



WATER FOR
OUR FUTURE

T.3.4.1: Integrated joint management of rivers, lakes and aquifers at basin level.

2nd round table: Monitoring of resources and uses & Indicators of performance

SEGURA RIVER BASIN AUTHORITY. SPAIN.

JOSÉ C. GONZÁLEZ. WATER COMMISSIONER. April 14th, 2015



GOBIERNO
DE ESPAÑA

MINISTERIO
DE AGRICULTURA, ALIMENTACIÓN
Y MEDIO AMBIENTE

CONFEDERACIÓN
HIDROGRÁFICA
DEL SEGURA

River basin districts in Spain

7th
World
Water
Forum

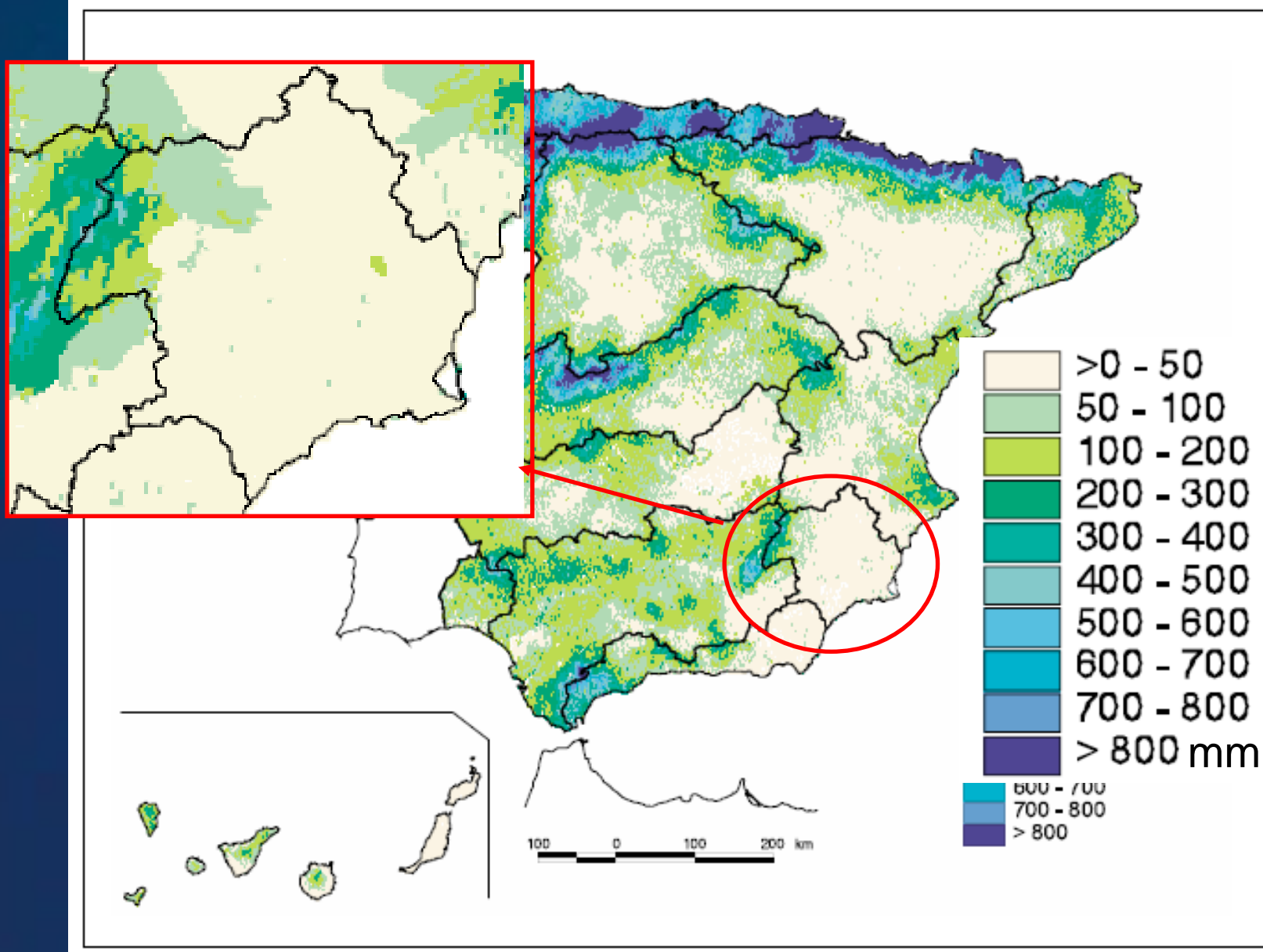
2015 대구·경북 세계물포럼



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General Characteristics

Only in the headwaters of the basin, the **RUNOFF** is significant.



Average total runoff < 100 mm in Segura River Basin

General Characteristics

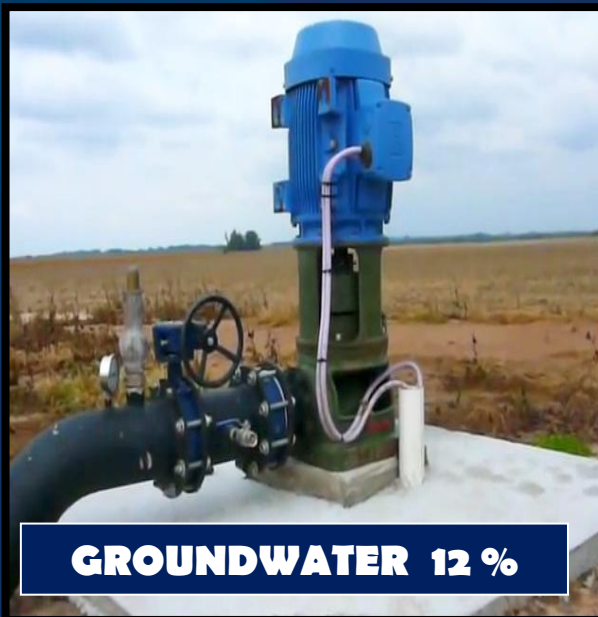
- According to international organisms (UN, WHO, etc...), the water scarcity threshold at national level is set in 1.000 m³/inhab/year of available water resources.
- This threshold is estimated for food safety or sustainable economic development of the region.

