

A Global perspective on Water Supply & Sanitation: Current situation, challenges & future trends

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Outline

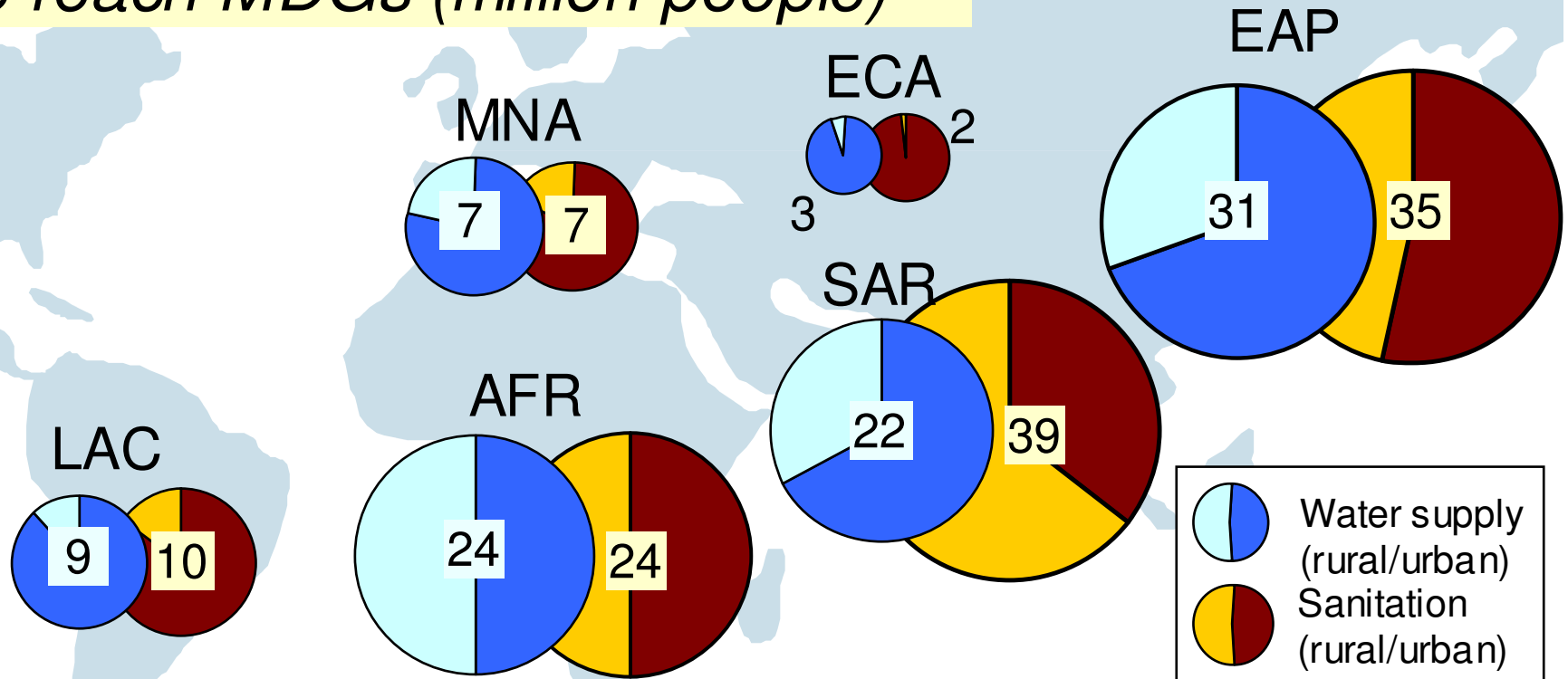


- Challenges
- Current situation & trends
- Responding to trends and sanitation services

