



**TRAINING WORKSHOP AND STUDY TOUR FOR DEVELOPING THE CAPACITY OF
 PROSECUTORS AND INVESTIGATORS FOR THE ENFORCEMENT OF WATER &
 ENVIRONMENT LEGISLATIONS**

DETAILED PROGRAM STUDY TOUR SPAIN

June 10 – 12, 2013

From: Nora Van Cauwenbergh
 To: Hosny Khordagui, SWIM-SM delegation
 Cc: Abel La Calle, Manuel Bea, Elisa Vargas, Hendrike Clouting, CH Guadiana, CH Tajo
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Participants

N	Title	First Name	Last Name	Position	Organization
ALGERIA					
1	Mme	Houda	BENHABILES	Chef de Bureau	Ministère des Ressources en Eau
2	M	Nacer Eddine	BOUDJEMLINE	Chef de bureau	Ministère des Ressources en Eau
3	M	El Houcine	HOUICHER	Ingénieur d'Etat	Ministère des Ressources en Eau
4	Mme	Amal	MENDES	Chef de bureau de la protection du Domaine Publique Hydraulique.	Ministère des Ressources en Eau
EGYPT					
5	Mrs	Asmaa NSA	ELFELAL	Director of the Department of freshwater quality	Environmental Affairs Agency, Ministry of State for Env Affairs
6	Mr	Emad MMK	IBRAHIM	Director of works – Environmental unit	Ministry of Water Resources and Irrigation
ISRAEL					
7	Dr Mrs	Dekel	AMIR SHAPIRA	Pollution Prevention	Ministry of Environment Protection
8	Mrs	Hanna	FRENKEL	Legal Advisor	The Governmental Authority for Water and Sewage
9	Mrs	Sharon	NUSSBAUM	Director of Enforcement and Information Department	Israel Water Authority
JORDAN					
10	Eng M	Ra'ed	ABU-HASAN	Director of the Environment Directorate for Governorates of Ajloun and Jerash	Ministry of Environment
11	Miss	Nassra Zead Hamdan	AL MASALHAH	JURIST	Jordan Valley Authority
12	Mrs	Nisreen	EL-BANNA	Section head of drinking water	Water Authority
13	Mr	Abbas	KALBOUNEH	Director	Water Authority of Jordan
LEBANON					
14	Mr	Abdallah	AHMAD	Magistrate in the State Council, membre au département du contentieux de l'Etat	Ministry of Justice
15	Mr	Wahib	DAOURA	Judge at the state council, and legal advisor for	Ministry of Justice



16	Mrs	Mona	FAKIH	the Ministry of Environment Water Director	Ministry of Energy and Water
17	Mr	Youssef	KASSAB	Director of waste water pumping stations and treatment plant of Saida district.	Saba Makhlouf for trading and contracting
MOROCCO					
18	Dr Mr	Salah Eddine	DAHBI	Chef de Division Domaine Public Hydraulique	Agence du Bassin Hydraulique du Loukkous
19	M	Mohamed	MAKBOUL	Chef de Division Legislation d'Eau	Direction de la Recherche et la Planification de l'eau
20	M	Jamal Eddine	TIKA	Chef de Division Domaine Public Hydraulique	Agence du Bassin Hydraulique du Sebou
STATE OF PALESTINE					
21	Ms	Majeda	ALAWNA	DIRECTOR OF WQ REGULATION DEPT.	PWA
22	Mr	Murad M.A.	MADANI	Legal Advisor	Ministry of Environment Affairs
23	Mrs	Hala	MUJAHED	Legal Consultant	Palestinian Water Authority
24	Mr	Islam	ABU ZAYYAD	Director of Legal Affair	Ministry of Local Government
EXPERTS					
25	Mr	Hosny	KHORDAGUI	SWIM-SM TEAM LEADER	
26	Mr	Stefano	BURCHI	NK- Expert	
27	Ms	Mirella	BATZIANIA	Event Coordinator	LDK Consultants
28	Ms	Nora	VAN CAUWENBERGH	Water Management and Planning expert, facilitator Spain	UNESCO-IHE, Institute for Water Education