Segura River Basin	442 m ³ /inhab/year
SPAIN	2.460 m ³ /inhab/year

SEGURA RIVER BASIN RESOURCES

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DEFICIT 25 %

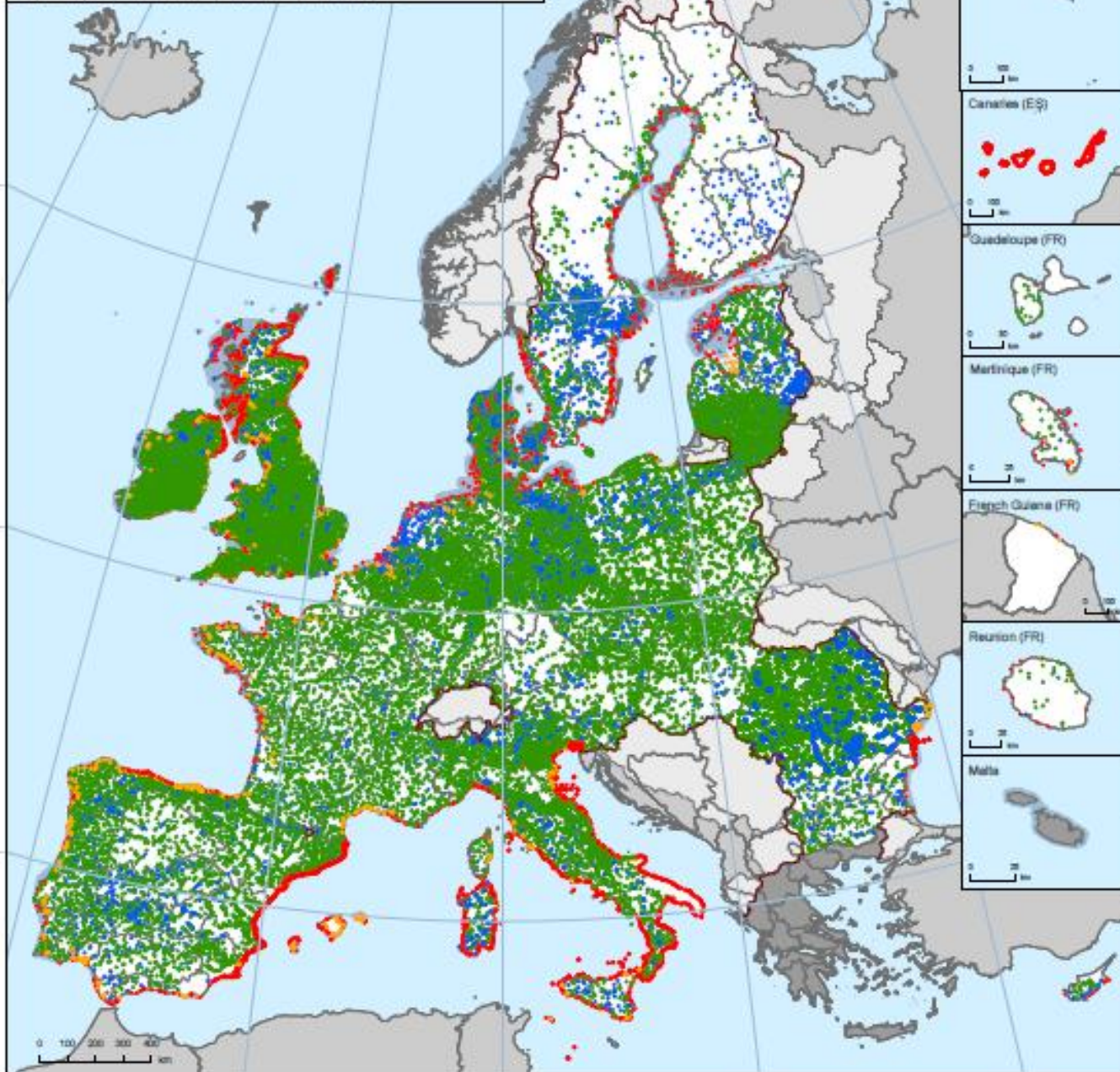


Surface water monitoring stations

Submissions in accordance with Article 8 of the Water Framework Directive
Version March 2009

- River monitoring stations
- Lake monitoring stations
- Transitional water monitoring stations
- Coastal water monitoring stations
- No report⁽¹⁾
- River Basin Districts (within EU27)⁽²⁾
- River Basin Districts (outside EU27)⁽³⁾
- Coastal waters⁽⁴⁾
- Country border⁽⁵⁾
- EU27 extent

