



**MINISTERIO DE AGRICULTURA,  
ALIMENTACIÓN Y MEDIO AMBIENTE**

DIRECCIÓN GENERAL DEL AGUA

SUBDIRECCIÓN GENERAL DE PLANIFICACION  
Y USO SOSTENIBLE DEL AGUA

**Collaborative production and management of water information  
How to make polycentric information available to managers,  
agencies and the public  
SPANISH EXPERIENCE**

**INTERNATIONAL CONFERENCE ON DATA, INFORMATION AND KNOWLEDGE FOR WATER  
GOVERNANCE IN NETWORKED SOCIETIES**

**9-11 June 2014, University of Seville (Spain)**

**Javier Ruza Rodríguez**





## Need for collaboration Europe

- **European Union. EU Commission. DG Environment. Compliance reporting**
  - ◆ Questionnaires
- **European Environmental Agency (EEA). Mission and evolution**
  - ◆ Eurowaternet 1998
  - ◆ Reportnert 2000
- **Joint efforts. EU Commission - EEA - Others**
  - ◆ SEIS (WISE) 2003
  - ◆ SIIF 2012
  - ◆ INSPIRE 2007

## Need for collaboration Spain

- ◆ Compliance reporting
- ◆ Waste water discharges information
- ◆ Water rights information
- ◆ Water quality data
  - ◆ The case of biological quality elements data
- ◆ Programmes of measures (DB PoM)
- ◆ NSDI Spatial data infrastructure (CODIIGE)
- ◆ Non born open collaborative production

## Conclusions



The need for collaboration  
Europe

# The European Union (EU) today

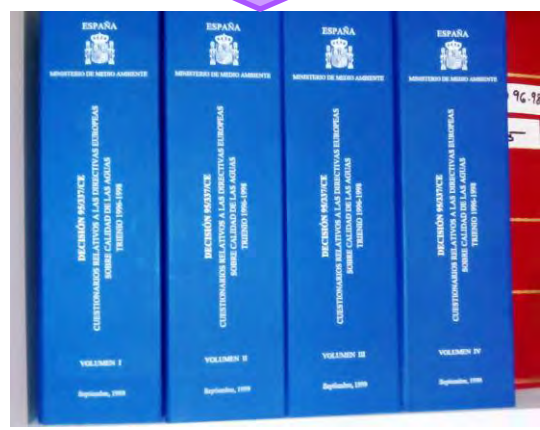
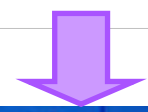
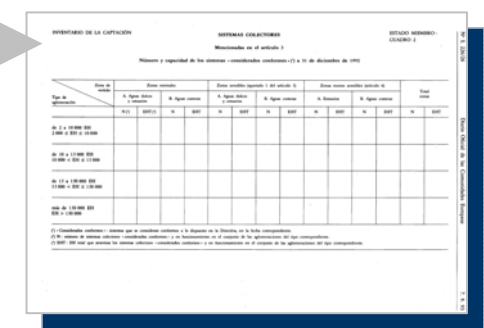
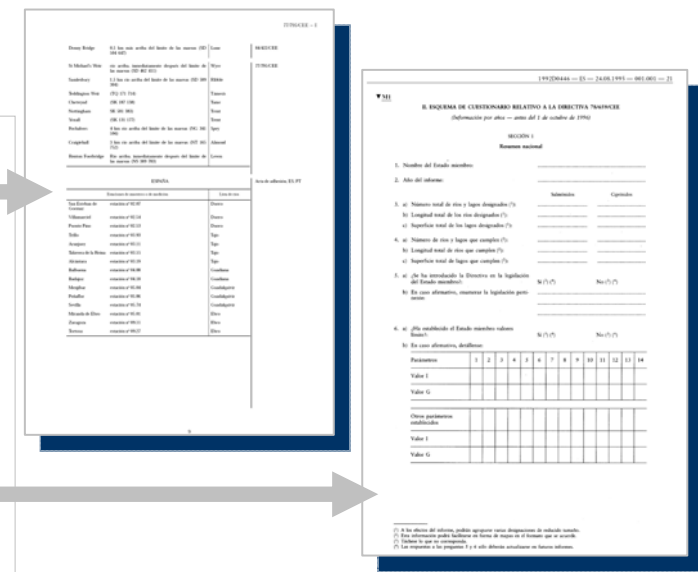


# European Commission Compliance reporting evolution



## Reports in writing paper

- ▶ **Exchange of information Decision (77/795/EEC)**  
 [19 parameters, 15 stations (ES)]
  
- ▶ **91/692/EEC: Council Directive standardizing and rationalizing reports on the implementation of certain Directives relating to the environment**
  - ◆ 92/446/EEC: Commission Decision concerning questionnaires relating to Directives in the water sector
  
  - ◆ 93/481/EEC: Commission Decision concerning formats for the presentation of national programmes as foreseen by Article 17 of Council Directive 91/271/EEC



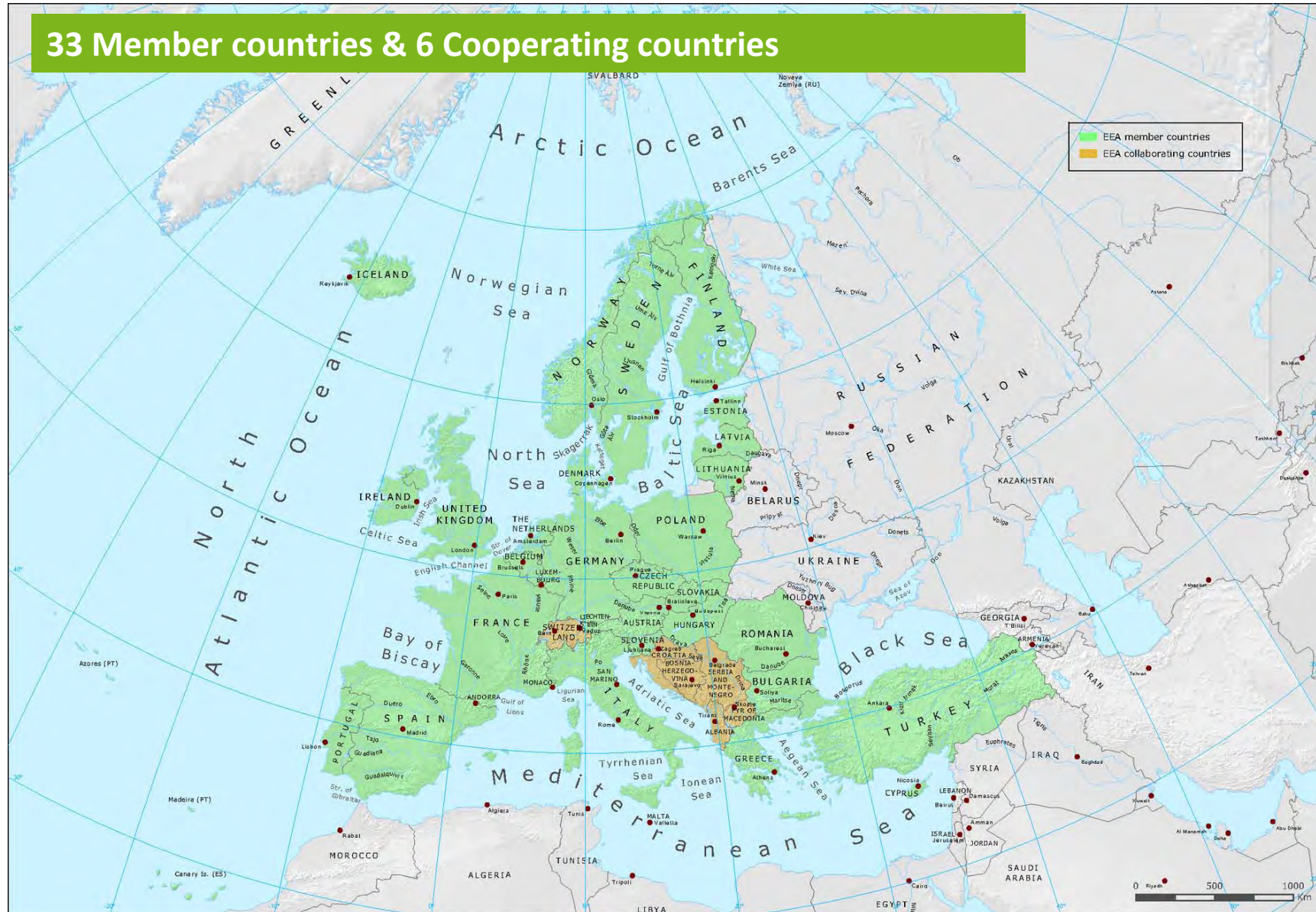
Four-year Spanish report  
(Sept. 1999)

# The European Environment Agency (EEA) Members and collaborators

European Environment Agency



33 Member countries & 6 Cooperating countries



Source EEA



- **1990** - Creation of European Environment Agency (EEA) and the European Environment Information and Observation Network (EIONET)
- **1994** - Work started

## MISSION:

To help the Community and member countries make informed decisions about improving the environment, integrating environmental considerations into economic policies and moving towards sustainability

- **1998** – Eurowaternet
  - Annual reports
  - First years (Excel sheets – email)
- **2000** – Reportnet launched
  - Several IT tools
  - Operational 2002



Source EEA





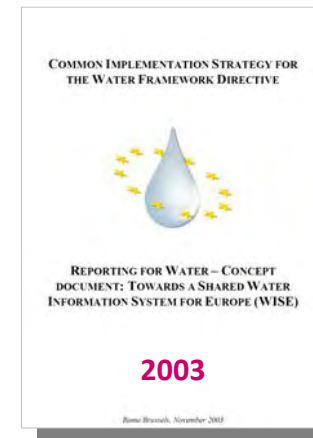
# Shared Environmental Information System

## SEIS principles

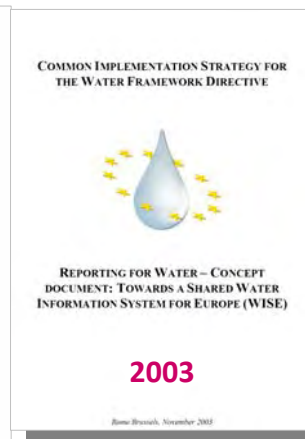
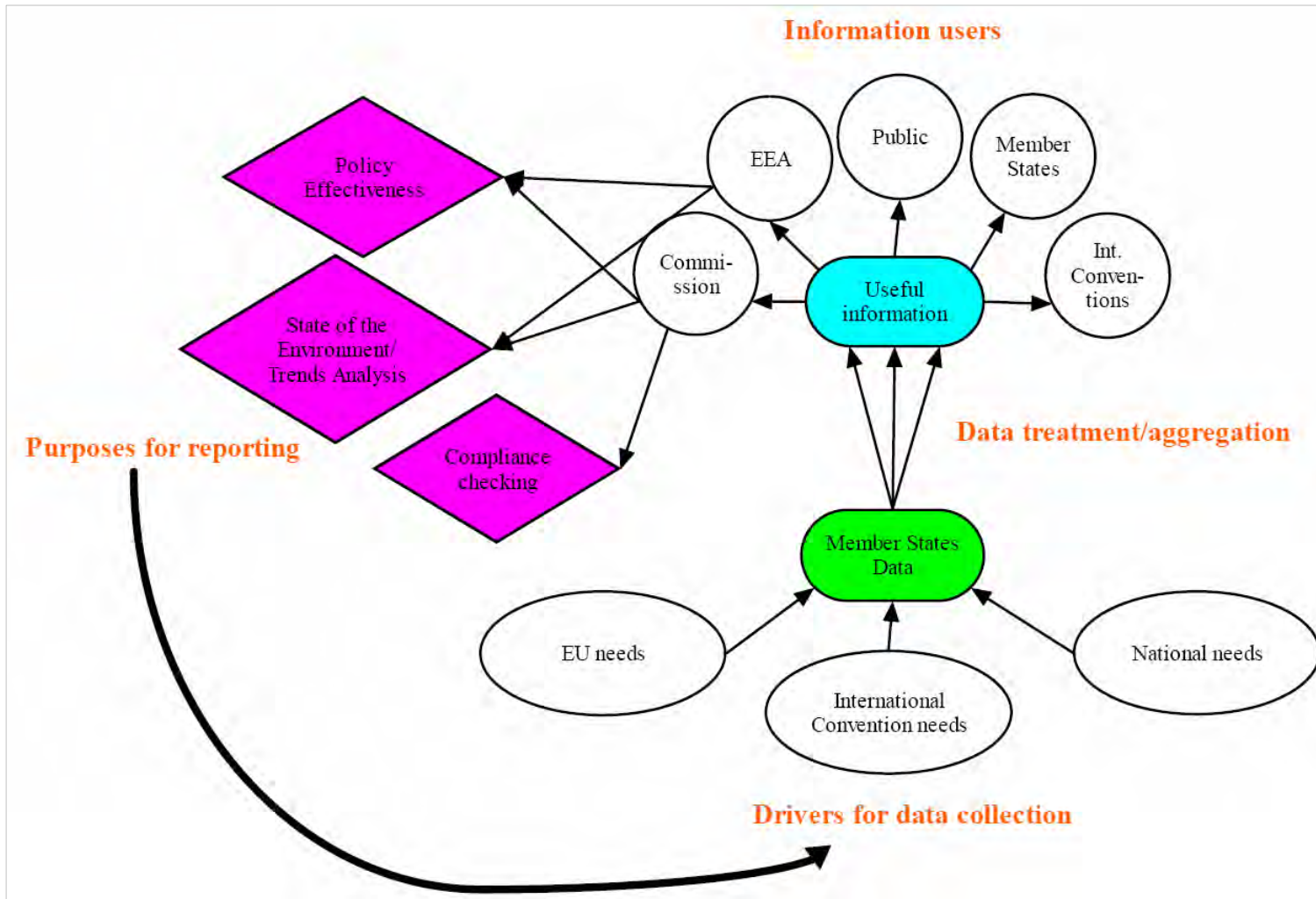


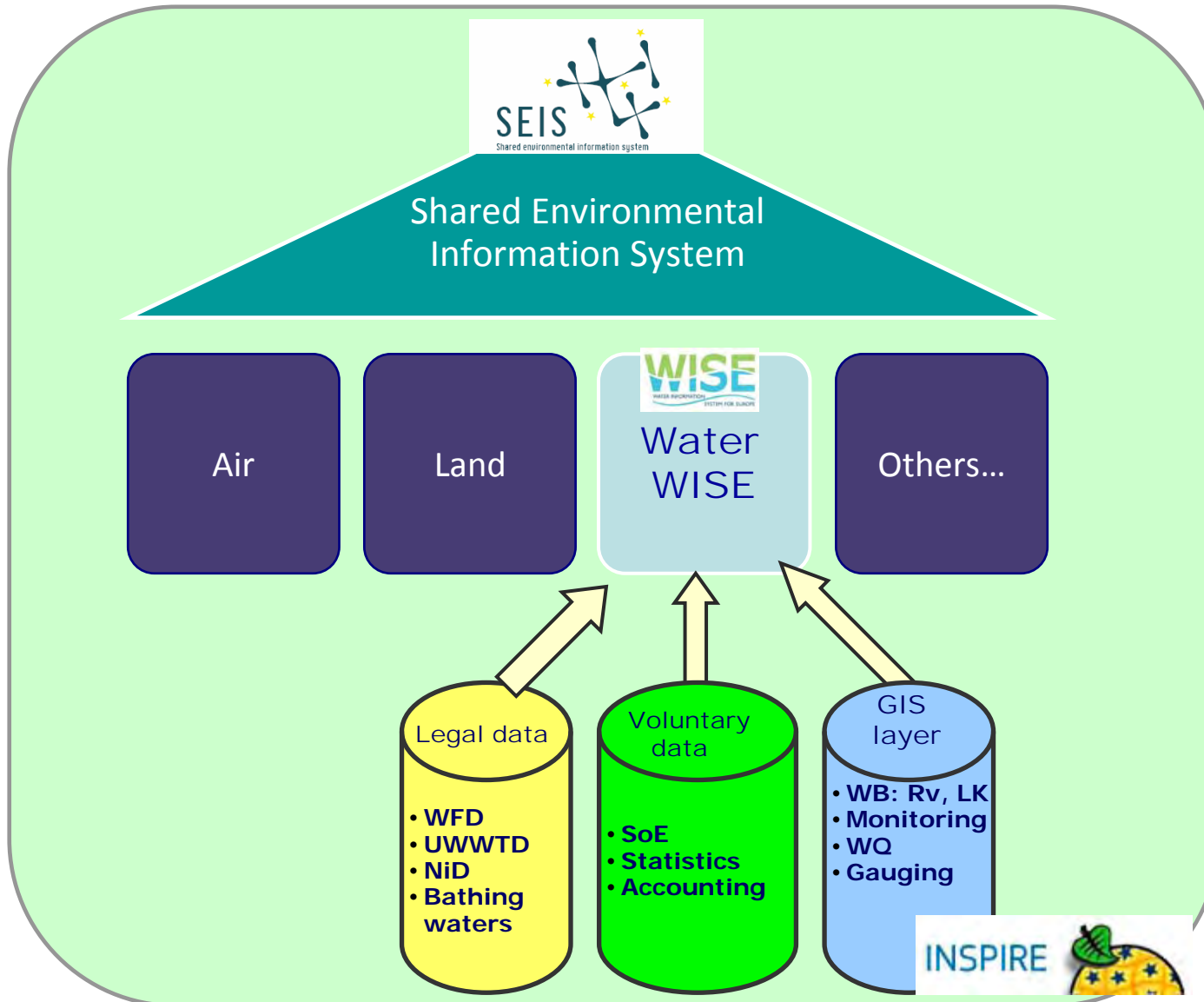
### Information should be:

- Managed as **close** as possible to its **source**
- **Collected once**, and shared with others for many purposes
- Readily available to **public authorities** to easily fulfil legal **reporting obligations**
- Readily accessible to **end-users**, primarily public authorities at all levels from local to European, to enable them to **assess** in a timely fashion the **state of the environment** and the **effectiveness** of their policies, and to design new policy
- Accessible to enable end-users, both public authorities and citizens, to make **comparisons at the appropriate geographical scale** (e.g. countries, cities, catchments areas) and to participate meaningfully in the development and implementation of environmental policy
- **Fully available to the general public**, after due consideration of the appropriate level of aggregation and subject to appropriate confidentiality constraints, and at national level in the relevant national languages
- Supported through common, **free open standards** (for sharing and processing)



# Shared Environmental Information System SEIS

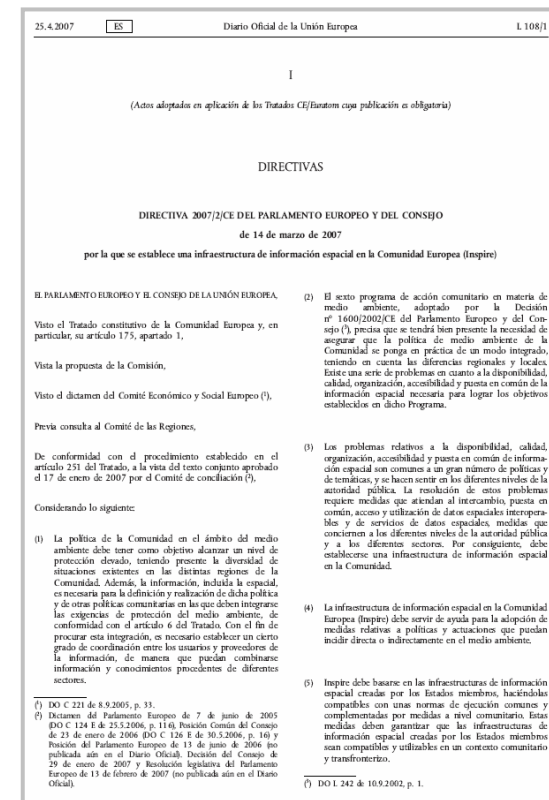




# Inspire directive (2007/2/CE). Principles



- ◆ Data should be **collected only once** and kept where it can be **maintained** most effectively
- ◆ It should be possible to **combine seamless spatial information** from different sources across Europe and share it with many users and applications
- ◆ It should be possible for information collected at one level/scale to be **shared with all levels/scales** (detailed & general thorough investigations & strategic purposes)
- ◆ Geographic information needed for good governance at all levels should be readily and **transparently** available.
- ◆ Easy to **find what** geographic information is available, **how** it can be used to meet a particular need, and under **which conditions** it can be acquired and used