Program Study Tour in Spain

Day 6 - Saturday 08.06.13	19:10 22:00	Travel from Amsterdam to Sevilla Leave from the Hotel in Delft at 14:00 Arrival in Sevilla, transfer to hotel	Amsterdam > Sevilla		
Day 7 - Sunday 09.06.2013 ~ Free day ~					
Day 8 - Monday 10.06.13 (Visit 3)	09:00 09:30 10:00 10:00 – 11:30 11:30- 12:30 12:30- 13:30	Travel from hotel to University of Sevilla by bus Introduction to field visits in Spain Program and objectives, brief introduction to water governance in Spain, competences and decision making in IWRM Visit to New Water Culture Foundation Introduction to legal framework and evolution in Spain. Discussion with legal expert on legislation, control and enforcement. Coffee break Discussion / debate on implementation of IWRM and enforcement in Spain - presentation of cases of non-compliance and community involvement	Sevilla	Guide from UNESCO-IHE: Nora Van Cauwenbergh Guest lecture- Prof. Abel La Calle Marcos Prof. Abel La Calle	
~ Lunch break 14:00 - 16:00 ~					
	16:00	Travel from Sevilla to Cordoba (140km)	> Cordoba		
	18:00	Optional – Visit of the Mezquita de Cordoba – Visit of the historic center of Cordoba	Cordoba		



Day 9 - Tuesday 11.06.201 3 (Visit 4, 5 +6)	08:30-11:30	Travel from Cordoba to Daimiel village (250km)	Cordoba > Daimiel	Guide from UNESCO-IHE: Nora Van Cauwenbergh	
	11:30-18:30	Visit to Daimiel (River Guadiana) with representatives of Guadiana River Basin Organization, irrigation associations and researchers - focus on overabstraction Presentation of the case on overexploitation of the groundwater table and several intents of control and enforcement	Daimiel		
	11:30 - 12:15	Visit to the Daimiel Water Center - Introduction to the water problems in the region and preparation of the field visit		Dr. Manuel Bea	
	12:15-14:00	Tour around the area: Tablas de Daimiel National Park - farming: consequences of groundwater overexploitation and illegal water use	Tablas de Daimiel		
~ Lunch break at the Meson de la Duquesa 14:00 - 15:30 ~					
	15:30-16:00	Travel from restaurant to Ciudad Real by bus (34km)			
	16:00	Visit to Guadiana River Basin Organization Welcome by the president of the RBO Presentation of the panel (water authorities, irrigator, legal and GIS experts).	Ciudad Real	D. José Diaz Mora (president)	
	16:15 - 17:00	Presentation on GIS / remote sensing for control of groundwater abstraction + presentation of a case study from monitoring till court sentence		Dr. Manuel Bea	
	17:00 -	Roundtable: “New technologies as a data source for better water governance” with:			



18:00	<ul style="list-style-type: none">- Representative(s) de la Comisaría de Aguas de la CHG: D. Timoteo Perea Tribaldos, D. Samuel Moraleda Ludeña.- Representante del sector de la investigación aplicada: Dr. Salomón Montesinos Aranda- Representante de la Comunidad de Regantes de Daimiel: D. Jesús Pozuelo- Representante de la Fiscalía (tbc)		D. Samuel Moraleda Ludeña Dr. Salomón Montesinos Aranda D. Jesus Pozuelo	
18:00-20:30	Travel from Daimiel to Madrid by bus (220km) with a brief stop at the ‘Ojos del Guadiana’, arrival at hotel	Madrid		



