



OECD Expert Meeting “Sustainable Financing for Affordable Water Services: from Theory to Practice”

Abstraction charges in practice: The Brazilian experience

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Brazil

- Federative Republic
- 5 Geopolitical Regions
- 26 States + 1 Federal District
- 5564 Municipalities
- 184 millions inhabitants
- 8.5 millions km²
- 12 % of the world water availability
- 89% Domestic Water Supply
- 48% Sewage Collection
- 15% Sewage Treatment



Water Pricing Implementation Process



Legislation

1988 – New Brazilian Constitution

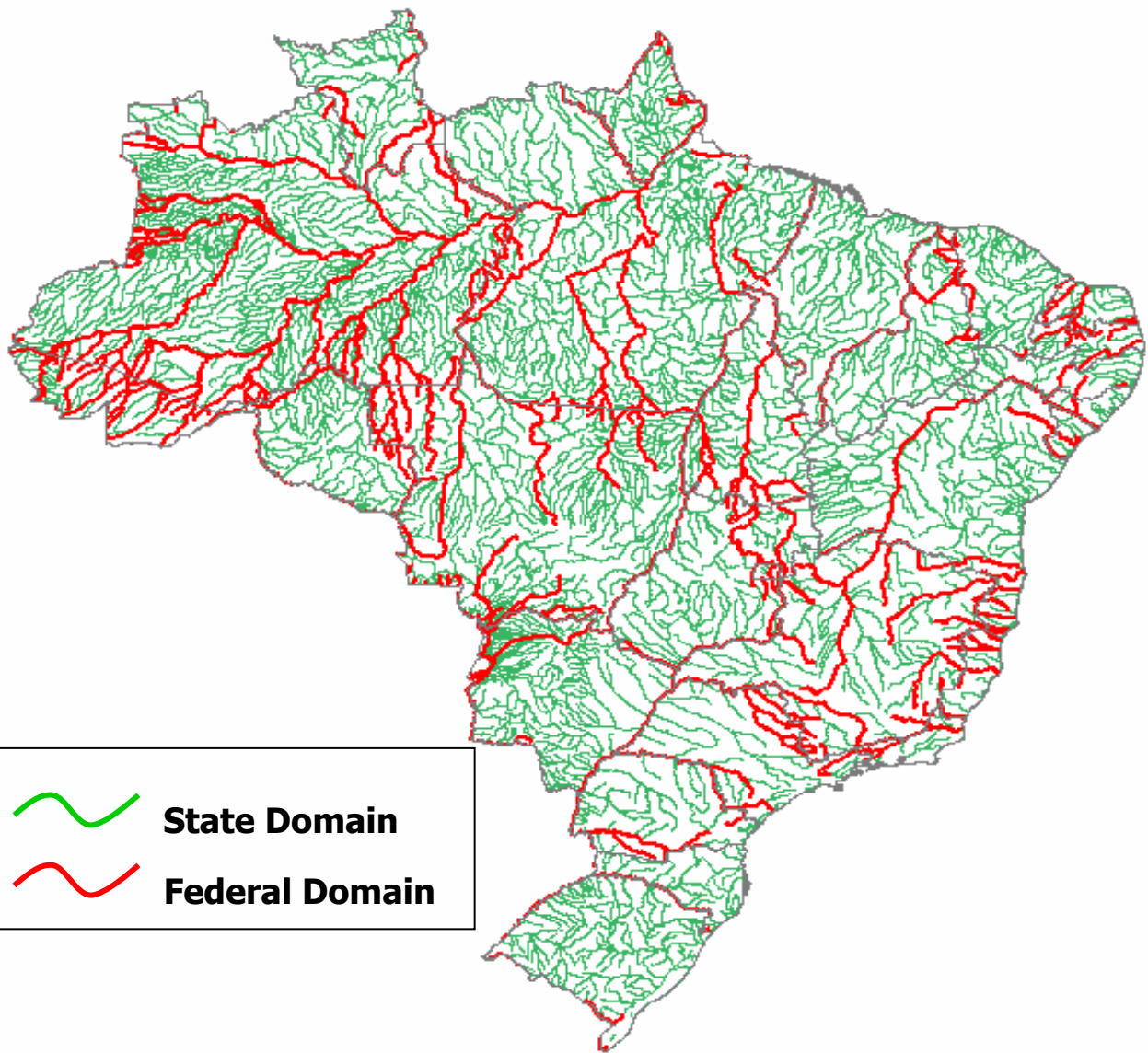
It establishes water as a public good that can be utilized based on the concession of rights to use. Granting concessions is an exclusive prerogative of the Union or State, giving the user only a right to its use.