Map produced by WRo on behalf of the European Commission DG Environment, 2009



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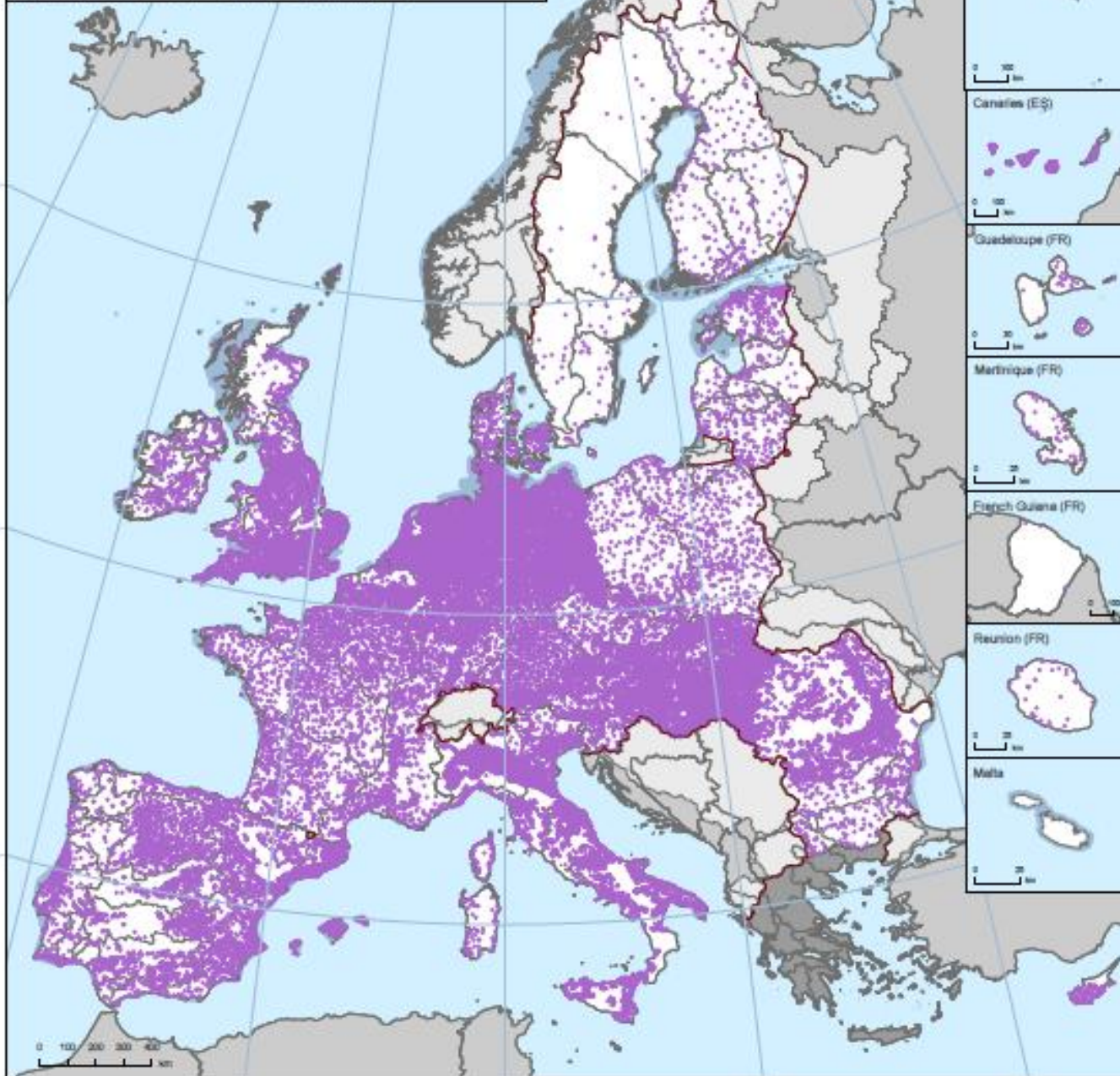


Groundwater monitoring stations

Submissions in accordance with Article 8 of the Water Framework Directive
Version March 2009

- Groundwater monitoring stations
- No report⁽¹⁾
- River Basin Districts (within EU27)⁽²⁾
- River Basin Districts (outside EU27)⁽²⁾
- Coastal waters⁽⁴⁾
- Country border⁽³⁾
- EU27 extent

Map produced by WRI on behalf of the European Commission⁽⁵⁾ DG-Environment, 2009



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WHEN STANDARD MONITORING IS NOT ENOUGH: FLASH FLOODS

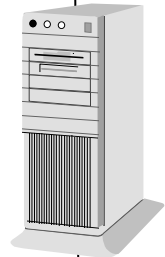
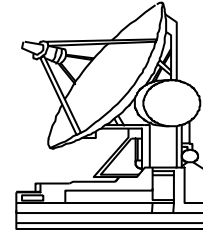
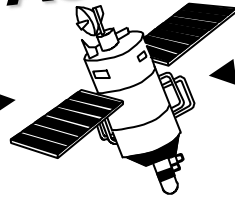
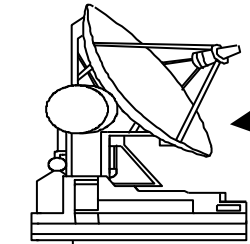


COMMUNICATIONS NETWORK

HUB-MADRID

HISPASAT

REMOTE STATIONS



3G

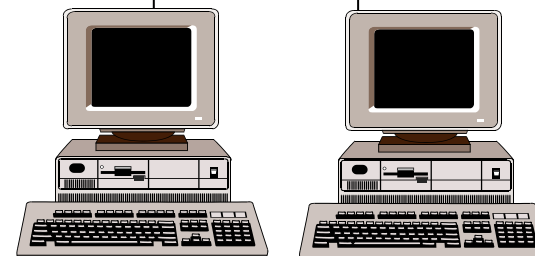
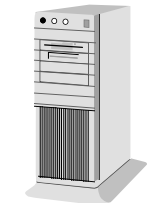
WIMAX

VOICE VHF



SCADA

L.A. NETWORK



DATA
PREPROCESSING
CENTER C.H.S.