Day 10 -	09:45	Travel from hotel to River Basin Organization Tajo	Madrid		
Wednesd ay 12.06.201 3 (Visit 7 + 8)	10:00- 13:30	Visit of the Tajo River Basin Organization – Presentation of competences and case studies + debate - focus on pollution and monitoring networks	Madrid	Guide from UNESCO-IHE: Nora Van Cauwenbergh	
	10:00	Welcome by the president of the Tajo RBO		Dr. Miguel Antolín (President)	
	10:15	Introduction to the basin, and information on the 'Hydraulic Public Domain', legal framework for monitoring and control in the basin.		D. Gabino Liébana (Head of the Environmental Management and Hydrology Area)	
	10:45	Presentation of water quality monitoring network (focus on urban supply/industrial pollution) + discussion on procedures and competences necessary for good quality monitoring and enforcement.		D. Javier Díaz Regañón (Head of Hydraulic Public Domain Area)	
	11:30	Presentation of an infringement case: procedures from monitoring to court		D. Antonio Yañez (Head of Water Quality Area)	
	12:15 13:00- 13:45	Coffee break Visit to the laboratory and Hydrologic Information Automatic System (SAIH) room and discussion on RBO relations with users and other stakeholders			
~ Lunch break at Casa del Campo (10' walk from RBO) 14:00 - 15:30					
	15:30	Travel from Madrid to Rivas Vaciamadrid (35km)			
	16:00- 18:30	Field visit to monitoring station SAICA in Rivas- Vaciamadrid Site visit to the monitoring station with representatives of the Guadiana River Basin Organization	Madrid	Tajo RBO representative (tbc) Guest lecturer: Elisa Vargas Lucia Rodriguez	



Itinerary map Spain





Background and information on visits

Day 1: Introduction to water governance in Spain and objectives of field visits

Distribution of legal competences

In the Spanish Constitution (SC) the State territory is organized in municipalities, provinces and autonomous communities. All these entities have the right to autonomy to manage their own interests.

In the context of the Autonomous State, and according to the principle of anterior autonomy and territorial decentralization, there is a competence rank, considering the once maintained by the State and the ones belonging to the Autonomous Communities (AC). Competences can be legislative (power to proclaim laws), regulatory (power to proclaim regulations) and executive (to fulfill and enforce the laws). Depending on how the competences are shared by the State and the Autonomous Communities, those could be:

- Exclusive competences: when only one entity has the competence to the subject
- Shared competences: when the different rights belonging to a competence are distributed among entities. For example, the State provides a basic law on a given matter and the AC develop, execute and enforce this law.
- Concurrent competences: when the two entities have the same rights on the matter.

The SC lists in art. 148 the matters whose competence can be assumed by AC. In art. 149 it lists matters which are exclusive competence of the State. It also defines different degrees in competence. Art 150 gives the option of transferring state competences through frame laws and transfer laws.

In addition, water issues affect a lot constitutional matters, such as environment, fishing, agriculture, health, energy, sport and leisure, civil defence etc and every territorial entity has some degree of competence in all of these matters.

General principles of Public Administration on water issues

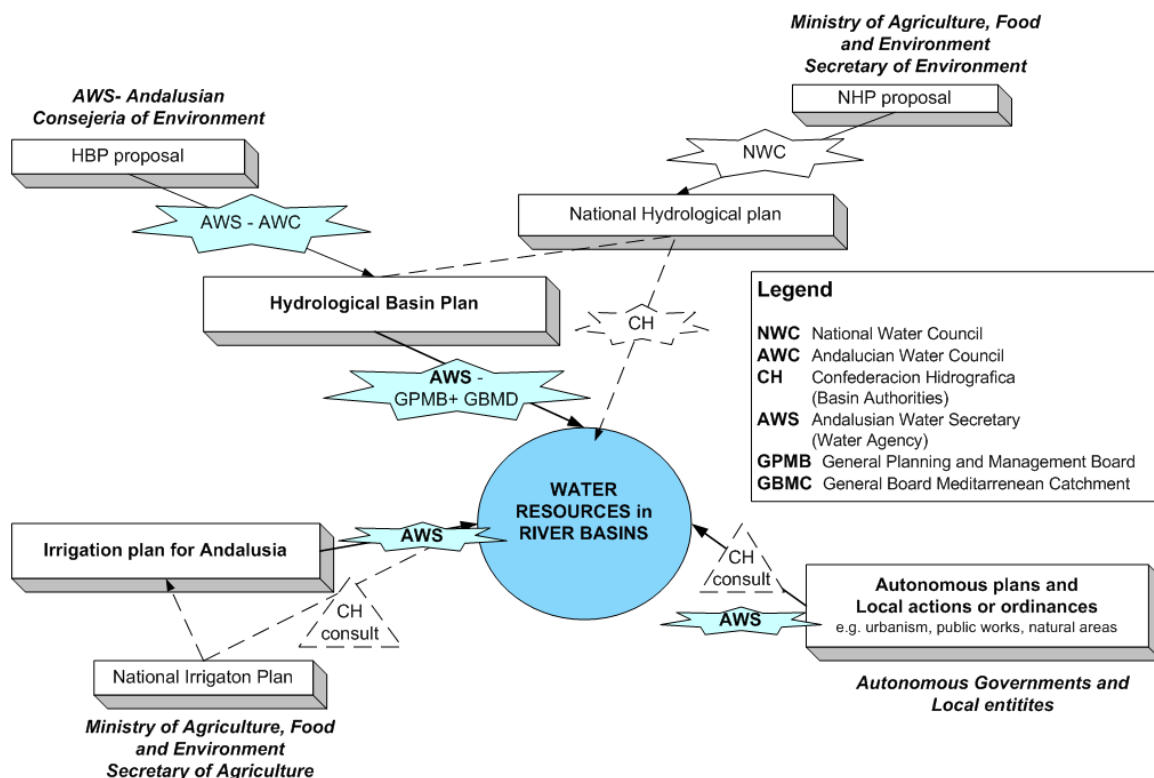
- The hydraulic public property belongs to the State
- Respect for the unity of Hydrographical Basin, hydraulic systems and hydrological cycle
- Integral approach, principle of decentralization, co-ordination, efficiency and user participation
- Compatibility of public water policy with regional planning, preservation, protection and restoration of environment
- Indivisibility of Hydrographical basin for administrative purposes