# Inspire directive (2007/2/CE)

## Water related themes



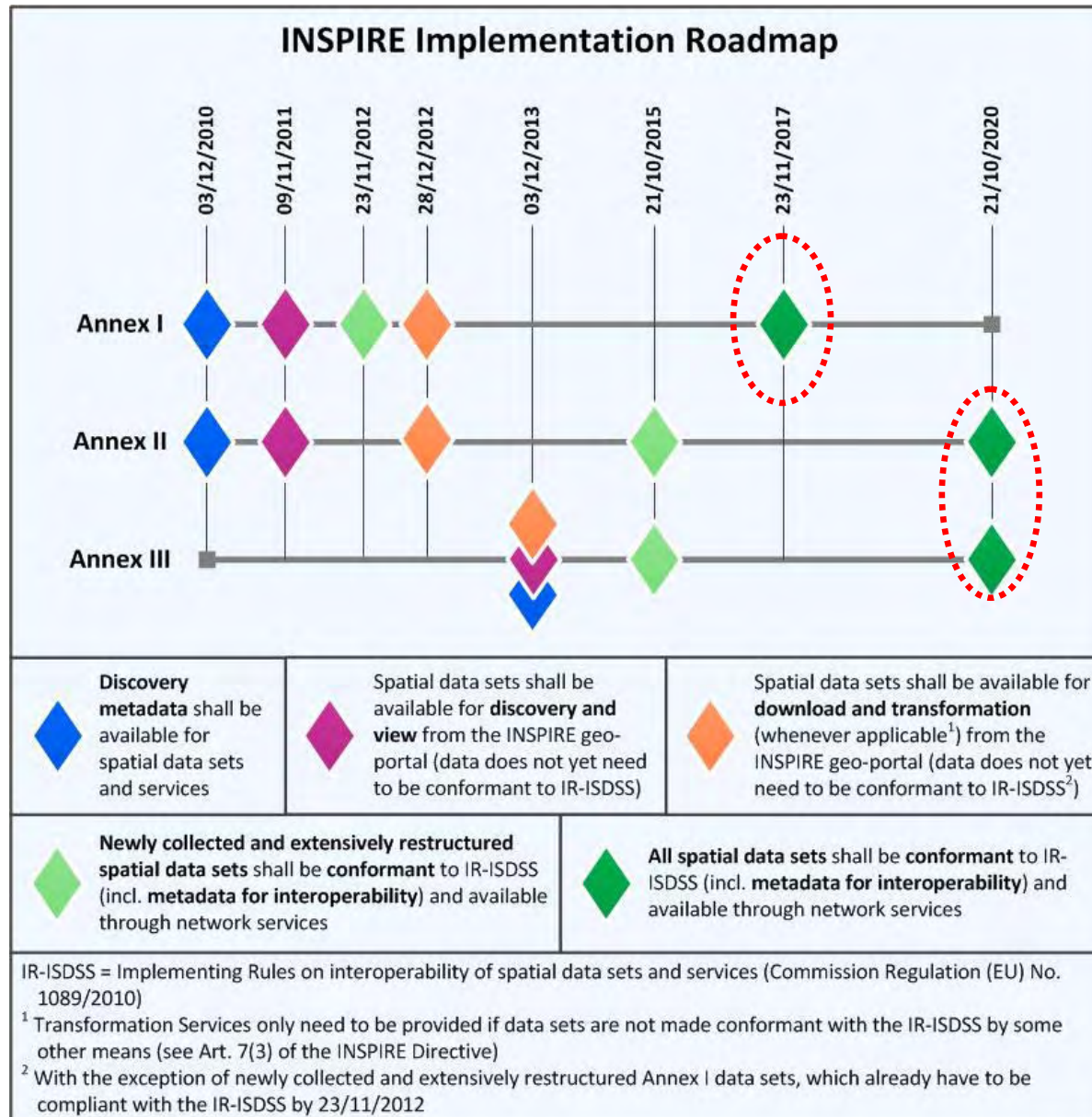
Annex I	
1	Coordinate reference systems
2	Geographical grid systems
3	Geographical names
4	Administrative units
5	Addresses
6	Cadastral parcels
7	Transport networks
<input checked="" type="checkbox"/>	<b>8 Hydrography</b>
9	Protected sites

Annex II	
1	Elevation
2	Land cover
3	Orthoimagery
<input checked="" type="checkbox"/>	<b>4 Geology</b>

- **34 data themes**
- **8 directly related to water**

Annex III	
1	Statistical units
2	Buildings
3	Soil
4	Land use
5	Human health and safety
<input checked="" type="checkbox"/>	<b>6 Utility and governmental services</b>
<input checked="" type="checkbox"/>	<b>7 Environmental monitoring Facilities</b>
8	Production and industrial facilities
9	Agricultural and aquaculture facilities
10	Population distribution and demography
<input checked="" type="checkbox"/>	<b>11 Area management / restriction / regulation zones &amp; reporting units</b>
<input checked="" type="checkbox"/>	<b>12 Natural risk zones</b>
13	Atmospheric conditions
14	Meteorological geographical features
<input checked="" type="checkbox"/>	<b>15 Oceanographic geographical features</b>
<input checked="" type="checkbox"/>	<b>16 Sea regions</b>
17	Bio-geographical regions
18	Habitats and biotopes
19	Species distribution
20	Energy Resources
21	Mineral Resources

# Inspire deadlines

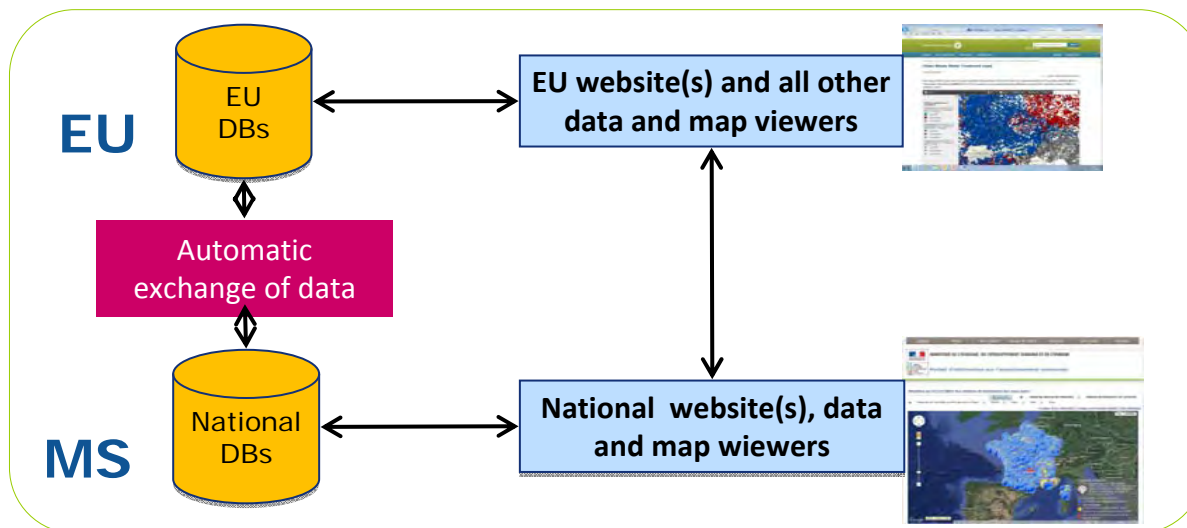


# Structured Implementation and Information Framework SIIF Principles



- **Focus on compliance** (implementation/compliance)
- **From reporting to information management**
- **Decentralise** (from centralised to distributed information systems)
- **Ensure transparency** (publically available and accessible, Directive 2003/4)
- **Keep up to date** (free to update national systems when data become available)

- **Look forward** (from assessing non-compliance of the past to future actions on getting into compliance)
- **Reduce burden** (reducing reporting for areas in compliance, focusing on non-compliance)
- **Self-assess** (EU-MS carry out a compliance assessment themselves)
- **Develop step-by-step** (development of a modular approach)



Implementation Communication (COM(2012) 95 of 7/3/12)

Structured Implementation and Information Framework (SIIF)

*"Developing a pilot for the Urban Wastewater Treatment Directive"*

[Status: 12/06/2012]

**1. Introduction**

The Implementation Communication of 7 March 2012 describes a set of objectives around two identified key themes that currently hamper compliant implementation being (i) knowledge on implementation and (ii) responsiveness at national, regional and local levels. The Communication introduced a number of new ideas on how to improve both facets of implementation.



The need for collaboration  
Spain



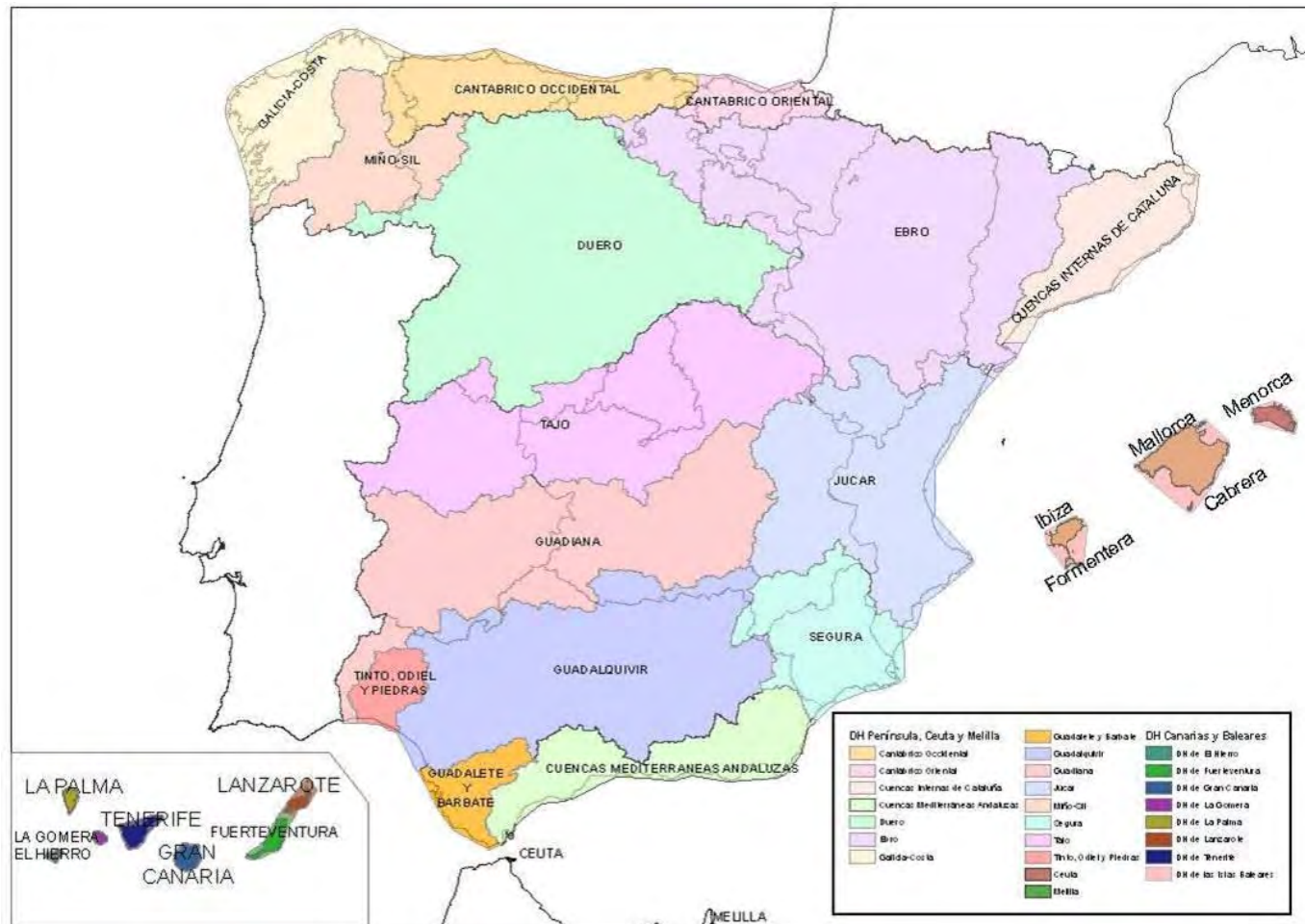
# Water Administration in Spain

## River Basin Districts (RBD)



### 25 RBD in Spain

- Complex system with different competent authorities represented within a RBD through cooperation bodies



# Regional administration



## 17 + 2 Regional Governments

- The Regions or Autonomous Communities may assume competences
  - Environmental protection management
    - Agriculture, diffuse pollution
    - Sewage treatment (municipalities)
    - Habitats and species



Comunidades Autónomas

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# Compliance reporting in Spain

# Compliance reporting first attempts



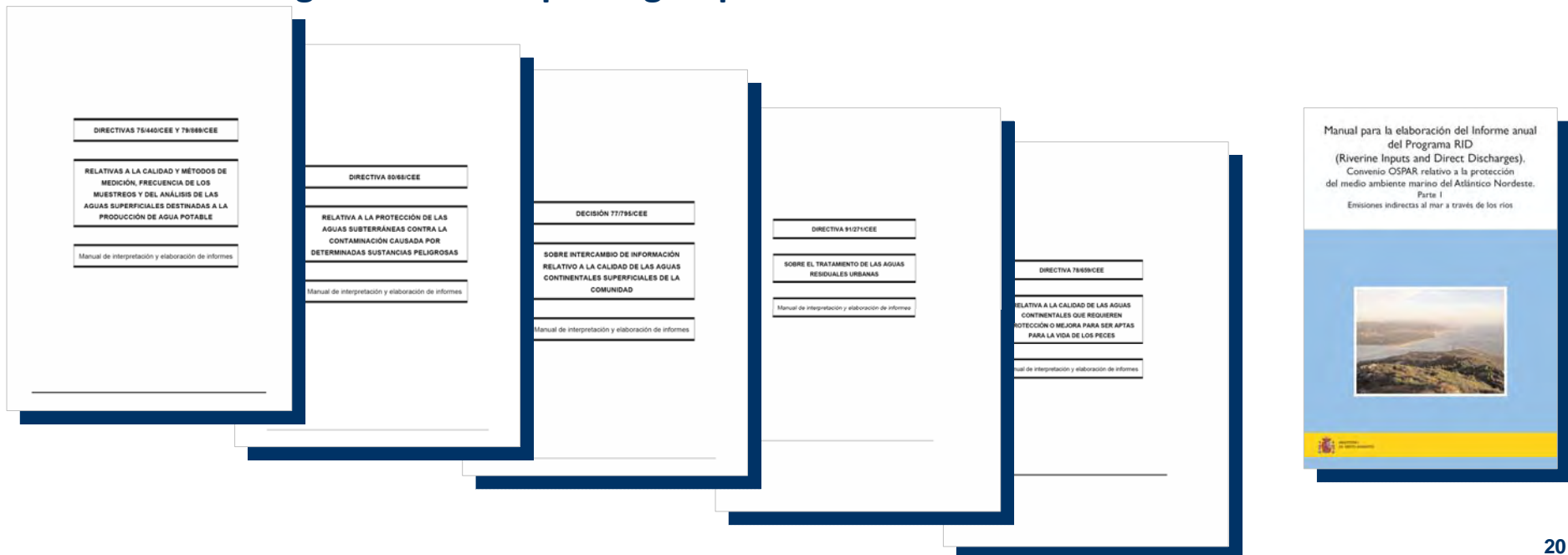
## Early 1990s

### Situation

- ◆ The Internet and email not widely available (internet search engines inaccurate)
- ◆ RBD ignore EU reporting requirements and legislation (not easily accessible)

### Measures

- ◆ Information and dissemination of requirements (working groups)
- ◆ Guidance on reporting on directives on water sector
- ◆ Other guidance on reporting requirements

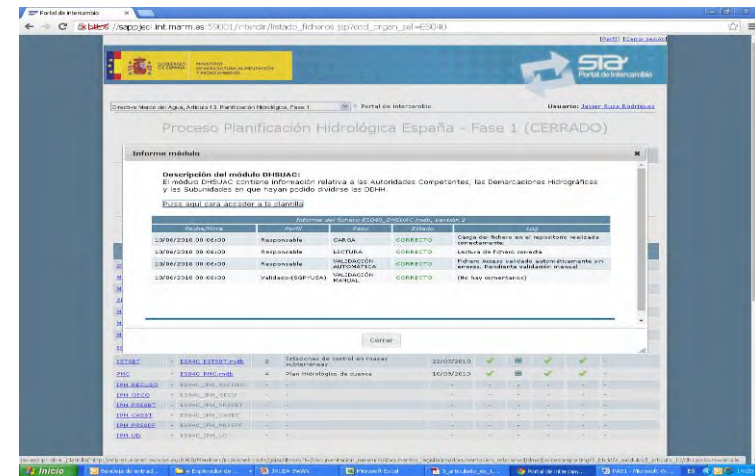
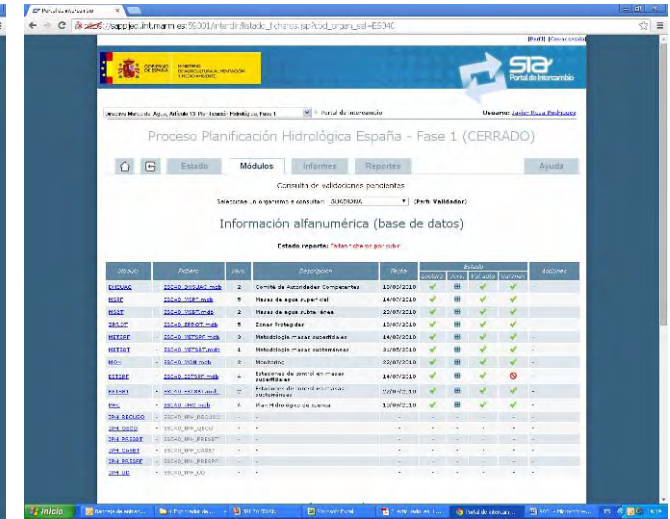
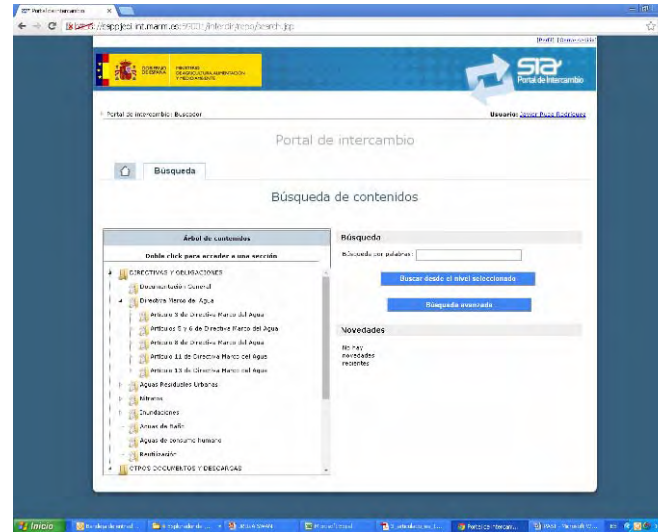


