



Evaluating Economic Policy Instruments for Sustainable Water Management in Europe



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# Water tariffs in Italy and Emilia Romagna

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## Po river basin



Table 4: Incidence of the Po-Valley on socio-economic variables in Italy (adapted from *AdB Po 2006*)

Socio-economic Variable under consideration	% of the total in Italy
Energy Consumption	48
Industry	37
Workforce	46
Cattle Breeding	55
Agriculture Production	35
Net Agricultural Surface	21
GDP	40
Population	27

## EPI instrument

- Law 36/94 (law Galli): integrated water supply and sanitation (WSS) service within Optimal Territorial Areas (ATO). ATO Authorities: regulation and planning, determination of the tariffs, commissioning the WSS service
- D.M. 1 August 1996 introduces the national tariff system. The reference tariffs are determined by the Normalised Method, meant to recover full financial costs of the WSS service: (new) investment costs, operational and management costs, and administrative and support costs.
- Referendum 12 June 2011 (third quest): abrogation of the art. 154 of the d.l. n. 152 del 2006, referring to comma 1 which determines that the tariff is determined taking into account the adequate remuneration of the invested capital.



## Implementation in the Region Emilia Romagna (RER)

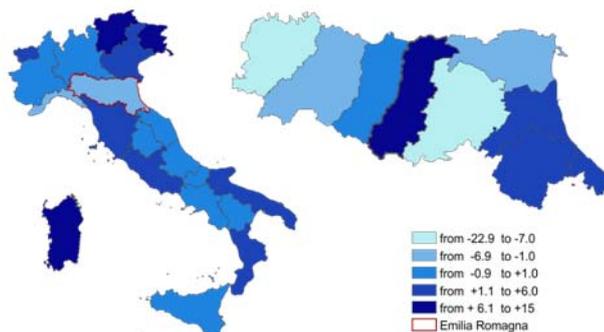
- Regional transposition of the law Galli: law n. 25 of 6 September 1999. (later modified and integrated with the regional laws n.27 of 21/10/2001, n.1 of 28/01/2003, n. 7 of 14/04/2004 and n. 10 of 30/06/2008)
- Economic incentive for water utilities to reduce water losses and improve the quality of the services; the so-called performance factor (PCn) determined by indicators related to the quality of the service (e.g. unplanned service disruption, customer satisfaction, call centre service), and environmental performance (e.g. water losses and per-capita water consumption)
- Introduction of the pro capita and social tariffs (ex DPGR 49/2006)

## Summary

- ↓ water abstraction (in average) and losses through the network
- ↓ pro-capita consumption
- ☺ WSS less fragmented, regulator closer to regulatee, step change towards cost recovery
- ↑ water prices (by 40-200% over ten years) ...
- ☹ ☹ are likely to further increase
- ☹ disproportional impact on poor and marginalised ...
- ☺ ... that can be tackled though different additional provisions and instruments such as pro-capita rate, social tariffs
- ☹ ☹ ☹ policy reform attempting to give higher role to private sector backfired



## Water withdrawal

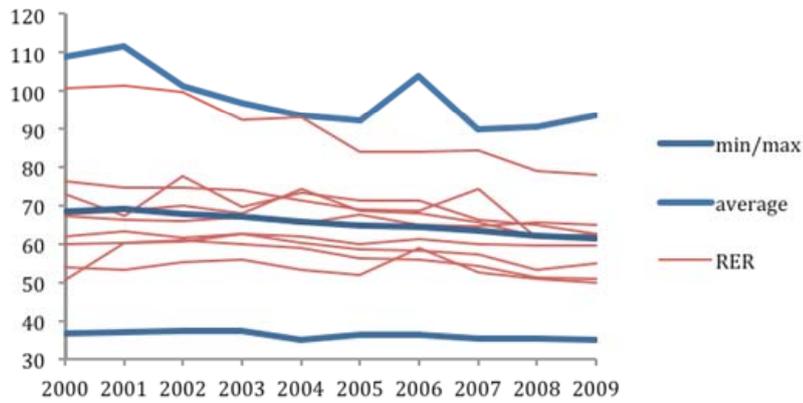


Change in water withdrawals per capita (per cent) between 2008 and 2005

Between 2005 and 2008, the water withdrawals declined by **1,6** per cents.  
With exception of Modena, the withdrawal declined in Emilia, and increased in Romagna



## Pro capita consumption



Domestic water consumption per capita trend from 2000 to 2009 in Italian district towns. Red lines are RER cities. Min-max and average (blue lines) are relative to all Italian district towns.