- Classification of Hydrographical Basins in two types for competence distribution purposes:
 - o Inter-community Basins: their territory includes the whole or part of territory from several communities
 - o Intra-community Basins: their territory includes only the whole or part of one community

In general, when looking at water management at the basin scale, 3 different actors and plans can be defined in the Spanish decision making on water management as shown in the figure below (example of the Autonomous region of Andalusia, south of Spain):

- the National Hydrological Plan and the Hydrological Basin Plans, prepared by the Ministry of Environment and evaluated by the Water Council
- National and Regional Irrigation plan, provided by the Ministry/Consejeria of Agriculture and evaluated by the River Basin Organizations
- Autonomous plans and local actions or ordinances related to water, reported previous action by the River Basin Organizations



Speaker: dr. Nora Van Cauwenbergh



Visit New Water Culture Foundation in University of Seville

The New Water Culture Foundation is a non-profit organization in the Iberian Peninsula that pursues to satisfy the general interest, principally of scientific nature. The foundation therefore promotes innovation initiatives, education, development cooperation and related matters for as far as they relate to water management in its broadest sense. The foundation started as the result of the “Iberian Congress on Water Management and Planning”, celebrated every two years since 1998 with the support of more than 70 Spanish and Portuguese Universities. The Foundation has over 100 founding members, with outstanding specialists in every area related to the water management, most of them coming from the academic field.

Professor Abel La Calle Sanchez Martos will give an introduction in the history of Spanish water legislation from early 1900 till nowadays. Key moments in the formulation of water legislation and implications on the field will be highlighted. Furthermore, prof. La Calle, who is an expert in the evaluation of the implementation of EU Water Framework Directive in Spain will give an exposition on main encountered problems. He will do so by presenting a series of case studies where EU WFD legislation has not been correctly implemented and enforced, explaining the viewpoint of different actors in the process.

After the presentation there will be room for a debate which will cover a broader understanding on how Spanish institutions have recently evolved from a vision of securing water quantity and promotion of infrastructure development mission towards the incorporation of the principles of integrated water management under the new European legal framework and the implications this has for prosecutors, monitoring networks and participation.