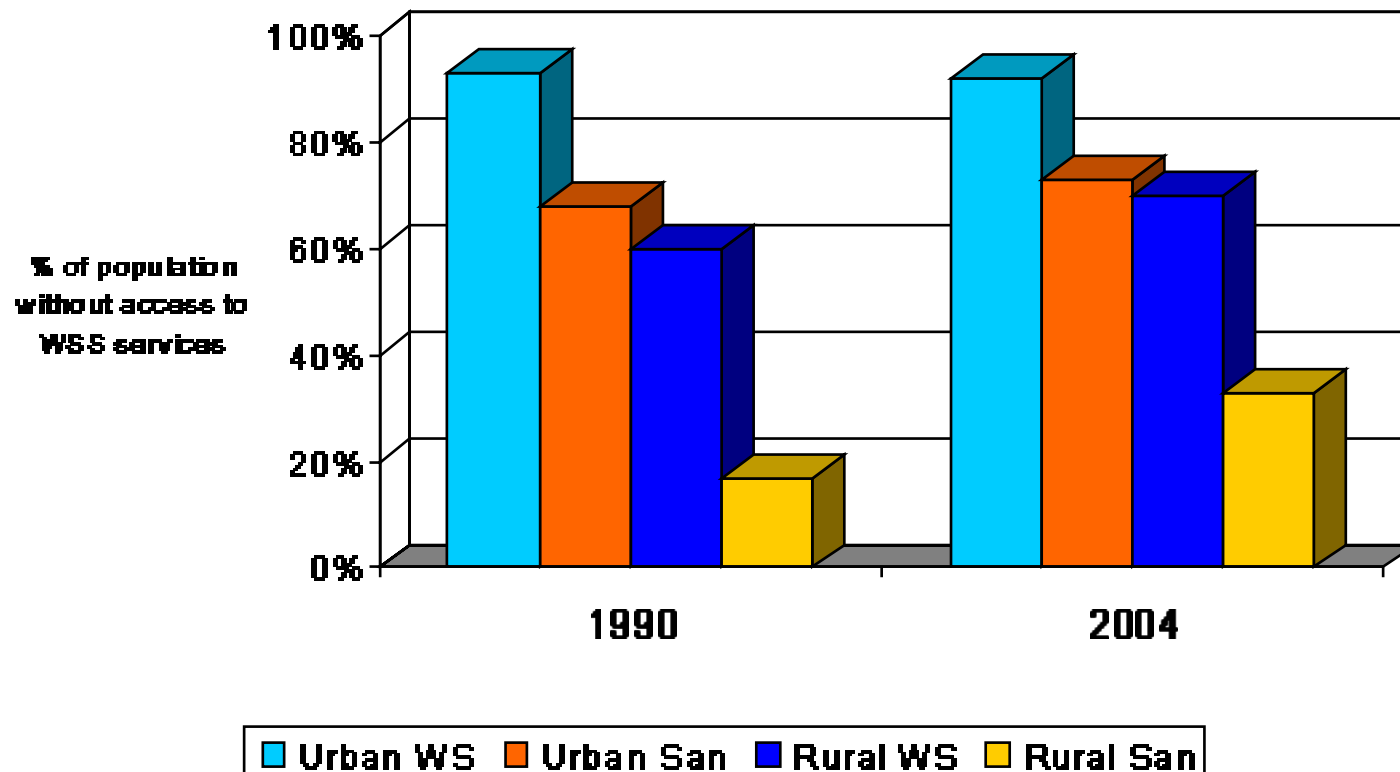
& improving water

The challenge to reach the MDGs

Population to be served each year to reach MDGs (million people)



The MDG Challenge: Scaling up is far from easy



Source: Water, Electricity and the Poor. who benefits from Utility Subsidies? World Bank 2005

The challenge – beyond the numbers

Official statistics use proxy indicators – proximity to *hardware*...
.....far fewer countries *on track* for:

Health benefits?



Girl's school enrolment?



Environmental sustainability?



Sustainable access to *safe* drinking water and *adequate* sanitation
key to **improved** health, education, and environmental outcomes

