

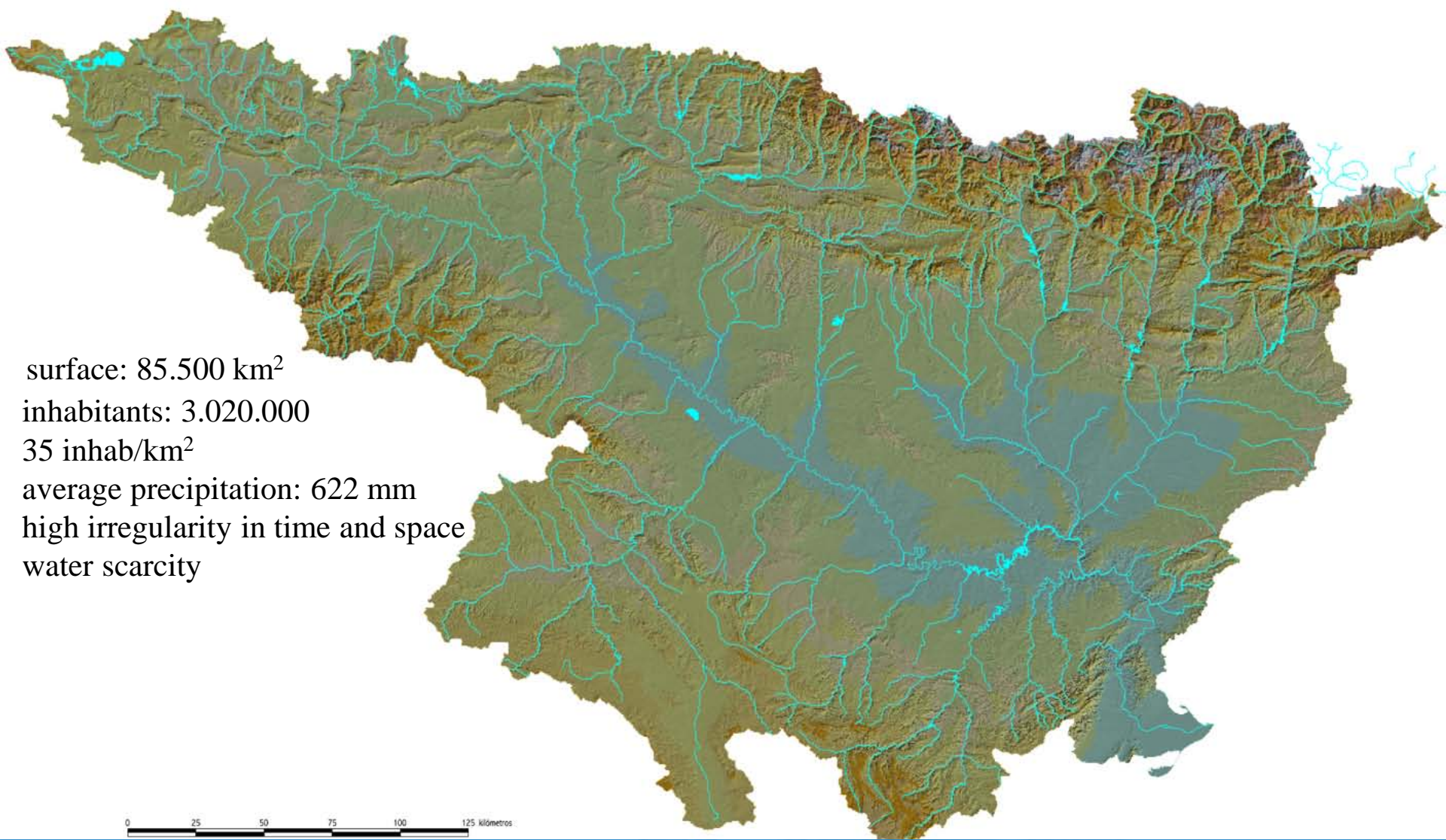
WATER IN THE GREEN ECONOMY IN PRACTICE: TOWARDS RIO+20

Zaragoza, Spain. 3-5 October 2011

Water Planning towards Green Economy in the Ebro River Basin

Demarcaciones hidrográficas



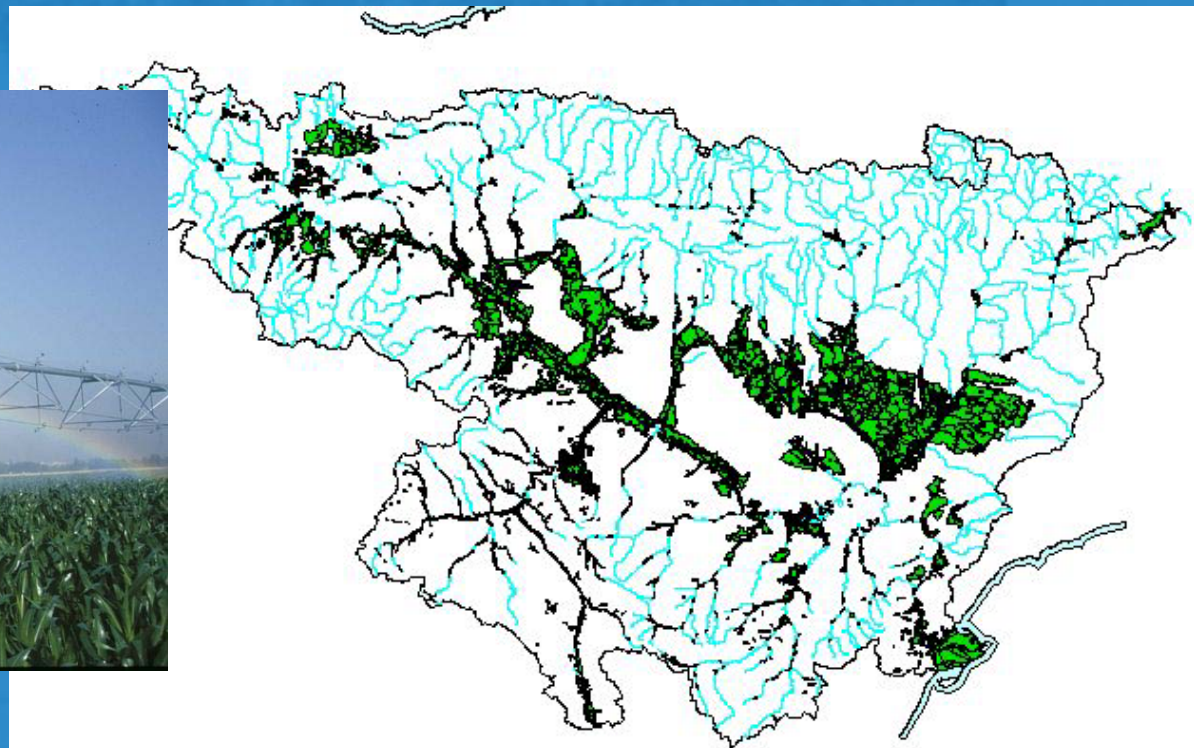


surface: 85.500 km²
inhabitants: 3.020.000
35 inhab/km²
average precipitation: 622 mm
high irregularity in time and space
water scarcity

0 25 50 75 100 125 kilómetros

The challenges for water planning and the Green Economy in the Ebro

- The importance of the agrofood complex (one fifth of the agrarian production and one third of the meat supply of the Spanish economy). 700.000 ha of irrigated farmland.



The challenges for water planning and the Green Economy in the Ebro

- Highly competitive power generation sector in the river basin
- The Ebro valley is also an industrial corridor of high importance



The challenges for water planning and the Green Economy in the Ebro

- Ebro River Basin Authority working since 1926
- In the past: to foster development (hydroelectricity and irrigation)



The challenges for water planning and the Green Economy in the Ebro

-Now:- reconciling economic growth with the protection and improvement of water resources, sustainable development, transition towards green economy within the framework of integrated water resources management



The challenges for water planning and the Green Economy in the Ebro

- Increasing water demands
- New environmental requirements. Water Framework Directive
- New water planning (Hydrological plan for the Ebro basin):

OBJECTIVES:

- Meet water demands
- Achieve good status in water bodies



Planning towards Green Economy in the Ebro River Basin

❖ Institutional framework for transparent stakeholder involvement and to favor public participation

- Long tradition in public participation. There are several participatory bodies in the Ebro Basin Authority where regions, municipalities, central government and civil society take part in the decision making process
- Active involvement under the umbrella of the Water Framework Directive



Ebro Basin Council

Planning towards Green Economy in the Ebro River Basin

- ❖ Establishing ambitious environmental objectives (85 % of water bodies in good status by 2015).
Programme of measures



Planning towards Green Economy in the Ebro River Basin

❖ Creating opportunities for productive uses respecting environmental standards

Emphasis is placed on an ambitious program to modernize the irrigation systems (water efficiency and reduction of diffuse pollution)

Planning towards Green Economy in the Ebro River Basin

❖ The building up of strategy to manage uncertainty including drought management and flood control