STATIONS CHS

AUTOMATIC HYDROLOGICAL INFORMATION SYSTEM



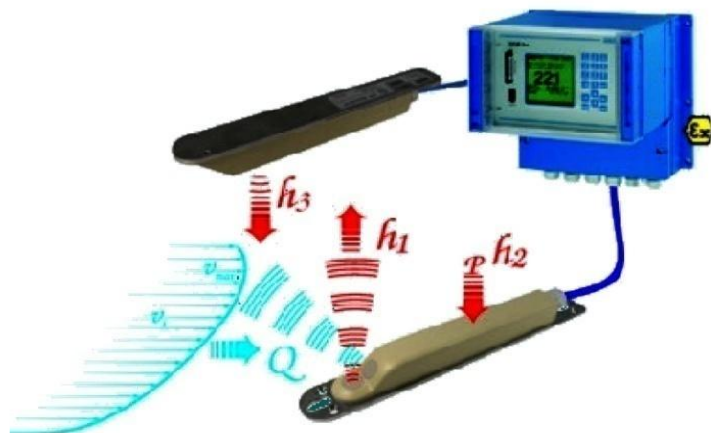
Monitoring the uses of water

Equipment monitoring volume

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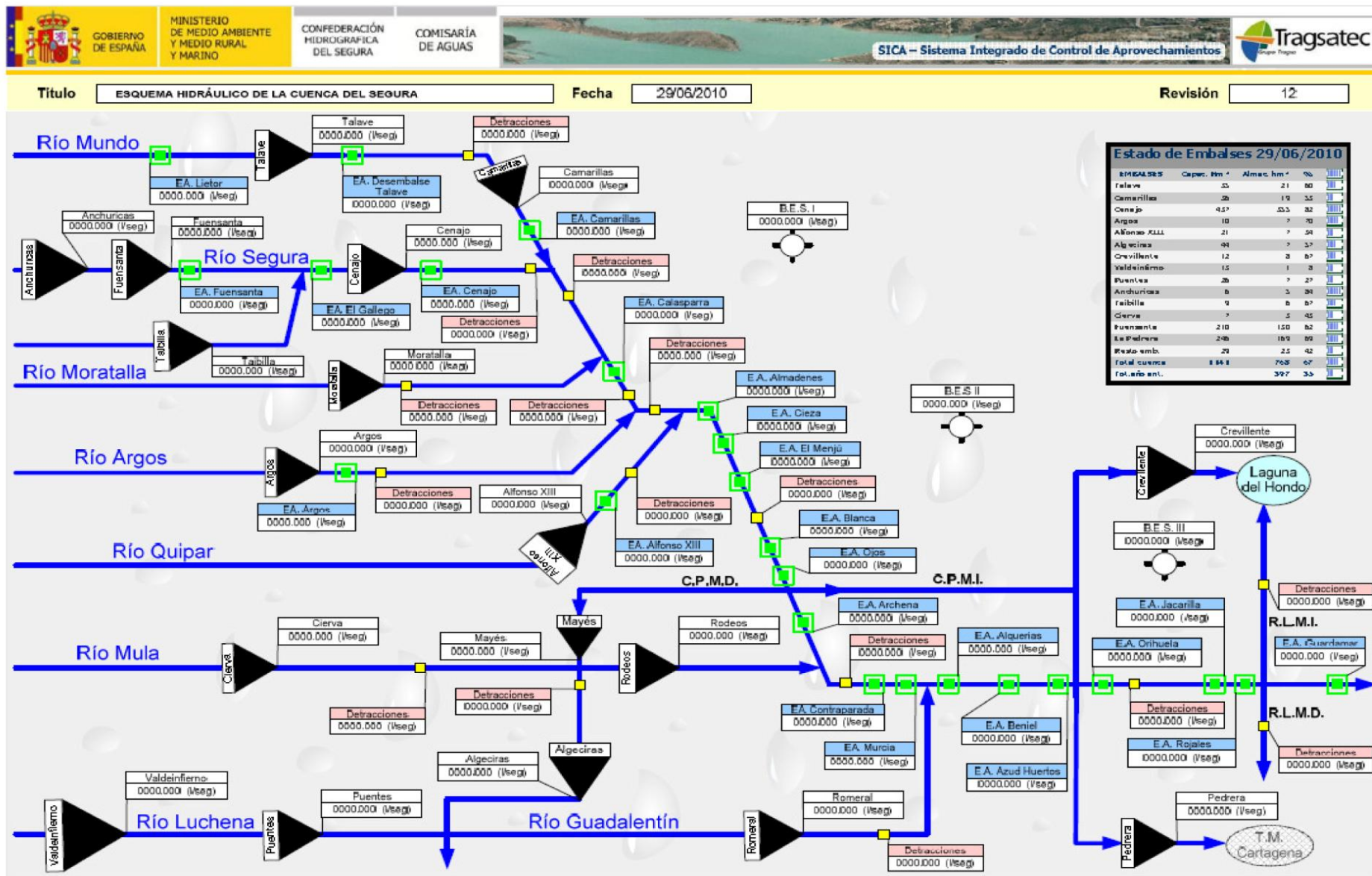


