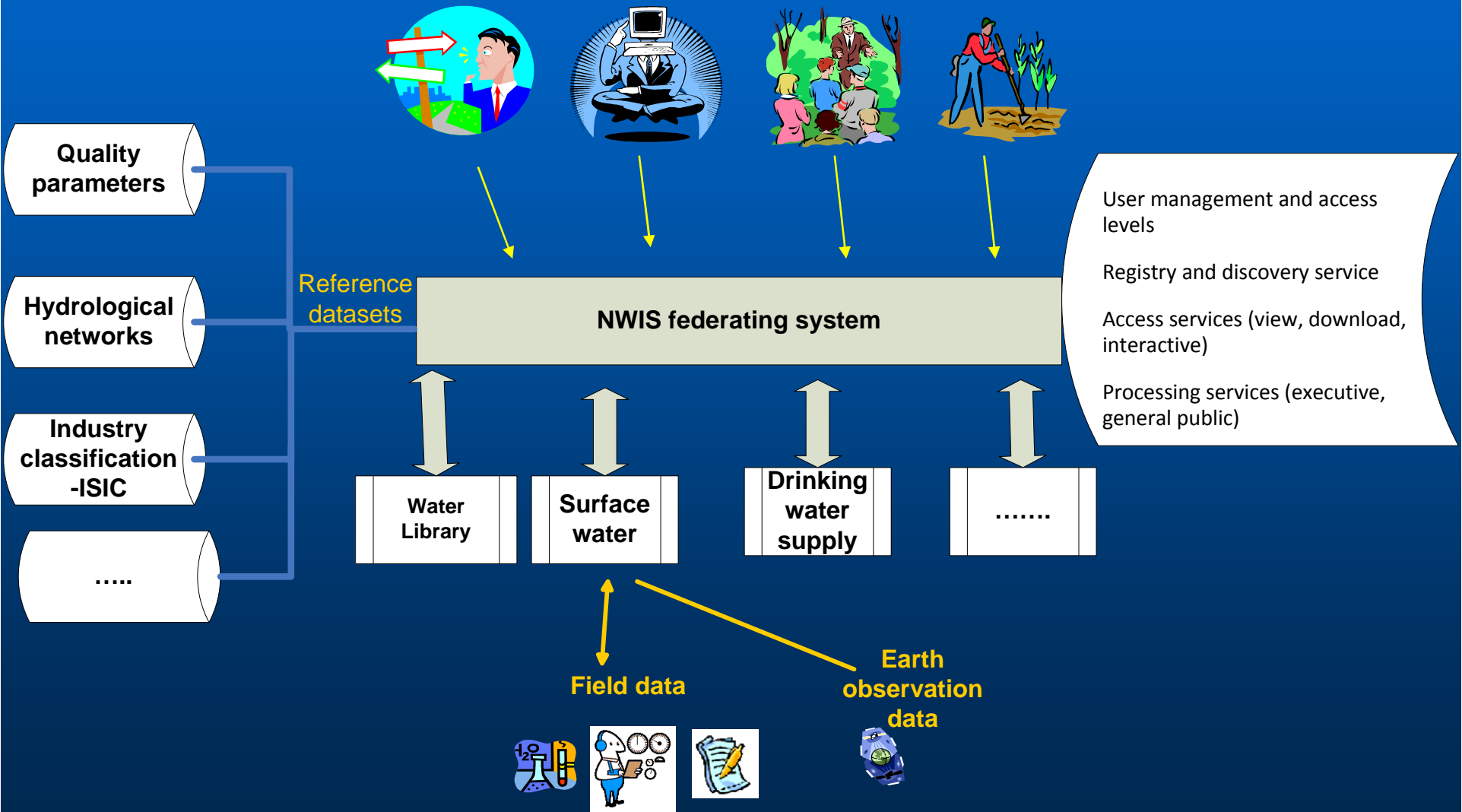
NWIS Benefits

- **Data management:**
 - ❑ Supporting decision making (water and other sectors)
 - ❑ Better data accessibility
 - ❑ Quality control & stability over time
 - ❑ Better control on costs
 - ❑ Upgrade of existing (sub) systems
 - ❑ Openness to add applications/services
- **National referential data sets**
 - ❑ Comparability
 - ❑ Quality control
 - ❑ Optimising monitoring networks
 - ❑ Agregating and combining data
 - ❑ Integration of water data with data from other sectors
- **Regional harmonisation**
 - ❑ Sharing experiences, existing guidelines
 - ❑ Use of international standards supporting data exchange
 - ❑ Sustainability of technical solutions
 - ❑ Easier reporting to international initiatives
 - ❑ Potential international support