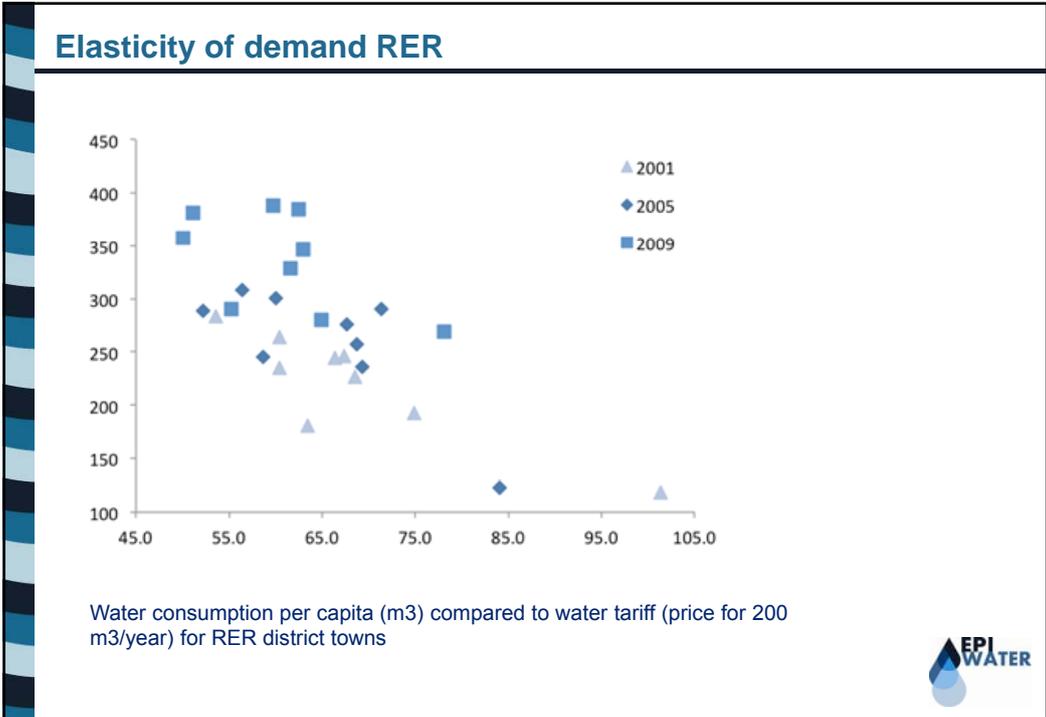
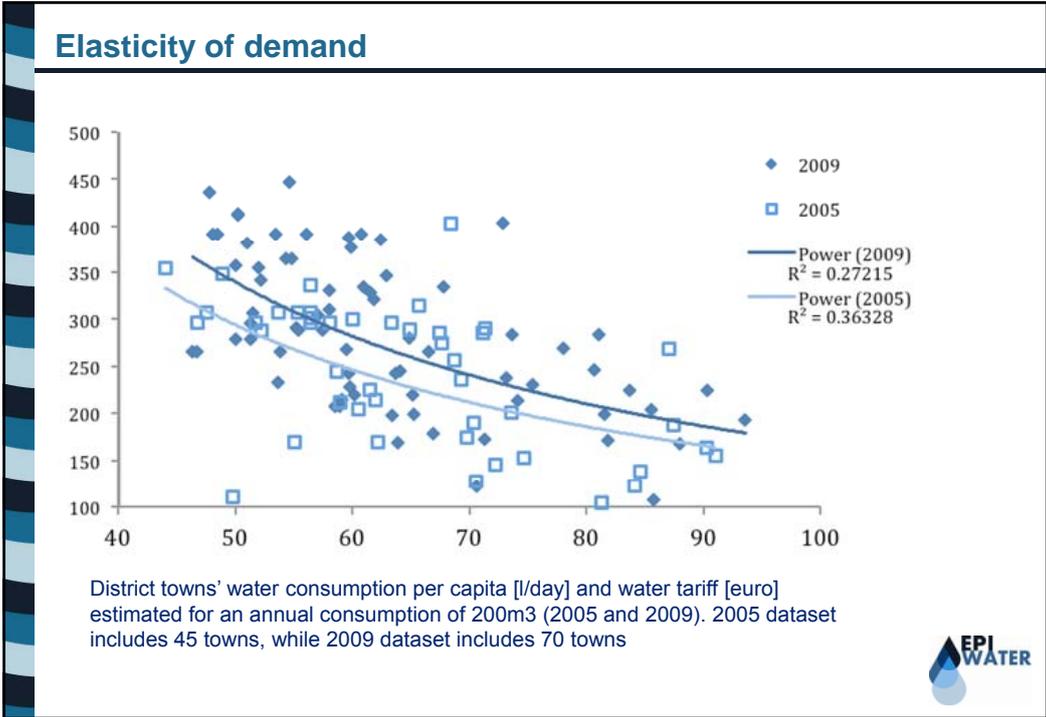


