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Water Landscapes and Changes in Environmental Policies in Spain (the Guadalquivir river basin, south Spain)



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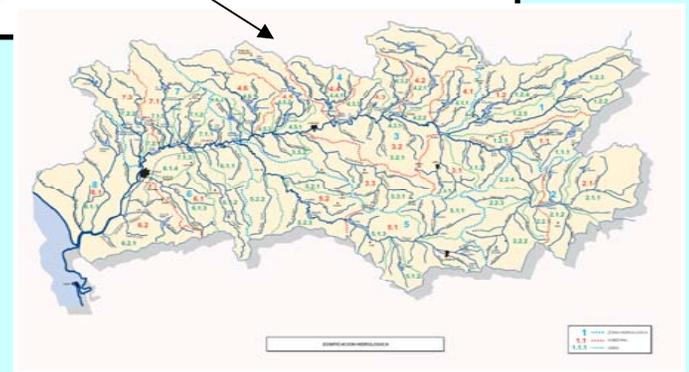


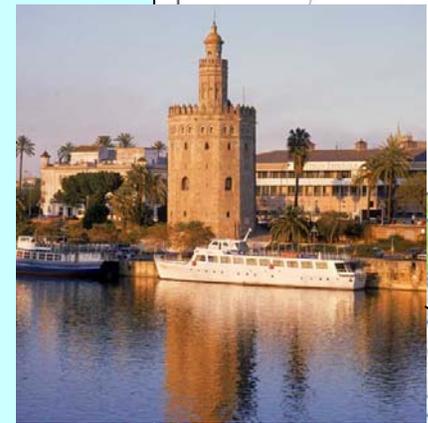
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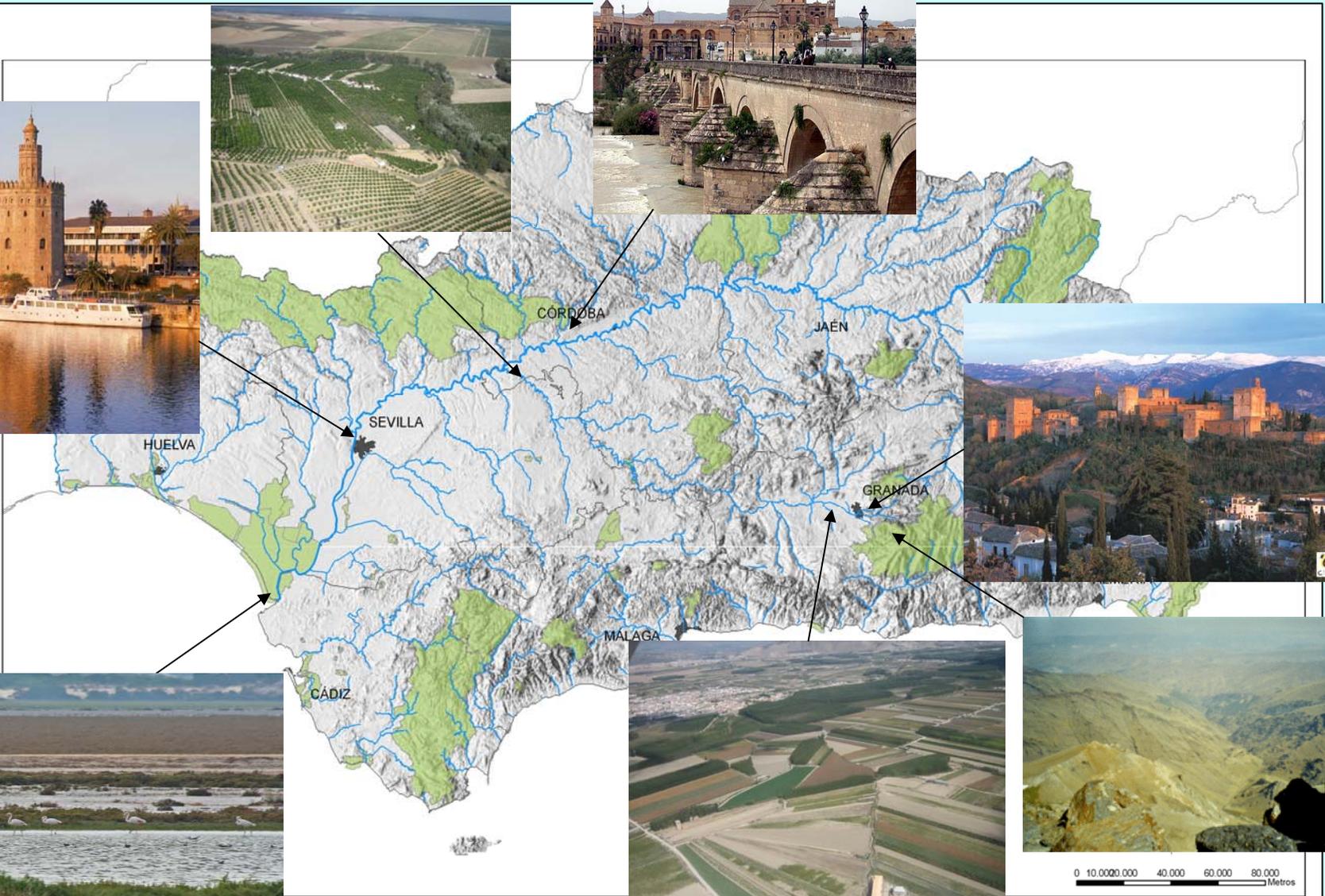
1. Study area

