



**XARXA PER UNA
NOVA CULTURA
DE L'AIGUA**

**WATER BANKS
OR
THE FAILURE OF WATER
GOVERNANCE**



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Formal aims of the tool

- ✓ Environmental protection
 - Over-allocation
 - Quality degradation
- ✓ Increase flexibility of water use entitlements
- ✓ Economic efficiency of water productivity
- ✓ Drought and scarcity management
- ✓ Transition to demand management models
- ✓ Implementation of cost recovery principle



Practical aims of the tool

- ✓ Overcome governance failures
- ✓ Overcome political conflicts
- ✓ Overcome lack of economic viability of infrastructures
- ✓ Speculation/capitalization of water
- ✓ Consolidation of lobby control over water



Spanish legal framework

- ✓ '85 ⇒ planning & water use legislation to satisfy demands
- ✓ '99 ⇒ drought&scarcity: increase flexibility From '05 to '08 ⇒ exceptional decrees to amplify possible applications + public acquisition for GES&PA
- ✓ 2012 Public Water Regulation ⇒ water use entitlements administrative centralization and inclusion of unconventional sources



What does “water bank” mean in Spain?

Formal markets

- ✓ “Water use entitlement exchange centers” =
Permanent acquisition by PA
- ✓ “Water rights transfer contracts” =
Temporary exchange between users under PA
framework
- ✓ Private negotiations (mostly groundwater)



What does “water bank” mean in Spain?

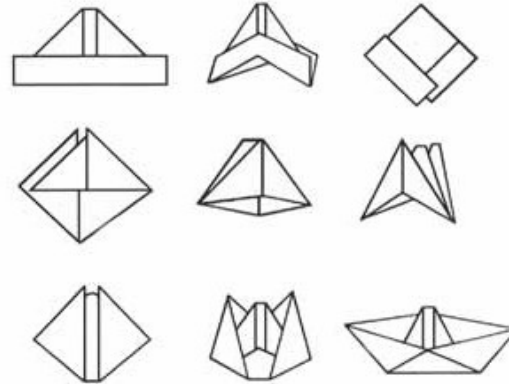
Informal markets

- ✓ Private negotiations under supervision or enhanced by Water Authorities
- ✓ Private transactions
- ✓ Transactions out of any legal framework



What does “water bank” mean in Spain?

Other forms ...



- ✓ Buy/sell land (with associated water entitlements)
- ✓ Buy/sell “option rights”
- ✓ Pure speculation with “paper water”



What is sold?

- ✓ Water use entitlements
 - ✓ Locally, between user groups
 - ✓ Inside the Water Basin area
 - ✓ Through water transfers between Basins

Problems defining “tradable flows”
- ✓ Water use with other administrative conditions
- ✓ Externalities



Who trades?

- ✓ Agriculture sector and urban areas
- ✓ Agriculture and energy sector
- ✓ Levels of administration and user associations (state/regions, Irrigation ass/municipalities,...)
- ✓ Private actors involved in water services



Some examples of water use right exchanges



Source: Hernández Mora & De Stefano 2013 (FNCA)



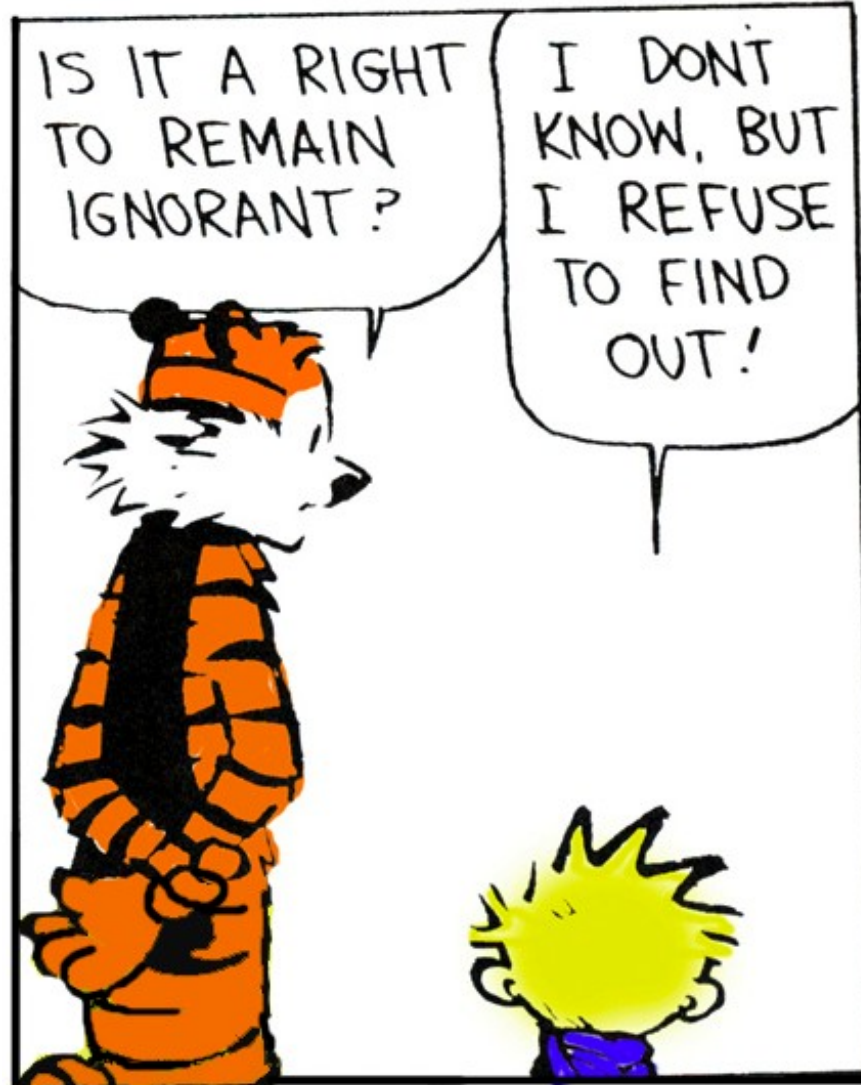
Some numbers ...