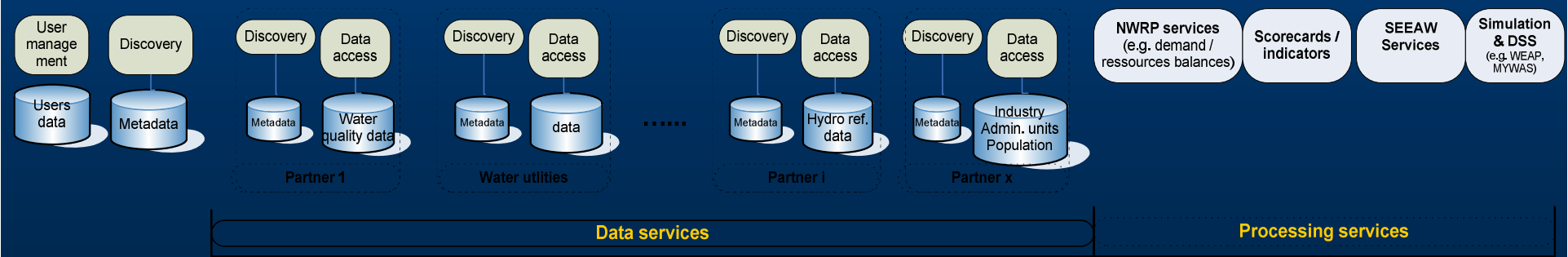
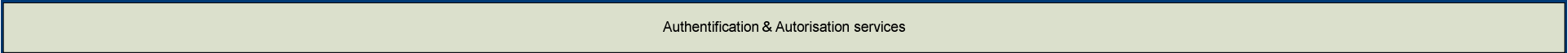
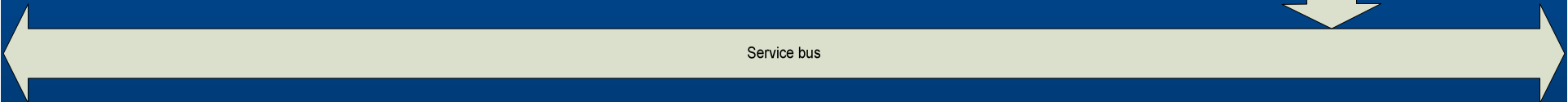
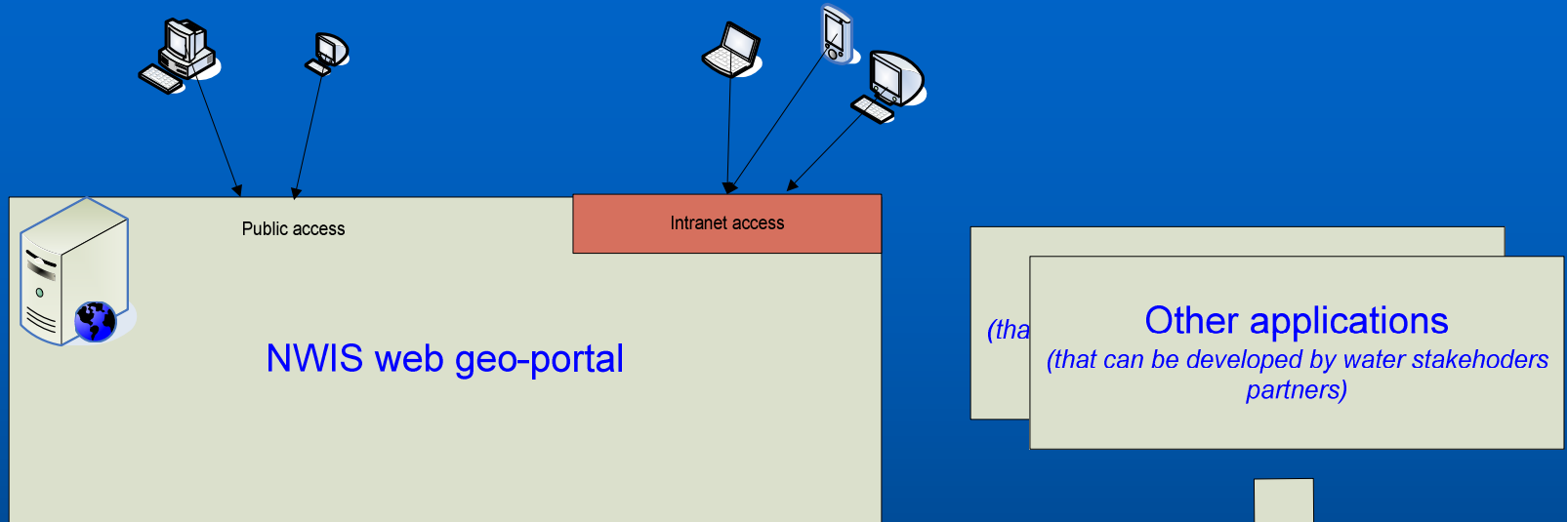
NWIS components