1997 – Law 9433 – “Water Law”

It establishes the National Water Resources Policy, which defines, among other fundamentals, that water is a limited natural resource with economic value and creates the water pricing as an water management instrument.

2000 - Law 9984- “ANA’s Law”

It regulates the establishment of the National Water Agency (ANA), a federal entity to implement the National Water Resources Policy and to grant and control concessions in federal domain water bodies.



National Water Resources Management System

Federal Rivers

- 1 National Water Agency/ANA
- 1 Water Resources National Council
- 8 River Basin Committees Created

State Rivers

- 27 State Agencies*
- 27 Water Resources State Councils*
- 137 River Basin Committees Created

* under implementation

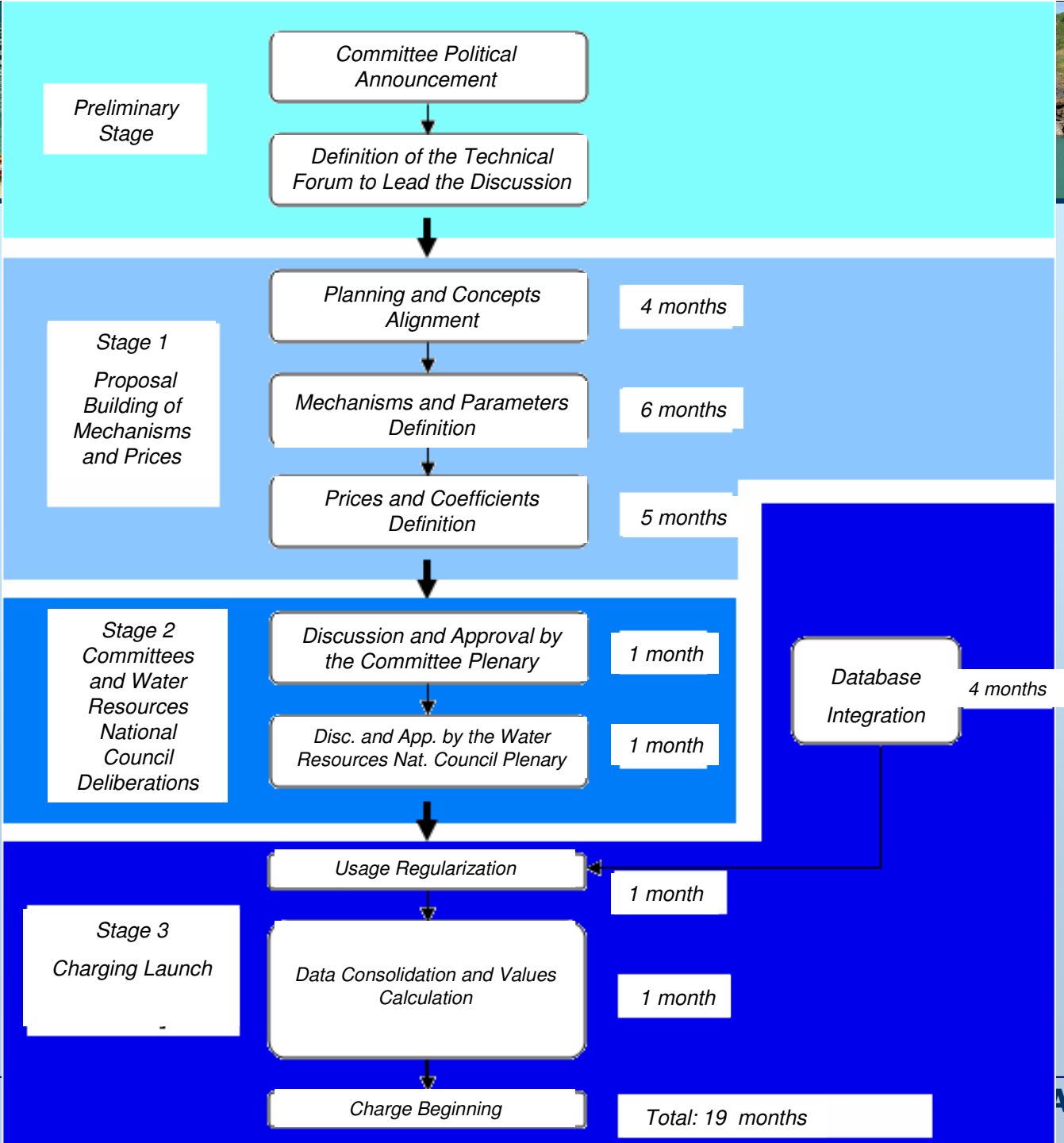
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Steps for the Water Pricing Implementation

