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WATER – PRIVATE OR PUBLIC GOOD?
Science & Public Trust

The Socio-Economic Dimension

Bernard Barraqué, DR CNRS

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Water is an economic good, indeed, but what kind?

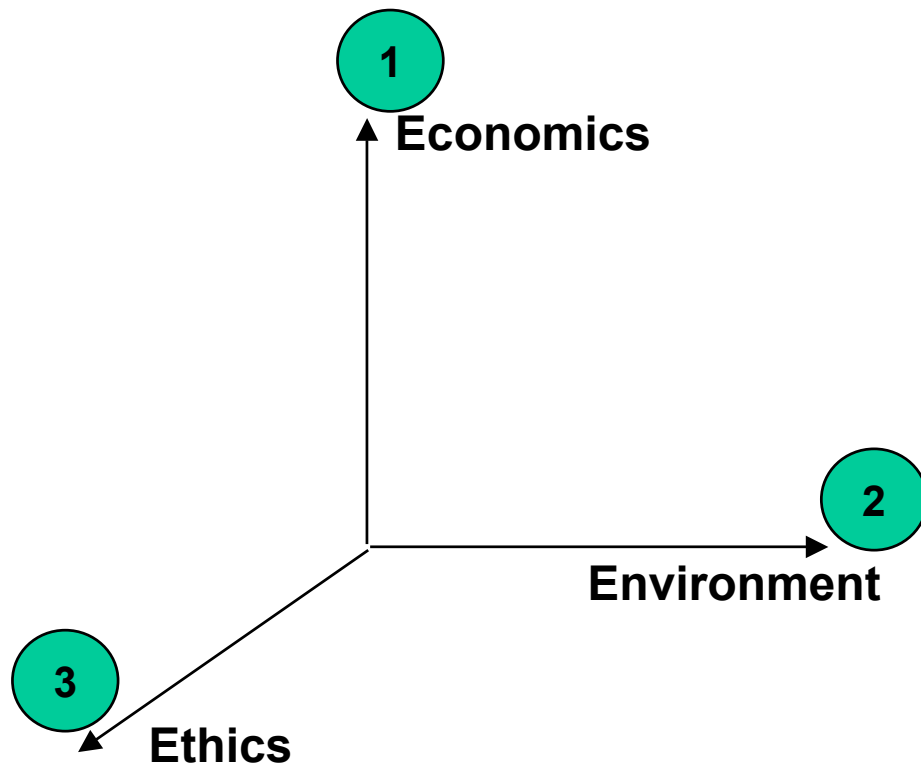
- We are not free to decide whether water is an economic good or not: Scarcity increasingly occurs; cost of infrastructure for offstream uses is always heavy; quality problems can be solved either through treatment, or conservation, re-allocation ...
- But, conversely to what many people think, it does not mean that water is a market good, and that poorer people would die of thirst under 'privatisation' ...
- For economists, demand management is a matter of pricing. For us, it is a matter of controlling the dynamic interaction between supply and demand, to reach a higher level of sustainability

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Water : from supply and needs, to various demands

- We must first quit the 'hydraulic mission' vision, which makes water a *need* that allows State engineers to decide for water users what is good for them
- The word demand implies that water users have a capacity to speak for themselves...
- In developed countries, water as a resource and water as a service are subjected to very different rules (and economics)
- For poorest population in developing countries, the right to water equates the first water right, so picture is blurred

Europe: The WFD sketched with the 3 E's



(Correia & al. 1999)