extendable architecture



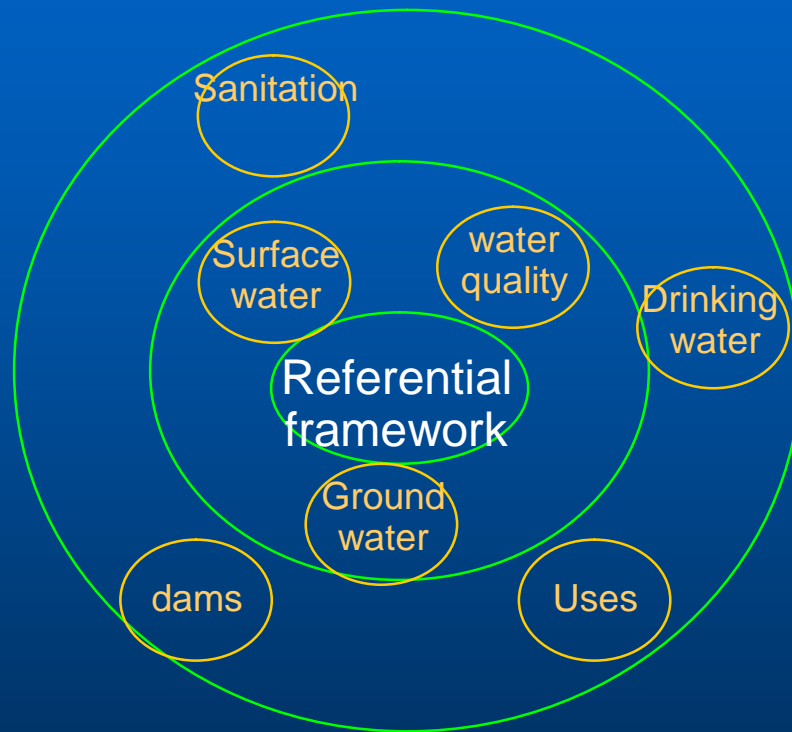


Technical architecture





A step wise integration process



- **Referential framework**
 - ❑ Set by and for the stakeholders
 - ❑ Quality Assurance
- **Sub-systems**
 - ❑ One domain = one leader
- **National system**
 - ❑ Sub-systems integration
 - ❑ Needs going beyond single sub-systems



Typical NWIS roadmap

- High level decision on building a NWIS
- MoU signature, with identification of focal points in each institution
- Fund raising
- Detailed analysis and NWIS specifications, including some sub-systems upgrading
- System implementation and training
- System operation
- Iterative process:
 - New components/public institutions can join later

2
years





Broader vision

- ***NWIS: a key component of an eGovernment infrastructure for Egypt***
- ***An important node of a Shared Environmental Information System –SEIS–***
- ***Could benefit from EU experience on SEIS and its foreseen extension to Southern Med countries***



NWIS Examples

- **France:**
 - <http://www.eaufrance.fr/>
- **Spain**
 - <http://servicios3.mma.es/siagua/news.jsp>
- **Czech**
 - <http://www.voda.gov.cz>
- **EU: WISE**
 - <http://water.europa.eu/>



You are here : Home > Online Services > For a data set > Consult a data from a reference set FR EN

- News
- About the Sandre
- Reference documents and data sets
- Online Services
 - For a dictionary
 - For a scenario
 - For a data set
 - Consult a data from a reference set
 - Atlas
 - Catalog
 - Update reference data description
 - Learn about the latest datasets updates
 - Report an inconsistency between documents or data sets
 - Newsletter

Enquête de satisfaction

Compléter le questionnaire de satisfaction sur la gestion des jeux de données Alphanumériques

Consult a data from a reference set

This service provides access to reference alphanumeric (codes for chemical substances or living organisms in water, municipalities) or geographical (geographic information such as water bodies) data sets by a multi-dimensional search. To ask for an update of this data, use the section **Mettre à jour la description d'une donnée d'un jeu** (Update the description of a given data from a dataset)

To consult:

- Geographic reference datasets, use the **Atlas (FR)**
- Metadata linked to the geographic reference datasets, use the **Catalog (FR)**
- OGRES alphanumeric reference datasets, complete the form below (only French terms) and click "Submit." To refine your query, add more criteria (they vary according to the selected reference data set).

Your query will rely on XML files, containing all the Sandre reference data sets (example: the parameters code list). To download these files or to obtain information on their content without using the search form below, **click here**.

The following video shows how to use the service: [watch the video \(fr\)](#)

Enter a word, a sentence or a code

 Exact term

Possibly refine the search by specifying several criteria

Dataset: Régions administratives

Status: Référentiels administrés par le Sandre (past and not anymore in use)

Creation date : ?

Données d'un jeu

Code	Jeu de données	Statut	Dates	Service proposé
ALSACE	Régions administratives	Validé	Créé le 2006-01-01 Mis à jour le 2006-01-01	<input type="checkbox"/> Consulter la donnée (HTML) <input type="checkbox"/> Consulter la donnée (XML)
AQUITAINE	Régions administratives	Validé	Créé le 2006-01-01 Mis à jour le 2006-01-01	<input type="checkbox"/> Consulter la donnée (HTML) <input type="checkbox"/> Consulter la donnée (XML)
AUVERGNE	Régions administratives	Validé	Créé le 2006-01-01 Mis à jour le 2006-01-01	<input type="checkbox"/> Consulter la donnée (HTML) <input type="checkbox"/> Consulter la donnée (XML)
BASSE-NORMANDIE	Régions administratives	Validé	Créé le 2006-01-01 Mis à jour le 2006-01-01	<input type="checkbox"/> Consulter la donnée (HTML) <input type="checkbox"/> Consulter la donnée (XML)



Actualités

Comprendre

Observer et évaluer

Bulletin de situation hydrologique

◊ Situation Générale

◊ Précipitations

◊ Précipitations efficaces

◊ L'eau dans le sol

◊ Nappes

◊ Restrictions d'usage

◊ Les bulletins régionaux et de bassins

◊ Les producteurs de ce bulletin

◊ Les bulletins des mois précédents

Agir et participer

◊ Situation Générale du 11 septembre 2009

Le mois d'août 2009 a connu des contrastes pluviométriques importants : des précipitations quasiment inexistantes du bassin d'Arcachon jusqu'au Nord, sur le pourtour méditerranéen et sur l'ouest de la Corse, alors que la Bretagne, les Alpes, les Vosges et le Massif Central ont été particulièrement arrosés.

Depuis le début de l'année hydrologique en septembre 2008, les cumuls de précipitations relevés sont légèrement déficitaires sur la majorité du territoire. Les cumuls de précipitations efficaces sur la même période restent contrastés sur la métropole. Sur la moitié nord du pays à l'exception de la Manche, et du nord de la Bretagne, les précipitations efficaces sont déficitaires de l'ordre de 50% par rapport à la normale, voire plus localement. Globalement, sur le sud, les précipitations efficaces sont excédentaires, souvent supérieures à 25% à la normale.