Speaker: Prof. Abel La Calle Marcos



Visit Mosque of Cordoba – history of water management in Andalusia



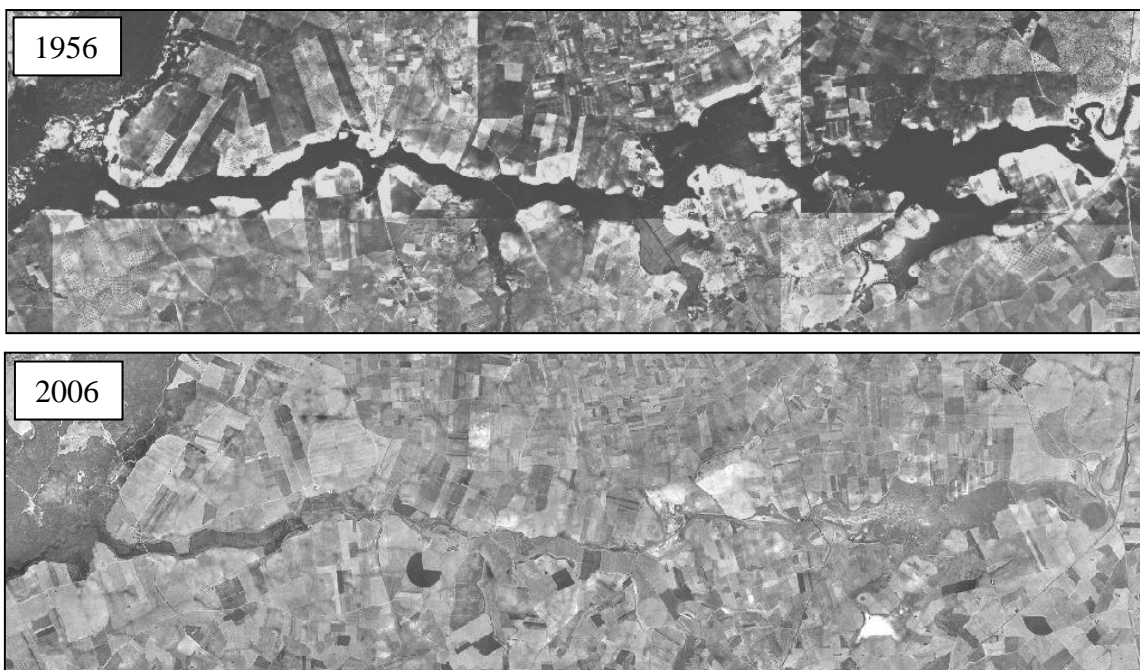
The private guided tour with English speaking guide will start at 9h00 visiting the most important and emblematic place of the city of Cordoba, its Mosque, which is also the Cathedral of Cordoba, since the building was transformed many centuries ago. Then we will take a walk, into the little streets, around the Cathedral, narrow, recondite, sinuous till the Calleja de las Flores, finishing our walking tour visiting the only Synagogue preserved in Andalusia. During the visit we will highlight some of the main characteristics of water management and water laws at times of the Arab Al-Andalus empire.

Speakers: local guide (optional)



Day 2: Visit Tablas de Daimiel – area of overabstraction and guest lecture by Dr. Manuel Bea

Intensive use of Mancha Occidental aquifer has had serious environmental impacts. Falling piezometric levels led to a significant loss of groundwater-dependent ecosystems; of the 25.000 ha of wetlands in the 1970s, only about 7.000 ha are now left. *Las Tablas de Daimiel* National Park represents the most dramatic and best documented case of wetland degradation in the area. Due to pumping, the park experienced a strong decrease in flooded surface area from approximately 2.000 ha in natural conditions to become almost completely dry in particularly dry summers. This wetland is situated west of the Upper Guadiana Basin (UGB), just a few kilometres from the discharge area of Mancha Occidental aquifer, known as 'Ojos del Guadiana' (Guadiana's Eyes). In this aquifer almost all the freshwater flow coming from the UGB gets infiltrated and also groundwater flows from adjacent aquifers are transferred to this area; so the state of *Las Tablas de Daimiel* can be used to measure the 'health' of the water system of the UGB. Next figure 4 comprises two aerial photographs from summer 1956 (upper) and summer 2006 (lower) over the "Ojos del Guadiana" and Guadiana river until it floods in "*Las Tablas de Daimiel*".