- The valleys of Guadalquivir and of some of its tributaries have been relatively densely populated and have an important economic activity;
- Though the average flow of Guadalquivir is relatively low, its water has been used by local populations with sophisticated techniques;
- It is the only Spain river with a significant fluvial traffic;
- The Guadalquivir river (“*Wadi al-Kabir*” (great river)) has an important symbolic and cultural value;
- Some of the most emblematic landscapes of Andalusia and even of Spain are located in its basin.





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2. The historical archetypes of the water/society/landscape relation in Andalusia

Table 1. The evolution of the water/society/landscape relation in Andalusia (Frolova, 2007; 2008a)

Historical Periods	Relation society/water/landscape in Andalusia	
	Intensive relationship	Not intensive relationship
Roman Empire period (II b.c. – V a.c.)	The important role attributed by the Roman Empire to water supply for urban nuclei converted hydraulic engineering in an important element of Romanic landscapes.	
Visigod period (Vth c.- 711)		Maintenance of some roman hydraulic structures and generalized abandoning of the most of them due to economical crises of slavery system
Islamic Empire (Al-Andalus) period (711-1492)	Water gained a vital importance in both material and spiritual aspects of the “Al-Andalus” culture. It became an element which structured the urban and agrarian space, due to Spreads of Islamic irrigation technology and of a sophisticated system of social regulation of water adopted to Mediterranean climate and local conditions of each community.	
Post Reconquest period (XVIth- XVIIth centuries)		Water landscapes had lost their symbolical meaning. Generalized abandment of theIslamic water use systems.

Table 1. The evolution of the water/society/landscape relation in Andalusia (continuation)

Historical Periods	Intensive relationship society/water/landscape	Not intensive relationship
<p>The Age of Enlightenment (XVIIIth century)</p>	<p>Renovation of interest to hydraulic engineering. Attempts to recuperate some hydraulic system inherited from the Islamic epoch, though the major efforts were dedicated to the utopian projects of construction of navigable channels.</p>	
<p>Romantic Period (XIXth century)</p>	<p>Interest to hydraulic engineering. The social elite rediscovered the Andalusian landscape and its straight relation with water, though the Islamic irrigation technology was still ignored. The vision of water is partial and elitist and is limited by esthetical considerations of its role in landscape.</p>	
<p>End of the XIXth century-end of the XXth century</p>	<p>Dominance of the “<i>paradigma hidráulica</i>” and instrumentalisation of water</p>	
<p>Early 1990’s/2008</p>	<p>Emergence of the New Water Culture and institutional emergence of water landscape</p>	

3. The “paradigma hidráulico” and its influence on Spain’s water policy in the XXth century

The traditional *paradigma hidraulico* (water management paradigm) is a state-based water regulation system “with the ultimate objective of ensuring the availability of cheap water to permit economic growth” (Saurí and del Moral, 2001: 351).