Début septembre, les sols superficiels sont secs et de manière plus importante que la normale et la baisse des nappes est quasi-générale.

Au 10 septembre 2009, 50 départements ont pris des mesures de restriction des usages de l'eau pour au moins un bassin versant.



Précipitations



Précipitations efficaces



Eau dans le sol



Nappes



Restrictions d'usage



	Eaux de surface		Eaux souterraines		
	Contrôle de surveillance	Contrôles Opérationnels	Contrôle de surveillance de l'état quantitatif	Contrôle de surveillance de l'état chimique	Contrôles opérationnels de l'état chimique
Corse	39	38	35	19	0
Escaut, Somme et cours d'eau côtiers de la Manche et de la Mer du Nord	52	43	68	50	136
Garonne, Adour, Dordogne, Charente et cours d'eau côtiers charentais et aquitains	380	344	369	308	163
Guadeloupe	20	16	22	9	5
Guyane	0	0	0	0	0
Loire et cours d'eau côtiers, vendéens et bretons	509	652	409	335	206
Martinique	36	15	29	20	16
Meuse	29	9	17	54	20
Réunion	31	14	22	17	3
Rhône et cours d'eau méditerranéens	468	645	313	338	348
Rhin	97	43	69	145	83
Sambre	9	6	5	5	3
Seine et cours d'eau côtiers normands	256	586	276	439	301
France entière	1926	2411	1634	1739	1284

Rapport à la Commission européenne

Corse: [HTML](#),[XML](#)

Escaut, Somme et cours d'eau côtiers de la Manche et de la Mer du Nord: [HTML](#),[XML](#)

Garonne, Adour, Dordogne, Charente et cours d'eau côtiers charentais et aquitains: [HTML](#),[XML](#)

Guadeloupe: [HTML](#),[XML](#)

Guyane: [HTML](#),[XML](#)

Loire et cours d'eau côtiers, vendéens et bretons: [HTML](#),[XML](#)

Martinique: [HTML](#),[XML](#)

Meuse: [HTML](#),[XML](#)

Réunion: [HTML](#),[XML](#)

Rhône et cours d'eau méditerranéens: [HTML](#),[XML](#)

Rhin: [HTML](#),[XML](#)

Sambre: [HTML](#),[XML](#)

Drinking water quality 1/2



Résultats du contrôle sanitaire de la qualité de l'eau potable

[27 mai 2009]

En France, l'eau du robinet est l'un des aliments les plus contrôlés. Elle fait l'objet d'un suivi sanitaire permanent, destiné à en garantir la sécurité sanitaire. Ce dossier vous permet d'accéder directement aux principaux résultats du contrôle sanitaire réalisé par les services déconcentrés du ministère chargé de la santé dans votre région.

<http://www.sante-sports.gouv.fr/dossiers/sante/eau/eau-potable/>



Cliquez sur votre région pour accéder aux résultats de qualité de l'eau potable de votre commune.

Ministry of Health
Access for public



Critères de recherche	
Département	ALPES MARITIMES
Commune	ASPREMONT
Réseau(x)	CANCA UDI ST BLAISE-ASPREMT-CASTA
Commune(s) du réseau	- ASPREMONT - CASTAGNIERS - SAINT-BLAISE
Bulletin précédent Rechercher	

Informations générales	
Date du prélèvement	28/08/2009 09h45
Commune de prélèvement	SAINT-BLAISE
Lieu de prélèvement (1)	RESEAU SAINT-BLAISE
Responsable de distribution	RUAS

(1) Le point de prélèvement n'est pas forcément sur la commune sélectionnée mais il est représentatif de la qualité de l'eau distribuée sur l'ensemble des communes alimentées par ce même réseau.

Résultats de la recherche			
Paramètre	Valeur	Limite de qualité	Référence de qualité
Ammonium (en NH4)	<0,05 mg/L		≤ 0,1 mg/L
Aspect (qualitatif)	0 qualit.		
Bact. aér. revivifiables à 22°-68h	<1 n/mL		
Bact. aér. revivifiables à 36°-44h	<1 n/mL		
Bact. et spores sulfito-rédu./100ml	<1 n/100mL		≤ 0 n/100mL
Bactéries coliformes /100ml-MS	<1 n/100mL		≤ 0 n/100mL
Chlore libre	<0,05 mg/LCl2		
Chlore total	<0,05 mg/LCl2		
Coloration	<5 mg/L Pt		≤ 15 mg/L Pt