# Spain- SIA Exchange of information portal



## Similar to Reportnet

- Obligations database
- Data repository
- Responses tracking
- Automated QA




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Waste water discharge information  
in Spain

# The origin of collaboration in WWD



- **1985 Water law**
  - All waste water discharge must have a permit 
- **1986**
  - Almost no permits issued
  - Provisional permit for all discharges (one month to become definitive)
  - Only maximum annual volume was fixed in order to charge a tax (Ministerial Order 23/12/1986)
  - It failed due to lack of effective mechanisms
- **1995**
  - Problem with industrial discharge permits
  - Sectoral regularization plans (Royal decree 484/1995)
  - It also failed
- **1999**
  - The European Commission opened a infringement procedure
    - Fail to correctly issue permits to activities discharging hazardous substances (reduction programs for list II substances)
  - Difficult to collect information from permits as there was no database

# Actors involved in WWD permitting



River basin organizations



Regions (Comunidades Autónomas)



Inland water direct discharges	
1 C.H. Cantábrico	13 C.H. Júcar
2 C.I. País Vasco	14 C.H. Ebro
3 Galicia Costa	15 C.I. Cataluña
4 C.H. Miño Sil	16 Islas Baleares
5 C.H. Duero	17 El Hierro
6 C.H. Tajo	18 La Palma
7 C.H. Guadiana	19 La Gomera
8 Tinto, Odiel y Piedras	20 Tenerife
9 C.H. Guadalquivir	21 Gran Canaria
10 Guadalete-Barbate	22 Fuerteventura
11 C.Mediterranea And.	23 Lanzarote
12 C.H. Segura	

Coastal discharges	
24 País Vasco	32 Islas Baleares
25 Cantabria	33 El Hierro
26 Asturias	34 La Palma
27 Galicia	35 La Gomera
28 Andalucía	36 Tenerife
29 Murcia	37 Gran Canaria
30 Valencia	38 Fuerteventura
31 Cataluña	39 Lanzarote



# First steps



## Objective

- Create a common database to facilitate water managers access to WWD information

## Needs

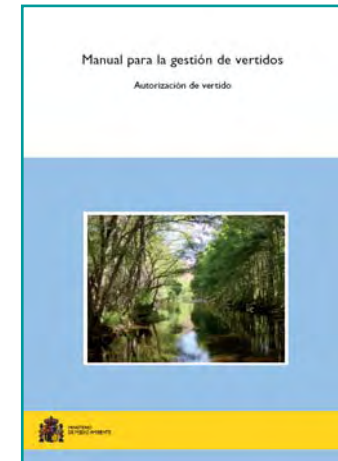
To take scientifically based decisions, BD should contain sound information:

- Provide **technical tools** to improve the quality of waste water discharge permits

## Actions taken

### Capacity building

- Manual for waste water discharge permitting (developed 1999-2007)
  - Standardization
    - Clarify workflow
    - Application forms for waste water discharges
    - Unify permit formats and criteria
    - Enable automated treatment of data
  - Decision support systems (DSS)



Seminars and training courses (promotion of interpersonal relationships)

### Legislative changes

- Royal Decree 606/2003
  - Emission limits only for characteristic pollutants
  - National inventory of waste water discharges (CNV)

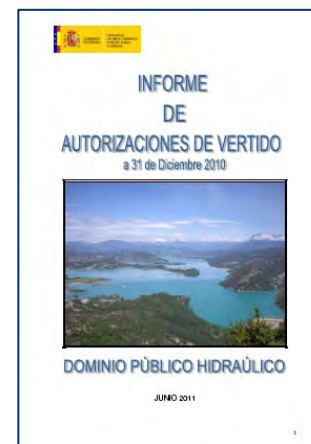
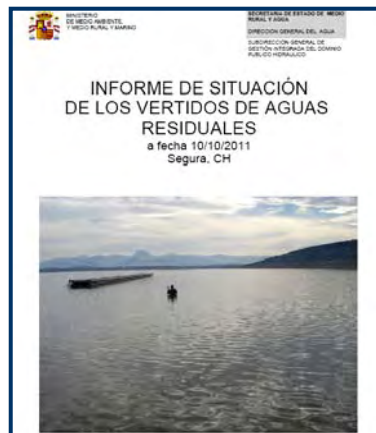


	ACTIVIDAD GENERADORA		PUNTO VERTIDO		CARACTERIZACIÓN DEL VERTIDO									INST.	PROYE. OBRAS	AFEC. TERC.	SUST. PEL. COLEC.	PLAN SAN.	EST. HDROG.	CIUV
	SOLICITUD	For.m.1.1	Form. 1.2	Form. 2	Form. 3.1.	Form. 3.2.	Form. 3.3.	Form. 3.4.	Form. 3.5	Form. 4	Form. 5	Form. 6	Form. 7.1							
Urbanos < 250 h.a.																				
Urbanos > 250 h.a.	X	X		X		X		X	X	X	X	X	X	X	X	X	X	X	X	X
Ind. Sust. Pel.	X		X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X
Ind. Plásticos	X		X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X
Ind. Residuos	X	X		X	X			X		X	X	X	X	X	X	X	X	X	X	X
Ind. Achique minas	X		X	X		X		X		X	X	X	X	X	X	X	X	X	X	X
Reso ind.	X		X	X		X		X		X	X	X	X	X	X	X	X	X	X	X



## ¿Why should we have a National Inventory on Waste Water Discharges?

- To meet information requirements of supranational institutions, streamlining (removing) reporting requests to River basin authorities and Regional authorities
- To facilitate decision-making process at strategic and political level (also local level)
- To serve as basis for the development of guidance documents on emission limits
- To share information between administrations involved in water permitting
- To enable public access to environmental information
  - ✓ Specific: applicants for permits can consult conditions of similar discharges
  - ✓ Specific: how affected is your waterbody
  - ✓ General: summary reports



# National inventory on waste water discharges (CNV)



## First results – Year 2.005

### 20 years after Water Law: no clear results achieved

- Waste water discharge permit (WWDP) conditions inadequate
  - ✓ 50% (9.860) of WWDP still provisional (without emission limit values)
  - ✓ 50% (9.220) of WWDP definitive (with emission limits, but not always adequate for water quality objective compliance)
  - ✓ 9.287 applications in process



### Need for additional measures and resources

# National inventory on waste water discharges (CNV)



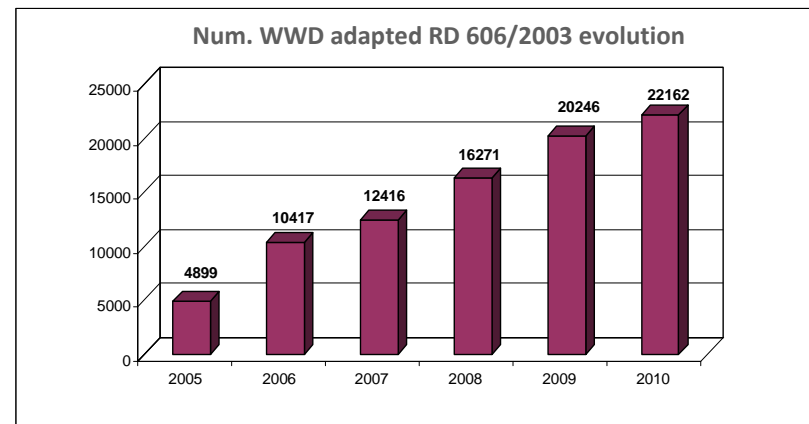
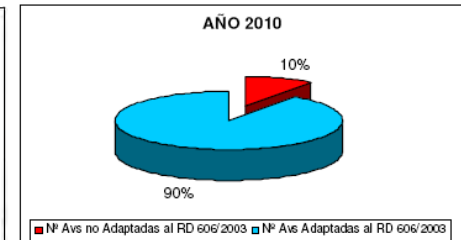
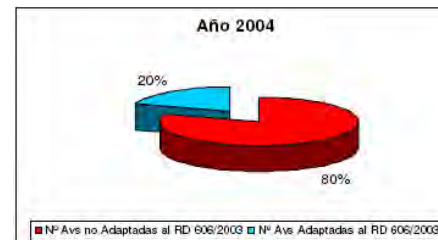
## WWD Action Plan (Plan de Choque de vertidos)

- Budget allocation (23,8 million €)
  - Human, technical and material resources for RBD
  - Selection of most important discharges to prioritise WWDP revision (based on basic statistics available – economic study for RD 606/2003)

### Results

Three stages with different priorities depending on volume and hazard:

- Priority I (2005):** 800 WWD permits represent 90% of discharge volume and of pollution. Urban discharges of more than 10.000 p.e, industrial discharges with hazardous substances, cooling water discharges and fish farm discharges.
- Priority II (2007):** urban discharges between 2.000 and 10.000 p.e. and biodegradable waste water discharges from agri-food industry of more than 4.000 p.e.
- Priority III (2009):** urban discharges of less than 2.000 p.e.



# National inventory on waste water discharges (CNV)

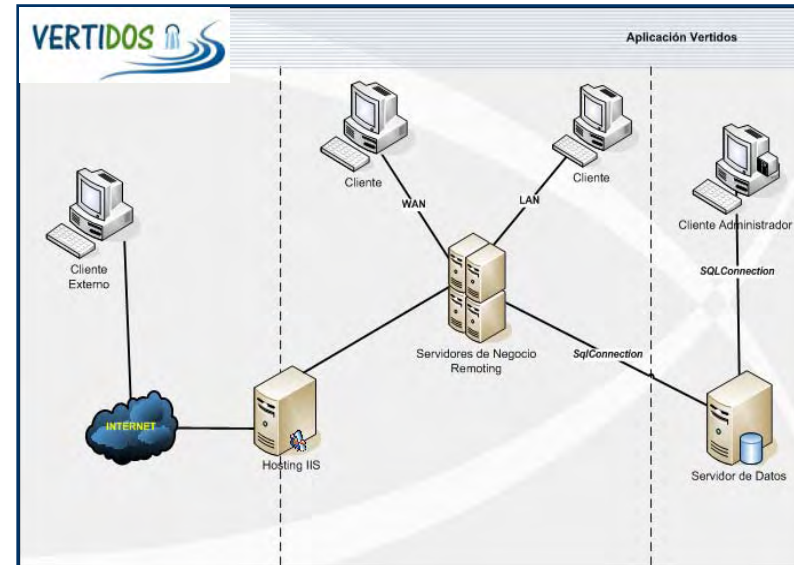


## WWD Action Plan (Plan de Choque de vertidos)

### Some measures

- o Human resources
  - ◆ Temporal external aid
  - ◆ New specialized public employees
    - ◆ Waste water discharge management 30 master degree graduates + 70 bachelor degree
    - ◆ Water quality 62 master degree

- o New ICT tools
  - ◆ To help issuing permits
  - ◆ To create the CNV-INEA



**Esquema del Vertido**

Flujos	Agua_Bruta	Edar	Punto_Control	Punto_Vertido
1				
2				
3	1	EDAR Estación de Servicio CEPESA	1	1
4				

Datos del Punto de Control Caracterización General

Volumen anual (m3)	1030	Caudal Máximo (m3)/h	0	Caudal Medio (m3)/día	2,82
Volumen Agua Residual (m3)		Volumen reutilizado (m3)		% Reutilización	

Parámetros	Concentración máxima	Concentración media
Hidrocarburos método IR	<=5mg/l	
Acetes y grasas	<=10mg/l	
pH	<=5,5 - <=9,5 U.d. pH	
DQO	<=125mg O2/l	
DBO5	<=35mg O2/l	

Cancelar      Aceptar

# New ICT tools



## Steps in permitting process

**Tramitación**

- 168/2008 - 263.120/08 - NÚCLEO ZOOLOGÍCO DE PERROS DE CAZA - Resolución 14/05/2010
- 17/06/2008 - Presentación de solicitud y declaración de vertido
  - Remitente: JESUS MARTIN MARTIN
  - 263120\_08\_rem.DGV\_170608.pdf
  - 263120\_08\_memoria\_170608.pdf
- 17/06/2008 - Apertura expediente de vertido
- 24/07/2008 - Notificación de recepción de la solicitud
  - Destinatario: JESUS MARTIN MARTIN
  - Fecha del Acuse de Recibo: 30/07/2008
  - Observaciones: Y petición de documentación
  - 263120\_08\_recibo.solicitud\_150708.pdf
- 16/08/2008 - Remisión de documentación
  - Remitente: JESUS MARTIN MARTIN
  - 263120\_08\_rem.doc\_160808.pdf
  - 263120\_08\_rem.doc2\_160808.pdf
- 01/09/2008 - Solicitud de informe a la C.A.
  - Destinatario: JUNTA DE CASTILLA Y LEÓN. DEL. TERRITORIAL. SERV. TERRITORIAL DE
  - Fecha del Acuse de Recibo: 05/09/2008
  - 263120\_08\_pet.inf.Org\_280808.pdf
- 01/09/2008 - Solicitud de informe al Ayto.
  - Destinatario: AYUNTAMIENTO DE BURGOHONDO
  - Fecha del Acuse de Recibo: 04/09/2008

Exportar: HTML / Texto

Fase del Expediente: Resolución

Estado Administrativo del Movimiento: Estado Administrativo del Expediente: RESUELTO - Con resolución de autorización

Aceptar

## Compliance: evaluation of damages

**Valoración de Daños a la Calidad de las Aguas**

Histórico de Valoraciones | Datos de la Valoración de Daños

MF Resolución: 28/07/2009 | Puntos de Control: 1 | Fecha Valoración: 24/09/2010

Tipo de Vertido: Vertidos de Aguas Residuales

Agua Residuales: Caudal (Q)

Determinación Caudal: Estimado

Población Abastecida (hab): | Actividad Comercial (L/hab\*d)

Caudal (m3/d): 1511

Tempo de duración (t): Fechas Muestras: 13/09/2009, 19/09/2009

Parámetros	Valor obtenido (Vm)	Valor referencia (Vr)	Coefficient
Fluoruros	12	1,7	7,06
Cadmio	3	0,005	600
Sulfatos (SO4)	45	10	4,5
Magnesio	5	1	5
Uranio	15	2	7,5
Estaño	2	1	2

Coefficiente en función de la peligrosidad del vertido (Kpv): 1,39

Coefficiente relacionado con la sensibilidad del medio receptor (Ks): 3

Coefficiente relacionado con la reversibilidad del impacto en el medio (Krv): 1,4

Valoración de Daños para Vertidos de Aguas Residuales (D)  $(0,12 * Q^{0,75} * Kpv * Ks * Krv)$ : 7409,82

Cancelar / Aceptar



E-Government

GOBIERNO DE ESPAÑA | MINISTERIO DE MEDIO AMBIENTE Y RIESGO NATURAL Y MARINO

Sede electrónica

Procedimientos: Zona Personal | admin account | Salir

Autorización de vertidos a las aguas continentales o a cualquier otro elemento del dominio público hidráulico, de aguas y productos residuales susceptibles de contaminar.

Complementación: Solicitar

Formulario 1.2 - VERTIDOS NO URBANOS

A) Descripción de la actividad industrial

\*CNAE (O): Actividades auxiliares a las artes escóricas

\*Tráfico CNAE (O): 90.02

Grupo (O):

I.F.P.C. (O):  No afecta  Si afecta

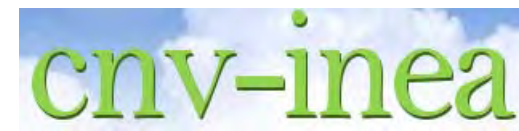
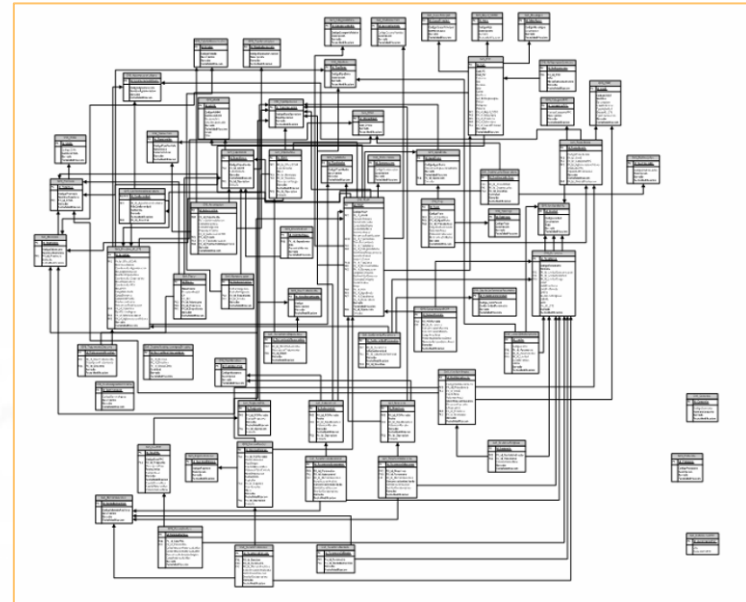
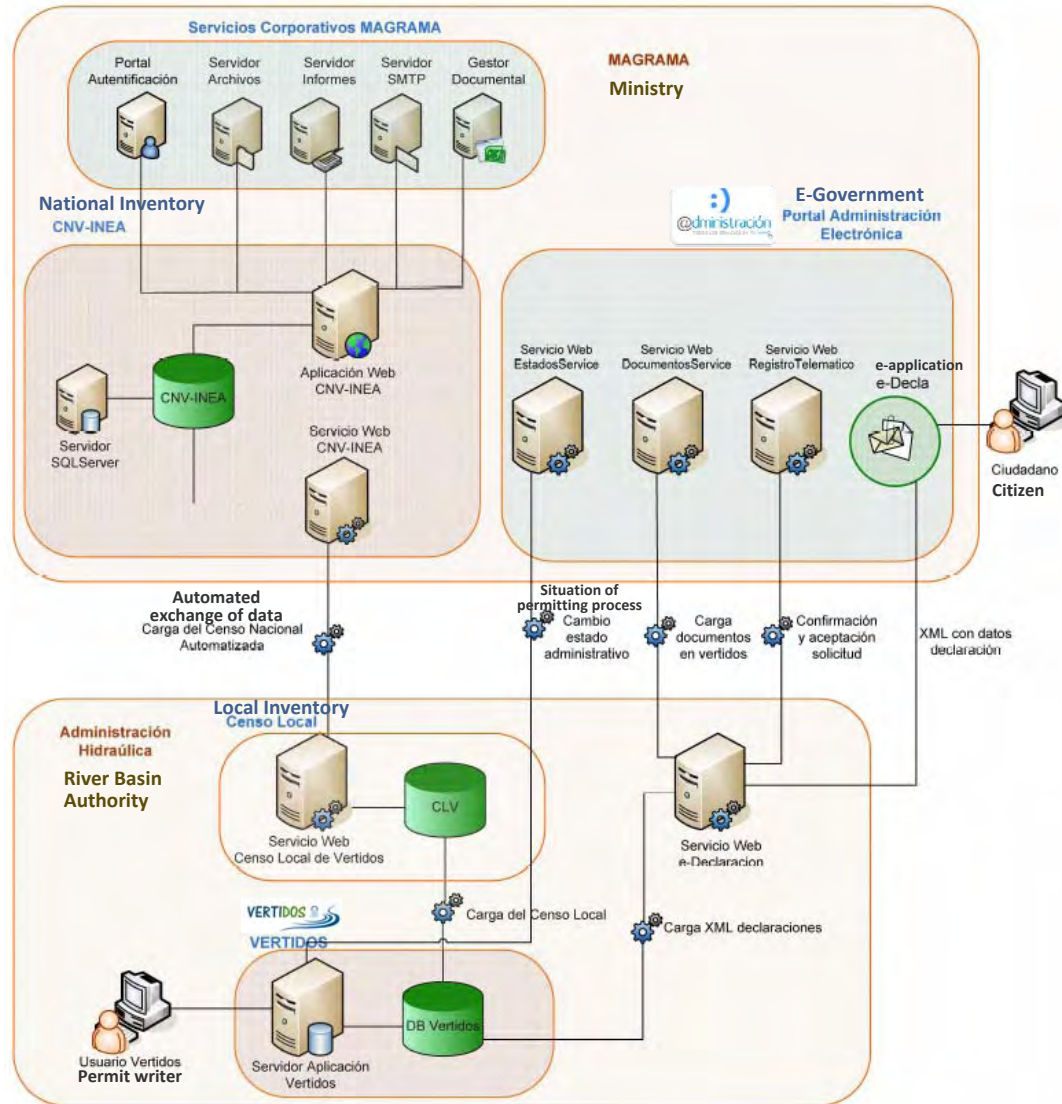
Categoría I.F.P.C. (O): 1.3