Transferencia	Cedente	Cesionario	Fecha	Forma legal	Volumen (m ³)	Volumen (m ³ /ha)	Precio (€/m ³)	Precio (total)	Presup. inicial
Tajo - Segura	CR Canal de Estremera	SCRATS	2006	Intercambio temporal intercuenca	31 500 000	13 500	0,19	5 985 000	
			2007		31 500 000	13 500	¿?		
			2008		31 500 000	13 500	0,22	6 930 000	
	R. Canal de Estremera	SCRATS	2007-2010		31 000 000		0,19	5 890 000	
	R. de la cuenca alta del Tajo	SCRATS	2011-2021	Intercambio temporal intercuenca	10 000 000		0,06	600 000	
	CR Canal de Las Aves ⁴	Mancomunidad de Canales de Taibilla	2006	Intercambio temporal intercuenca	35 500 000	12 000	0,288	10 224 000	
			2007		36 030 000		0,236	8 503 080	
		2008		36 950 000		0,31	11 454 500		
Segura		Mancomunidad de Canales de Taibilla	2006		1 200 000		0,30	360 000	
Tajo	CR Canal del Henares	Mancomunidad de Aguas del Sorbe	2002	Cesión de Derechos Intercuenca	20 000 000				
Segura	Intercambio entre usuarios de la cuenca del Segura		2000-2005	Cesión de Derechos Intercuenca	10 100 000				
			2008-2012	Cesión de Derechos Intercuenca	2 374 312				
			2008	Cesión de Derechos Intercuenca	1 935 865				
			2009	Cesión de Derechos Intercuenca	4 498 563				
			2010	Cesión de Derechos Intercuenca	3 528 174				
			2011	Cesión de Derechos Intercuenca	27 634 345				
			2012	Cesión de Derechos Intercuenca	244 441				
Segura			2007	Oferta Pública de Adquisición de Derechos	2 930 000		0,168	495 000	700 000
			2008	(OPAD)					

Source: Delacàmera 2012 (EIP)



But... basically nobody knows





S t a t e o f a r t

- ✓ Spanish ministry strongly pushing forward E U **juris p r u d e n c e**
- ✓ NHP based on this tool to search for **e c o n o m i c v i a b i l i t y** of infrastructures and water transfers
- ✓ Tool to take away pressure from River Basin Management Planning **f a i l u r e**
- ✓ Indirect way to sustain agricultural sector
- ✓ Window of opportunity for water service companies



What results did the tool deliver until now?





Environmental protection?

Plan Especial del Alto Guadiana (PEAG)

Permanent recovery of groundwater use rights

BUT

Water was bought

from those who didn't use it = "*paper water*"

farms in public domain = *state buying its own water*

out of the hydrological defined priority area
= *no effect*



Reality is stranger than fiction

Plan Especial del Alto Guadiana (PEAG)

Cuadro comparativo entre los datos oficiales y reales de la compra de derechos del PEAG

	Según CHG	Lo que ha ocurrido	Observaciones
Superficie regada antes de la compra	6.787 ha	1.594 has alguna vez en 5 años (media 599 ha)	
Volumen agua comprada ahorrada	13,5 hm ³	1,1 hm ³	Gasto de 66.000.000 €
Superficie regada después de la compra	0 ha (0 hm ³)	312 ha (0,9 hm ³)	
Reparto del agua comprada	30% ilegales 70% acuífero	100% ilegales 0% acuífero	
Coste eficacia de la compra de agua	14 €/m ³	56,9 €/m ³	

Source: Hernández and Fernández, 2012 (WWF)



Economic efficiency?

Cost recovery, opportunity or environmental cost emergence, water productivity...

- ✓ High market inefficiency: Tagus/Segura WT case 0,12 €/m³ (T) 0.24 €/m³ (TC) 0,30/0,60 €/m³ (IM)
- ✓ Exemption of payment for infrastructure use
- ✓ Doubtful definition of "loss of future earnings" (*lucrum cessans*)
- ✓ No accounting for losses of third parties and the environment
- ✓ Fictitious markets Almanzora SA, Agbar-SUEZ



Governance flexibility?

- ✓ 450 000 Ha new irrigation in the Ebro River in RBMP consolidating overexploitation
- ✓ Exploitation contracts for 50 years on strategic sources in Barcelona region
- ✓ Parallel agreements with users out of any planning or jurisprudence in the Tagus Memorandum
- ✓ ... infinite list of **institutional masochism**



Conclusions

The idea to exchange entitlements locally between fellow water users for re-allocation and adaptation is not diabolic and could be done without any commodification...

INSTEAD

...institutional framework under development for water banks aim to get rid of political burden of the protection of general interest in water management.



Any way out?

- ✓ Establish criteria of overriding public interest on water use contracts ⇒ Prioritize and review the ALBERCA program
- ✓ Strengthen the human relationship and knowledge on geophysical, economic and environmental features between users of the same source.
- ✓ Experiment local, small scale initiatives to assign water use entitlements according to a socio-environmental optimum at basin level.



Thanks for listening and...