MINISTRY OF AGRICULTURE

THE WATER MANAGEMENT INFORMATION PORTAL



Current information **i**

Registration of ISVS

Project ISVS - VODA

Each Republic was given praise within the EU

Water levels and flows

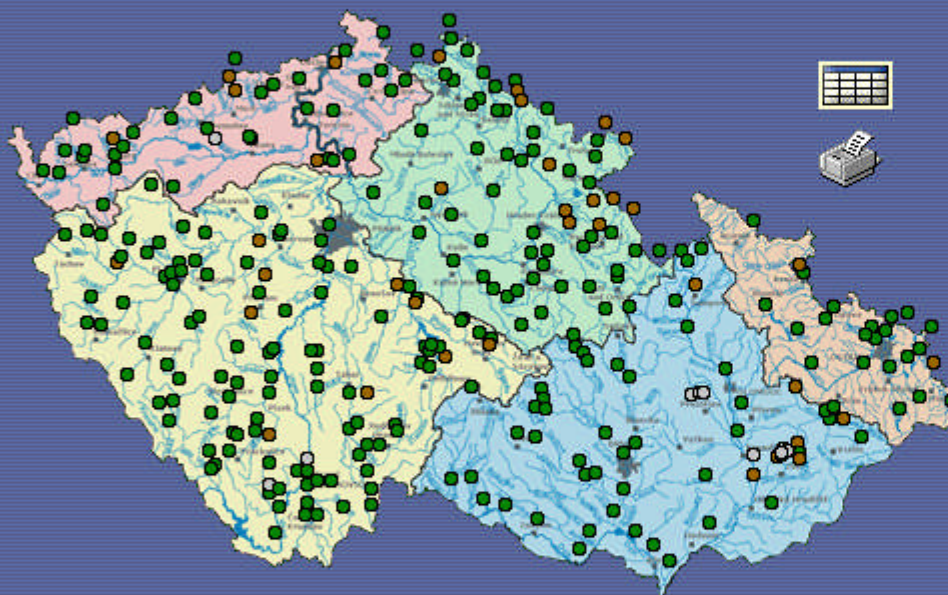
Precipitations

Water quality

Technical Records

Contacts

Links



Last updated value

	Elbe River Board s.e.	04.10.2009 20:45
	Vltava River Board s.e.	04.10.2009 20:00
	Ohře River Board s.e.	04.10.2009 20:30
	Odra River Board s.e.	04.10.2009 20:40
	Morava River Board s.e.	04.10.2009 20:14

Legend

- Information is not available
- Drought
- State of Normal
- 1st flood level (State of Alert)
- 2nd flood level (State of Emergency)
- 3rd flood level (State of Danger)

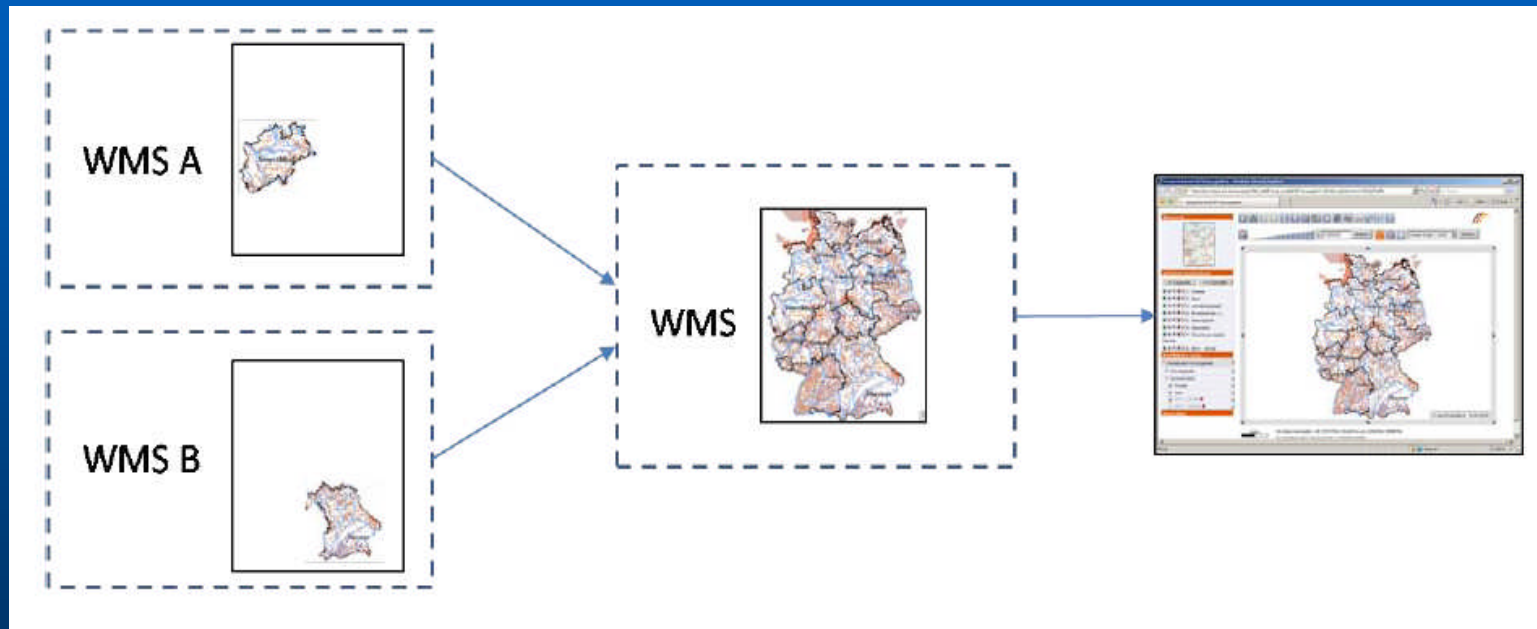
- Levels and flows on watercourses
- Status and flow rates in water reservoirs

<http://www.voda.gov.cz/>

Germany



Common map of protected areas with distributed WMS services



Distributed WMS

Cascading WMS

WMS Map Client

Not so simple: lack of joint rules



Geoportal.Bund MP Schutzgebiete - Windows Internet Explorer

http://ims1.bkg.bund.de/navmpsg/basicviewer.jsp?MAP_NAME=map_one&BBOX=3327508,6060724626%2C5640387,941962045%2C3365609

Übersichtskarte

Geladene Kartenlayer

- >> Legende
- >> Copyright
- 1 . Wasserschutzgebiete
- 2 . Bundesländer
- 3 . Europagrenzen