Capacidad de producción o rendimiento (O): 1 sistema

Sede electrónica

All application process can be done totally online

# New ICT tools



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Compliance reporting in Spain  
Urban waste water discharge information  
(Directive 91/271/CEE)





# EdarNet

## Urban waste water discharges

EdarNet



- o A **web based tool** which give access to all national relevant information concerning Urban waste water discharges (directive 91/271/CEE)

- o **Inventory of infrastructures:**

- ◆ Sewage system - description and Key figures
- ◆ UWW Treatment Plant - description and Key figures
- ◆ Agglomerations of the UWWTP – Compliance, description and Key figures
- ◆ Discharge point - Description and Key figures
- ◆ Sensitive areas

- o **Management of analytical data**

- o **Functionalities**

- ◆ Compliance is automatically processed from raw analytical data
- ◆ Generation of maps
- ◆ Automated generation of detailed or synthesis reports (colour codes)
- ◆ Generation of EU report

- o **Users**

- ◆ 200 from Confederaciones hidrográficas and Comunidades Autónomas
- ◆ Similar to SIIF but without publication of data



# EdarNet Urban waste water discharges

EdarNet



SGGDIPH - EdarNet v.1.7.3 - [EDAR - HELLIN(ES08020370005010E)]

Acceso rápido Ventana Ver

Nombre: HELLIN

CÓDIGO: ES08020370005010E Zona III. Sin diagnóstico validado para el último año. Zona Sensible \*. Criterio A con parámetro relevante P

Aglomeración: HELLIN (ES08020370005010E)

EDAR COLECTOR PUNTO DE VERTIDO FANGOS REUTILIZACIÓN

Tratamientos Estado Diag. de flujo Imágenes Observaciones Datos generales

Tipo de proceso: AIREACIÓN PROLONGADA

TIPO DE TRATAMIENTO: Sin seleccionar Primario Secundario Mas riguroso

TIPO DE PRETRATAMIENTO: Desengrasado Desbaste Desarenado Tanque de recuperación

TIPO DE TRATAMIENTO PRIMARIO: Físico / Químico Decantación primaria

TIPO DE TRATAMIENTO SECUNDARIO: Fungos activados Lagunaje Lecho bacteriano

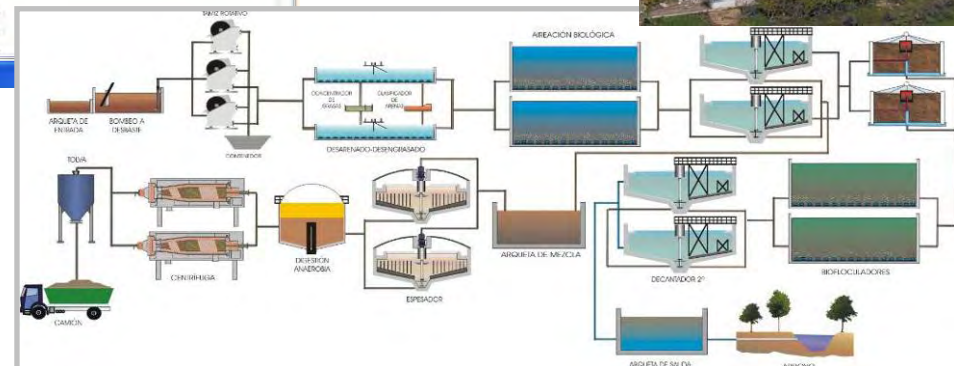
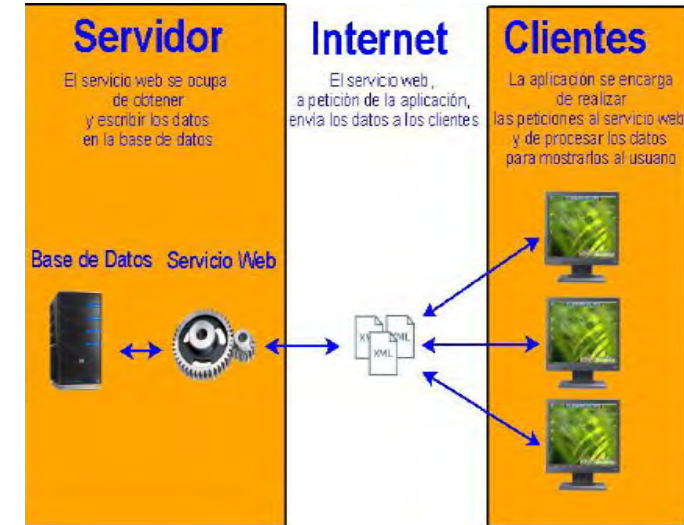
TIPO DE TRATAMIENTO MAS RIGUROSO: Eliminación N Eliminación P UV Cloración Ozonización Filtración de arena Microfiltración

Localización Datos de Contacto Documentación

LOCALIZACIÓN: CCHH Segura DDHH SEGURA CCAA Castilla-La Mancha Provincia Albacete Municipio Hellín UTM X 811.999,0 Y 4260.448,0 HUSO 30 Datum ETRS89 Dirección

LISTADO DE VISITAS

Fecha	Usuario
29/04/2014	Angelina Gonzalez-Nicolás Chicote
02/04/2014	Angelina Gonzalez-Nicolás Chicote
31/03/2014	Angelina Gonzalez-Nicolás Chicote
13/03/2014	Angelina Gonzalez-Nicolás Chicote
19/02/2014	Angelina Gonzalez-Nicolás Chicote
06/02/2014	Angelina Gonzalez-Nicolás Chicote
30/01/2014	Angelina Gonzalez-Nicolás Chicote
17/01/2014	Angelina Gonzalez-Nicolás Chicote
26/12/2013	Angelina Gonzalez-Nicolás Chicote
09/12/2013	Angelina Gonzalez-Nicolás Chicote
20/11/2013	Angelina Gonzalez-Nicolás Chicote
11/11/2013	Angelina Gonzalez-Nicolás Chicote
23/10/2013	Angelina Gonzalez-Nicolás Chicote
03/10/2013	Angelina Gonzalez-Nicolás Chicote
20/09/2013	Angelina Gonzalez-Nicolás Chicote
05/09/2013	Angelina Gonzalez-Nicolás Chicote
22/08/2013	Angelina Gonzalez-Nicolás Chicote
08/08/2013	Angelina Gonzalez-Nicolás Chicote
23/07/2013	Angelina Gonzalez-Nicolás Chicote
11/07/2013	Angelina Gonzalez-Nicolás Chicote
27/06/2013	Angelina Gonzalez-Nicolás Chicote
13/06/2013	Angelina Gonzalez-Nicolás Chicote
21/05/2013	Angelina Gonzalez-Nicolás Chicote
07/05/2013	Angelina Gonzalez-Nicolás Chicote
30/04/2013	Angelina Gonzalez-Nicolás Chicote
09/04/2013	Angelina Gonzalez-Nicolás Chicote
25/03/2013	Angelina Gonzalez-Nicolás Chicote
08/03/2013	Angelina Gonzalez-Nicolás Chicote
27/02/2013	Angelina Gonzalez-Nicolás Chicote
11/02/2013	Angelina Gonzalez-Nicolás Chicote
22/01/2013	Angelina Gonzalez-Nicolás Chicote
09/01/2013	Angelina Gonzalez-Nicolás Chicote
30/12/2012	Angelina Gonzalez-Nicolás Chicote
19/12/2012	Angelina Gonzalez-Nicolás Chicote
04/12/2012	Angelina Gonzalez-Nicolás Chicote
23/11/2012	Angelina Gonzalez-Nicolás Chicote
12/11/2012	Angelina Gonzalez-Nicolás Chicote
31/10/2012	Angelina Gonzalez-Nicolás Chicote
10/10/2012	Angelina Gonzalez-Nicolás Chicote
20/09/2012	Angelina Gonzalez-Nicolás Chicote
07/09/2012	Angelina Gonzalez-Nicolás Chicote





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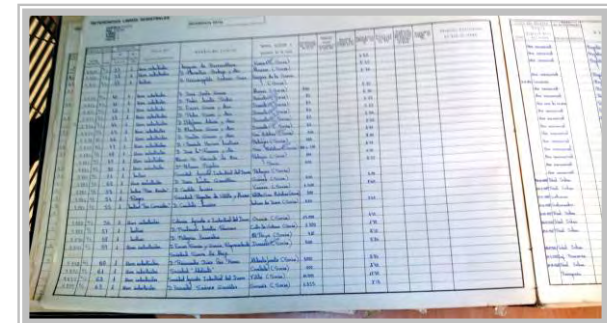
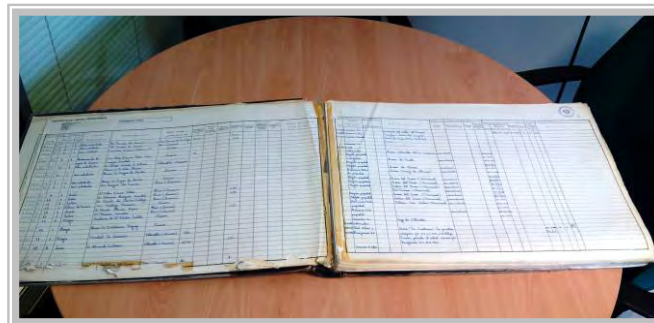
# Water rights in Spain



# Water Registry



- In previous legal regulation (Water Act of 1879) groundwater was private water
- Since The Water Act came into force in 1985, all water has been considered public
- The Spanish administrative law is especially careful with private property and to not damage the property rights
- The Water Act 1985 created a transition period to adapt the private exploitation of groundwater



- Historically, records were registered in paper
- Difficult decision-taking process to issue new water rights (some demands for economic compensation by the administration of previous water right holders)
- Big amount of groundwater applications to manage to adapt to the new water law

# Water Registry Some steps



2003

- Modernisation plan of hydraulic administration
  - ◆ **ALBERCA program was launched:**
    - ◆ Provide human, technical, technological and financial resources
    - ◆ New software developed to help the administrative process (more than 500.000 administrative records)
    - ◆ Review of the water rights registered in the The Catalogue of Historical Private Abstractions
    - ◆ Need to control external contactors (centralized system)



2014

- 2014 Confederaciones Hidrográficas: 689.106 records within ALBERCA system (or similar systems)
  - ◆ **WATER REGISTRY: a modern tool to register, modify, identify and locate all water uses... It is already developed, but now it is being tested**



REGISTRO DE AGUAS  
WATER REGISTRY

# Alberca Permit processing tool



**Gerdap**

Exp.	Año
88	1948
1	1949
4	1949
5	1949
6	1949
62	1949
63	1949
67	1949
69	1949
1	1950
2	1950
4	1950
5	1950
39	1950
40	1950
<b>55</b>	<b>1950</b>
57	1950
60	1950

**55/1950**      **Sección A Concesiones aguas superficiales**      **Fecha Entrada**  
 Ref.: I-934-PA      Concesión (Regadíos mayores de 8 l/seg)      13/04/1950

**Nº Registro**      **Área**      **Proyecto**  
 58           S\_A\_RESUELTOS\_GRABADOS\_UTE

**RESUELTO**      **Con Resolución de otorgamiento de concesión**

**APROVECHAMIENTO DEL EXPEDIENTE 55/1950**

Momento: Resolución      Fecha: 08/04/1964

**General**      **Captaciones**      **Usos**      **Condiciones**      **Plazo**

**Volumen máximo anual: 0,000 m3 - Consuntivo**

Limitación Mensual

Ene	Feb.	Marzo	Abril	Mayo	Junio	Julio	Agosto	Sept.	Octub.	Nov.	Dic.

**Superficie Total de Riego: 20,000 hectareas**

Relaciones

	Captaciones		
U		1	3
s	1 X		X
o			
s			

Observaciones:

Sistemas de Regulación      Fotointerpretación      Términos Municipales de Obra

Observaciones del M/F:

Expediente      **Aprovechamiento**      Captaciones      Usos      Personas      Documentos

11.030 Exps.  
 Nexp/Año      Ref.Local  
 Buscar      Exportar

Principal

MINISTERIO DE AGRICULTURA, ALIMENTACIÓN, Y MEDIO AMBIENTE

Inscripciones: [Datos de la inscripción](#) | [Otros apartados](#) | [Notas marginales](#) | [Historial](#) | **[Resumen](#)** | [Avisos](#)

Lm  
Gr

Nº Inscripción: DU2014001080 · Inmatriculación  
 Organismo: Confederación Hidrográfica del Duero  
 Estado: Vigente  
 Sección: A  
 Fecha de registro del asiento: 21/01/2014



*Usted está en [Derechos](#) / [Inscripciones](#) / [Detalle](#) / [Resumen](#)*

## Resumen

[Generar PDF](#)
[Opciones](#)
[Volver](#)

### Derecho

#### DATOS GENERALES:

**Plazo del derecho:** 30 años

**Fecha inicio:** 29/01/1985

**Fecha de extinción:** 29/01/2015

**Volumen máximo anual (m³):** 1.150,000

#### TITULARES:

A58818501 - Comunidad de Regantes El Porvenir

### Captaciones

#### Captación 1:

**Procedencia del agua:** Superficial

#### Río o cauce:

PRADO ANCHO

#### Masa de agua superficial:

Natural

**Volumen máximo anual (m³):** 800,000

**Caudal máximo instantáneo (l/s):** 500,000

#### Captación 2:

**Procedencia del agua:** Subterránea

#### Acuífero:

Páramo del Duratón

**Volumen máximo anual (m³):** 200,000

**Caudal máximo instantáneo (l/s):** 200,000

#### Captación 3:

**Procedencia del agua:** Subterránea

#### Acuífero:

Páramo del Duratón

**Volumen máximo anual (m³):** 150,000

**Caudal máximo instantáneo (l/s):** 100,000

#### INFRAESTRUCTURAS:

**Nombre:** Páramo

**Tipo:** Canal

[Ver más](#)

### Usos

#### Uso 1:

**Tipo de uso:** Usos agropecuarios - Regadíos

**Volumen máximo anual (m³):** 800,000

#### Uso 2:

**Tipo de uso:** Abastecimiento - Usos destinados a otros abastecimiento fuera de los núcleos urbanos - Otros usos domésticos distintos del consumo humano

**Volumen máximo anual (m³):** 350,000



Inscripciones: **Datos de la inscripción** | Otros apartados | Notas marginales | Historial | Resumen | Avisos
Lm  
Gr
 Nº inscripción: DU2014001080 · Inmatriculación  
 Organismo: Confederación Hidrográfica del Duero  
 Estado: Vigente  
 Sección: A  
 Fecha de registro del asiento: 21/01/2014


Usted está en Derechos / Inscripciones / Detalle / Datos de la inscripción / Derecho

 Datos de la inscripción: **Derecho** | Captaciones | Usos | Relaciones | Documentación

Generar PDF

Opciones

Volver

**Titulares**

A58818501 - Comunidad de Regantes El Porvenir

**DATOS DEL TITULAR:**
**Tipo de persona:** Comunidad de usuarios

**Tipo de documento:** CIF

**Nº de documento:** A58818501

**Nombre/Razón social:** Comunidad de Regantes El Porvenir

**Fecha de aprobación de la comunidad:** 02/01/1985

**Nombre:** Juan

**Primer apellido:** Pérez

**Segundo apellido:** López

Ver datos de contacto

**Título**
**Nombre:** Resolución de Otorgación de Derechos

**Tipo:** Resolución administrativa

**Fecha del derecho:** 28/01/1985

**Autoridad:** Presidente de la Confederación Hidrográfica

Ver documento

**Características generales**
**Plazo del derecho:** 30 años

**Fecha inicio:** 29/01/1985 (A partir del día siguiente de notificación de la resolución)

**Fecha de extinción:** 29/01/2015

**Naturaleza:** Consuntivo

**Volumen máximo anual (m³):** 1.150,000

Ver condiciones específicas

1

**Información de los expedientes**
**Nº expediente tramitación:** DU-2730/ZA

**Nº expediente organismo:** DU-2730/ZA

**Referencias a inscripciones anteriores**

20002 - Registro de Aprovechamiento de Aguas

**Nombre del registro:** Registro de Aprovechamiento de Aguas

**Tomo / Folio:** 10

**Sección:** A

**Nº Inscripción:** 20002

**Acta de reconocimiento parcial o final**
**Fecha de aprobación:** 03/02/1986

Ver documento

Inscripciones: **Datos de la inscripción** | Otros apartados | Notas marginales | Historial | Resumen | Avisos

 Lm  
 Cr

 N° Inscripción: DU2014001080 - Inmatriculación  
 Organismo: Confederación Hidrográfica del Duero  
 Estado: Vigente  
 Sección: A  
 Fecha de registro del asiento: 21/01/2014

 Usted está en [Derechos](#) / [Inscripciones](#) / [Detalle](#) / [Datos de la inscripción](#) / [Captaciones](#)

 Datos de la inscripción: [Derecho](#) | **[Captaciones](#)** | [Usos](#) | [Relaciones](#) | [Documentación](#)

Generar PDF

Opciones

Volver

 C 1 - Captación 1 [Ver más](#)

 CS 1.A - Captación secundaria [Ver más](#)

 C 2 - Captación 2 [Ver más](#)