Table 2. Chronological synthesis of the institutional “emergence” of water landscape in Spain (Frolova, 2008b)

Periods	Institutional turning points		
	Water policy in Europe and Spain	Landscape policy in Europe and Spain	Other areas
1940’s/1970’s – Absolute dominance of the “ <i>paradigma hidráulico</i> ”	1960’s – 1970’s - Radical transformation of the Spanish landscape due to the policy of intensive economic development	Absolute dominance of the “ <i>paradigma hidráulico</i> ”	939/1975 - Franco’s dictatorship, centralized and paternalistic State
1978/1988 –The “ <i>paradigma hidráulico</i> ” is still dominant. Environmental legislations is not implemented in the centralized water policy	1985 – The Water Act (29/1985)	1980s – Special Plans for Physical Environment Protection	1978 – Decentralisation of government by the Spanish Constitution. 1986 - Spain became a full member of the EU 1986-1988 – National Legislative Decrees on Environmental Impact Assessment (EIA)

Table 2. Chronological synthesis of the institutional "emergence" of water landscape in Spain (continuation)

<p>1989/2004 – The critic of the water management paradigm and its failed adaptation to the new contexts. Emergence of landscape in the environmental legislation.</p>	<p>1996 – Transfer of the River Boards to the newly created Ministry of Environment</p> <p>2000 – European Water Framework Directive</p> <p>2001 – The National Hydrological Plan authorised large inter-basin transfers of water from the Ebro River</p> <p>2001 – National Irrigation Plan</p>	<p>1989 – Emerging of a protected landscape concept in the Law of Nature Conservation</p> <p>1993 – The Mediterranean Landscape Carte was signed by Andalusia (Spain), Toscana (Italy) and Languedoc-Rousillon (France) regions</p> <p>2000 – European Landscape Convention</p> <p>2001 – The National Irrigation Plan mentioned landscape as an element of environmental and cultural value and introduced some environmental criteria in water management</p>	<p>1989 – Law on Nature Conservation</p> <p>1991 – Decentralisation of land use</p> <p>1997 – Royal Decree 1997/1995 implements in Spain the Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora</p> <p>2001 – Law 6/2001 on Environmental Impact Assessment</p> <p>2001 - Directive 2001/42/EC of the European Parliament and of the Council on Strategic Environmental Assessment</p>
<p>From 2004 onwards – The institutional "emergence" of water landscape</p>	<p>2004 – Shelving of the project of the inter-basin transfers from the River Ebro</p> <p>2006 – Law for the protection, conservation and improvement of the rivers of the Galicia Autonomous Region</p> <p>2007 – Hydrological Planning Regulation (RD 907/2007) includes landscape as a new element to take into consideration.</p>	<p>2004 - Law for Land Use Planning and Landscape Protection of the Valencia Autonomous Region 4/2004</p> <p>2005 - Landscape Law of the Catalan Autonomous Region 8/2005</p> <p>2008 – Ratification of the ELC by Spain</p>	<p>2006 – The Law 9/2006 on Strategic Environmental Assessment, application of Directive 2001/42/EC</p>

4. The institutional emergence of water landscape in Andalusia and in the Guadalquivir River Board water management

1993 - The Mediterranean Landscape Carte was signed by Andalusia (Spain), Toscana (Italy) and Languedoc-Rousillon (France) regions and emphasized in the necessity of landscape protection in these regions.

1995 - The Guadalquivir River Board proposed a Hydrological Plan which mentioned, for the first time, natural and agrarian water landscapes.

From **2002** onwards - An important number of water landscapes (wetlands, etc.) has been declared Sites of Community Importance in Andalusia thanks to the implementation of the Directive 92/43/EEC.

2006 - The Land-use Plan of the Andalusia Autonomous region planned a program for the coordination and integral recuperation of the Guadalquivir river and actions for fluvial landscape assessment.

2007 - The Andalusia's Autonomous region statutes recognised the right of every Andalusians to enjoy their landscapes and their duty to use them responsibly to avoid their deterioration.

From **2007** onwards - The revision of the Hydrological Plan of the Guadalquivir River Board has been carried out. It proposes to undertake special studies to establish a strategy for landscape protection linked to water policy.

5. Concluding remarks

1. Although the influence of the traditional water management paradigm still remains, the relationships between water policy and landscape have recently reached a turning point.
2. The achievement of integrated water management of river basins in Spain depends on how successful the shift will be from centralized government approaches based on the *paradigma hidraulico* and traditional Spanish attitudes to water resources to modern approaches that include landscape values, which seem to be increasingly important for Spanish people.
4. Broader public participation is a necessary condition for the achievement of this objective.

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