Verfügbare Layer

- Modellprojekt Schutzgebiete
 - MP Schutzgebiete
 - Fauna-Flora-Habitat-Gebiete
 - Biosphaerenreservate
 - Landschaftsschutzgebiete
 - Naturschutzgebiete
 - Naturparke
 - Nationalparke
 - Wasserschutzgebiete
 - Vogelschutzgebiete
 - Topograph. Karte Deutschland
 - Gewässer
 - Geobasisdaten

Ende der Layerliste

Objektinformationen - Windows Internet Explorer

http://ims1.bkg.bund.de/navmpsg/basicviewer.jsp?MAP_NAME=map_one&BBOX=3327508,6060724626%2C5640387,941962045%2C3365609

Objektinformationen

Wasserschutzgebiet

Schutzgebietsart	Wasserschutzgebiet
Gebietsname	Weiler
Gebietsnummer	NW_2800_490616
Rechtsgrundlage	Die gerichtsfesten Akten zu den Wasserschutzgebieten finden sich bei der zuständigen Wasserbehörde (s. Info/Kontakt). Die WSG werden im Rahmen der berichtspflichtigen zur EU-WRRL bereitgestellt und nicht kontinuierlich aktualisiert.
Schutzzone	
Erfassungsgrundlage	In der Regel ist der Erfassungsmassstab >= 1:25.000
Info_Kontakt	http://www.wasserblick.net/serlet/is/20090/?title=Parea_D_DENW&parentId=14561
Laendercode	DENW
Gebietsflaeche	125,06

© GeoPortal.Bund - Modellprojekt Schutzgebietsinformationen 05.11.2010

4km

Min-Max-Koordinaten: (r/h) 3327509m; 5640388m und 3365609m; 5664730m
Koordinatensystem: Gauss-Krüger, 3. Meridianstreifen



Spanish system

The screenshot shows a web browser window with several tabs. The active tab is 'Hispagua', which displays the 'Spanish Water Information System' website. The navigation menu includes 'Home', 'Institutions', 'Documents', 'Training', 'Research', and 'Water data'. The 'Water data' section is active, showing a breadcrumb trail: 'Home > Data on Water > Water in Spain'. A date '26/10/2010' is displayed. A sidebar on the left lists various water-related topics. The main content area is titled 'Water in Spain' and includes a reference frame on the Spanish physical environment with icons for Climatology, Energy, Hydrography, Biotic Frame, Population, Soils, Industry, and Tourism. A footer contains the SEMIDE/EMWIS logo, copyright information for Hispagua, and links for 'About us', 'Sitemap', 'Suggest a resource', and 'Question'.

Most Visited Water Scarcity Private ... HP templates & images Euro-Mediterranean In... Sedna Système Euro-Méditer... http192.70.34.1948081s... EMWISSEMIDE Public ... p03

Problem loading page Euro-Mediterranean Information S... Hispagua ... spanish water information - بحث G... Hispagua ...

Hispagua

Spanish Water Information System

Home Institutions Documents Training Research **Water data**

Home > Data on Water > Water in Spain

26/10/2010

- Water in Spain
- Water Culture
- Quality and quantity monitoring networks
- Spanish Dams Inventory (MMA)
- Spanish Dams Inventory 1986
- Selected Spanish Dams 1973-1993
- Hydraulic Public Domain
- Spanish Spas

Water in Spain

In this section you will find a reference frame on Spanish physical environment:

- Climatology
- Energy
- Hydrography
- Biotic Frame
- Population
- Soils
- Industry
- Tourism

More information: Libro Blanco del Agua. Spanish Environment Ministry

SEMIDE/EMWIS © Hispagua About us | Sitemap | Suggest a resource | Question



water

▲ Switch theme

Policy | Themes and data | Projects | Links

Menu

- » Water themes and data
- » About water
- » Articles
- » Highlights
- » Publications
- » Multimedia
- » Indicators
- » Maps and graphs
- » Datasets
- » Upcoming events

Topics

WISE



- » European waters
- » Water pollution
- » Status and monitoring
- » Water resources
 - » European water resources – overview
 - » Hydrological cycle
 - » Water availability
 - » Water abstraction
 - » Water use by sectors
 - » Impacts due to

Water abstraction

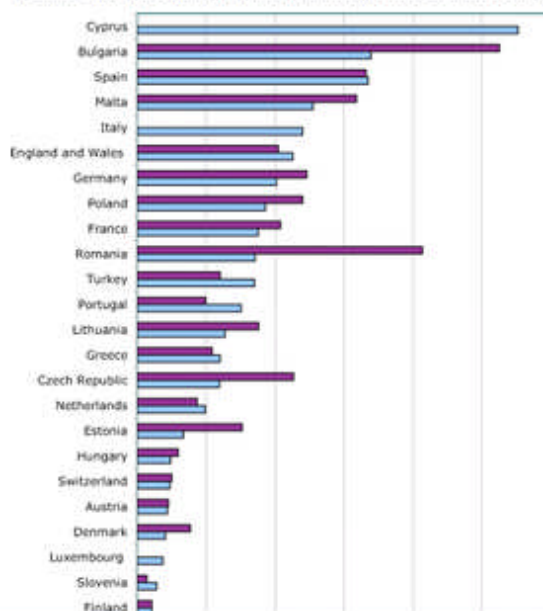
Overall, the region abstracts a relatively small portion of its total renewable water resources each year.

Total water abstraction in the region is about 350 km³/year. In other words, approximately 10 % of Europe's total freshwater resource is abstracted annually.