2001 to 2003 - Paraíba do Sul River Basin

2004 to 2006 - Piracicaba-Capivari-Jundiaí (PCJ) River Basin





Water Pricing Mechanisms and Values



Basic Structure of the Mechanisms

$$\text{Charging Value} = \text{Calculation Base} \times \text{Unit Price} \times [\text{Coefficients}]$$

Abstraction	Bulk water abstraction volume	m ³ /year
Consumption	Bulk water consumption volume	m ³ /year
Disposal	Organic load disposal (BOD)	Kg/year

Water quality	0,7 - 1,0
Water use efficiency	0,05 - 0,5
Others	...



Charging Prices

Use	Term	Unit	Unitary Price (R\$)		Unitary Price (EUR)*	
			Paraíba do Sul	PCJ	Paraíba do Sul	PCJ
Bulk Water Abstraction (Captação)	PPU _{CAP}	1000 m ³	10,0	10,0	4,0	4,0
Bulk Water Consumption (Consumo)	PPU _{CON}	1000 m ³	20,0	20,0	7,9	7,9
Organic Load Disposal – BOD (Lançamento DBO)	PPU _{DBO}	1000 kg	70,0	100,0	27,8	39,7
Basin Reversion (Transposição)	PPU _{TRANSP}	1000 m ³	-	15,00	-	6,0

* 1 EUR = 2,52 R\$



Impact on Users

Sector	Average impact on expenses (%)	
	Paraíba do Sul	PCJ
Water supply and sanitation	2,20	1,32
Industrial	0,02	-
Rice Irrigation	0,16	0,67
Tomato Irrigation	-	0,02
Sugar cane Irrigation	-	0,51



Results: Income and Investments



Income

Sector	Income (R\$)			Income (EUR)*		
	Paraíba do Sul (2003 to 2006)	PCJ (2006)	Total	Paraíba do Sul (2003 to 2006)	PCJ (2006)	Total
Water supply and sanitation	16.668.488	8.950.021	25.618.509	6.614.479	3.551.596	10.166.075
Industrial	7.980.447	1.422.493	9.402.940	3.166.844	564.481	3.731.325
Mining	19.434	435	19.869	7.712	173	7.885
Irrigation and Animal Demand	11.000	9.102	20.102	4.365	3.612	7.977
Others	53.474	342.070	395.544	21.220	135.742	156.962
Total	24.732.843	10.724.121	35.456.964	9.814.620	4.255.604	14.070.224