In the 1956 image, the flooded areas are observed in black colour, showing a connection between the *Ojos del Guadiana* springs (in the East) and *Tablas de Daimiel* wetland (in the West). Today, this connection is totally broken and the *Ojos del Guadiana* area has

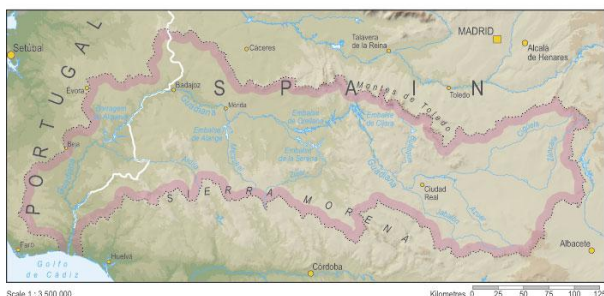


changed from being a discharge area into a recharge area of water into the aquifer. This switch has caused several direct impacts besides water scarcity, as the alteration of chemical characteristics of water and consequently associated fauna and flora as well as the modification in seasonal flooding patterns.

Speaker: dr. Manuel Bea (text based on Bea, M. (coord.) (in press). *Towards wetland sustainability in Spain: Doñana region and Upper Guadiana basin and*. LAP LAMBERT Academic Publishing.)

Visit Guadiana River Basin Organization in Ciudad Real

<http://www.chguadiana.es>



The Guadiana is an international river flowing from Spain to Portugal. With 829kms length it is the fourth longest river in the Iberian Peninsula. The river drains an area of 68.000 km², inhabited by over 1.5 million people in Spain and serving extended agricultural areas (olives, cereals in rice in the estuary), hydroelectricity plants and domestic water supply.

The River Basin Organization (RBO) is a public organism, depending of the State (Ministry of Agriculture, Food and Environment). Under its main functions, the River Basin Organization is responsible for (1) the elaboration of hydrological river basin plans, as well as its follow-up and revision in the Spanish part of the Guadiana river basin (2) the administration and control of the public hydraulic domain, (3) the administration and control of all exploitations of public interest that affect more than 1 autonomous community, (4) construction and exploitation of infrastructure works on internal funding, entrusted by the national authority and (5) all functions related to agreements with the regional government, local corporations or other public or private entities as well as private persons.

The Water Comissariat (Comisaria de Aguas) is one of the 3 principle departments within the River Basin Organism. Its functions are surveillance and control of the water resources uses. More detail on the structure of RBO can be found in the description of the Tajo RBO.

Speakers:

D. Timoteo Perea, present Head of Department of the Water Comissariat since 2012 and/or D. Samuel Moraleda, former Head of the Water Comissariat (2005-1012)



Roundtable with stakeholders and experts

Apart from the River basin Organization, following organisms will be presented in the roundtable:

- The Irrigation Association or Comunidades de Regantes (in this case ‘Comunidades de Usuarios de Aguas Subterráneas’ or Groundwater User Associations) are public law entities that are subject to the rules of private law. Irrigators that operate in the area of the association are integrated in this entity. As the ‘Mancha Occidental’ aquifer is declared to be overexploited, the User Associations are obligatory and a series of water management support functions are assigned to them.

Speakers: D. Jesús Pozuelo, President of the Irrigation Association of Daimiel and Mrs. Isabel Villaseñor, lawyer and legal representative of the Irrigation Association of Daimiel.

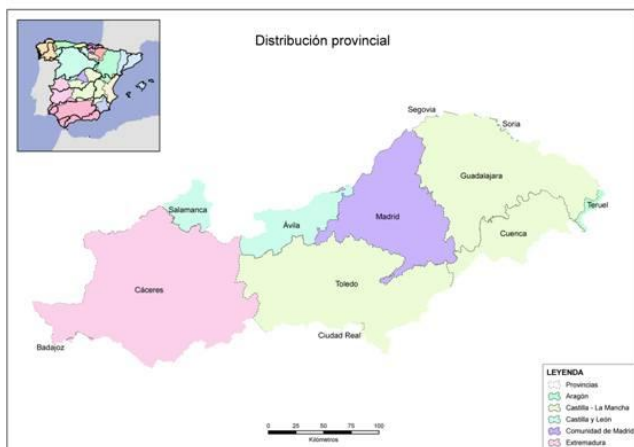
- The University of Castilla la Mancha, located in Ciudad Real