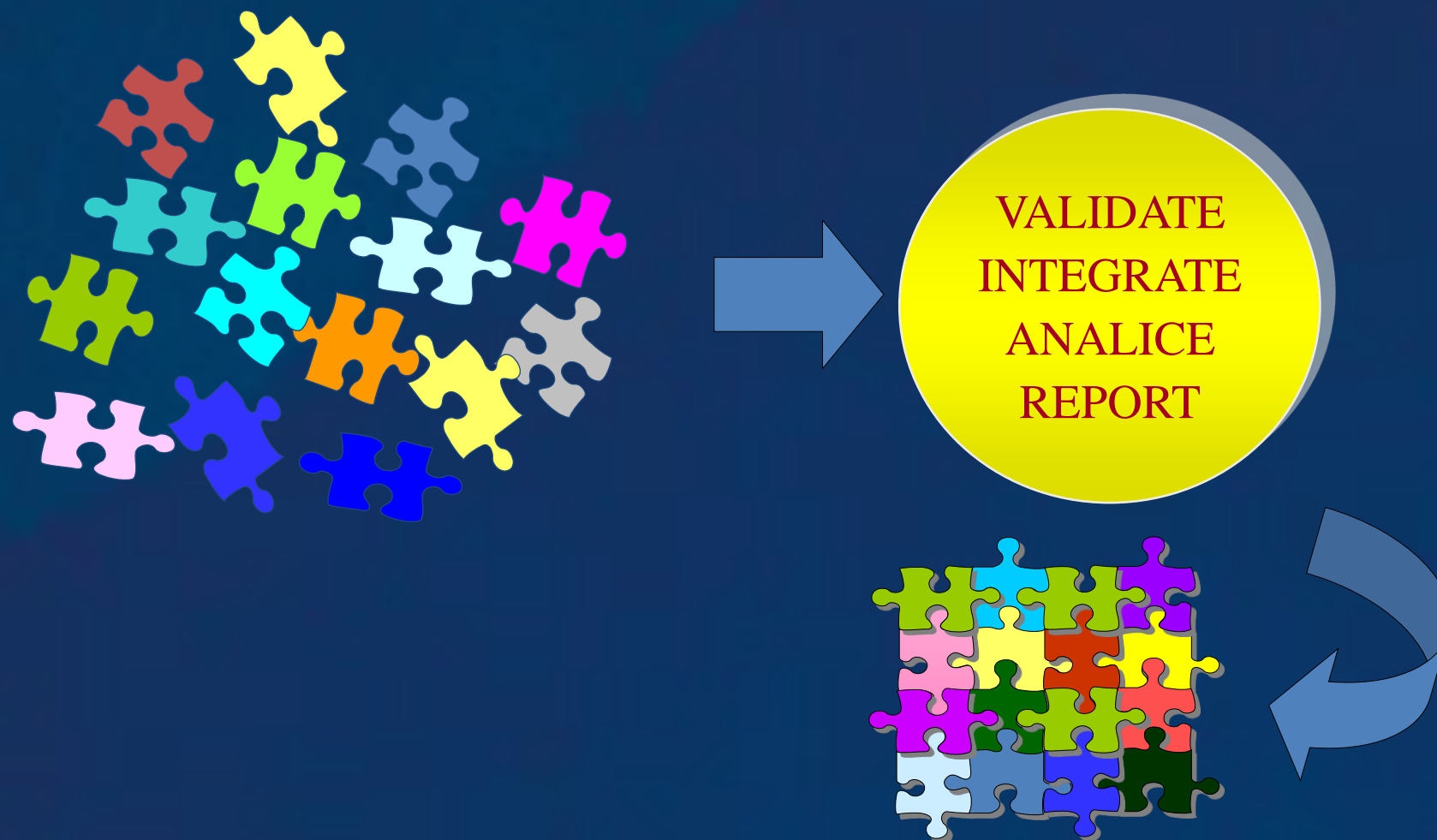
Monitoring of flow



Remote control



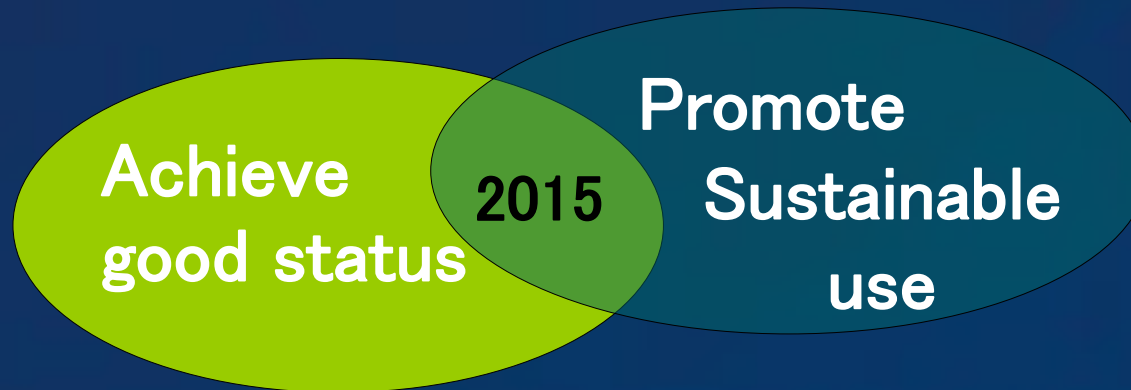




WHAT DO WE DO?