The 3 E's is the Sustainability Definition of the United Nations

1 – Getting closer to full cost recovery: calculate balance

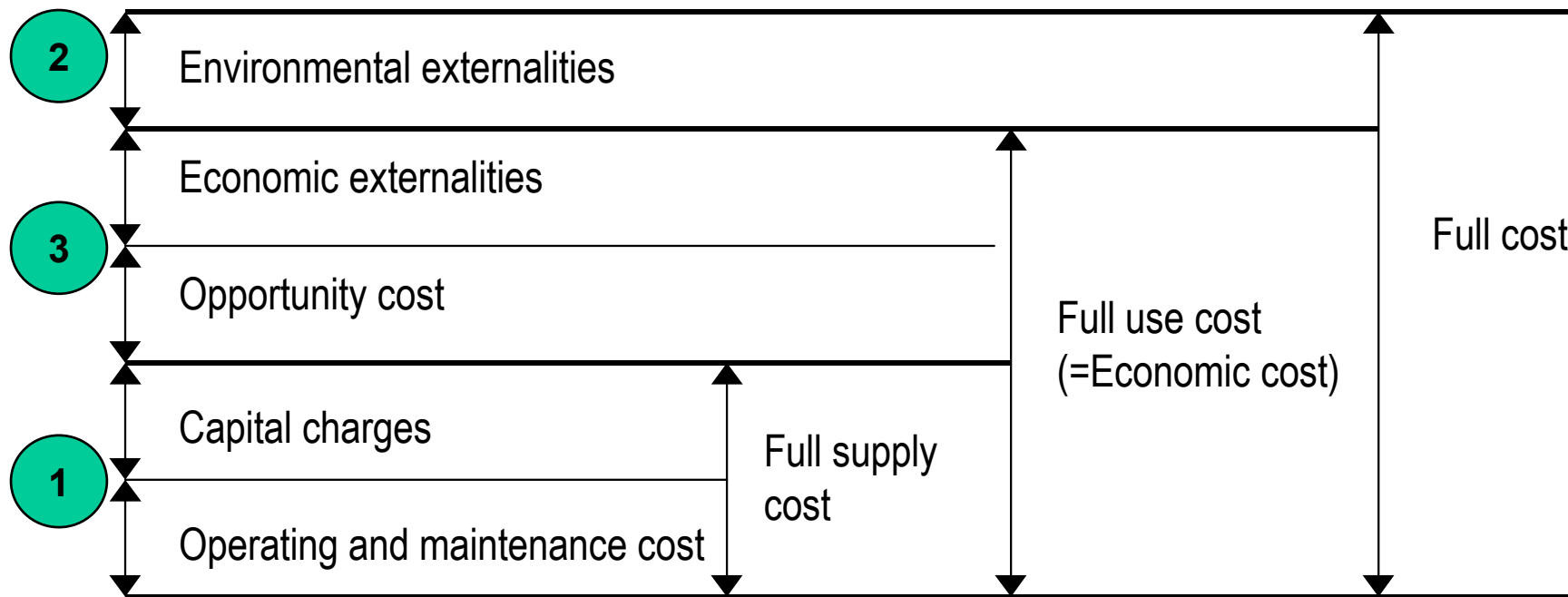
2 – Clean Aquatic Environment in 15 years, except strongly modified bodies of water

3 – Public Participation, transparency, equity

If we could quantify, they would represent the 3 parts of full cost ...

The notion of *Full cost pricing*

(« ideal translation » in economic terms of the 3 E's)



(From P. Rogers & al. GWP-TAC paper)

Water vs Typology of Collective Goods

(from Ostrom V. & Ostrom E., 1977)

Rivalry in Consumption

		yes	no
Excludability of Benefits	yes	Private or Market Goods	Toll or Club Goods
	no	Common Pool Resources	Fully Public Goods

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Water vs Typology of Collective Goods (contd.)

Depending on situations and types of uses, Water can be in any box!

+ Economists disagree

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Economics & Natural Resources

Water is a renewable resource, Oil & Gold are minerals !