 C 3 - Captación 3 [Ver más](#)
**Datos de la captación**
**Identificador:** 1

**Nombre:** Captación 1

**Tipo:** Toma directa

**Orden de la captación:** 1 de 3

**Sistema de explotación:** Esla-Valderaduey

**Volumen máximo anual (m³):** 800,000

**Caudal máximo instantáneo (l/s):** 500,000

**Características de la captación**
**Tipo de toma:** Fija

**Infraestructuras de la captación**
**Nombre:** Páramo

**Tipo:** Canal

[Ver más](#)
**Usos asociados a la captación**
**N° de usos:** 1

**Usos asociados:**

 USO 1 [consultar uso](#)
**Procedencia del agua**

Superficial

**Río o cauce:**

PRADO ANCHO

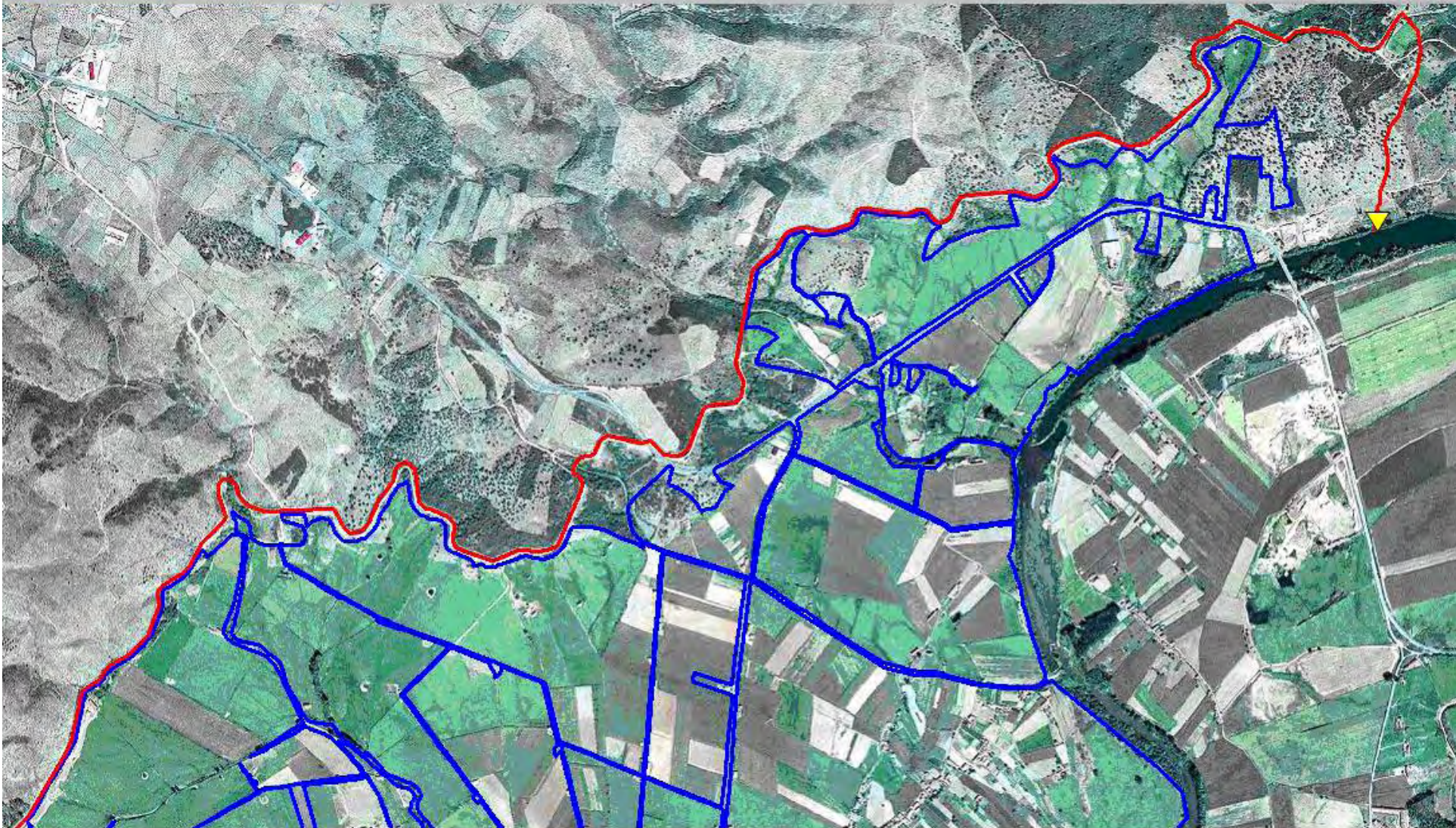
**Masa de agua superficial:**

Natural

**Localización de la captación**

 visor  cartográfico





Proyección UTM / Elipsoide ETRS 1989 X: 178.166,96 Y: 1.378.761,32 HUSO: 30 ESCALA: 1:8.000.000

Abstractions:

▼ Primary

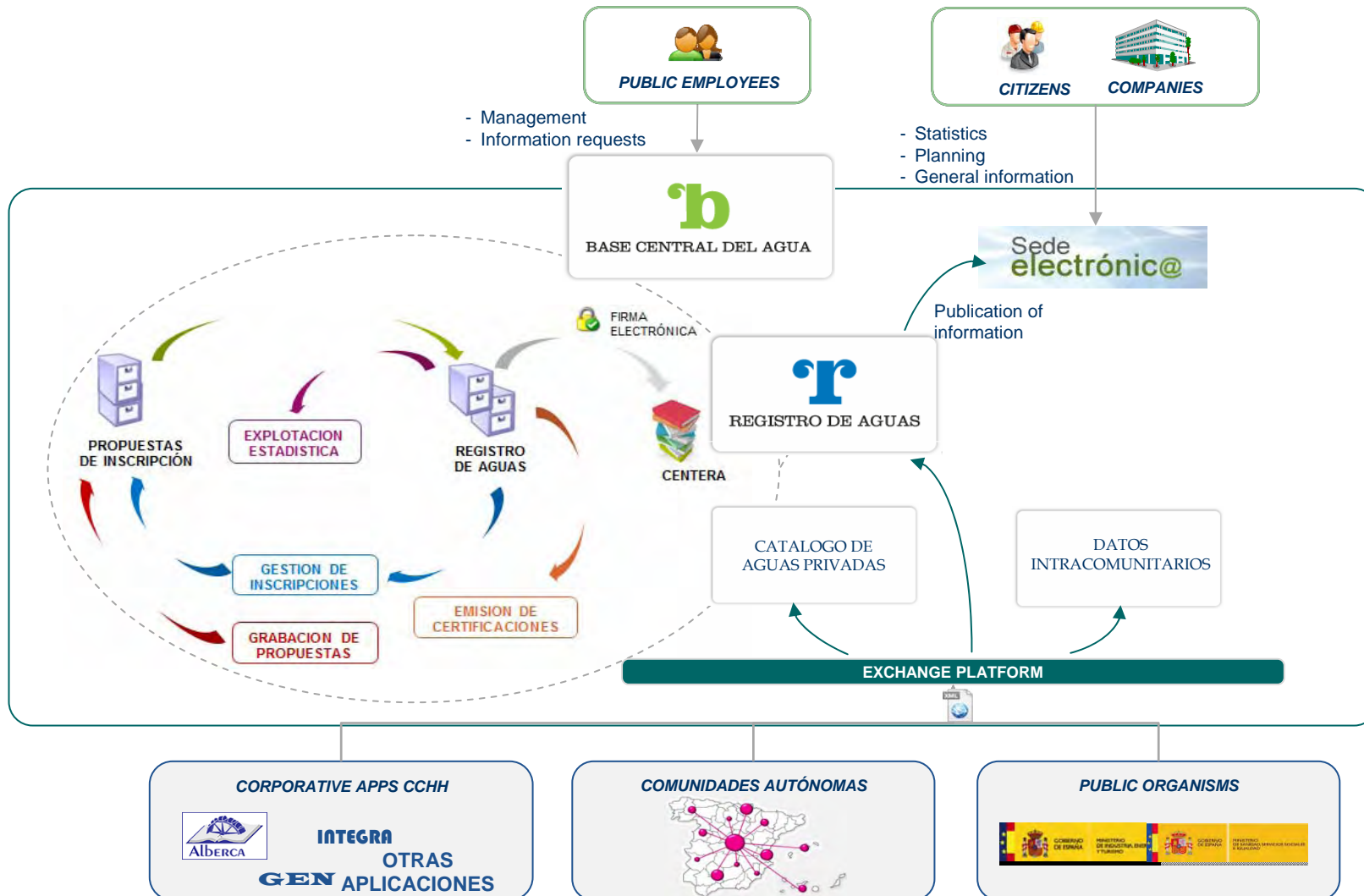
Uses:

□ Irrigation

Infraestructuras:

— Channel

# Water Registry

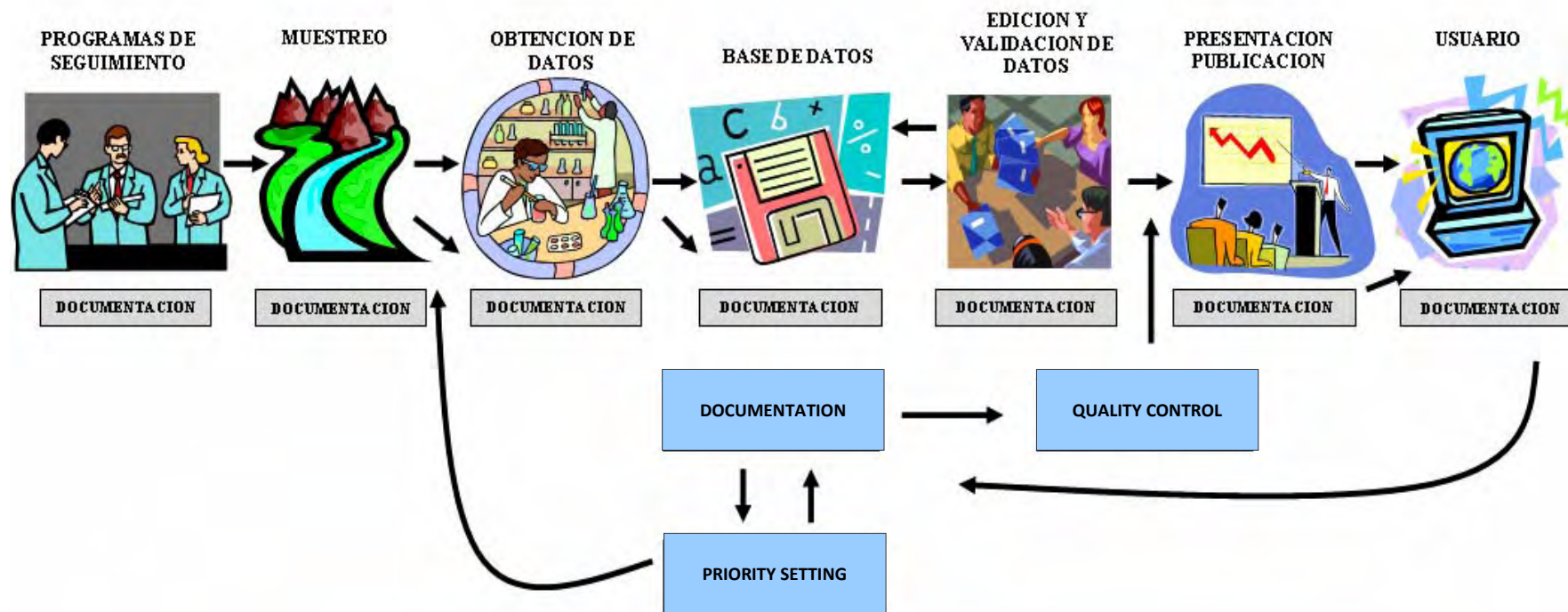
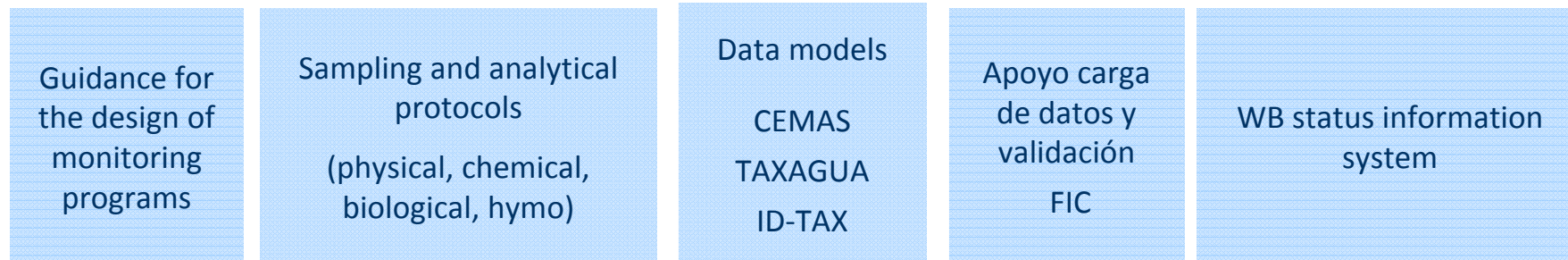


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Water quality and water status information  
in Spain

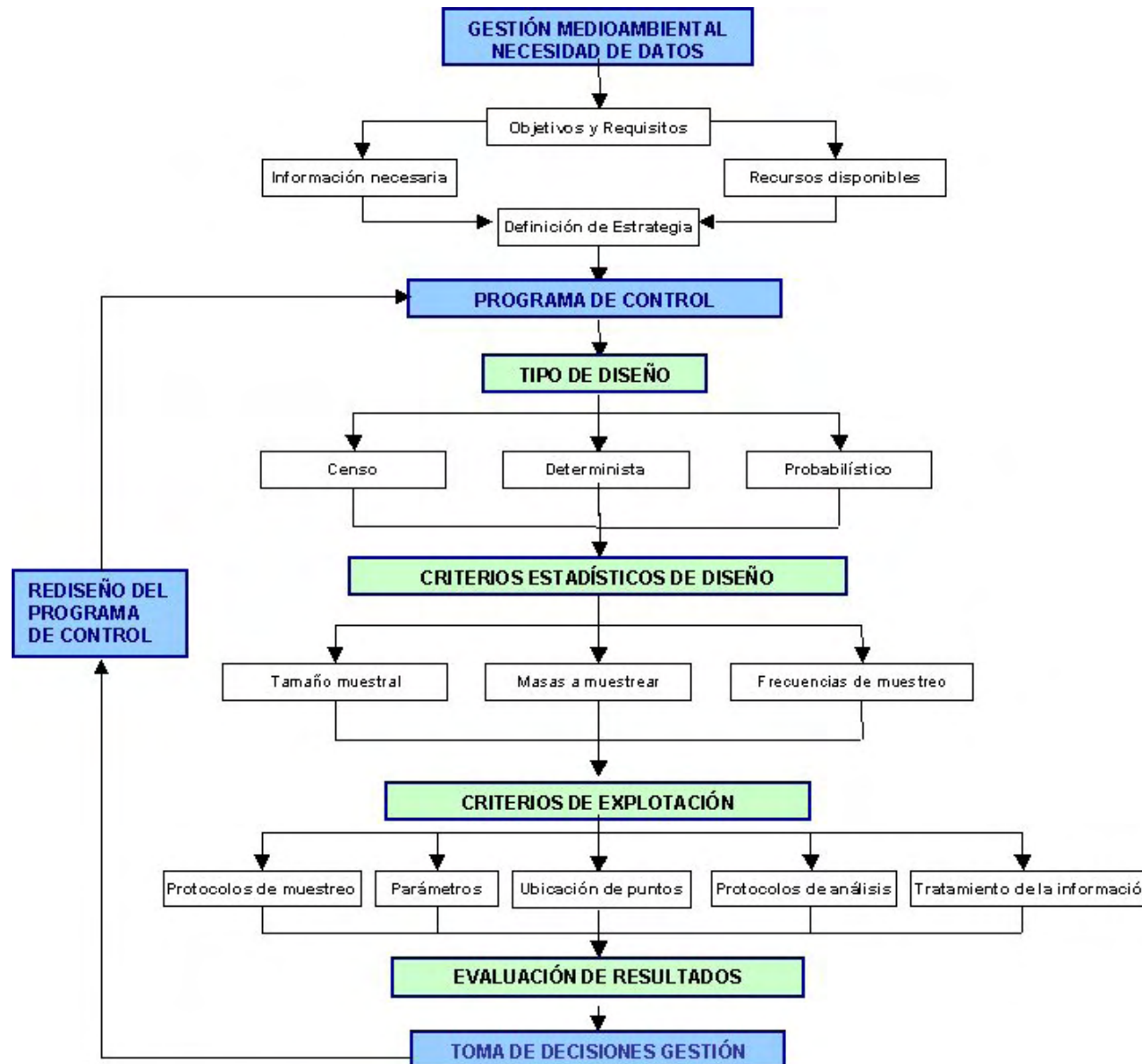


# Monitoring programs Quality assurance



→ Coste de la corrección de errores aumenta

# Guidance for the design of water quality monitoring programs





# Sampling and analytical protocols



- b **Chemical and microbiological analysis**
  - ◆ Orden MAM/3207/2006 Technical instruction MMA-EECC-1/06
- b **Biological sampling and identification protocols**
  - ◆ Invertebrates in wadeable rivers (ML-Rv-I-2013)
  - ◆ Phytobenthos in rivers (benthic diatoms) (ML-R-D-2013)
  - ◆ Phytoplankton in lakes and reservoirs (M-LE-FP-2013)
  - ◆ Invertebrates in lakes (ML-L-I-2013)
  - ◆ Macrophytes in lakes (M-L-OFM-2013)

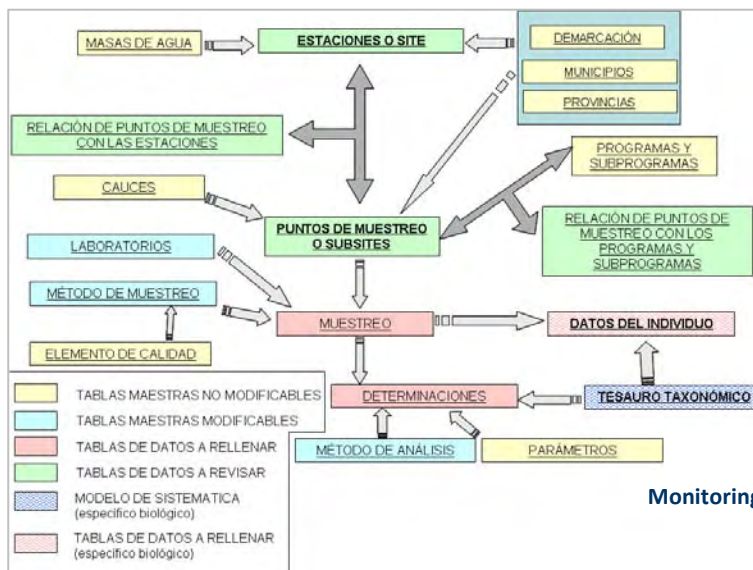
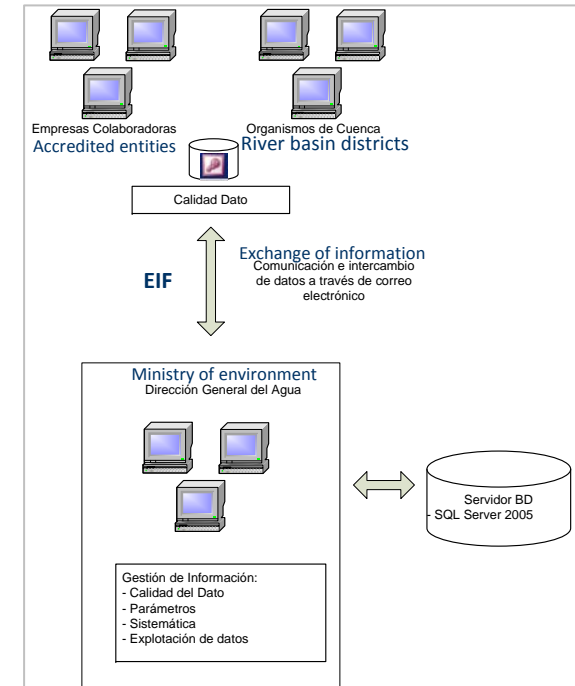
- b **Biological sampling protocols**
  - ◆ Invertebrates in rivers IBMWP.2013
  - ◆ Invertebrates in lakes IBCAEL-2013
  - ◆ Phytoplankton in lakes and reservoirs MFIT-2013
  - ◆ Diatoms IPS. -2013
  - ◆ Macrophytes in lakes. OFALAM-2013