Outline



- Challenges

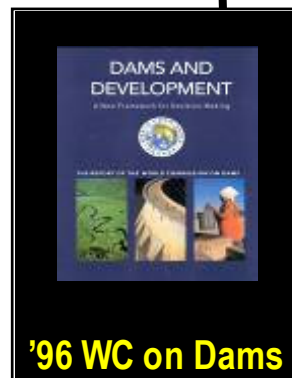
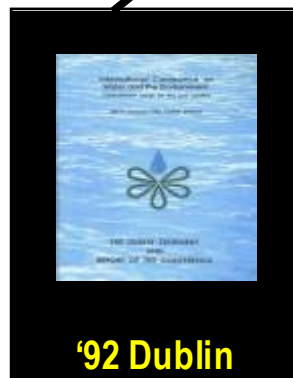
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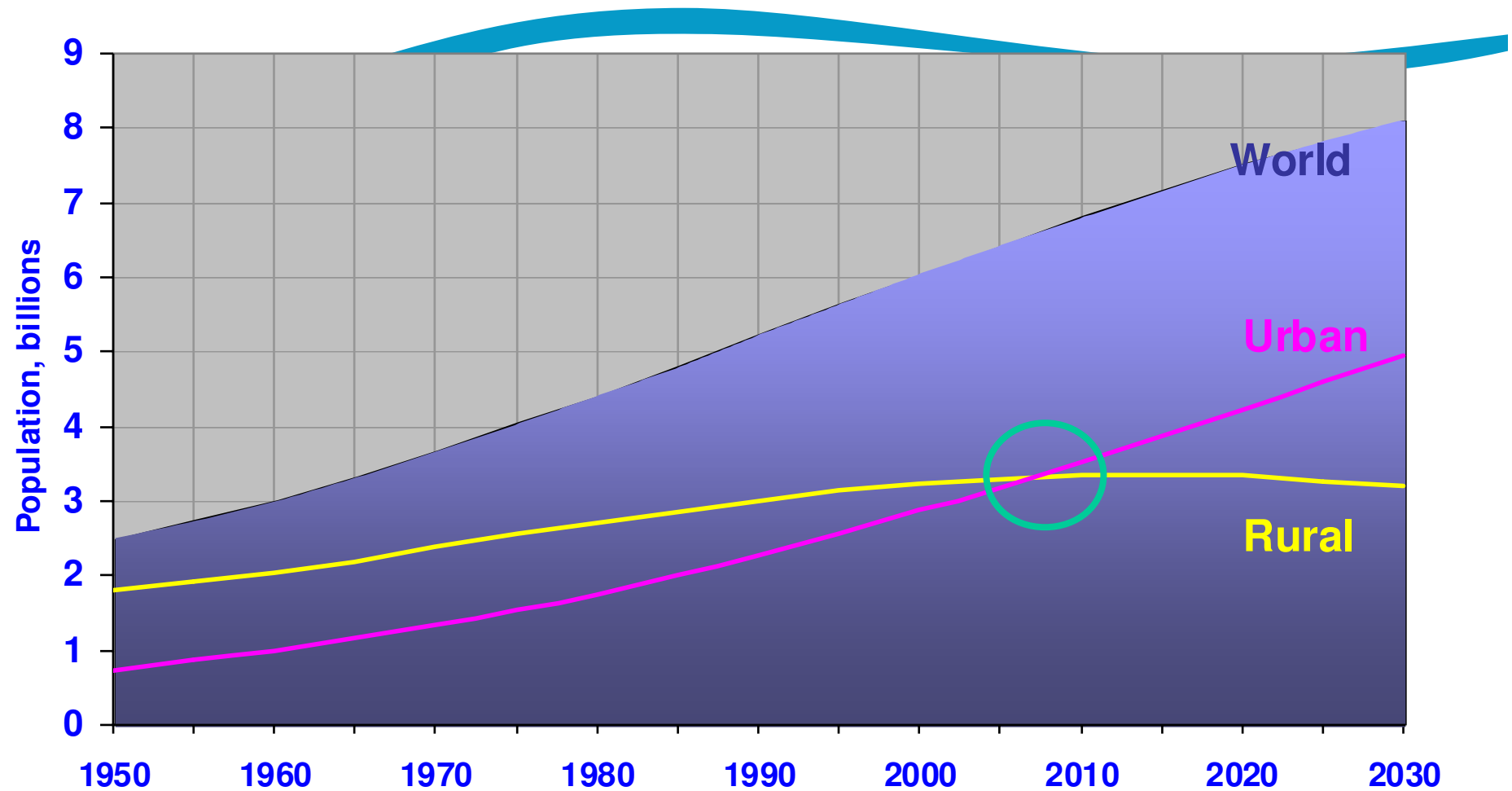
& improving water

Trends in the water sector

	1980s	1990s	2000-2008
PHYSICAL	Population growth and urbanization		
	Scarcity	Growing competition for natural resources	Climate stress
		Worsening water quality	Groundwater depletion
GOVERNANCE	Hierarchical Top-down state interventions	Market-led Enter the private sector	Distributed Enter civil society
		Decentralization	
INTERNATIONAL AGENDA	Limited attention to environment	Strong environmental advocacy 'do no harm'	Environment mainstreamed 'do good'
	Focus on infrastructure	Focus on management	Focus on services