To ensure water supply many countries have built reservoirs. Three countries - Spain, Turkey and Romania - are able to store more than 40 % of their long-term annual available (LTAA) resource, but also countries such as Cyprus, Bulgaria, Ukraine, Sweden and the Czech Republic have high storage capacities. Although such structures are beneficial for securing supply at critical moments, they adversely affect the regional water cycle and sediment transport. Moreover, they act as barriers for migrating aquatic species, e.g. salmon and sturgeon.

Water-stressed countries are often identified in terms of the water exploitation index (WEI), which is the total water abstraction divided by the long-term available annual resource (see figure WEI). The warning threshold for WEI which distinguishes a non-stressed from a stressed country is around 20 %. Severe [water stress](#) can occur where the WEI exceeds 40 %, indicating unsustainable water use.

Water exploitation index. Total water abstraction per year as percentage of long-term freshwater resources in 1990 and 2002



Latest addition

Water

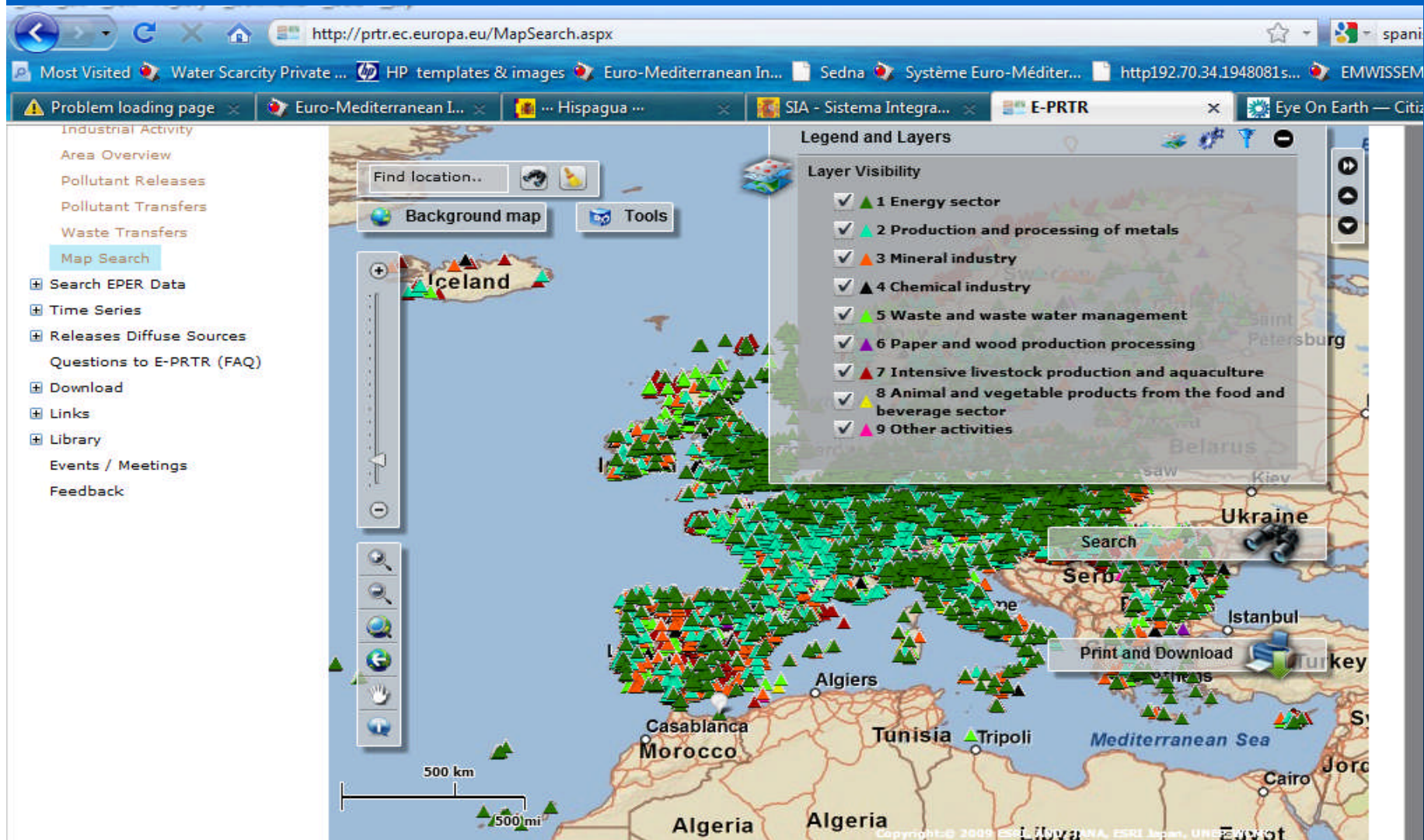
[Updated maps of urban waste water collection and treatment](#)

[Bathing water Directives](#)

[New data on European water quality in WISE](#)

[More >>](#)

Registry of Industry pollutant emissions



Eye on Earth:



bathing water and air quality in real-time with citizens comments

my location about help lock

NICE, MARITIME ALPS,...

Change Location

OUR RATING VERY GOOD

AIR WATCH

No Rating

OUR RATING GOOD

WATER WATCH

No Rating

nearest station
Quai des États-Unis, 06300, France

EEA HEADLINES

Biodiversity beyond 2010: deciding the way ahead
World leaders and policymakers are gathering at a major conf...