WFD PURPOSE

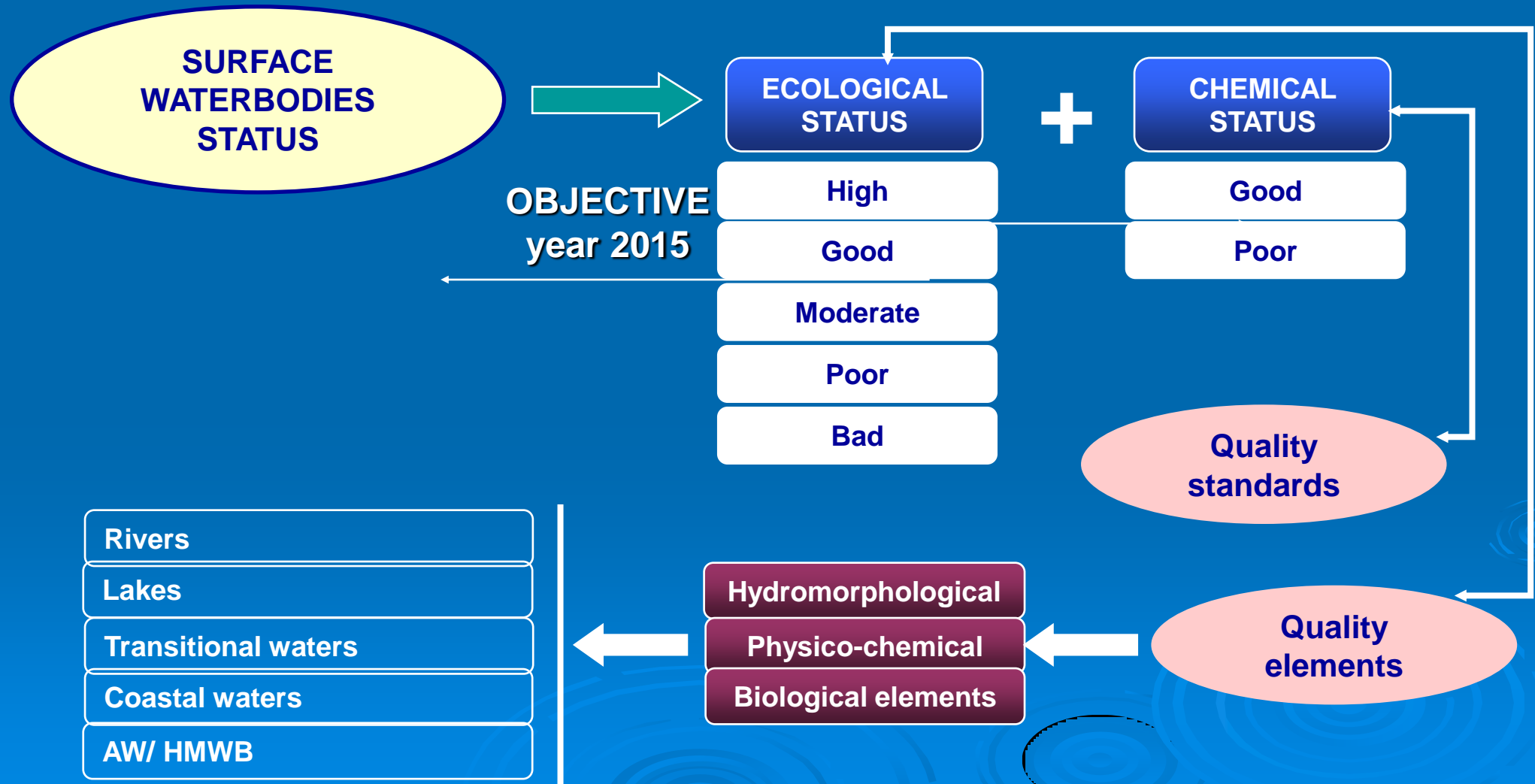
- Prevent further deterioration and protect the status of aquatic ecosystems
- Promote sustainable use of water



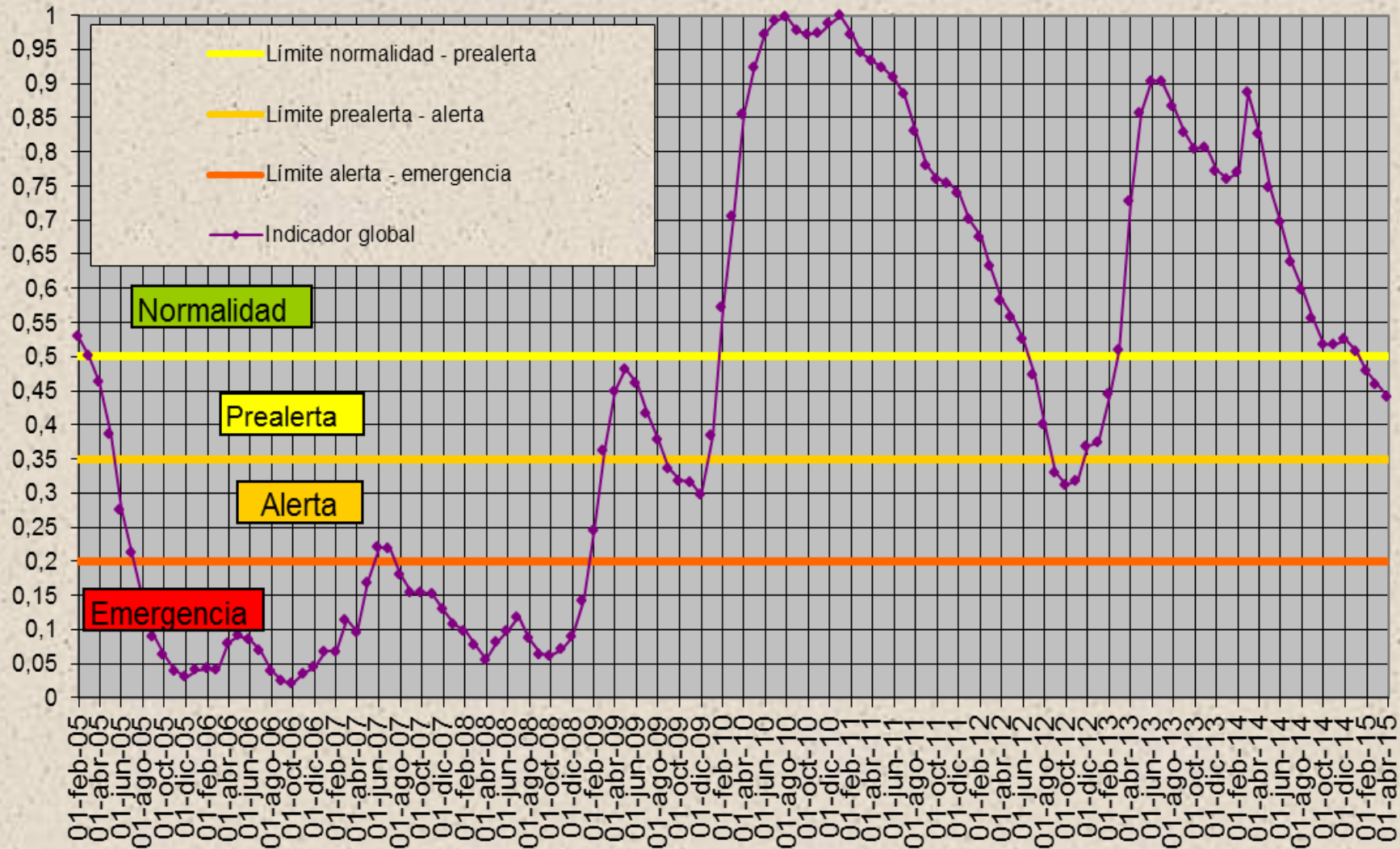
- Control pollution in water
- Mitigate effects of floodings & droughts