* 1 EUR = 2,52 R\$

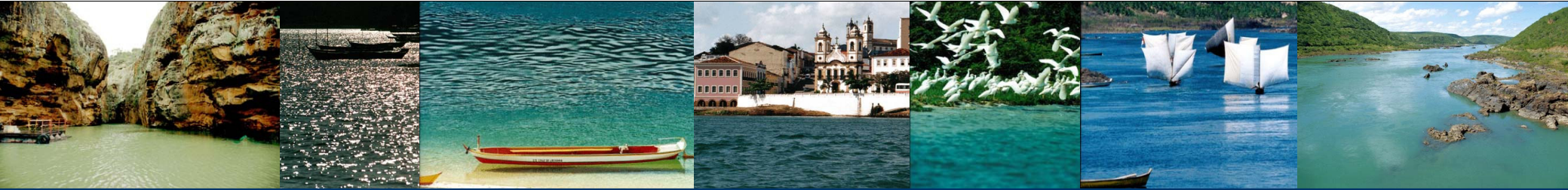


Investments

	Investment (1.000.000 R\$)			Investment (1.000.000 EUR*)		
	Paraíba do Sul (2003 to 2006)	PCJ (2006)	Total	Paraíba do Sul (2003 to 2006)	PCJ (2006)	Total
Sanitation	18,32	8,82	27,14	7,27	3,50	10,77
Operating costs and management support	3,62	1,30	4,92	1,44	0,52	1,95
Others	5,71	-	5,71	2,27	-	2,27
Total	27,65	10,12	37,77	10,97	4,02	14,99

* 1 EUR = 2,52 R\$

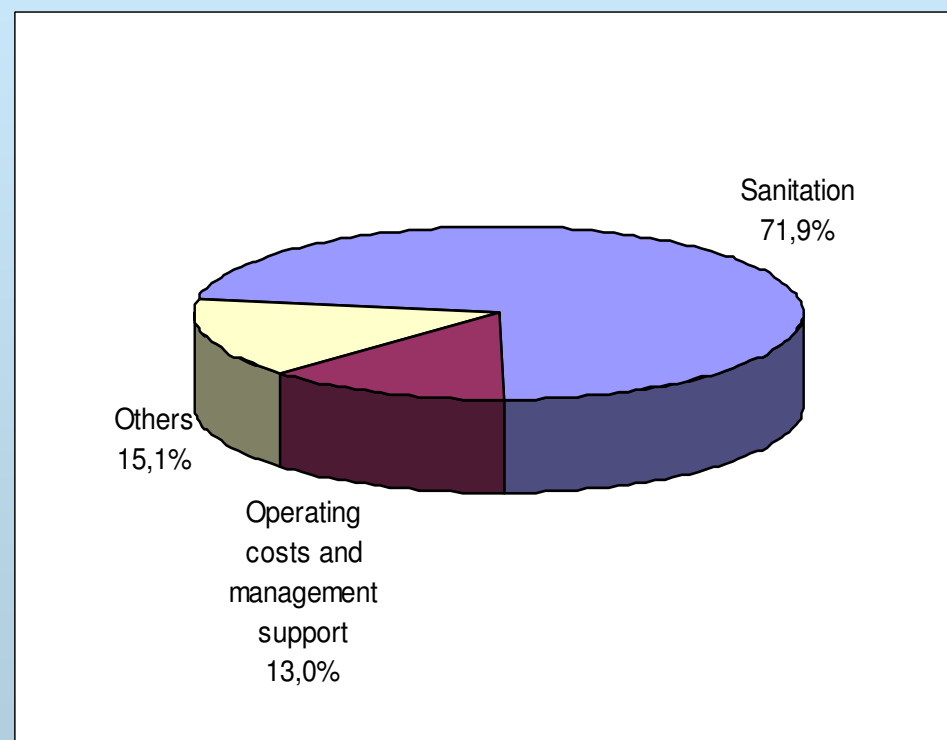
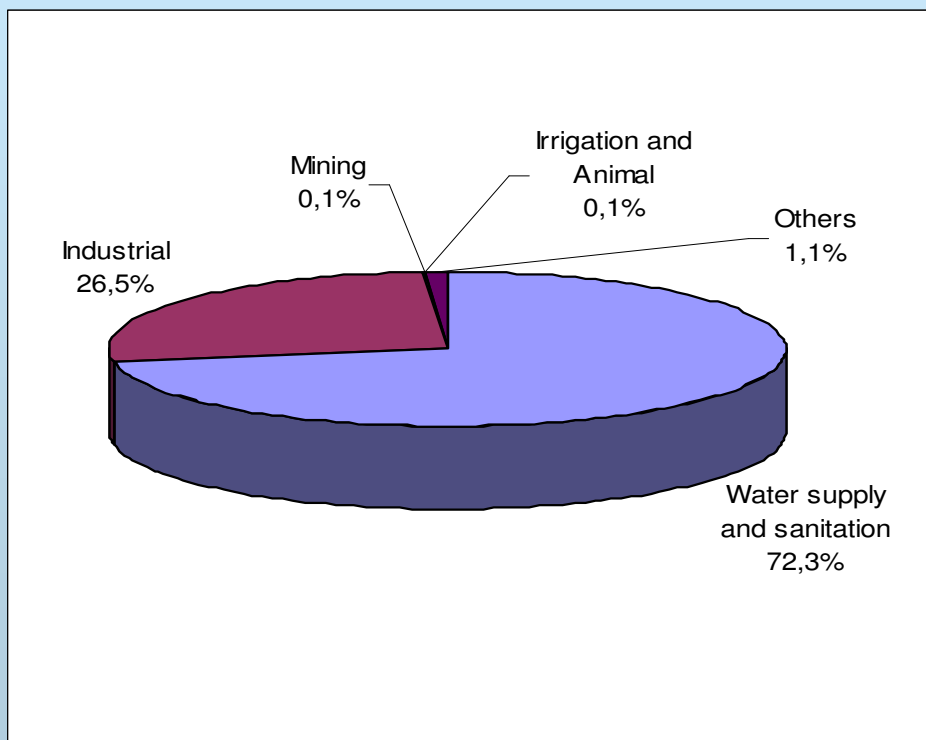
Total: 100 Projects - representing
around 10% of the total investment needed per year