Speaker: Dr. Salomón Montesinos, profesor at the university and expert in application of teledetection techniques. He participated in the first large EU funded project on the use of teledetection systems in judicial procedures, named Aperture (4th Framework Programme)



Day 3: Visit Tajo River Basin Organization in Madrid

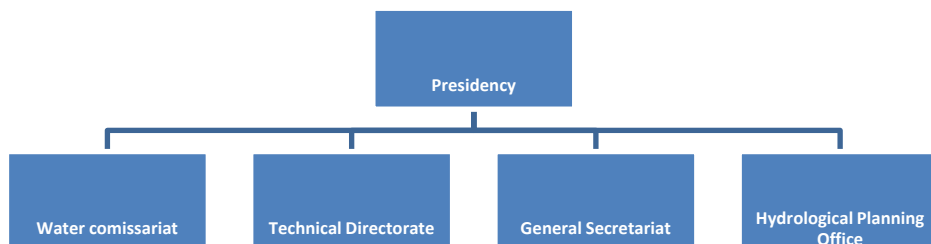
<http://www.chtaio.es/>



The Tajo Basin District covers an extensive area in territories of Spain and Portugal. The Spanish part is limited by the basins of the Duero in the North, the Ebro and Júcar in the East and the Guadiana in the South, being its surface approximately 55.781km². The Portuguese part (“Tejo e Riberas do Oeste”) has a surface of 25.666km².”

The basin encompasses areas from different Spanish Autonomous Regions, being Castilla-La Mancha the one with the greater extension, followed by Extremadura, and the Madrid Region (which is almost entirely within the basin). The total population in the basin is 7.833.089 inhabitants (INE, 2010), and the population density in the basin is approximately 140 people/km².

The Tajo River Basin Authority (or “Confederación Hidrográfica del Tajo) is a Spanish River Basin Organisation. It is an entity with its own law jurisdiction, affiliated with administrative effects to the Spanish Ministry of Agriculture, Food and Environment, and has full functional autonomy, according to what is established by water Spanish laws. The main structure is represented in figure below.





The Basin Authority duties (legally established by the Royal Decree 984/1989) are:

- Elaborating the Basin Hydrologic Plan, as well as its reviews and follow-ups
- Administrating and controlling the hydraulic public domain
- Administrating and controlling the uses of general interest or uses that affect more than one Spanish Autonomous Region
- Developing water projects, constructing them and managing related infrastructures charged to the Organization own funds, and constructing other public works entrusted by the Government.
- Developing other functions derived from agreements with Autonomous Regions, Local Corporations, and other private or public entities.

The basin presents a Mediterranean continental climate, with regional specificities marked by altitude, latitude and more or less distance to the Atlantic Ocean. It presents an important variability in temperature, with dry summers and cold winters, with averages between 8°C and 10°C in the mountainous areas of Guadarrama and Gredos, and milder ones in the lower Tajo reach with 13°C and 17°C. The average precipitation is 648mm (1940-2006). The basin is rich in endemic animal and plant species, with characteristic ecosystems, where rivers, intermittent flows and wetlands play very important roles as biological corridors.

To optimize water management, the conjunctive use for surface and groundwater resources is a common practice in the river basin (there are 24 groundwater bodies, none of them shared with Portugal). The basins has a total average annual contribution of 10.210hm³ (1940-2006), and a reservoir storage capacity of 11.000hm³. Droughts and floods episodes are common in the basin, being one of the latest severe drought episodes the one from 2005-2008. The basin has a Drought Management Plan (approved in 2007), and counts with a cartographic viewer on flood prone areas. The main water demands are public supply (Madrid metropolitan area), agriculture, industrial uses and other (energy plants, aquiculture and recreational uses). The river basin management plan (according to the EU Water Framework Directive) has been recently published for public consultation (the current plan dates back to 1998).

Speakers: Mr. Miguel Antolín, president of the Tajo River Basin Organization
Mr. Antonio Yañez, Head of Water Quality Area
Mr. Gabino Liébana, Head of the Environmental Management and Hydrology Area
Mr. Javier Diaz Regañon, Head of Hydraulic Public Domain Area
Ms. Elisa Vargas, expert in climate change and drought management
Ms. Lucia Rodriguez Montañez