

# ADAPTING SPANISH WATER RIGHT SYSTEM TO CLIMATE CHANGE IMPACTS

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POLICY

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# LEGAL FRAMEWORK

- **NATIONAL WATER LAW:** *Real Decreto Legislativo 1/2001, de 20 de julio, por el que se aprueba el Texto Refundido de la Ley de Aguas de 2001*
- **REGIONAL WATER LAW:** Regions with internal river basins
- **Great influence of European Law in environmental aspects:**  
EU Water Framework Directive 2000

# SPANISH WATER RIGHT SYSTEM CHARACTERS (1)

General notes:

- Based on **water resource scarcity**
- **Classical forms of management** even in present
- **Flexible features:** adaptability at new conditions

Main characters (6):

a) **Water is public domain.** Legal consequences:

- **Use of water requires a public title:** concession, statutory rights
- **Non perpetual right to use,** but very long time to use (75 years)
- **Public authorities may re-examine concessions (flexibility):** lower water amounts
  - Possible **without compensation:** unusual

# SPANISH WATER RIGHT SYSTEM CHARACTERS (2)

b) Spanish water right system flexibility: “water market” (since 1999). Two available models

• **Private initiative:** “*contrato de cesión de derechos de uso de agua*”. Rules:

- Only between users
- **Public control:** authority license requirement. No reply equals a positive response (“tacit consent”)
- **Used flows**, not conceded (only in drought)
- Only preferential uses
- Transaction price: **theoretical public control**

# SPANISH WATER RIGHT SYSTEM CHARACTERS (3)

- **Public initiative:** “*Centros de Intercambio de Derechos de uso de agua*”
  - Established by Government, in exceptional circumstances (drought, overuse): Júcar, Segura, Guadiana, Guadalquivir river basins
  - Working rules based on public offers
  - Some activities in 2008 (Júcar river basin)
  - Inactivity due to economic crisis (2008-2019)

# SPANISH WATER RIGHT SYSTEM CHARACTERS (4)

## c) Water management at the level of river basin

- Since 1926: hydraulic works
  - River basin plans
  - *Confederaciones Hidrográficas* (basin authorities) are created
- Since 1959: water management (concessions, authorizations, penalty system...): *Comisarías de aguas* (basin authorities)
- *Ley de Aguas 1985*: *Confederaciones Hidrográficas* integrate *Comisarías de Aguas*.
- Autonomous water development agencies depending on Government.



# SPANISH WATER RIGHT SYSTEM CHARACTERS (5)

## d) Transfers between river basins are allowed

- National Hydrological Plan
- Spanish Parliament Law required
  - Most important example: Tajo-Segura transfer
  - Since 1979. Up to 600 Hm<sup>3</sup>/year transfers
  - Lower flows because of not enough water in the headwater reservoir



# SPANISH WATER RIGHT SYSTEM CHARACTERS (6)

e) **Hydrological planning** is an essential technique. Two available models :

•a') **River basin hydrological plan**: Royal ordinance approved by Government

- Firstly approved in 1998

- Adapted to EU Water Framework Directive 2000

  - First cycle (2011-2014). Actually in 2015

  - Second cycle (2016-2021)

- **Legal status: plan defines water right system for each river basin**

- **Key element of flexibility and adaptability to climate change impacts**

•b') **National Hydrological Plan**. An specific law is required

- Approved 2001, modified 2004

- Main content: water transfers

# SPANISH WATER RIGHT SYSTEM CHARACTERS (7)

## Other river basin area plans:

a) **Management Drought Plans** (approved 2007, revised november 2018)

- **Instrument of prevention**, not remediation of damages (as usual in past)

b) **Management Flood Risk Plans** (approved 2016, in the process of being revised)

- **Instrument of prevention**
- **Operate on the territory: urban and land planning consequences**

# SPANISH WATER RIGHT SYSTEM CHARACTERS (8)

## f) Economic-financial system. Main characters:

- Water is **free**
- **Taxes** compensate Government investments:
  - **Payback on the infrastructures** (reservoir, pipe network, water potability plants, wastewater treatment plants...)
  - **Service costs**
- **Privileged status:** Government assumes some infrastructure and service costs. There are not full costs recovery
- **Consequence:** **rational water use not rewarded/irrational water use not enough punished**
- **There is a significal scope for improvement and adaptation to climate change impacts**

# SPANISH POLICY ON CLIMATE CHANGE (1)

Ministerial Order 9/10/2008, Hydrological Planning Instruction: following proposal by RIBERA RODRIGUEZ (current Minister of Environment) and MARTINEZ LOPE \*:

•“Para el horizonte de 2030, se calculan disminuciones medias de aportaciones hídricas, en régimen natural, entre un 5 y un 14%, mientras que para 2060 se prevé una reducción global media de los recursos hídricos del 17%. Estas cifras pueden superar el 20 o 22% para los escenarios previstos para final de siglo. Junto a la disminución de los recursos, se prevé un aumento de la variabilidad interanual de los mismos. El impacto se manifestará más severamente en las cuencas del Guadiana, Canarias, Segura, Júcar, Guadalquivir, Sur y Baleares”.

\* “El cambio climático: amenaza para la biodiversidad. Respuestas en curso”, Documentación Administrativa 278-279, 2007, pp. 267 y ss.

Hydrological Planning Instruction: Hydrological Plan will evaluate the impact of climate change over river basin resources. Meanwhile, estimated percentage

Tabla 7. Porcentajes de disminución de la aportación natural para incorporar el efecto del cambio climático

Demarcación hidrográfica	Porcentaje de disminución
Miño-Sil	3
Cantábrico	2
Duero	6
Tajo	7
Guadiana	11
Guadalquivir	8
Segura	11
Júcar	9
Ebro	5

# SPANISH POLICY ON CLIMATE CHANGE (2)

Spanish relevant documents about climate change:

- **National Climate Change Adaptation Plan** (approved 2006).
  - First work program (2006) establishes scientific evaluation of climate change impact on the water resources, biodiversity and coastal areas
  - Second work program (2009) establishes social and economic costs of climate change.
  - Third work program (2013) establishes climate change impact on business and private side and local and urban level
- Remarkably: “climate change adaptation must be implemented in sectorial legislation...”. Not completed
- *“Estudio de los impactos del cambio climático en los recursos hídricos y las masas de agua” (CEDEX 2012)*: consequence of First work program

# SPANISH POLICY ON CLIMATE CHANGE (3)

## Water law:

- A) Hydrological Planning Regulation 2007: Hydrological Plans will evaluate the impact of climate change over river basin resources
- B) Hydrological Planning Instruction 2008: meanwhile, estimated percentages between 5-11%
- C) Ecological flows. Strong decrease in available flow rates expected: STS 11 marzo 2019, cancelled *Tajo* Hydrological Plan: priority over transfer
- D) A climate change Law was announced

# CONCLUSIONS

- 1ª) Spanish water rights system is based on scarcity. Flexible features: adaptability at new conditions
- 2ª) Flexible features have been accentuated in recent years: concession re-exam, “water market”
- 3ª) Hydrological planning is the key element in order to formulate adaptations strategies in the context of climate change
- 4ª) Water market and hydrological planning must coherently go together
- 5ª) Economic-financial system is the second key element for adapting water rights to face climate change impacts