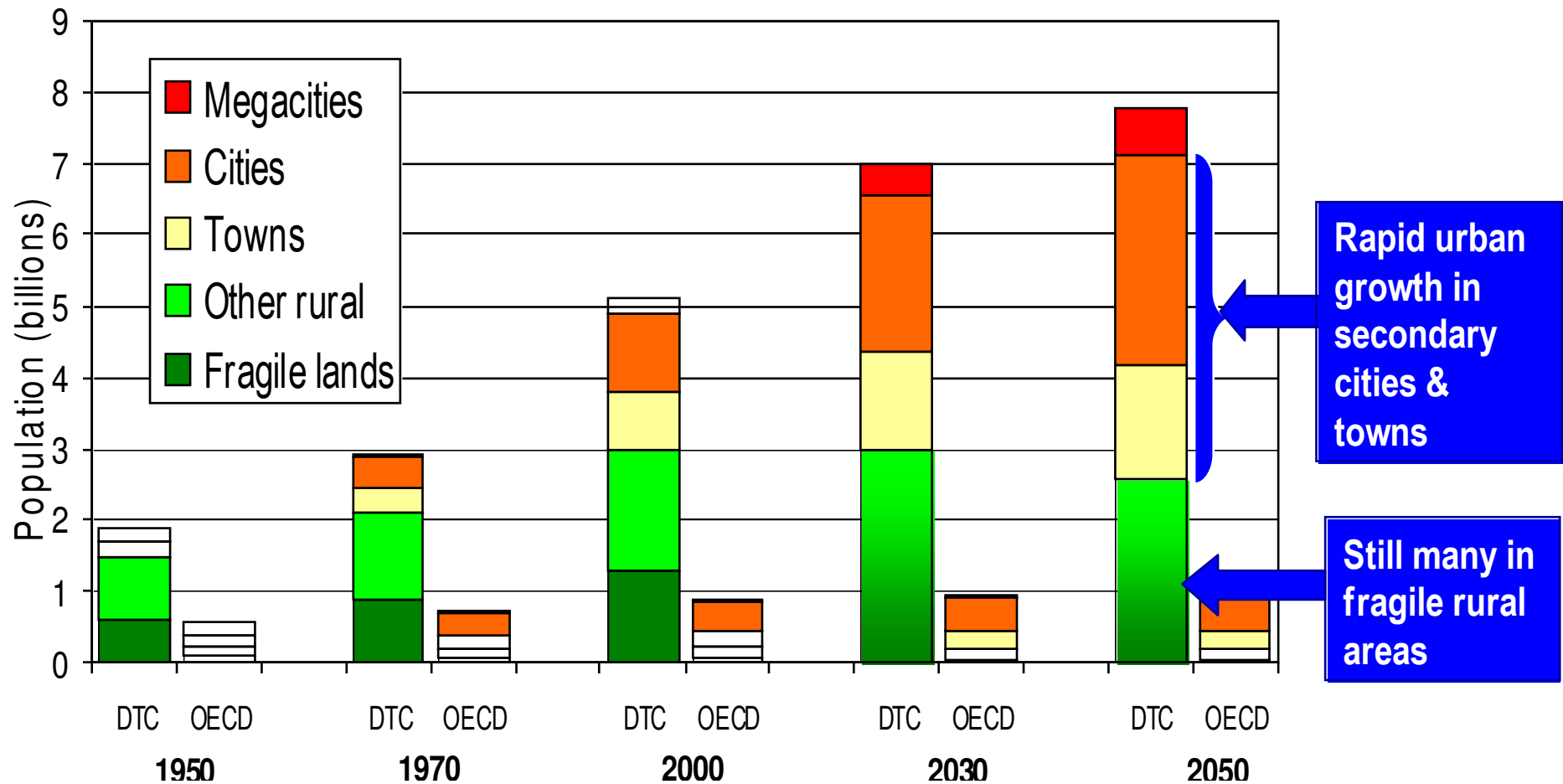
Trend 1: Population growth



Source: UN Population Data

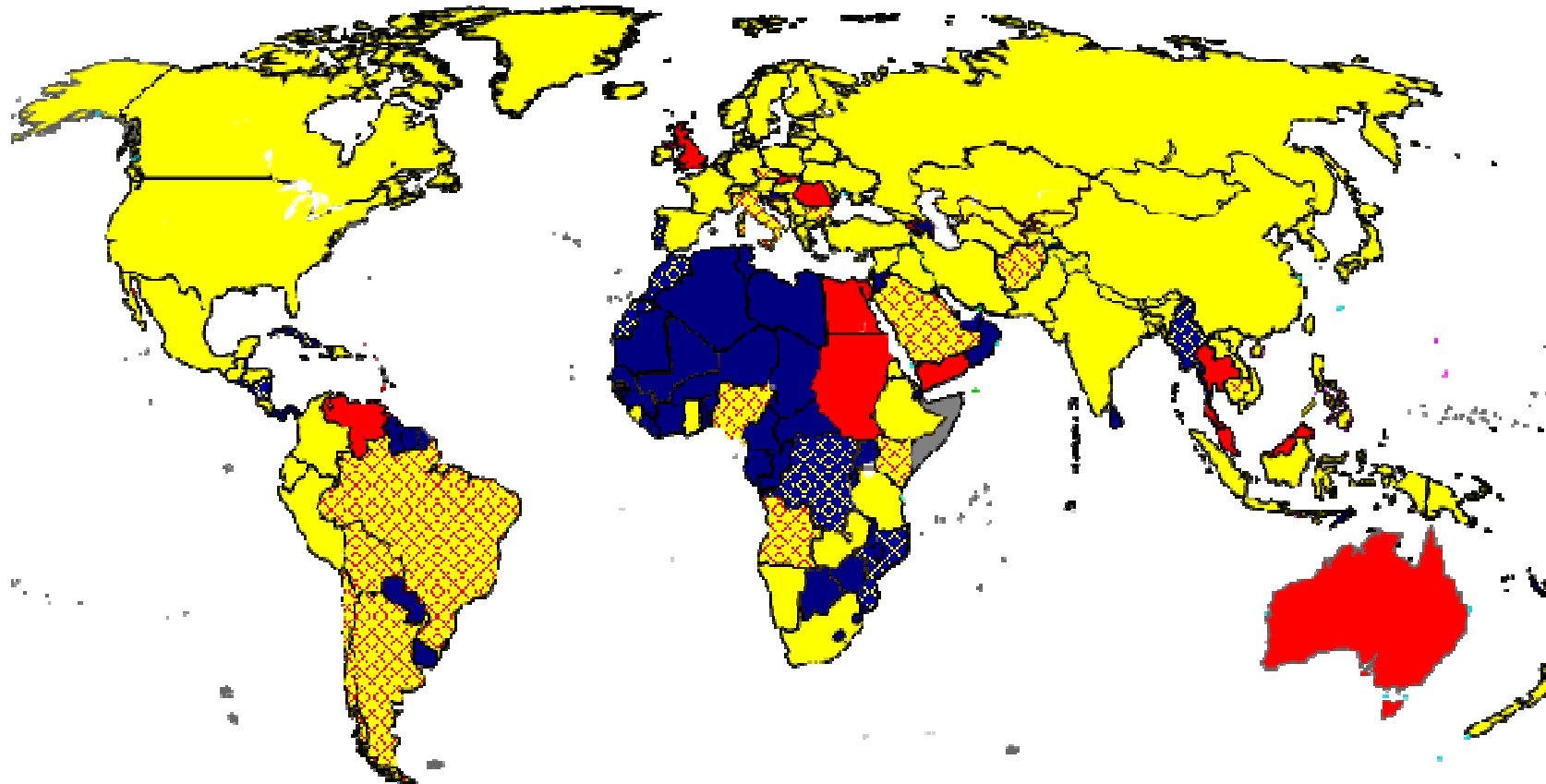
Trend 2: Urbanization