- Neo-classical answer to scarcity by water markets
- External costs (Marshall) & their taxation (Pigou): regulator needed
- Coase: less State involvement, more bargaining
- Tragedy of the Commons (G. Hardin): privatisation only solution
- Answer by S. Ciriacy Wantrup: natural resources economics
- The issue of transaction costs: Common property management institutions (Ostrom)

**But there are always pre-existing rules, usually non-appropriative:
In Europe, IRBM = *watershed partnerships* under Govt. control**

Zoom on neo-classical school and beyond

- ‘Radical’ school: supply/demand balance, opportunity & external vs social costs (hedonist method or contingent valuation). Limitations of these methods (Massarutto, Faburel)
- Applied school: introduction of incentive tools, earmarked levies & ecotax supplementing legal rules; double-dividend theory. But information asymmetry & issue of ‘preliminary anomaly’.
- Macro-economic school (Capital-Labour-Nature). Decoupling economic development & resources. Valuation of services rendered by nature. Bio-economics (Passet, Boulding, Gorgescu-Roegen) & systemic approaches. Limited operationality

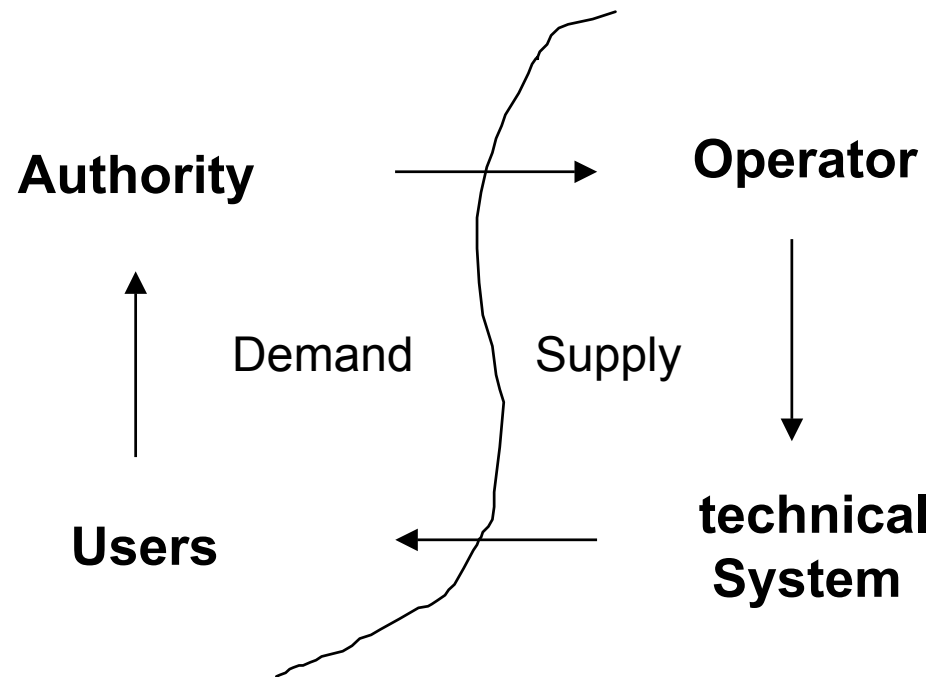
The Specific Issue of Public Water Services

- In history, public fountains are public goods (non-excludable, non-rival), for legal and institutional reasons. Today, some developing countries are experiencing fountains as club goods
- Conversely, piped water under pressure always considered somewhere between public and club good.
- The real issue is that initial investment accounts for 80% of price but depreciates over more than 50 years. **No banker accepts!**
- Accordingly, until almost everybody was connected, investment was paid by local, or (indirectly) by national taxes
- Therefore full privatisation impossible (unsustainable), and Europe shows all sorts of PPP, + maintained direct labour instead

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Past Water industry: Civil & Sanitary Engineering