# Situation of WB status databases 2014

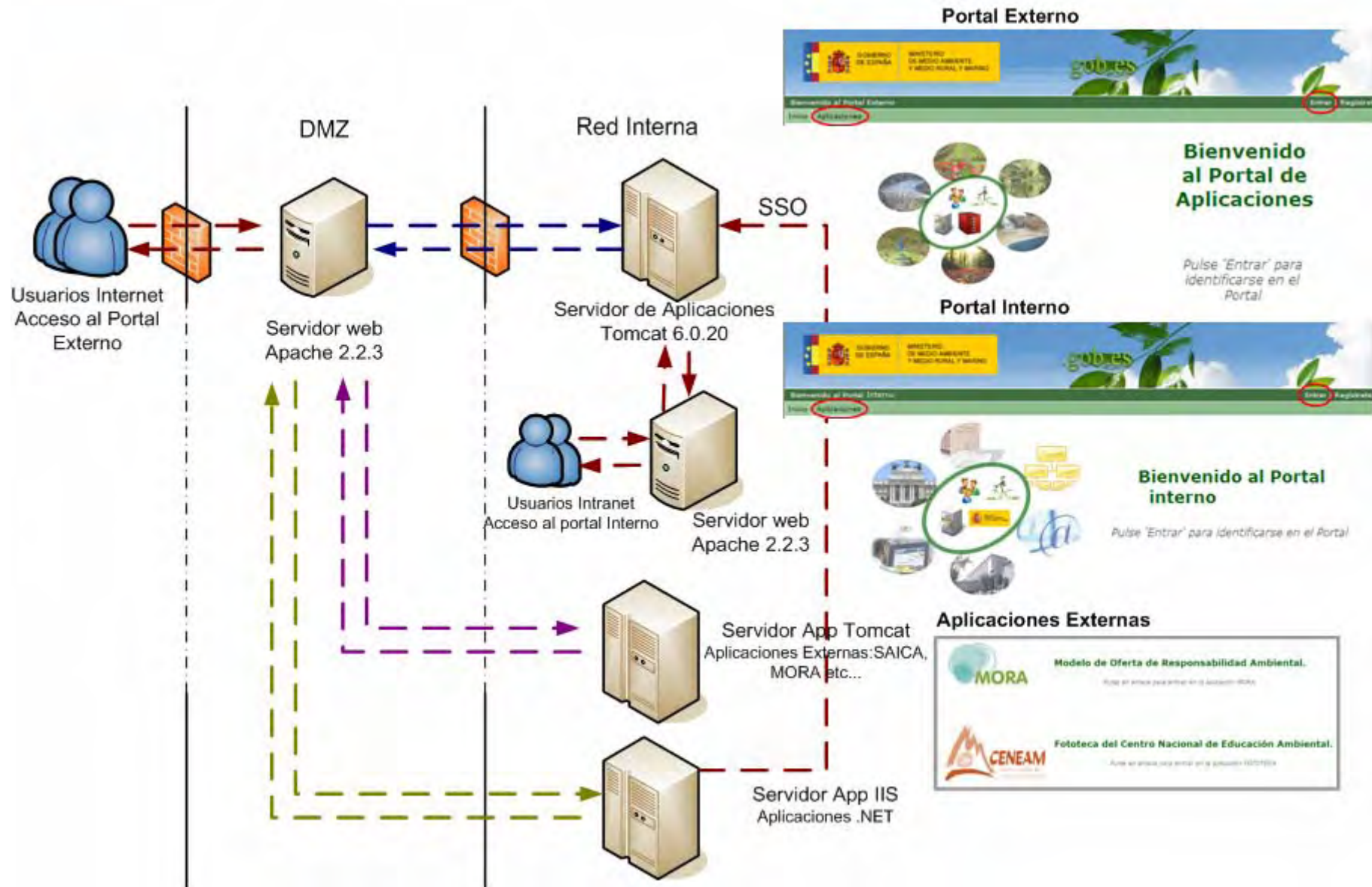


- 25 RBD involved
- Data model in continuous evolution
- Exchange of information file (EIF Access)
- Work focused on the improvement of data quality
- Annual reporting to the Ministry DB
  - ◆ From floppy disk exchange to the use of exchange of information platforms (CIRCA)
- Moving towards direct access to data at source



Monitoring status of WB (CEMAS)  
Data model

# Water status monitoring System architecture





# Thesaurus of taxa: TAXAGUA



Taxagua v.1.0 Fichero taxones: v.1.0 Fichero propiedades: v.1.0

Patrón de búsqueda  Grupo revisión Tesoro   Nodos detallados Cargar Árbol 1 / 1

**taxagua** TESAURO TAXONÓMICO PARA LA CLASIFICACIÓN DEL ESTADO ECOLÓGICO DE LAS MASAS DE AGUA CONTINENTALES

GOBIERNO DE ESPAÑA MINISTERIO DE MEDIO AMBIENTE Y MEDIO RURAL Y MARINO  
soportebiologico@vertidos-calidad.es

**SEARCH BOX FOR TAXA**

Reino	Filo	Clase	Orden	Familia	Género	Especie	Subespecie	Variedad	Forma
			CER001ORDE	Corynidae COR018FAMI	Coryne COR011GENE	pusilla COR011PUS011			
		Hydrozoa HYD001CLAS	Anthoathecata ANT003ORDE						
			Hydroida HYD003ORDE						
Bacteria BAC001REIN	Cyanobacteria CYA001FILO	Cyanophyceae CYA001CLAS	Chroococcales CHR003ORDE	Chamaesiphonaceae CHA035FAMI	Chamaecalyx CHA035GENE	swirenkoi CHA035SW001			
			Nostocales NOS001ORDE	Microchaetaceae MIC007FAMI	Coleodesmium COL007GENE	wrangellii COL007WRA002			

**INTERACTIVE TAXONOMIC TREE**

DIATOMEAS 
  FITOPLANCTON 
  ICTIOFAUNA 
  INVERTEBRADOS LAGOS 
  INVERTEBRADOS RÍOS 
  MACRÓFITOS 
  MUESTREADO 
  PREFERENTE 
  SECUNDARIO

TAXÓN SELECCIONADO: **Chroomonas acuta**

ELEMENTOS DE CALIDAD	PROPIEDAD	VALOR	SUBVALOR	INFRAVALOR	SISTCODSUP	SISTCODINF	MÉTRICA
Grupo revisión tesoro:	BLOOMS						
FITOPLANCTON	FORMA CRECIMIENTO						
Elemento calidad:	HÁBITAT	Continental					
FITOPLANCTON	HÁBITAT EN COLUMNA DE AGL						
	NUTRICIÓN						
	TOXICIDAD						

**ECOLOGICAL PROPERTIES AND VALUES OF METRICS ASSOCIATED**

R >> FI >> C Cryptophyceae >> O Pyrenomonadales >> F Chroomonadaceae >> G Chroomonas >> E acuta >>

# Common identification keys



# ID-TAX



Phylobenthos: 367 species



Phytoplankton: 485 species



Fish: 84 species



Macrophytes: 379 species



Benthic invertebrates: 160 families, total taxa 175

## CLAVES DE IDENTIFICACIÓN

151b	Estrías uniseriadas .....	Especie Gomphonema capitatum
152a	Frústulos arqueados, elípticos en visión pleural, mostrando simultáneamente el rafe de ambas valvas .....	153
152b	Combinación de caracteres diferente.....	160
153a	Sin cópulas.....	154
153b	Con cópulas .....	157
154a	Ramas del rafe fuertemente curvadas .....	159
154b	Ramas del rafe ligeramente curvadas o rectas.....	155
155a	Área dorsal ausente.....	Especie Amphora eximia
155b	Área dorsal presente .....	156
156a	Punctae dorsales visibles.....	Especie Amphora indistincta
156b	Punctae dorsales no visibles.....	Especie Amphora pediculus
157a	Más de 20 estrías en 10 µm .....	Especie Halamphora montana
157b	Menos de 20 estrías en 10 µm .....	158
158a	Punctae visibles .....	Especie Halamphora veneta
158b	Punctae no visibles .....	Especie Halamphora coffeaeformis
159a	Área dorsal central ausente.....	Especie Amphora ovalis
159b	Área dorsal central presente .....	Especie Amphora copulata
160a	Margen ventral de la valva ondulado, con una prominencia hialina central. Terminaciones proximales del rafe no curvadas .....	161
160b	Combinación de caracteres diferente.....	162
161a	Valvas con una anchura media inferior a los 5 µm.....	Especie Reimeria sinuata
161b	Valvas con una anchura media superior a los 5 µm .....	Especie Reimeria uniseriata
162a	Terminaciones proximales del rafe curvadas dorsalmente. Terminaciones distales del rafe curvadas ventralmente.....	163
162b	Combinación de caracteres diferente.....	176
163a	Frústulos curvados dorsiventralmente, frecuentemente presentan estigmoides ..	164
163b	Frústulos no curvados dorsiventralmente o sólo ligeramente, sin estigmoides	173
164a	Punctae visibles .....	165
164b	Punctae no visibles .....	168
165a	Las punctae son areolas .....	166
165b	Las punctae son lineolas.....	167
166a	Ratio largo/anchura superior a 5 .....	Especie Encyonema gracile
166b	Ratio largo/anchura inferior a 5.....	170
167a	Valvas de hasta 15 µm de ancho .....	Especie Encyonema caespitosum
167b	Valvas de más de 15 µm de ancho .....	Especie Encyonema prostratum
168a	Más de 17 estrías en 10 µm .....	Especie Encyonema reichardtii
168b	Menos de 17 estrías en 10 µm .....	172
169a	Valvas con una densidad media de estrías de 13 en 10 µm	
169b	Valvas con una densidad media de estrías de 15 en 10 µm .....	171
170a	Valvas de hasta 22 µm de ancho .....	Especie Encyonema silesiacum
170b	Valvas de más de 22 µm de ancho .. Variedad Encyonema silesiacum var. altensis	
171a	Más de 32 punctae en 10 µm.....	Especie Encyonema ventricosum
171b	Menos de 32 punctae en 10 µm.....	Especie Encyonema lange-bertalotti
172a	Valvas con una densidad media de estrías de 16 µm .....	
	.....	Especie Encyonema minutum
172b	Valvas con una densidad media de estrías inferior a 16 µm .....	169

*Catálogo de identificación de los organismos utilizados como elementos de calidad biológicos en las redes de control en aplicación de la Directiva Marco del Agua*

# ID-TAX web-based application



Browser tabs: ID-TAX - Lampetra fluviatilis, ID-TAX - Clave Peces

GOBIERNO DE ESPAÑA  
MINISTERIO DE AGRICULTURA, ALIMENTACIÓN Y MEDIO AMBIENTE

ID-TAX Clave Glosario Buscador Clave para imprimir Listado taxonómico

### Peces

Árbol de Claves

Nodos Disponibles

- A: Peces sin mandíbula....
- B: Peces con mandíbula....

**A**

Peces sin mandíbula. Con siete pares de aberturas branquiales. Carece de aletas pares. Boca redonda tipo [ventosa](#) y en forma de embudo

Propiedad/Autor: CHEbro

**B**

Peces con mandíbula. Con un par de aberturas branquiales protegidas por [opérculos](#). Presenta aletas pares. Boca sin este conjunto de características

Propiedad/Autor: CHGuadiana

Añadir Favorito

CONTINUAR

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Programs of measures  
WFD river basin management plans  
in Spain

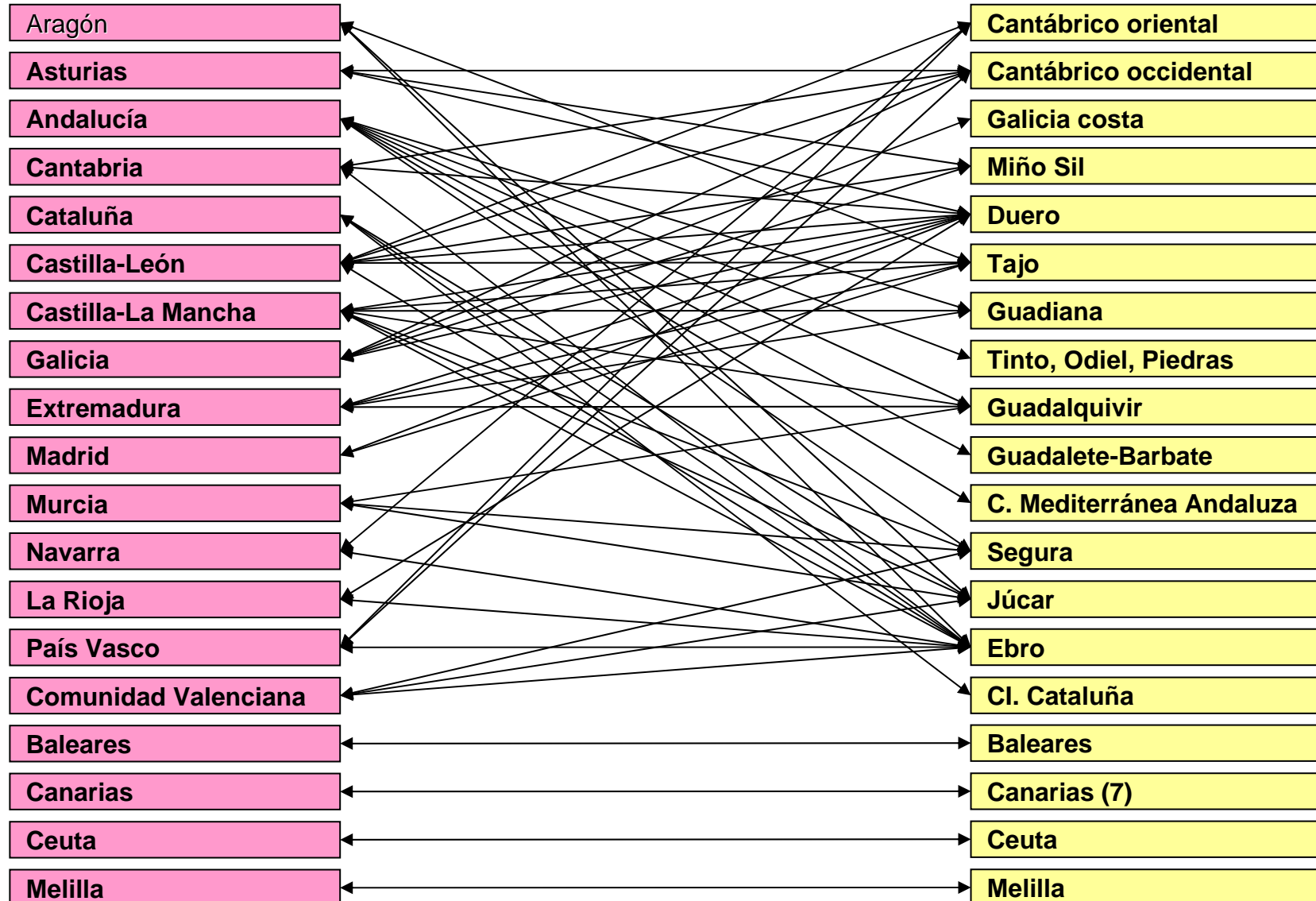




# Interrelation Regions-River Basin District (measures)



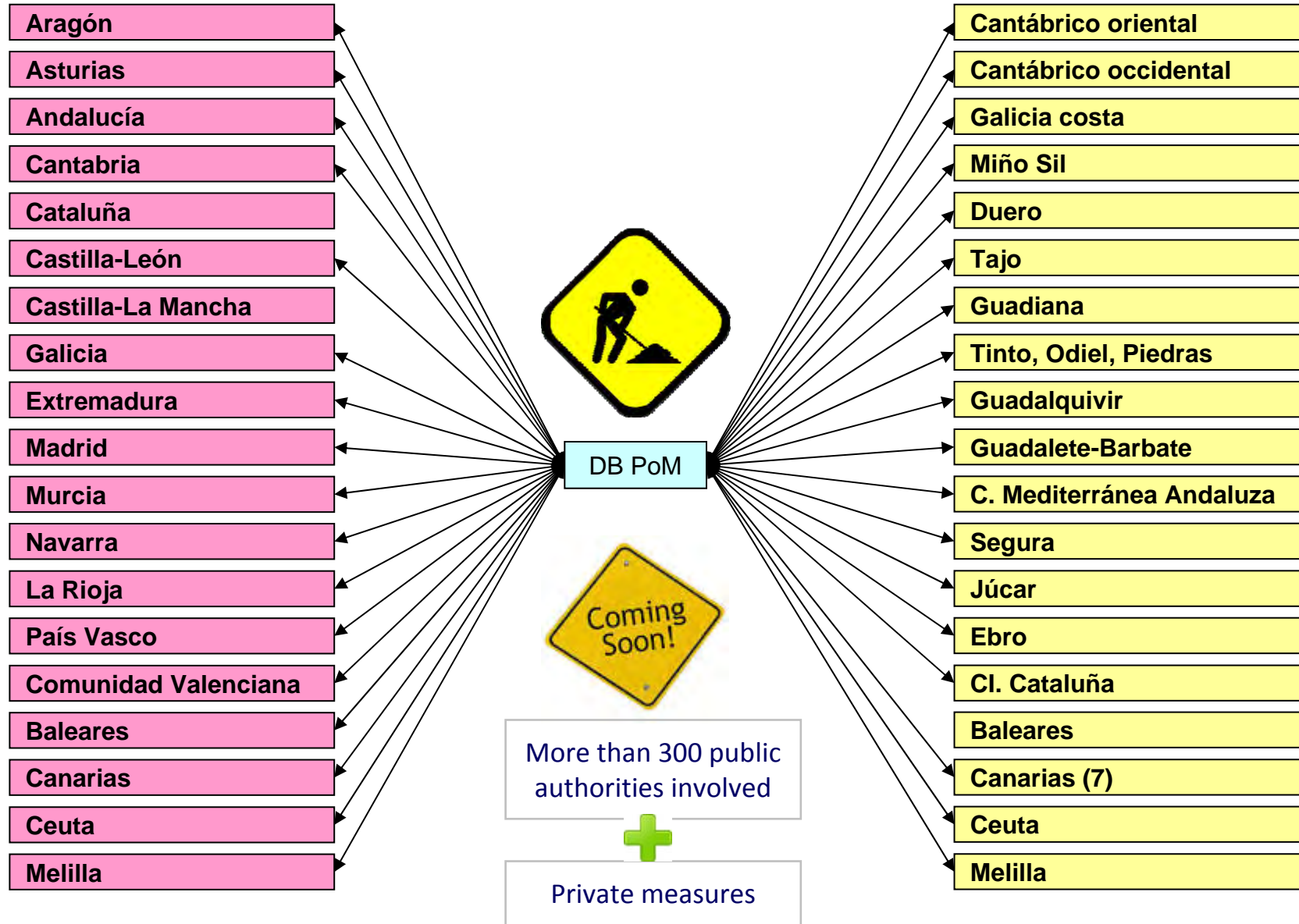
Several General Directorates by Region (x5 or more)



# Future situation with Programmes of measures Database (DB PoM)



Several General Directorates by Region (x5 or more)



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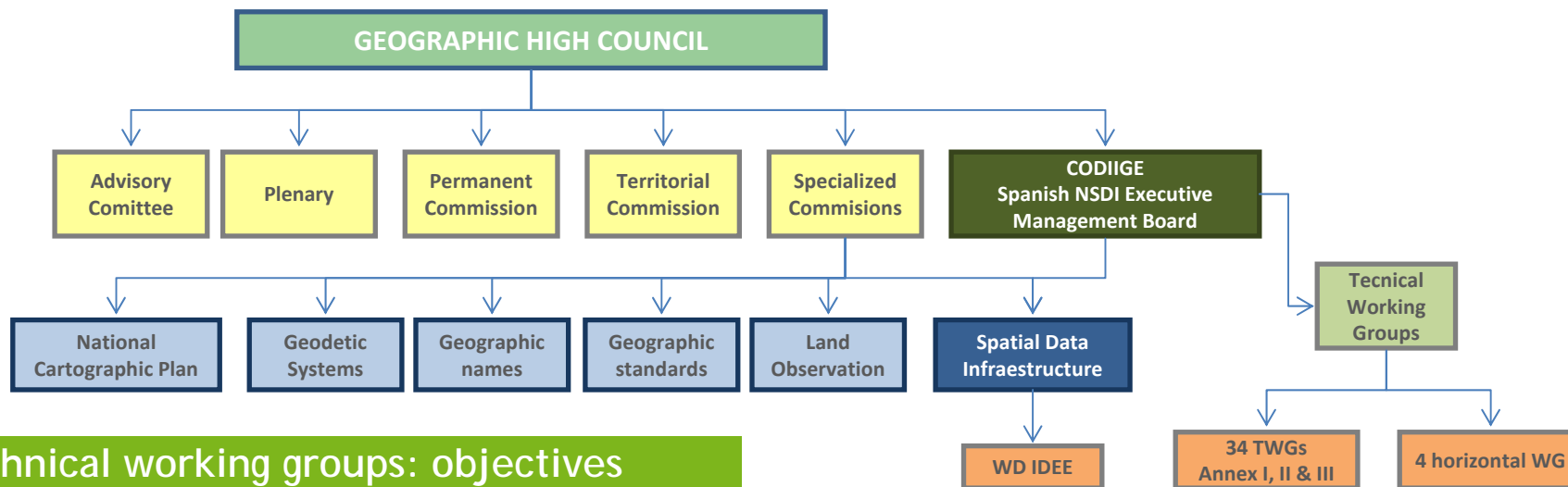
Spatial datasets  
Inspire directive in Spain



