



Basics of Economic Instruments for WDM

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Shaping sustainable futures

Costs, values, prices and tariffs of water

“Water as an economic good”

■ Cost of water:

- technical,
- economical,
- social, and
- environmental components

NB *Economic* externalities are assumed to be measurable, contrary to *environmental* externalities

Environmental Externalities		Full Economic Cost	Full Cost
Economic Externalities			
Opportunity costs			
Capital Charges	Full Supply Cost		
O & M Cost			

Cf. private cost vs. social cost

■ Value of water:

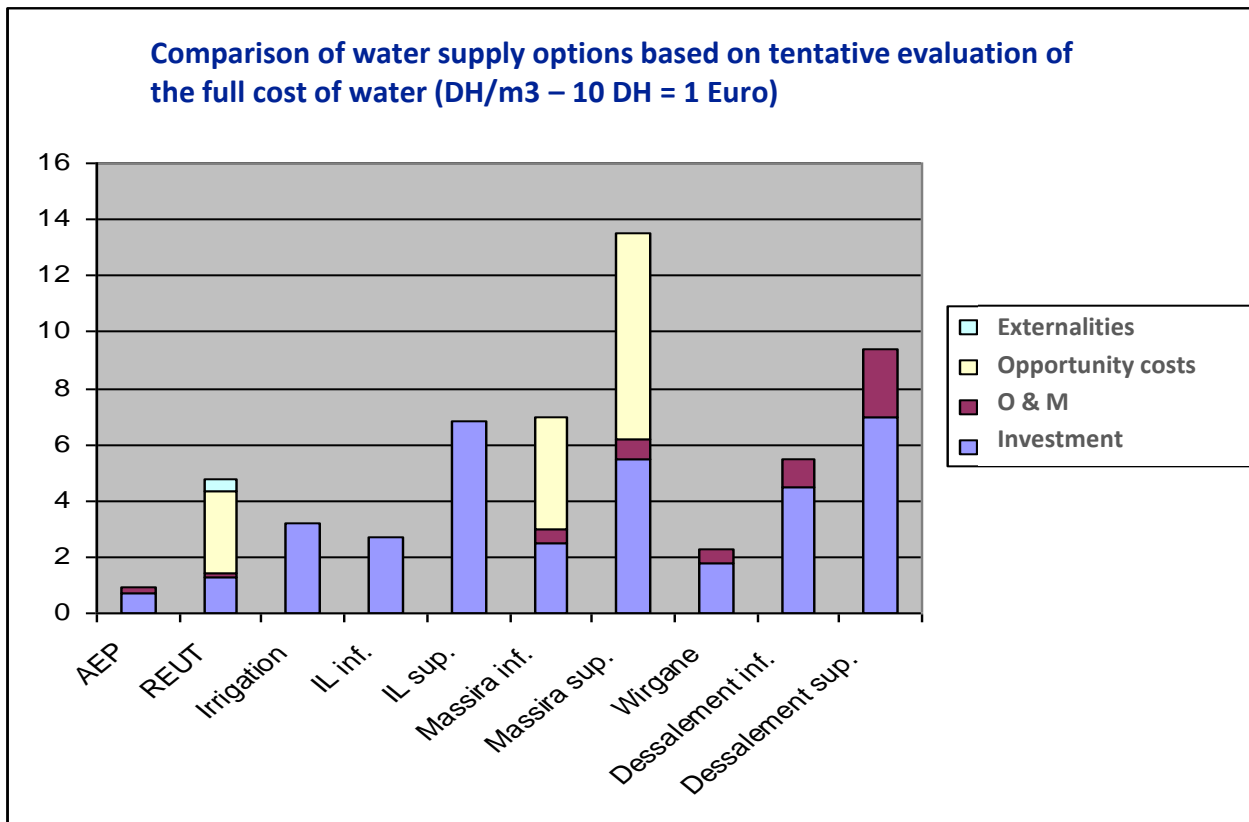
- Direct use value: as a **final** consumption good for domestic water; consumers' **utility**
- Direct use value: as an **intermediary** consumption good for commercial, industrial, tourism and agricultural water; producers' surplus (i.e. **net revenue**)
- Indirect use value (livestock watering, micro-hydroelectricity, tourism)
- Non use value/intrinsic value: amenity value

Intrinsic Value		Economic Value	Full Value
Adjustment for Social Objectives			
Net Benefits from Indirect Uses			
Net Benefits from Return Flows			
Direct Value to Users of Water			

