

Are rivers being restored in the Iberian Peninsula?

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CIREF (Iberian Center for River Restoration) / CEDEX

Overview

- i. Which are the priorities for the restoration of Iberian rivers?
- ii. What has been done during the last decade?
- iii. Which should be the focus of restoration initiatives in the coming years?
- iv. Conclusions and proposals for action

i. Which are the priorities for the restoration of Iberian rivers?

- Full integration of WFD, FRD and BHD
- Water quality is not the big obstacle for restoration, but should be improved in specific segments
- Restoration of flow regimes and river dynamics are essential for success
- Large disconnection between scientists/managers and society

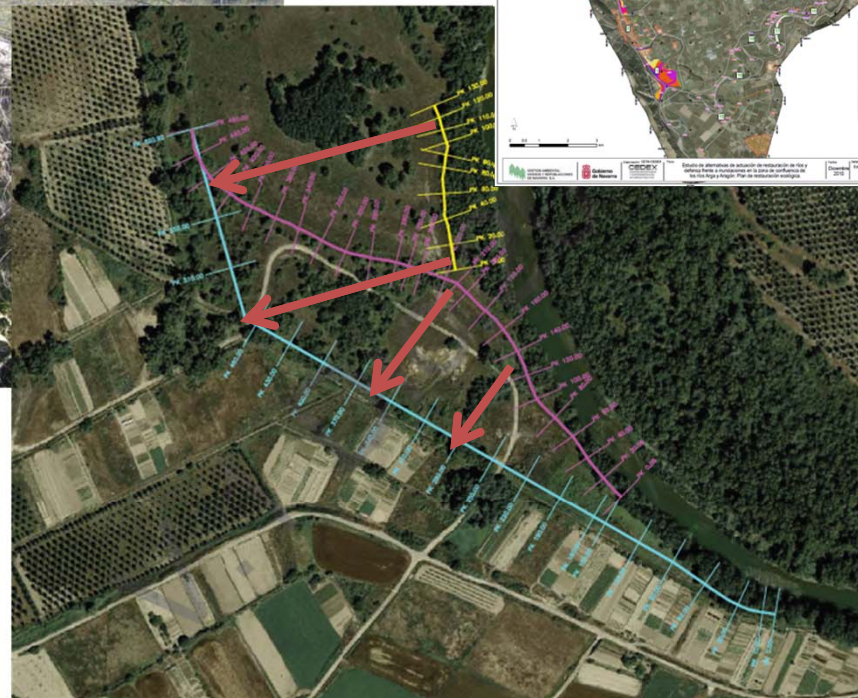
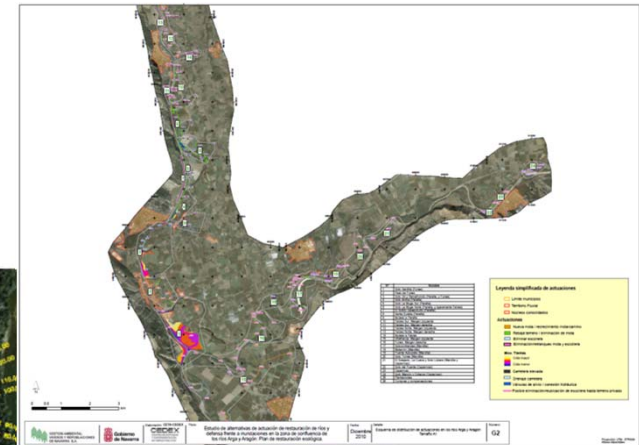
ii. What has been done during the last decade?

- Top initiatives:
 - Large projects developed under EU co-funding (esp. Life+ projects)
 - Spanish National Estrategy for River Restoration
 - New flow exigencies in Basin Management Plans
 - Smaller actions developed by NGOs and public/private Foundations
- Bottom initiatives
 - Traditional bad practices (insistently) developed by Basin Authorities and Regional Governments: dredging, “river cleaning”, antropization of urban and peri-urban reaches
 - Additional regulation, bad and non-improving agricultural practices, urbanization of critical (flood-risk, coastal) areas

ii. What has been done during the last decade?

- Top initiatives

Life+ project “Mink Territory” (2010-2015)



- Restoration of riverbeds, riparian woodlands, floodplains, meanders and wetlands – Over 40 km
- Flood risk reduction
- SCI improvement
- Agents: Government of Navarre, Ebro Basin Agency, Ministry of the Environment, Municipalities

Source: Government of Navarre

ii. What has been done during the last decade?

- Top initiatives

Restoration of the Órbigo River (Duero Basin)



- Floodplain reconnection, improvement of hydrogeomorphic processes
- Flood risk reduction
- Intense participative programme
- Agents: Duero Basin Agency, Ministry of the Environment, Municipalities

Source: Ministry of Agriculture, Food and Environment / Duero Water Agency

ii. What has been done during the last decade?

- Top initiatives

Dam Removals (e.g., Basque Country)



- Channel connectivity, habitat improvement, geomorphic renaturalization
- Agents: Government of Vasque Country (Gipuzkoa Administration)

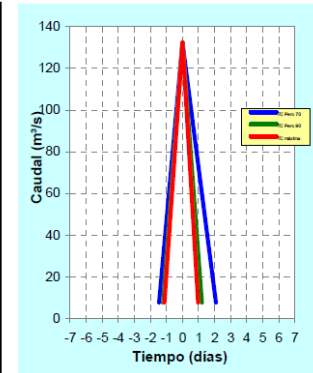
Source: Gipuzkoa Administration and Alfredo Ollero