# Spanish Infrastructure for Spatial Information Managing Board (CODIIGE)



- Created in 2011 to coordinate the implementation of Inspire directive in Spain
  - 38 TWG created (4 horizontal + 34 thematic)



## Technical working groups: objectives

- Analysis of existing regulations in Spain
- Search for consistency between these regulations and the corresponding INSPIRE implementing rules
- Preparation of draft standards, guidelines, methodologies, classifications, nomenclatures, codes (standardization)
- Analysis of the data sets, metadata, and services necessary to inform the EC (INSPIRE)
- Raise awareness of creating data sets, metadata, and services
- Monitor the implementation of these data sets and services
- Promote the development of tools for analysis and publication of information

# Guidelines – Data Specification



## Thematic Guidelines

- I.1.1 INSPIRE\_Specification\_CRS\_v3.1
- I.1.2 INSPIRE\_Specification\_GGS\_v3.0.1
- I.1.3 INSPIRE\_DataSpecification\_GN\_v3.0.1
- I.1.4 INSPIRE\_DataSpecification\_AU\_v3.0.1
- I.1.5 INSPIRE\_DataSpecification\_AD\_v3.0.1
- I.1.6 INSPIRE\_DataSpecification\_CP\_v3.0.1
- I.1.7 INSPIRE\_DataSpecification\_TN\_v3.1
- I.1.8 INSPIRE\_DataSpecification\_HY\_v3.0.1
- I.1.9 INSPIRE\_DataSpecification\_PS\_v3.1
- II.1 INSPIRE\_DataSpecification\_EL\_v3.0rc3
- II.2 INSPIRE\_DataSpecification\_LC\_v3.0rc3
- II.4 INSPIRE\_DataSpecification\_GE\_v3.0rc3
- III.1 INSPIRE\_DataSpecification\_SU\_v3.0rc3
- III.2 INSPIRE\_DataSpecification\_BU\_v3.0rc3
- III.3 INSPIRE\_DataSpecification\_OI\_v3.0rc3
- III.3 INSPIRE\_DataSpecification\_SO\_v3.0rc3
- III.4 INSPIRE\_DataSpecification\_LU\_v3.0rc3
- III.5 INSPIRE\_DataSpecification\_HH\_v3.0rc3
- III.6 INSPIRE\_DataSpecification\_US\_v3.0rc3
- III.7 INSPIRE\_DataSpecification\_EF\_v3.0rc3
- III.8 INSPIRE\_DataSpecification\_PF\_v3.0rc3
- III.9 INSPIRE\_DataSpecification\_AF\_v3.0rc3
- III.10 INSPIRE\_DataSpecification\_PD\_v3.0rc3
- III.11 INSPIRE\_DataSpecification\_AM\_v3.0rc3
- III.12 INSPIRE\_DataSpecification\_NZ\_v3.0rc3
- III.13 y 14 INSPIRE\_DataSpecification\_AC-MF\_v3.0rc3
- III.15 INSPIRE\_DataSpecification\_OF\_v3.0rc3
- III.16 INSPIRE\_DataSpecification\_SR\_v3.0rc3
- III.17 INSPIRE\_DataSpecification\_BR\_v3.0rc3
- III.18 INSPIRE\_DataSpecification\_HB\_v3.0rc3
- III.19 INSPIRE\_DataSpecification\_SD\_v3.0rc3
- III.20 INSPIRE\_DataSpecification\_ER\_v3.0rc3
- III.21 INSPIRE\_DataSpecification\_MR\_v3.0rc3

## General Guidelines

- D2.3 Definition of Annex Themes and scope\_v3.0
- D2.5\_Generic conceptual modelv3.4rc3
- D2.6Methodology data specifications\_v3.0
- D2.7\_Encoding data v3.3rc3
- D2.8.II-III xx INSPIRE\_DataSpecification
- D2.9\_Observations&Measurements\_v2.0rc3
- D2.10.1\_GenericNetworkModel\_v1.0rc3
- D2.10.2\_CoverageTypes\_v1.0rc3
- D2.10.3\_Activity\_Complexes\_v1.0rc3

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 Título: Microsoft Wor  
 Fecha de modificació  
 Tamaño: 977 KB



INSPIRE  
 Infrastructure for Spatial Information in Europe

### D2.8.1.8 INSPIRE Data Specification on Hydrography – Guidelines

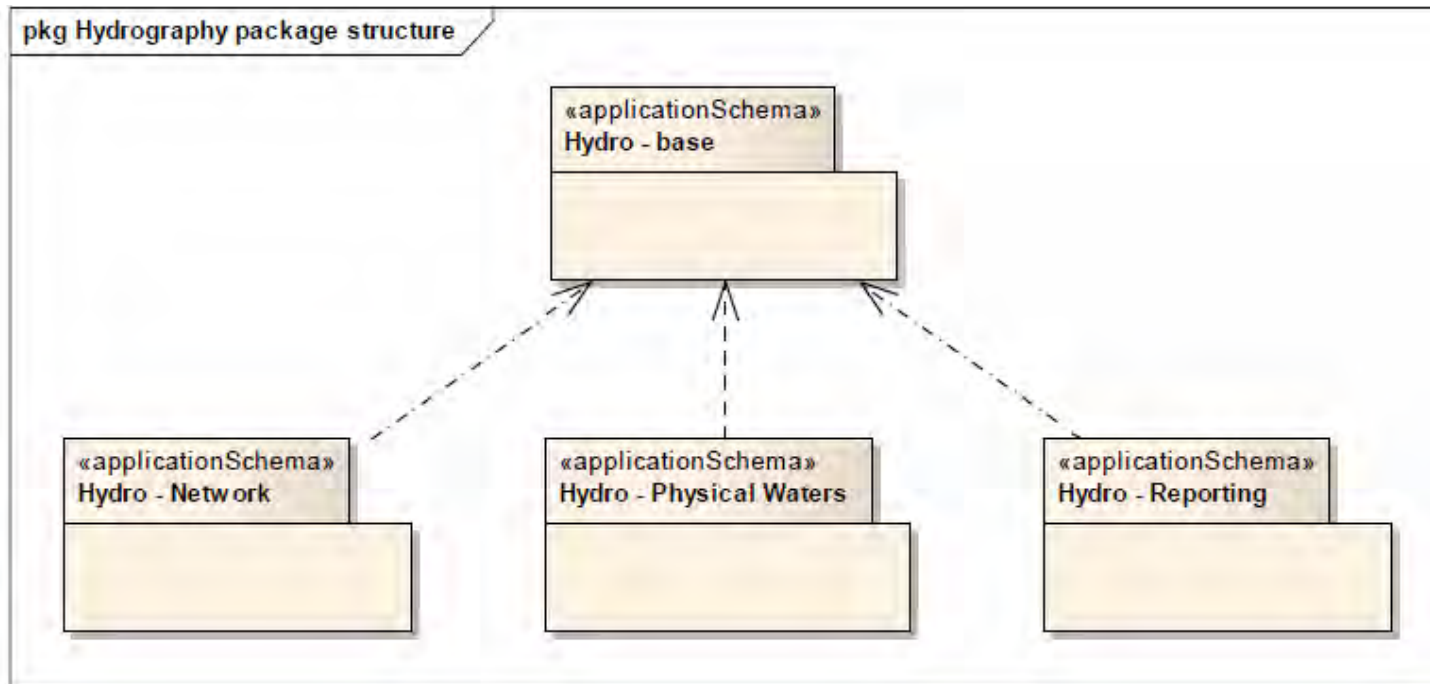
<b>Title</b>	D2.8.1.8 INSPIRE Data Specification on <i>Hydrography</i> – Guidelines
<b>Creator</b>	INSPIRE Thematic Working Group <i>Hydrography</i>
<b>Date</b>	2010-04-26
<b>Subject</b>	INSPIRE Data Specification for the spatial data theme <i>Hydrography</i>
<b>Publisher</b>	INSPIRE Thematic Working Group <i>Hydrography</i>
<b>Type</b>	Text
<b>Description</b>	This document describes the INSPIRE Data Specification for the spatial data theme <i>Hydrography</i>
<b>Contributor</b>	Members of the INSPIRE Thematic Working Group <i>Hydrography</i>
<b>Format</b>	Portable Document Format (PDF)
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<b>Relation</b>	Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)
<b>Coverage</b>	Project duration

# Data Specification

## Guidelines I.8 Hydrography



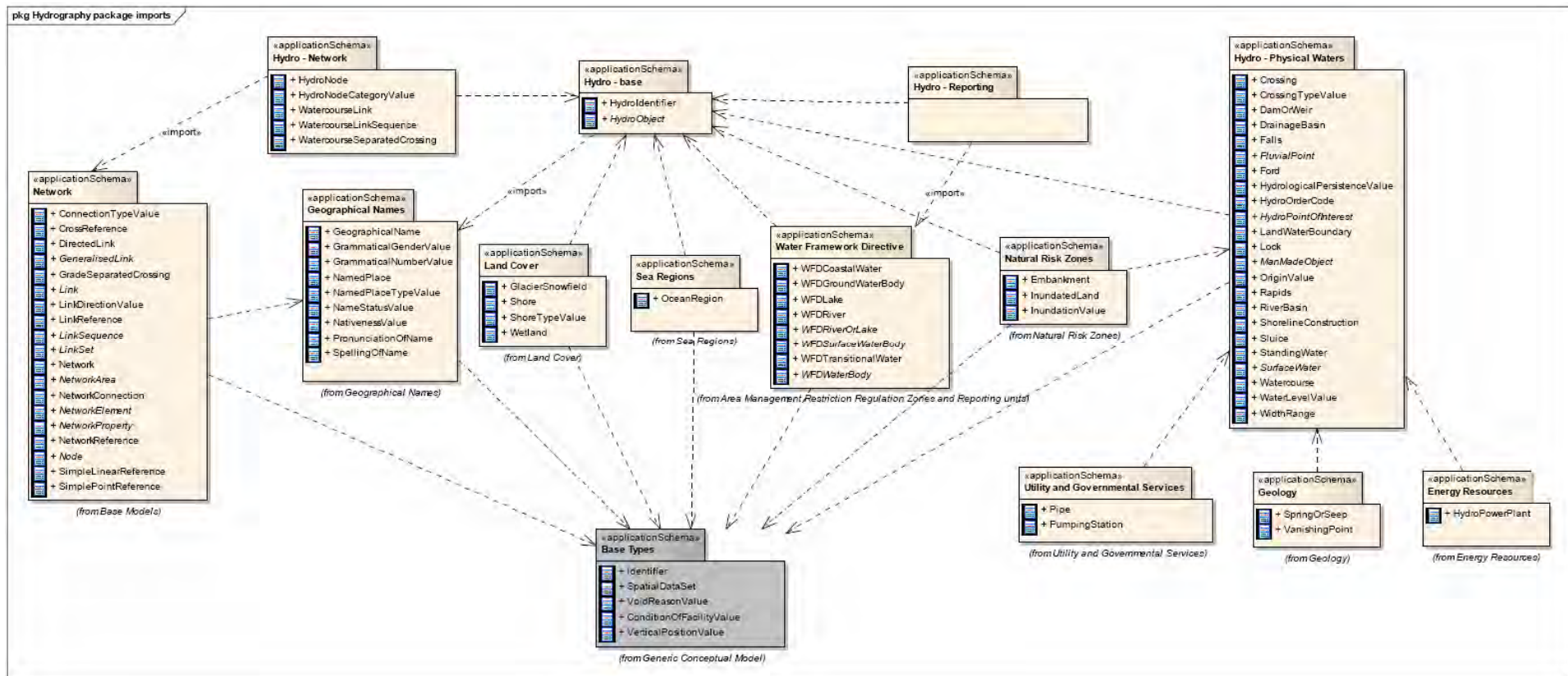
- Structure of the hydrography application schemas



# Data Specification Guidelines I.8 Hydrography

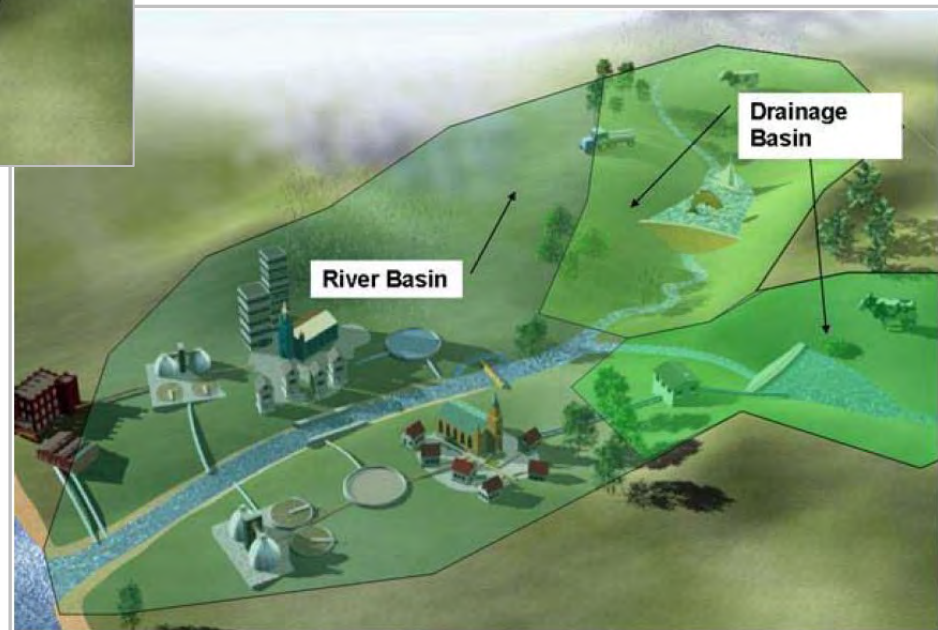


## Relationships in the Hydrography application schemas



# Data Specification

## Guidelines I.8 Hydrography. Physical waters



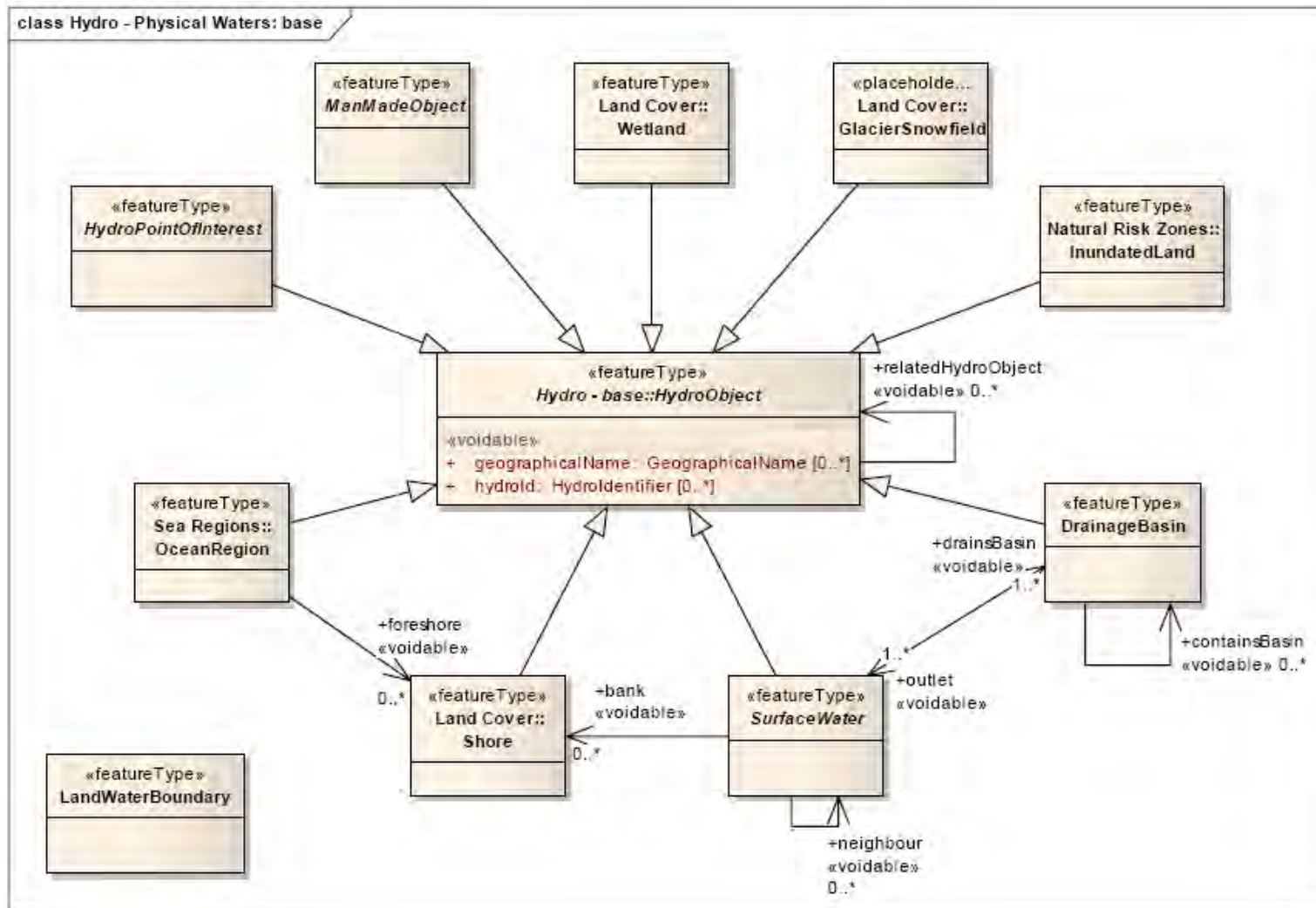


# Data Specification

## Guidelines I.8 Hydrography. Physical waters



- UML class diagram: Overview of the 'Hydro – Physical Waters' application schema