Cf. private value vs. social value

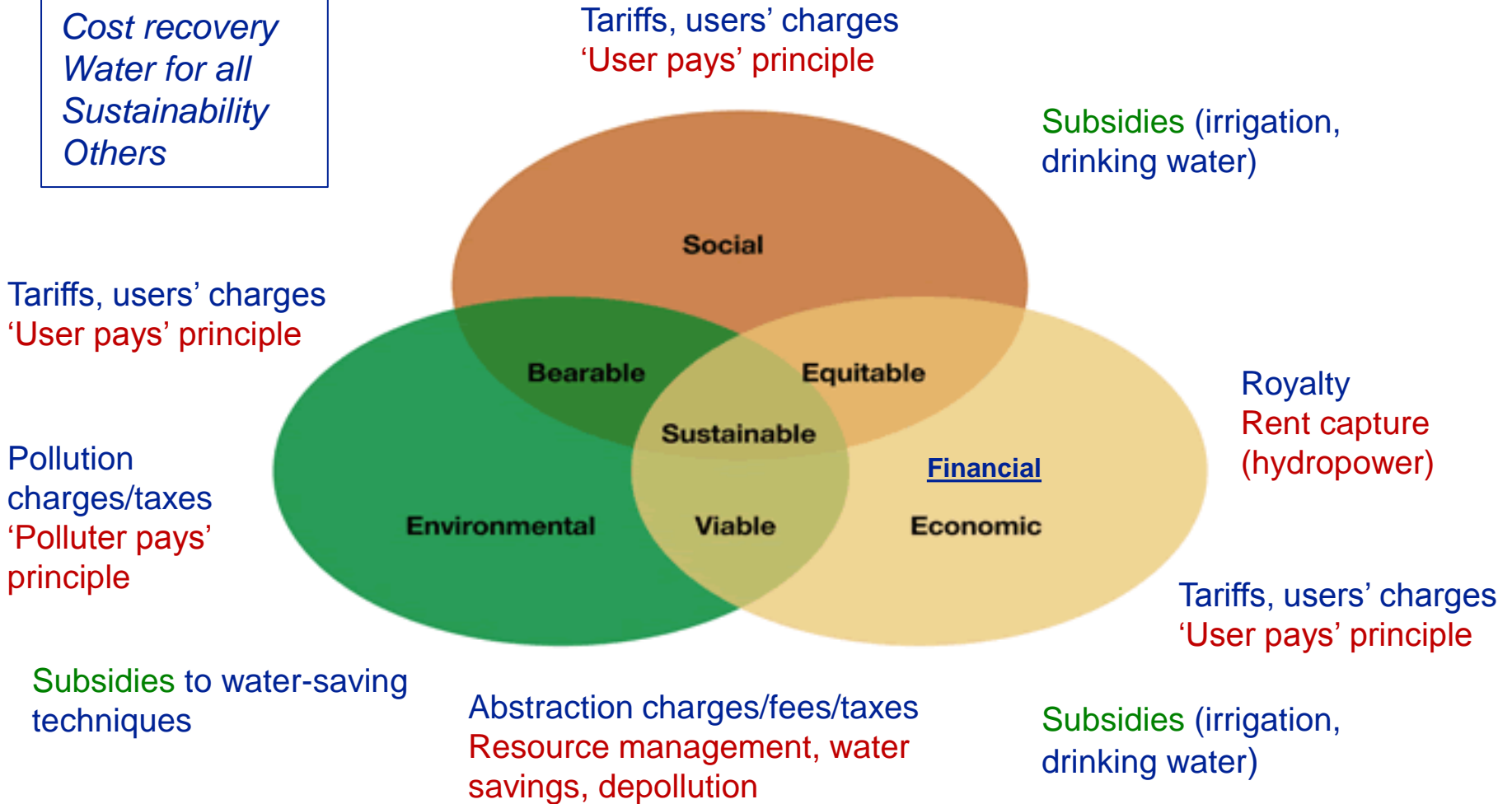
Taking account of opportunity cost

The mere accounting for OC **makes a big difference** in the ranking of water supply options (SCP and AFD, 2008)