## Water losses

ATO	Water losses in water supply networks		
	2005 [%]	2008 [%]	$\Delta$ [%]
1 - Piacenza	23	20	-3
2 - Parma	28	27	-1
3 - Reggio nell'Emilia	28	26	-2
4 - Modena	29	28	-1
5 - Bologna	26	23	-3
6 - Ferrara	33	30	-3
7 - Ravenna	22	20	-2
8 - Forli-Cesena	22	18	-4
9 - Rimini	23	19	-3
Emilia-Romagna	26	24	-2

Reduction in water losses (difference between emitted and delivered water) in the water supply pipelines across ATOs in RER





	2001	2010	Difference
	<i>Euro</i>	<i>Euro</i>	%
<b>Italy*</b>	<b>135</b>	<b>225</b>	
Piacenza	67	205	205.97
<b>Parma</b>	<b>135</b>	<b>274</b>	<b>102.96</b>
Reggio Emilia	160	295	84.38
Modena	113	205	81.42
<b>Bologna</b>	<b>152</b>	<b>189</b>	<b>24.34</b>
<b>Ferrara</b>	<b>186</b>	<b>284</b>	<b>52.69</b>
Ravenna	173	267	54.34
Forli-Cesena	196	270	37.76
Rimini	155	239	54.19
Minimum value RER	67	189	182.09
Maximum value RER	196	295	50.51
<b>Medium value RER</b>	<b>149</b>	<b>250</b>	<b>67.79</b>

Average water charges (Euro per typical annual consumption of 160m<sup>3</sup>) in the Region Emilia Romagna (RER) in 2001 and 2010



## Distributional effects

Tariff for 200m <sup>3</sup> /year (€)			
ATO	Bologna	Parma	Poverty line
2 pers. Household	336.21	334.12	11,909.52
5 pers. Household	235.8	334.12	22,628.09

Pro-capita tariff introduced in Bologna in 2008

	Bologna		Ferrara		Parma*	
	No of households	% of all households	No of households	% of all households	No of households	% of all households
First income band	643	0.2	555	0.3	2,400	1.2
Second income band	2,150	0.5	1,593	1	7,100	3.6
total	2,793	0.7	2,148	1.3	9,500	4.8

Number of households- beneficiaries of social tariffs in 2009



## Investments: planne required

Comparison of the investments planed and necessary (€/capita/year)

	Flora	Publiacqua	Gori	AQP	Abbanoa	GEA	Irisacqua	UD	TS	MM
Planned inv.	67,4	11,9	30,0	31,6	25,1	37,8	61,1	20,5	53,3	36,0
Required inv.	150,5	54,4	56,0	51,9	-	86,4	105,2	108,7	52,8	58,1
Difference	83,1	42,5	26,0	20,3		48,6	44,1	88,1	- 0,5	22,1
Factor	2,23	4,56	1,87	1,64	-	2,29	1,72	5,29	0,99	1,61

Source: Masarutto



**Thank you!**

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