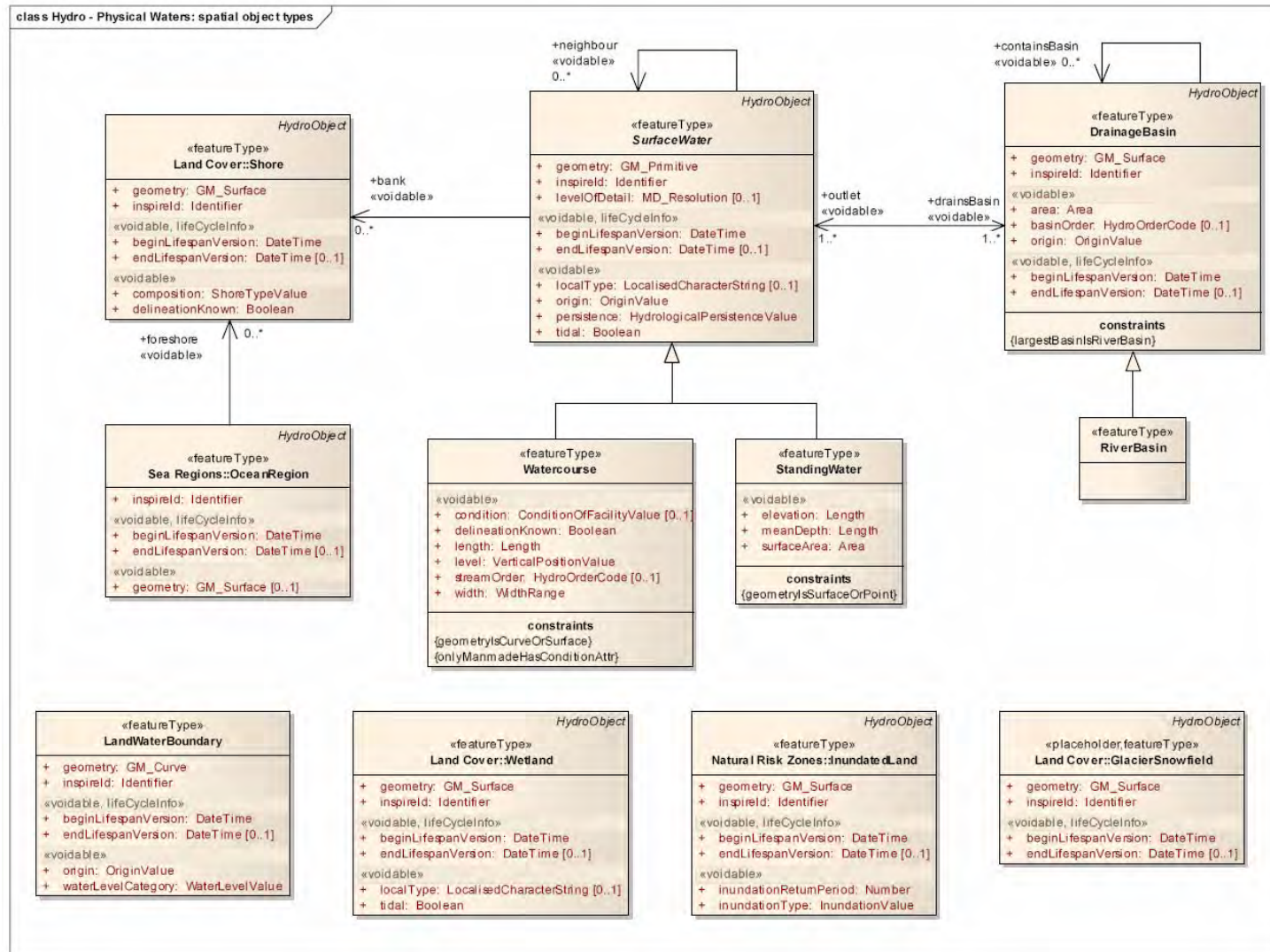


# Data Specification

## Guidelines 1.8 Hydrography. Physical waters

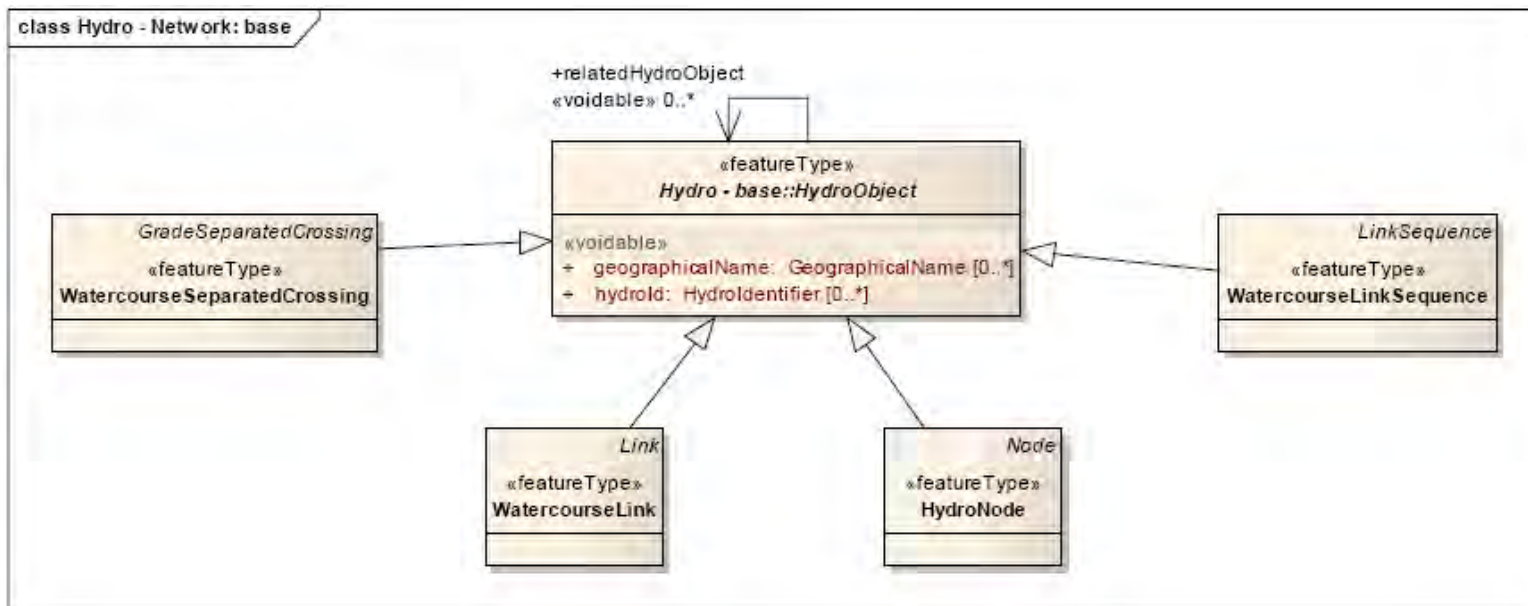


UML class diagram: 'Physical Waters' spatial object types (including related classes from other themes)



# Data Specification

## Guidelines I.8 Hydrography. Hydro-network

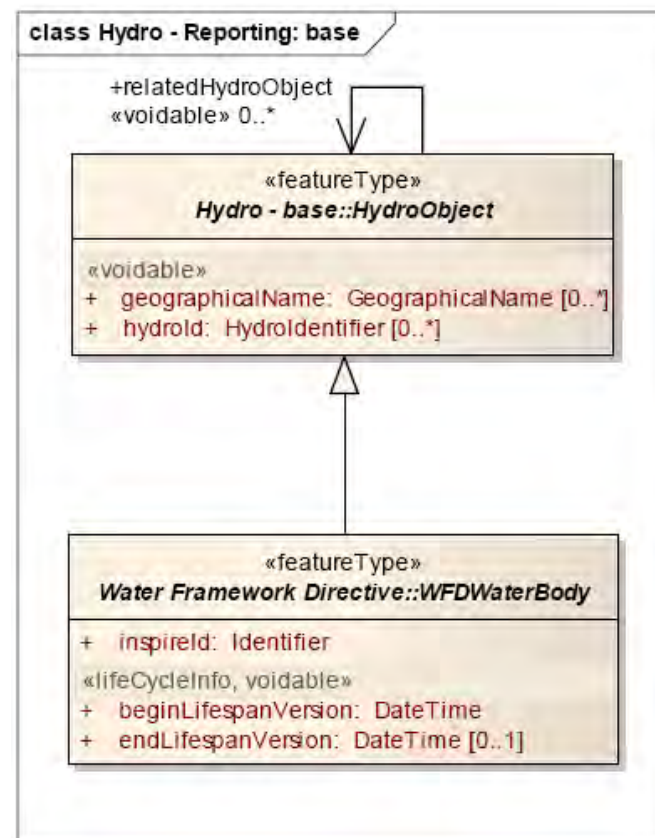
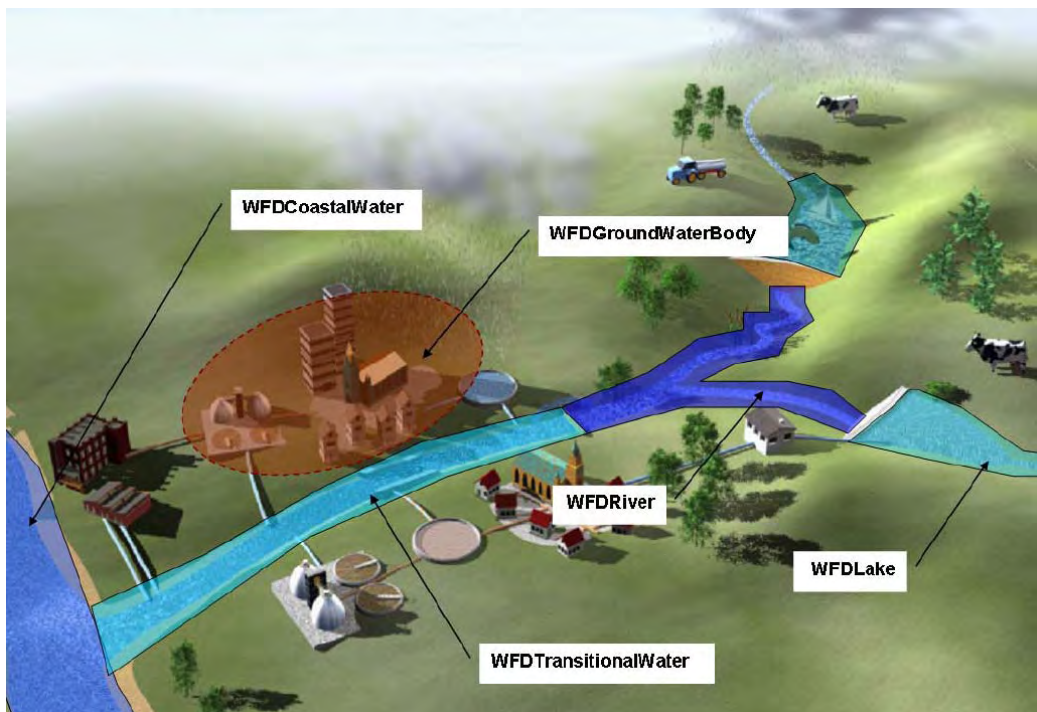


# Data Specification

## Guidelines I.8 Hydrography. Reporting



Moved to Annex III.11 through Regulation 1253/2013



# Inspire regulations

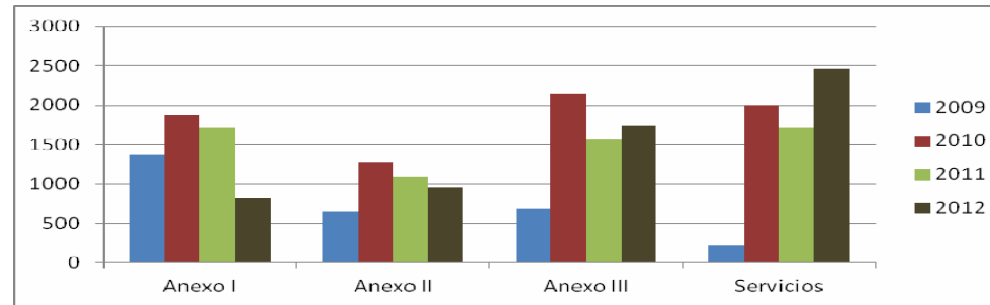


- ⦿ Regulation (EC) No 1205/2008 as regards **metadata**
- ⦿ Regulation (EC) No 976/2009 as regards the **Network Services**
- ⦿ Regulation (EC) No 1088/2010 as regards **download services and transformation services**
- ⦿ Regulation (EC) No 1089/2010 as regards **interoperability** of spatial data sets and services (Annex I Themes)
- ⦿ Regulation (UE) No 1253/2013 (Annex II & III Themes)

The image displays a collage of several pages from European Union regulations, including Commission Regulation (EC) No 1205/2008, Commission Regulation (EC) No 976/2009, Commission Regulation (EC) No 1088/2010, and Commission Regulation (EU) No 1253/2013. The pages show the title, preamble, and various articles of the regulations in both English and Spanish.



- General evolution of data reported to the European Commission (Spain)



- Annex I.8 Hydrography
  - First years: even no data
  - Year 2010
    - 403 spatial datasets reported
    - 48 considered valid
  - Year 2013
    - 98 spatial datasets reported
    - 62 considered valid & correct

**More data doesn't necessarily mean more information**

**If data is not well catalogued  
more data = more confusion = less information**

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Open collaborative production  
Non born initiatives



# Open collaborative production

## Non born initiatives



### Difficulties of public authorities to cover the hole territory or hole information

- **Phytoplankton:** assessment of frequency of algal blooms (WFD requirement)
- **ID-TAX:** not all levels of taxonomic identification had a good photographs
- Collaborative completion of **inventory of pressures** (e.g. abandoned little dams)



### Why haven't they succeed yet?

- Difficulties for quality control
  - ✓ Algal blooms: possible confusion in the name of the lake/reservoir, misspellings in names, foam (pollution or algal bloom?)..
  - ✓ ID-TAX photos: possible mistakes of taxonomic classification, mistakes encoding photos...
  - ✓ Small differences in coordinates produce two objects...
- A reviewing system has to be put in place
  - Does it worth the information gained?
  - Need for automated reviewing or volunteer reviewing community or... (any idea?)
- More data can be less information







Some possible conclusions



## ▫ First requirement to share information:

- ◆ Information should exist and have minimum quality requirements
  - Requirements have to be public, well known and stable
  - Share data vs share information

## ▫ Standardization is crucial

- ◆ The highest binding level the better (law, technical specifications, agreements, guidance documents...)
- ◆ Standardization is of no use if there is no willingness to follow the standards
  - Legal enforcement mechanisms are important
  - Mechanisms to increase **loyalty** are of paramount importance
    - Interpersonal relationships (working groups, seminars...)
    - Education: all levels of society implied



## ▫ The role of ICT

- ◆ ICT is the main driver that allows information sharing (but just a tool)
- ◆ Collaborative production and management of water information should take advantage of existing ICT developments
- ◆ Focus should be put on institutional arrangements

# Loyalty – Institutional loyalty



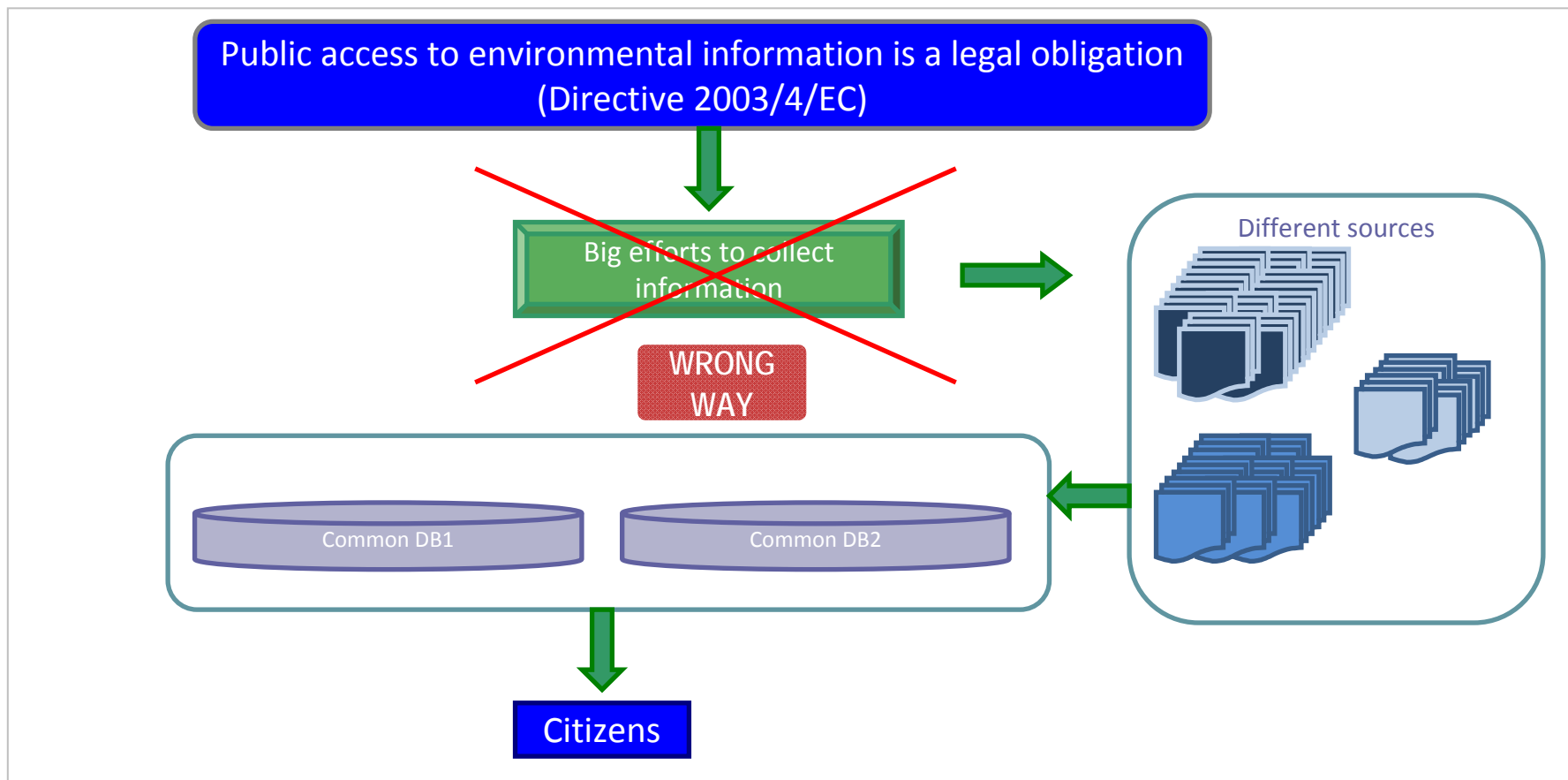
- With co-workers
- With workers of other levels in the scale of information
- With information needs of others (management, citizens)
- With non binding compliance documents or formats
  - With agreements
  - With guidance documents
  - With information formats
- With law compliance
- Loyalty of citizens with administration (environment protection is a responsibility of all)

## Spanish Constitution

### *Article 45*

1. Everyone has the right to enjoy an environment suitable for the development of the person **as well as the duty to preserve it.**
2. The public authorities shall concern themselves with the rational use of all natural resources for the purpose of protecting and improving the quality of life and protecting and restoring the environment, **supporting themselves on an indispensable collective solidarity.**

# Public participation and access to data



Public participation is not just an obligation



### To make polycentric information available to managers, agencies and the public

- o **Data information systems have to offer the data producer an advantage for using it**
- o **Data information systems have to take account of data needs of all actors involved**
- o **Data collection shouldn't be oriented only to:**
  - ✓ Reporting purposes (compliance reporting should be just one of the outputs the systems)
  - ✓ Comply with public access to environmental data
- o **Data should be collected for management, planning or policy definition purposes**
  - ◆ Data as a means to an end
  - ◆ All levels of decision have to be involved (Policy makers, managers, stakeholders, water users, NGOs, citizens...). Consensus on strategy
- o **Reporting has to be a consequence of the work carried out**
  - ◆ Reporting shouldn't be a time consuming effort
  - ◆ Reporting should be “transparent” for the producer of the information
- o **Public access to data has to be seen as a way to improve water management** (public access to information as a means to an end)
  - ◆ There is a need that public authorities and citizens believe this way of thinking
- o **Public authorities and citizens should have the commitment to work together**
  - ◆ Need for loyalty in this relationship



# Thank you!

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