Tariffs, taxes and subsidies are of different nature/serve different purposes

Cost recovery
Water for all
Sustainability
Others



Costs, values, prices and tariffs of water

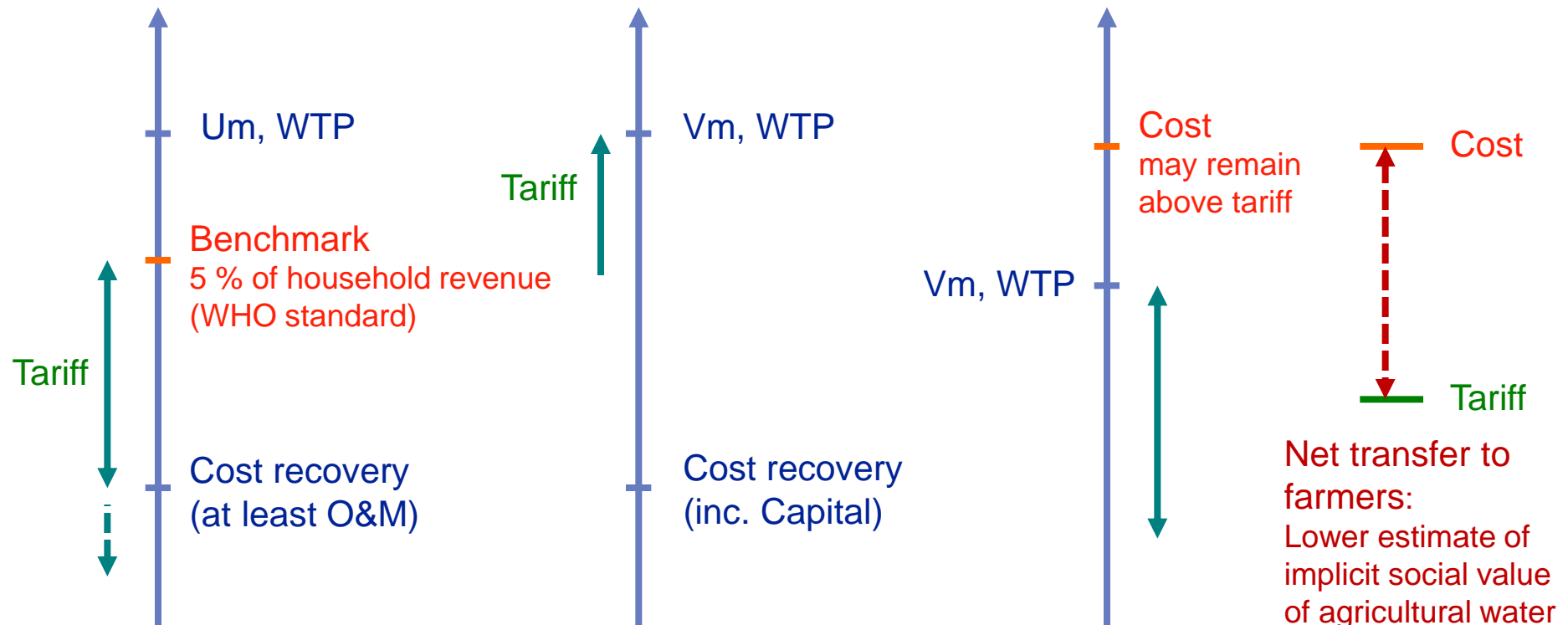
“Water pricing”, or: setting an optimal tariff

(which means: “as least sub-optimal as possible”)

Domestic water
(and sanitation)