- Special Action Plan in Situation of drought



Nº junta:	14	Denominación:	RESERVAS SOTONERA, MEDIANO Y EL GRADO, BUBAL Y LANUZA										
Provincia:													
UMBRALES DE SEQUÍA INDICE DE ESTADO													
(Si $V_i \geq V_{med}$; $le = 1/2 * (1 + (V_i - V_{med}) / (V_{max} - V_{med}))$) y si $V_i < V_{med}$; $le = (V_i - V_{min}) / (2 * (V_{med} - V_{min}))$)													
le > 0.5 Estable; 0.5 > le > 0.3 Prealerta; 0.3 > le > 0.15 Alerta; 0.15 > le Emergencia													
AÑO	MENSUALES											ANUALES Indice medio	
	OCT	NOV	DIC	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO		SEP
	10	11	12	1	2	3	4	5	6	7	8		9
le (acumulación mensual)													
1981/82	0,679	0,421	0,491	0,736	0,905	0,629	0,488	0,445	0,600	0,792	0,983	1,000	0,681
1982/83	0,874	0,863	1,000	0,741	0,468	0,517	0,449	0,451	0,664	0,724	0,872	0,812	0,703
1983/84	0,483	0,369	0,323	0,317	0,334	0,393	0,470	0,467	0,823	0,964	0,891	0,638	0,539
1984/85	0,473	0,759	0,912	0,920	0,968	0,691	0,716	0,759	0,924	1,000	0,925	0,654	0,808
1985/86	0,456	0,385	0,316	0,270	0,276	0,386	0,470	1,000	0,828	0,813	0,725	0,734	0,555
1986/87	0,573	0,566	0,405	0,368	0,456	0,472	0,683	0,642	0,545	0,690	0,629	0,529	0,547
1987/88	0,983	0,633	0,676	0,650	0,618	0,609	0,746	0,776	1,000	0,974	1,000	0,819	0,790
1988/89	0,627	0,479	0,278	0,123	0,051	0,088	0,148	0,157	0,170	0,134	0,157	0,156	0,214
1989/90	0,097	0,056	0,267	0,298	0,408	0,414	0,267	0,276	0,465	0,511	0,512	0,478	0,337
1990/91	0,592	0,592	0,610	0,561	0,605	0,859	0,717	0,401	0,364	0,339	0,280	0,289	0,517
1991/92	0,263	0,231	0,205	0,146	0,100	0,009	0,051	0,063	0,280	0,453	0,686	0,971	0,288
1992/93	1,000	0,843	0,960	0,761	0,718	0,608	0,470	0,762	0,665	0,641	0,695	0,863	0,749
1993/94	0,992	0,827	0,758	0,740	0,684	0,593	0,429	0,638	0,500	0,443	0,374	0,368	0,612
1994/95	0,476	0,653	0,664	0,648	0,770	0,712	0,475	0,364	0,239	0,175	0,104	0,107	0,449
1995/96	0,000	0,000	0,371	0,894	0,797	0,748	0,693	0,842	0,755	0,726	0,836	0,776	0,620
1996/97	0,557	0,540	0,910	0,920	0,943	0,995	0,772	0,768	0,634	0,805	0,874	0,838	0,796
1997/98	0,556	0,706	0,927	0,934	0,905	0,729	0,792	0,906	0,694	0,481	0,407	0,408	0,704
1998/99	0,363	0,206	0,088	0,025	0,000	0,075	0,134	0,342	0,398	0,368	0,423	0,671	0,258
1999/00	0,896	0,798	0,752	0,651	0,608	0,445	0,670	0,896	0,724	0,554	0,418	0,313	0,644
2000/01	0,287	0,474	0,868	1,000	0,986	1,000	0,878	0,850	0,766	0,770	0,661	0,557	0,758
2001/02	0,625	0,495	0,394	0,340	0,346	0,436	0,466	0,412	0,361	0,271	0,166	0,228	0,378
2002/03	0,341	0,416	0,652	0,937	0,876	0,894	0,943	0,906	0,759	0,535	0,383	0,482	0,677
2003/04	0,877	0,999	0,936	0,908	0,977	0,982	0,916	0,900	0,712	0,528	0,438	0,419	0,799
2004/05	0,424	0,335	0,240	0,156	0,103	0,012	0,000	0,000	0,000	0,000	0,000	0,000	0,106
2005/06	0,179	0,184	0,142	0,102	0,140	0,375	0,438	0,315	0,216	0,220	0,156	0,429	0,241
2006/07	0,788	1,000	0,960	0,853	1,000	0,859	1,000	0,953	0,707	0,491	0,438	0,347	0,783
2007/08	0,244	0,112	0,900	0,000	0,006	0,000	0,461	0,928	0,918	0,796	0,642	0,572	0,390
2008/09	0,437	0,498	0,451	0,605	0,719	0,740	0,829	0,888					0,646

CONCLUSION (1)

The Ebro Water Plan is a social opportunity to build a system of water management which is ethical, efficient and sustainable within the Ebro River Basin in Spain. Under the principles of Integrated Water Resources Management includes ambitious environmental objectives, at least 85.3% of river water bodies will achieve good status by 2015, but it also contributes to sustainable growth, strengthening the agro-food complex in the Ebro valley and the role of water as an energy source in a future which relies on energy from mostly renewable sources, and encourages the inclusion of new uses of water, such as recreational uses.

CONCLUSION (2)

The commitment to reduce pollution and the efforts to increase water efficiency are keystones of a process contributing to a green growth. In particular, modernization of irrigation in Ebro basin is a necessary action for efficient water management and reduction of diffuse pollution, whereas simultaneously, facilitate a higher productivity and, as a whole, a better water footprint balance in Spain. On the other hand, reducing pollution from point sources implies the creation of many green jobs. All in all, 56% of all the investments considered in the Ebro Water Plan are to improve water environmental status.

Thank you for your attention

<http://www.chebro.es>

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