OBJECTIVES IN THE WATER FRAMEWORK DIRECTIVE



Evolución del Índice de Estado global



saihsegura



t.real



saih



saihVisor



meteo



alertas



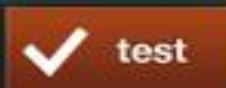
iSCADA



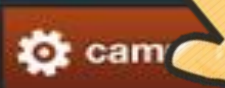
16°



personal



test



cam



9



3



4



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SAIH SEGURA - EMBALSES

PUNTO (Cota MNN)	H(m)	Hm3	%
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CABECERA

E.Talave (36.10)	33.15	26.58	76.3
E.Camarillas (34.63)	27.67	17.57	49.0
E.Fuensanta (67.92)	63.86	176.09	84.0
E.Cenajo (80.40)	77.29	385.70	88.2

ZONA ALTA 1

E.Argos (29.16)	26.14	6.78	67.4
E.Alfonso XIII (38.50)	28.96	2.52	11.6
E.Moro (23.00)	0.00	0.00	0.0
E.Judio (14.65)	17.56	2.73	32.2
Azud Ojés (10.65)	9.30	2.71	74.7

ZONA ALTA 2

E. La Cierva (54.14)	44.03	3.00	41.2
E.Mayés (17.40)	12.49	0.94	56.0

ZONA MEDIA

E.Santomera (35.86)	17.82	1.65	6.2
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RIO GUADALENTIN

E.Algeciras	-	-	-
E.Valdeinfierno (43.00)	35.26	0.03	0.3
E.Puentes (44.00)	38.04	8.76	33.7

ZONA BAJA

E.La Pedrera (56.00)	50.94	186.78	75.9
E.Crevillente (45.00)	30.26	3.58	28.0

DATOS PROVISIONALES SUJETOS A REVISION



Estás en :: Inicio > Información > Control y análisis > SAIH > Visor de series de información hidrológica del SAIH > Visor GIS SAIH

VISOR GIS PARA CONSULTA Y DESCARGA DE DATOS SAIH

Para los embalses se pueden consultar datos de nivel y volumen embalsado con periodicidad horaria mientras que para cauces se mostrarán los valores de niveles y caudales con periodicidad horaria. Los datos que se presentan son los que obtienen los sensores en tiempo real por lo que pueden encontrarse sin validar ni contrastar.

Versión en modo texto y accesible

1. Seleccione el parámetro a consultar

- ☒ Volumen en Embalses Hm³
- ☐ Nivel en Embalses m
- ☐ Caudal en cauces m³/s
- ☐ Nivel en Cauces m
- ☐ Caudal en impulsiones (m³/s)
- ☐ Precipitación horaria (mm)

2. Seleccione el punto a consultar

Seleccione un máximo de 10 puntos

01E05B02 – Balsa de Algeciras (Rifón)
01E05B03 – Balsa de La Muela
02E03B01 – Embalse de Alfonso XIII
01E05B01 – Embalse de Algeciras
02E02B01 – Embalse de Argos
03E03B01 – Embalse de Camarillas
04E03B01 – Embalse de Cenajo
07E02B01 – Embalse de Crevillente
01E04B01 – Embalse de Doña Ana
04E02B01 – Embalse de Puente de Sanja

3. Seleccione fechas a consultar

El rango de fechas consultadas incluirá los 15 días anteriores a la fecha seleccionada

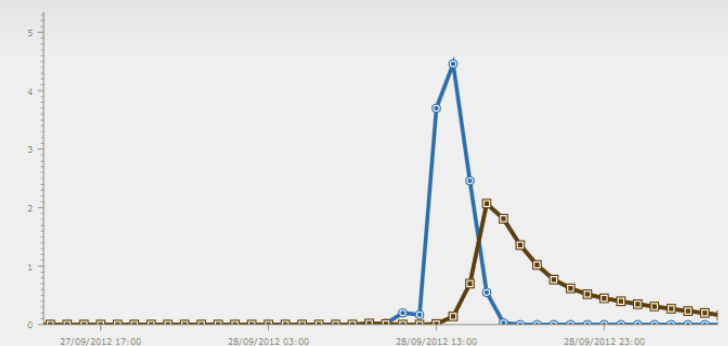
Fecha hasta (ejemplo: 31/01/2010): 10/10/2014



Denominación: Balsa de Algeciras
Código variable hidrológico: 01E05B02
Unidad de medida: m³/s

X: 642843 / Y: 4194107 ETRS89 Huso 30 N

Nivel en Cauces m



05R01U01 – Aforo Guadalentín (Lorca)

05001U12 – Marco de control en Puerto Lumbreras

Gráfico Tabla de datos

Leyenda:

- Estado 0: Datos provisionales, obtenidos en tiempo real sin contrastar: Texto de ejemplo.
- Estado 1: Datos provisionales, filtrados sujetos a revisión: Texto de ejemplo.
- Estado 2: Datos provisionales, filtrados no consolidados: Texto de ejemplo.
- Estado 3: Datos filtrados y consolidados: Texto de ejemplo.