Supply side



More water, better quality, unsustainable loop

Environmental response to crisis

- **Stage of quantity and of quality were on the supply side**

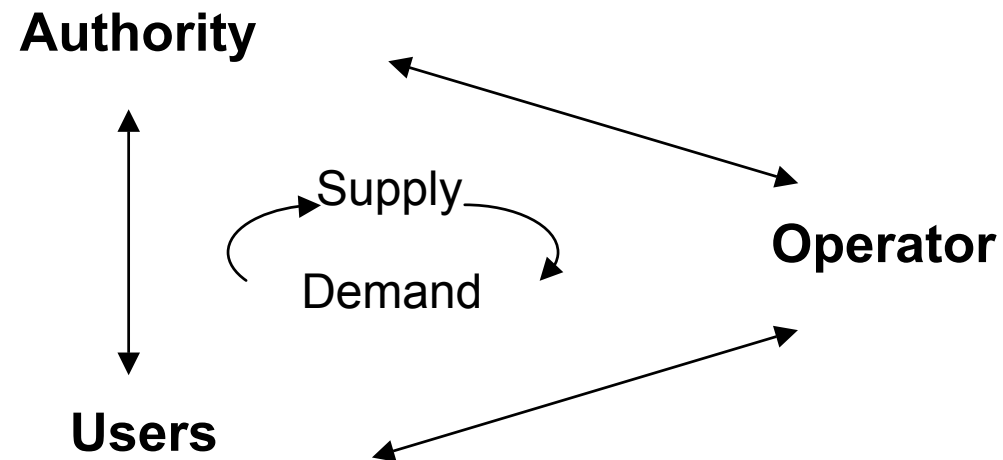
The crisis then leads to:

- **Stage of Territorial Heritage and Environmental Engineering**
demand side management;
water conservation;
water allocation flexibilisation, recycling;
land use policies
From farmer better than from further!
- **But policies of the previous ages are still available:**
typically, sea water desalination

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Environmental engineering perspective

Demand side



*Is Demand side just a matter of full cost pricing ?
Or of a public debate around possible innovations?*

Demand Management: what it means

- The first idea is to conserve water in each sector: the cheapest water is often the one available through conservation
- The second idea is to adopt supply technologies which are cheap investment, but costly in O&M, because it is easier to pass on their costs to water users, and it generates economies
- The third idea is to re-allocate water between types of users either temporarily (drought) or permanently (scarcity)
- The new role of Government is to be the 'Guardian' of water resources to protect the aquatic ecosystems and the ethical dimension of water allocation.

Pigou vs Coase in practice

- Pigovian internalisation based on individual responsibility: polluter-pays is framed by « principal-agent » type of relationship
- Coasean model based on transactions between stakeholders, with direct compensation schemes
- The first model corresponds to a « sector-by-sector » type of full cost recovery, while the second would rather lead to « regional » type of cost recovery, with cross subsidies (*Wasserpfennig*)
- Today in NW Europe cost recovery is incomplete, but bill recovery is high. Self financing capacity is then rather good.
- But *Public Confidence* is vital, and might be questioned by excess of commodification of water services / resources. **Hence the need for institutions for collective learning processes.**

Conclusion 1

- There is a global issue about water as an economic good, which tends to confront supporters of State management and those of water markets. **But economics and law do support each other**
- Europeans will certainly not privatise their water resources, but they largely chose various forms of PPP for service provisions
- But they also reduce the role of central governments, and at the same time they redefine water as a common property to be managed under the subsidiarity principle
- This gives rise to complex multi-level governance, with new territories allowing for different ways of politics/policy making, e.g. river basin
- Difficulty, but need to bring water policy closer to stakeholders, and eventually to lay citizens. **Water price not cause but result!**

Conclusion 2

- The French *Agences de l'eau* are not a universal model, but the lesson is the need for institutions where stakeholders meet and decide to (re)-allocate water and mutualise economic impacts
- Ongoing debate between State-liberal model with central government or independent authority using taxation, and more subsidiary approaches using economic incentives to integrate
- Economic analysis constrained by heavy and long term investment which introduces lumpiness effects. **This is why Concession fails!**
- A lot of work ahead for economists to give a better meaning to the notion of water as economic good.

Thank you for your Attention!