

Economics of water resources

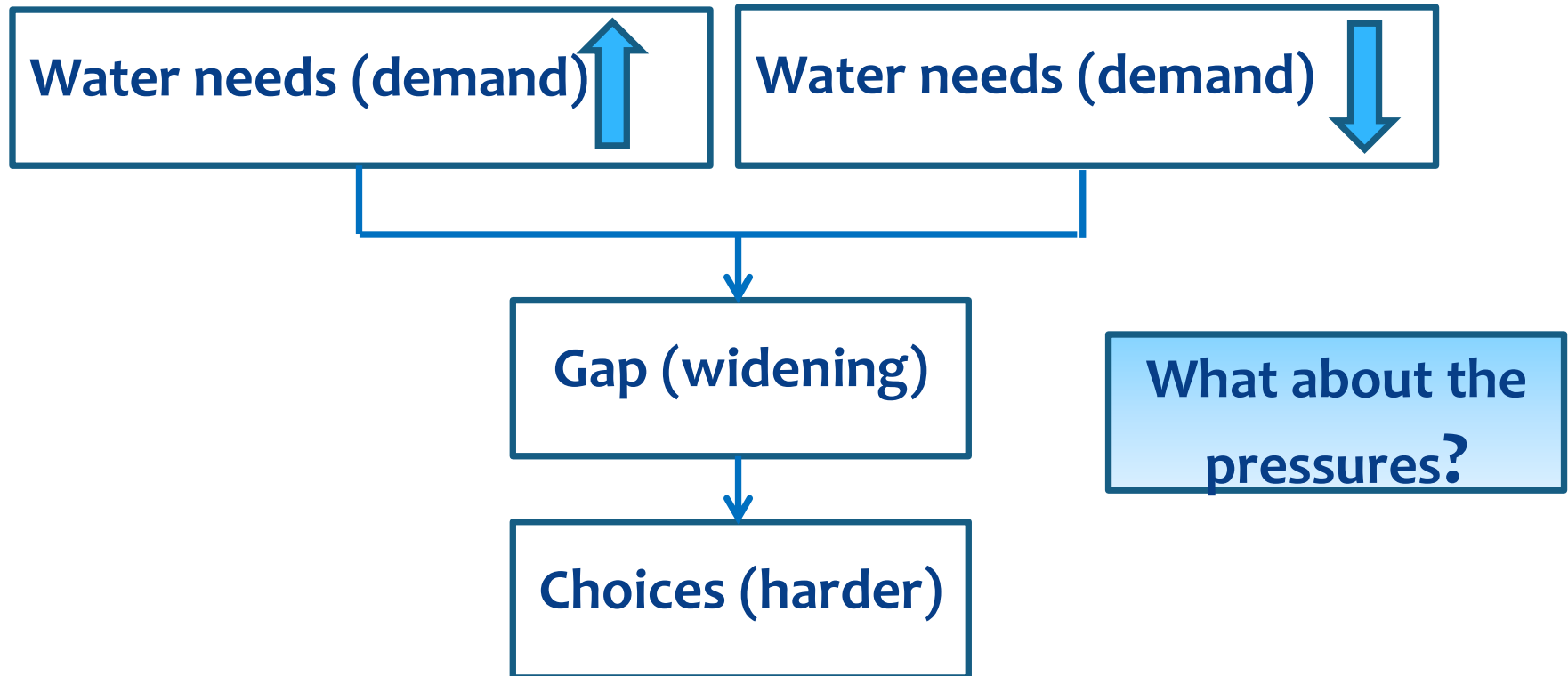
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Outline

- * **Background**
- * **Economic assessment techniques**
- * **Economic value of water resources**
- * **Water pricing**

Background (1)

We always start with some facts:



Background (2)

From an economic perspective:

- * Choices about which sector will get how much water at any point in time**
- * Choices have to be made on the merits of different alternatives (Costs vs. Benefits)**

Background (3)

To reach an efficient decision on water resources allocation, choices (decisions) can be made:

- * From an individual perspective by compare between revenues vs. expenditures**
- * From a societal perspective by comparing overall costs and benefits to society (if not ill-informed decisions)**

Economic assessment techniques

1. **Cost effectiveness analysis**
2. **Cost-benefit analysis**

1. Cost effectiveness analysis

- * **Cost effectiveness analysis is a way of choosing among various policy options when the policy outcome is taken as given**
- * **According to this technique, the options are ranked according to their cost. The analysis seeks to identify the least-cost policy option for achieving the goal**

2. Cost-benefit analysis

- * It attempts to assess alternative policy options in terms of their costs and benefits, both direct and indirect
- * It intends to identify the option which if deployed could provide the best possible valued uses in terms of goods and services they create

Economic assessment techniques (2)

For water the story is different (more difficult) for a number of reasons:

- * Domestic water provision is a natural monopoly**
- * No effective markets**
- * Water use and disposal involves “ + & - externalities”**
- * Domestic water provision is a human right**

Economic value of water resource

- * Water is an asset that provides a wide range of benefits and services that people value.
- * The most important question:
 - If water is so widely recognized as the most essential substance to sustain life, why then is it among the most undervalued resource in the world?

Economic value of water resource (2)

- * When we talk about costing and pricing water, the most ambitious approach is cost recovery
- * This means that we assume that water has got no value that its value is

Zero

Water uses determine water value



Economic value of water resource (3)

- * The real value of water is related to the services it provides. This means that this value is not fixed over time and place.

Final product	Intermediate product	Part of the ecosystem
Human life and health	Input in production processes	Final product

Water value: considerations

- * **The value of water must be related to:**
 - * **“who” is using the water and**
 - * **“what” is the end use of the water because each use has a unique value.**
 - * **“where” water *in place* has value and delivers a wide range of values to society.**
- * **Need for information on users, uses, qualities, and quantities necessary for use, and value or worth for the water**

Economic value of water resource (4)

- * ***Why do we need Economic value for water?***
- * **For policy-makers:**
 - * **The valuation of water is of critical importance for water management and planning.**
- * **For producers and consumers:**
 - * **As a signal to decide rational demand and supply (low pricing sends the wrong signal: the water is in abundance).**

Economic value of water resource (5)

- * Failure to adequately account for and incorporate water values into the decision-making process has resulted in unanticipated negative consequences on:**
 - * Socio-cultural;**
 - * Economic; and**
 - * Environmental outcomes**

Water pricing (1)

We talk about awareness and awareness raising. But awareness is not only about knowing, it's knowing and acting

- * At the same time no signals are being sent to different users to support the conservation argument.**

Water pricing (2)

Water pricing is not the ultimate solution, but a part of an integrated framework for water management

- * Equity: provision of basic human needs at highly subsidized prices (block pricing).
- * Efficiency: take into account of all costs and benefits involved
- * Effectiveness: charging for actual water consumption

Ignoring economic value of water

- * Sometimes people talk about need to reallocate water used in agriculture to other, more profitable uses. Again by doing this we're committing similar mistakes.
- * The negative externalities in such a case are huge
 - agriculture provides jobs (direct and indirect); and
 - supports food security and the environment.

Thank you