Income

X

Investment



Considering Paraíba do Sul and PCJ River Basins from 2003 to 2006



Conclusions

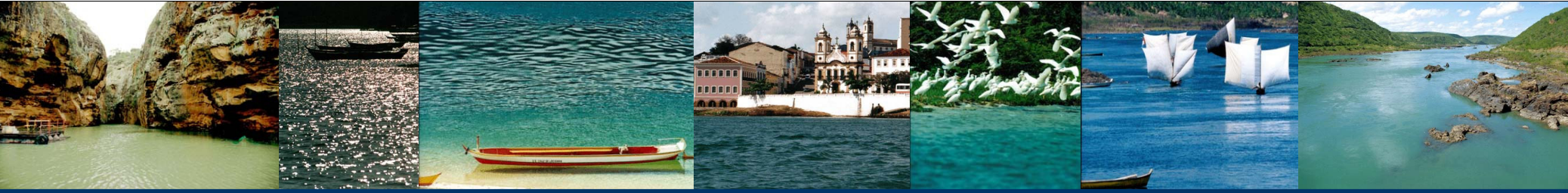


What are the key-factors for the Water Charge Implementation?

Legislation –The water management policy must be established by appropriate legislation which may define managing instruments like water permits and water pricing. But it's not sufficient. Political will and adequate institutions are fundamental for the implementation of water pricing.

National Water Agency (ANA) – The existence of an executive agency with technical qualification, decision-making autonomy and operational capability was essential for the implementation process. The partnership with Universities was also important to provide theoretical support to the discussions.

Committee – The creation of the basin committee was decisive for the process. It is the discussion forum to establish a common sense among the government, the civil society and the users and to legitimate the decisions. The committee provides the possibility of decisions decentralization and planning and management at the river basin level.



The water pricing can support the investments needed?

A part of it. With the water pricing implementation in other river basins (federal and state) and the increase of unit prices, as well as the beginning of other parameters charge, the financing capacity will increase.

But it won't be sufficient to cover all the investments needed.

So, what's the solution?

Seek for alternative funding sources like:

- Increase of counterpart from the local companies
- Government budget
- Financial yield from loans with water pricing money
- Other economic instruments



Thank you very much for the attention!

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