Deep emission cuts give the EU a head start under the Kyoto Protocol
A new report by the European Environment Agency (EEA) shows ...

Biodiversity in Europe: policy scope must be widened for effective conservation
Europe is still far from meeting its 2010 target and the risk



- DESERT ACTION HOME
- DROUGHT
- Background
- Real-Time
- Precipitation
- Soil Moisture
- Moisture Anomaly
- Forecast
- Anomaly Forecast
- NDWI
- fAPAR
- MapServer
- EDO Repository
- SPI Development
- Get drought graphs
- Help
- Generate PDF
- Grid Cell Graphs
- fAPAR by cell

Real-Time

Benefiting from the pre-operational mode of the [European Flood Atlas](#) and regularly updated. All information shown in this section has to be presented will be continuously improved and the range of drought products will be extended.

The following information is currently available:

- [monthly precipitation anomaly of Europe](#)
- [daily top soil moisture map of Europe](#)
- [daily top soil moisture anomaly maps of Europe](#)
- [daily forecasted top soil moisture development in Europe \(seven days\)](#)
- [daily forecasted top soil moisture anomaly in Europe](#)

For more information please contact:
Jürgen Vogt

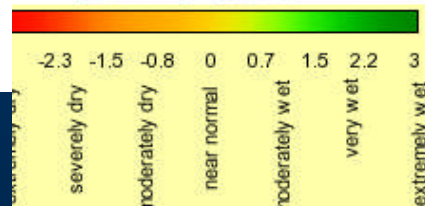
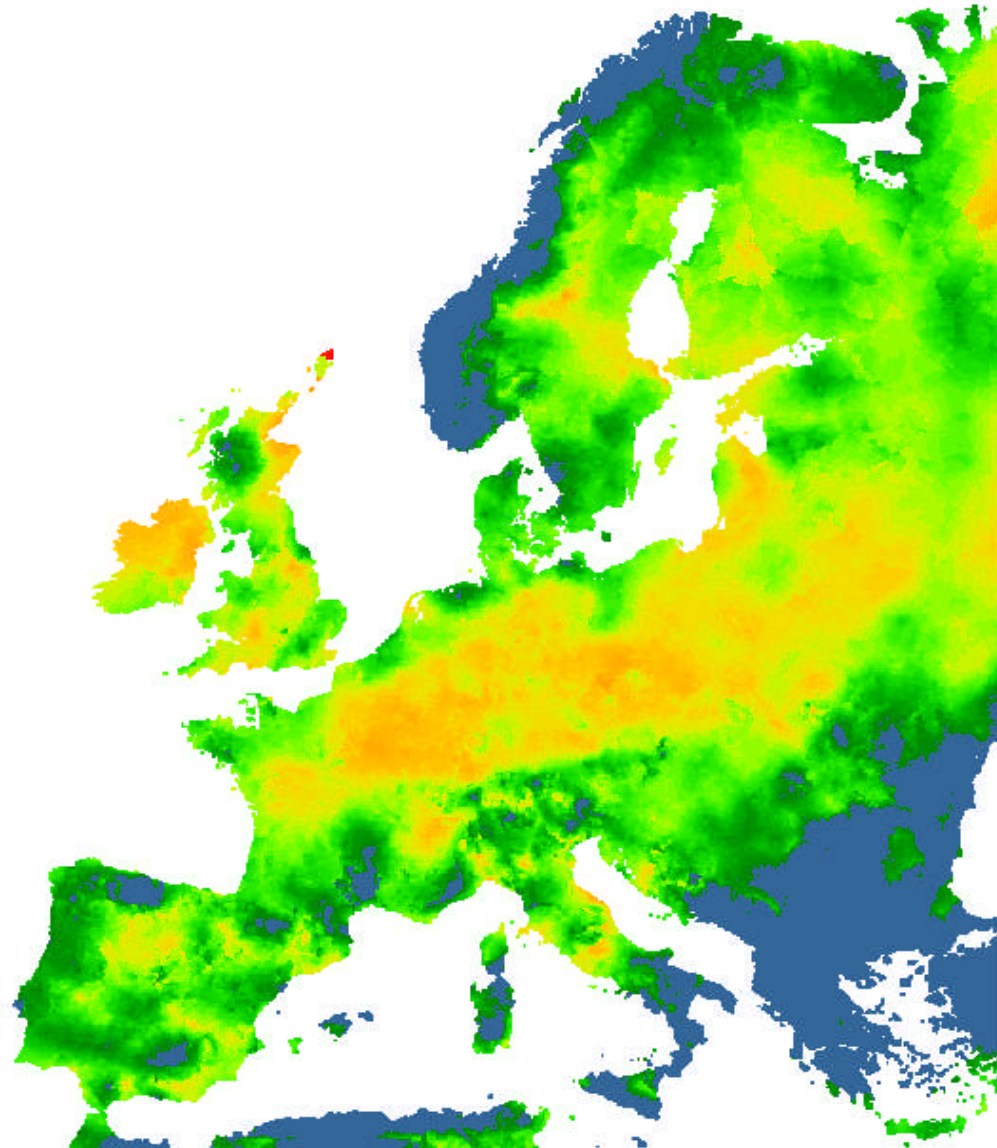
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Map of Monthly Precipitation Anomaly for October 2010



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National portals

« who does what

Common taxonomy (multilingual water thesaurus)

www.semide.net

Thematic forums/folders

Ground water, water scarcity
Water glossaries, satellite images,
etc.

Clearing house for EU programs and initiatives

Regional water projects

Monthly eNews Flash in Arabic, English and French