- Top initiatives

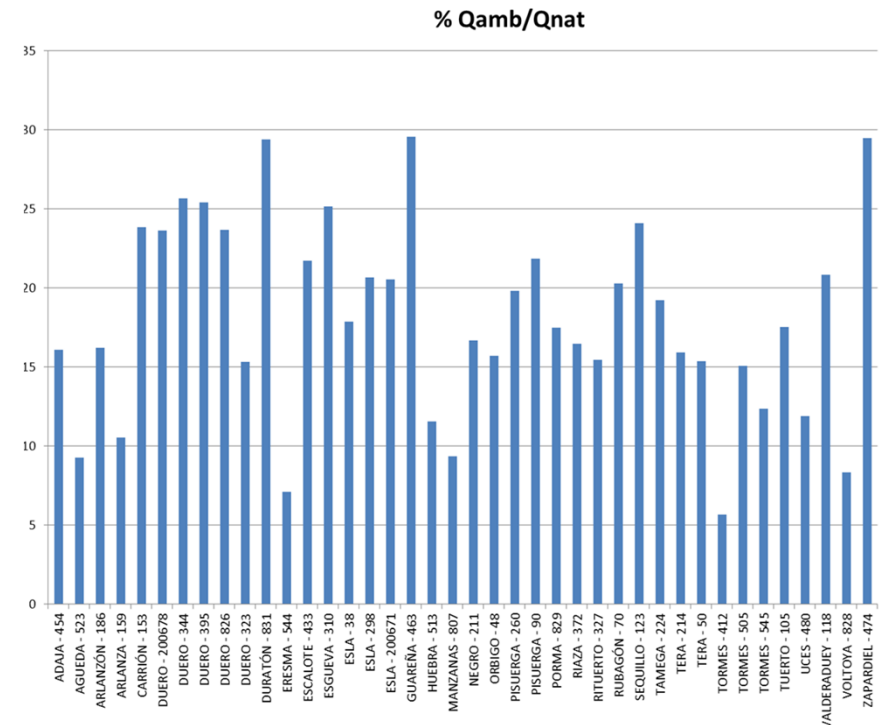
Recalculation of environmental flow requirements



CAUDAL GENERADOR									
CAUDAL PUNTA (T= 3,75 años):						132 m³/s			
MES DE MÁXIMA FRECUENCIA:						ENERO			
CARACTERIZACIÓN DEL HIDROGRAMA DEL EVENTO GENERADOR TIPO									
	Rama ascendente			Rama descendente			Total hidrograma		
	Perc. 70	Perc. 90	Máx	Perc. 70	Perc. 90	Máx	Perc. 70	Perc. 90	Máx
Tasa cambio (m³/s/día)	85,55	102,65	111,34	59,76	103,01	127,54			
Duración (horas)	34,9	29,1	26,8	50,0	29,0	23,4	84,9	58,1	50,3
Volumen (hm³)	7,83	6,53	6,02	11,21	6,50	5,25	19,04	13,03	11,27
% s/ Apo. natural	3,2%	2,6%	2,4%	4,5%	2,6%	2,1%	7,7%	5,3%	4,6%



- New methodological approach: combination of hydrological and habitat-based procedures
- Design and establishment of Flood regimes
- Whole range of native fish species and conceptual incorporation of riparian plant species
- Many scientific and management gaps still to be filled



ii. What has been done during the last decade?

- Bottom initiatives

River dredgings in large alluvial systems



Ebro River



Source: J.A. Pinzolas

ii. What has been done during the last decade?

- Bottom initiatives

“River cleanings” in agro-landscapes



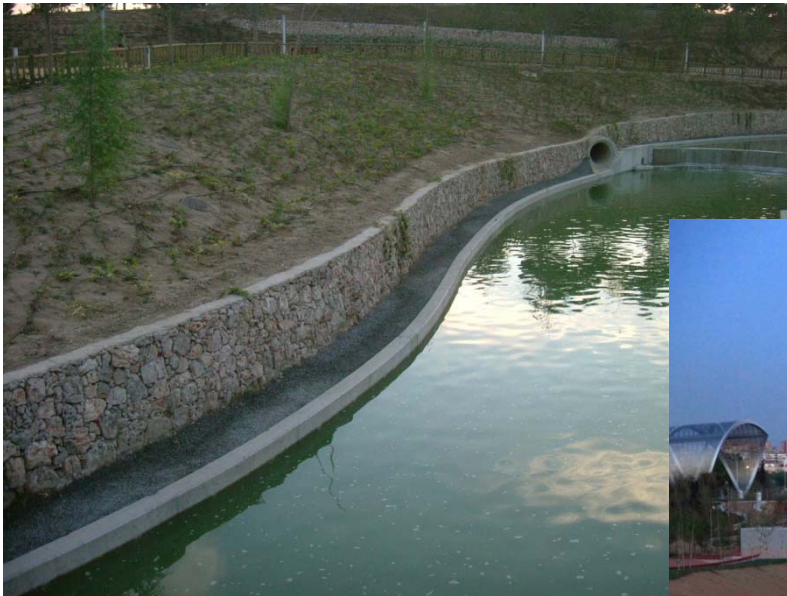
Tajuña River, Madrid



ii. What has been done during the last decade?

- Bottom initiatives

**Artificial, forgotten rivers
in “modern” urban design**



Carcavas Creek,
Manzanares tributary



Manzanares River, Madrid downtown

iii. Which should be the focus of restoration initiatives in the coming years?

- Improve social recognition of ecosystem services
- Require participatory processes
- Demand initiatives give answer to WFD, FRD & BHD
- Oblige all initiatives to incorporate true cost-benefit analyses
- Strengthen public/private participation by technical and financial means, but under well-coordinated programmes

iv. Conclusions and proposals for action

- Iberian rivers need intensive hydrogeomorphological restoration
- Flood risk reduction must be actively managed
- Urban design must not block restoration
- Much work is to be done to increase social awareness on long-lasting problems and to provide long-term solutions



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