Nivel en Cauces m				
Fecha	05R01U01 -- Aforo Guadalentín (Lorca)		05001U12 -- Marco de control en Puerto Lumbreras	
	Valor	Estado	Valor	Estado
19/09/2012 00:00	0.0	3	0.0	3
19/09/2012 01:00	0.0	3	0.0	3
19/09/2012 02:00	0.0	3	0.0	3
19/09/2012 03:00	0.0	3	0.0	3
19/09/2012 04:00	0.0	3	0.0	3
19/09/2012 05:00	0.0	3	0.0	3
19/09/2012 06:00	0.0	3	0.0	3
19/09/2012 07:00	0.0	3	0.0	3
19/09/2012 08:00	0.0	3	0.0	3
19/09/2012 09:00	0.0	3	0.0	3
19/09/2012 10:00	0.0	3	0.0	3
19/09/2012 11:00	0.0	3	0.0	3
19/09/2012 12:00	0.0	3	0.0	3
19/09/2012 13:00	0.0	3	0.0	3
19/09/2012 14:00	0.0	3	0.0	3
19/09/2012 15:00	0.0	3	0.0	3
19/09/2012 16:00	0.0	3	0.0	3
19/09/2012 17:00	0.0	3	0.0	3
19/09/2012 18:00	0.0	3	0.0	3
19/09/2012 19:00	0.0	3	0.0	3
19/09/2012 20:00	0.0	3	0.0	3
19/09/2012 21:00	0.0	3	0.0	3
19/09/2012 22:00	0.0	3	0.0	3
19/09/2012 23:00	0.0	3	0.0	3
20/09/2012 00:00	0.0	3	0.0	3
20/09/2012 01:00	0.0	3	0.0	3
20/09/2012 02:00	0.0	3	0.0	3
20/09/2012 03:00	0.0	3	0.0	3
20/09/2012 04:00	0.0	3	0.0	3
20/09/2012 05:00	0.0	3	0.0	3
20/09/2012 06:00	0.0	3	0.0	3
20/09/2012 07:00	0.0	3	0.0	3
20/09/2012 08:00	0.0	3	0.0	3
20/09/2012 09:00	0.0	3	0.0	3



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Y MEDIO AMBIENTE

ECOLOGICAL STATUS IN RIVERS & LAKES

BAD

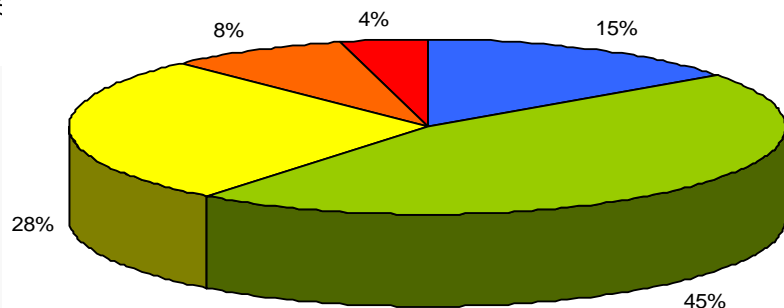
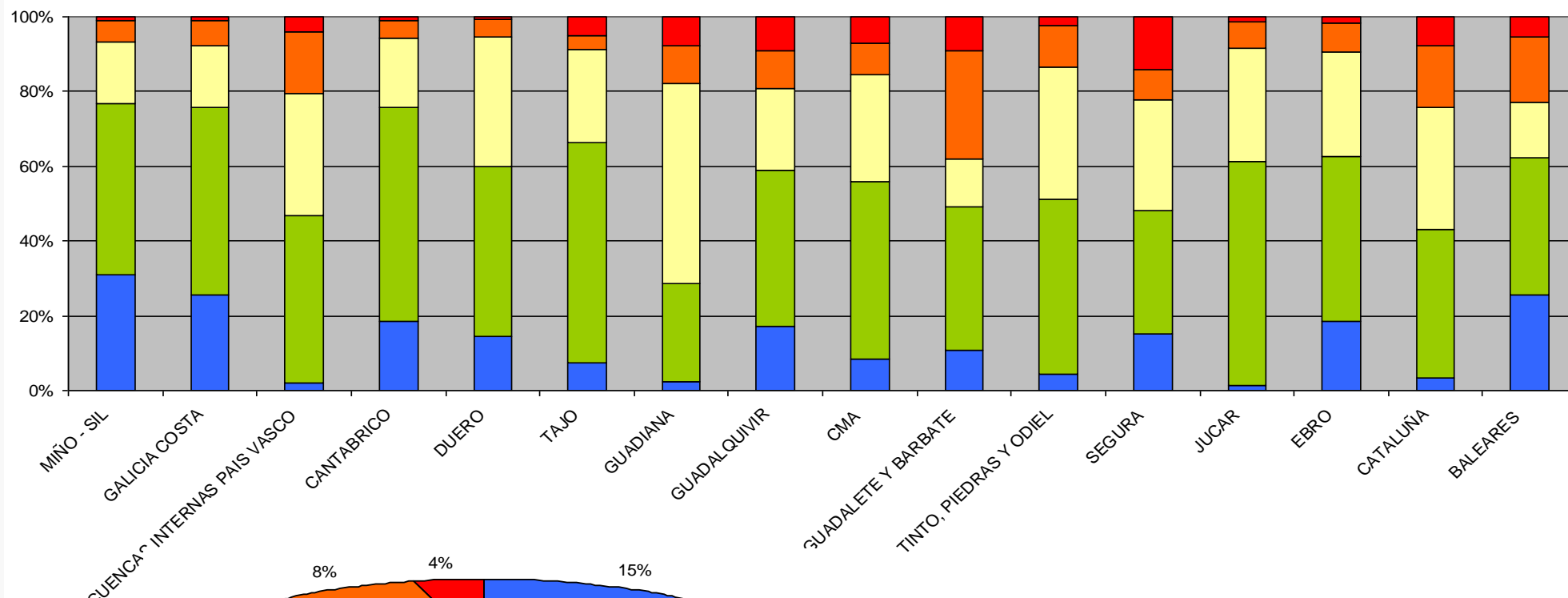
POOR

MODERATE

GOOD

HIGH

Porcentajes de MAS según estado ecológico por Demarcación Hidrográfica



60 % RIVERS & LAKES
ACHIEVE OBJECTIVES

15% High + 40% Good