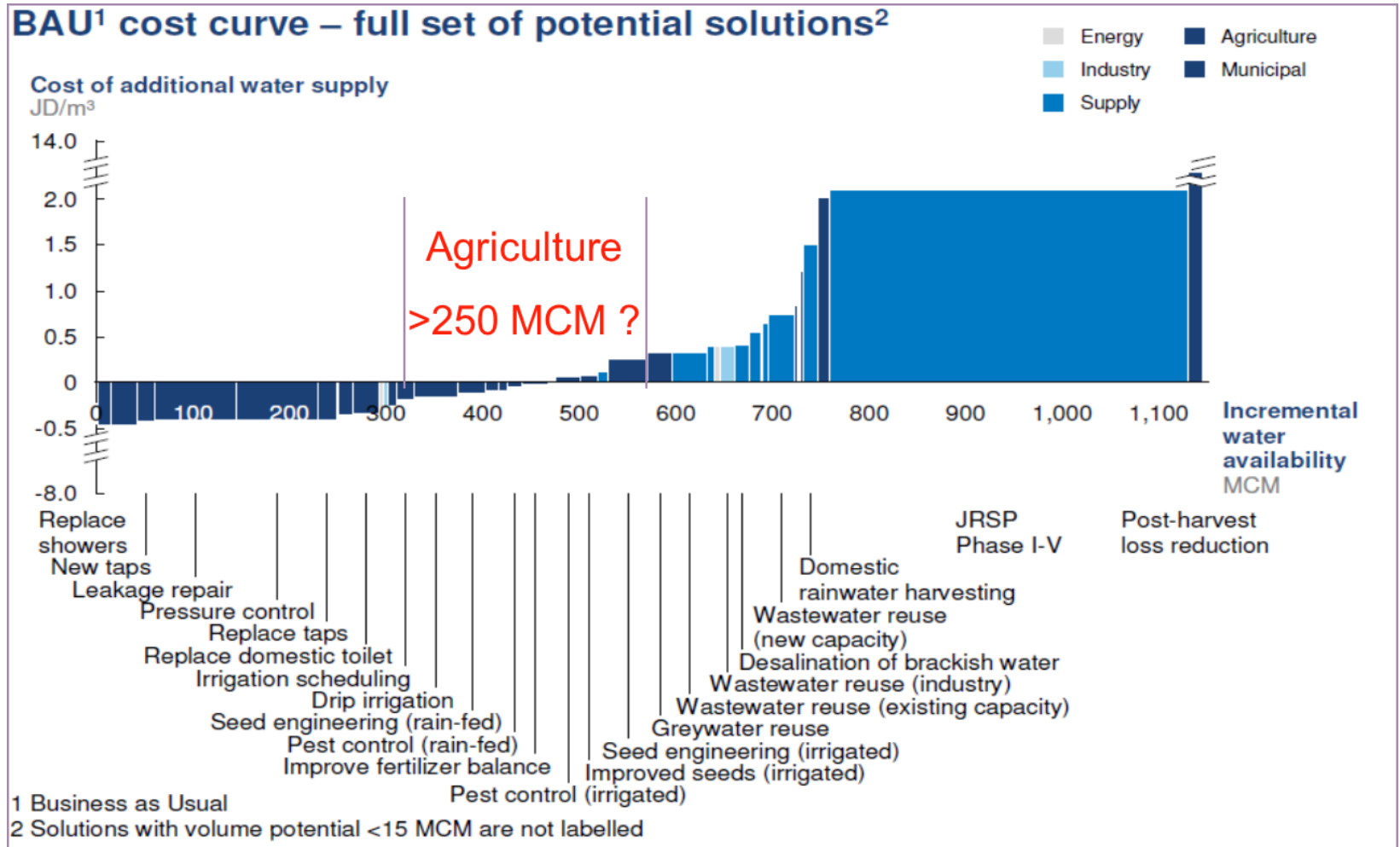
Industry and tourism
Commercial uses

Agricultural water
Economic/social purposes



Extra charges for social or environmental purposes may be added

Economic approach to choices in water supply/mobilization/savings



Contribution and potential of economic instruments for WDM

- **Mixed** results and achievements so far:
 - Mainly focused on contribution to **cost recovery and access to drinking water**
 - **Better use of water for agriculture** through subsidization of water saving irrigation techniques
 - Less good at **saving water**
- But do not throw the baby out with the bathwater
- **Get basic incentives right**: first, carefully **review subsidies** including outside water sector (energy, agriculture) – tackle ‘perverse’ subsidies with harmful effects on water resources
- **Clarify purposes and objectives**: you cannot have your cake and eat it
- **Go further with already efficient instruments**: in particular, consider raising tariffs for **commercial uses** of water with high marginal value, **aquifer withdrawals** and **recreational domestic uses** with high **willingness (or capacity) to pay**
- **Think about - and test - innovative instruments**: water markets, payments for environmental services, groundwater management contracts





Thank you for your attention!

Shaping sustainable futures

Public Policies: Typical Intervention Effects

Actions:

- Material: infrastructure investments, input supply...
- Institutional: laws, regulations, contracts, taxes/incentives...
- Informative: awareness, training

Result in changes (effects) in:

- Physical environment, production and consumption functions
- Rules of the game
- Behavior

And further changes (impacts) in:

- Production and consumption patterns
- Distribution of goods and services, revenues, rights
- Stakeholder interactions