Projected Population Developing & Transition Countries (DTC) and OECD



Trend 3: Decentralization

Tier of government responsible for water supply service provision

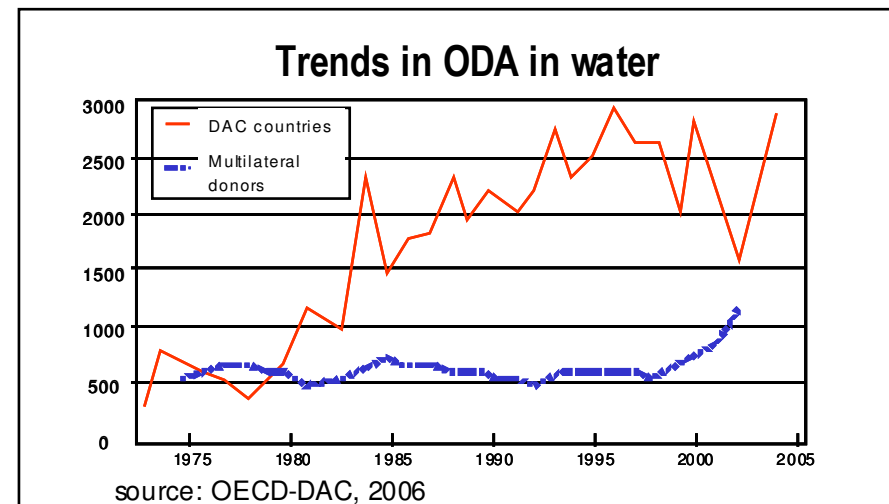
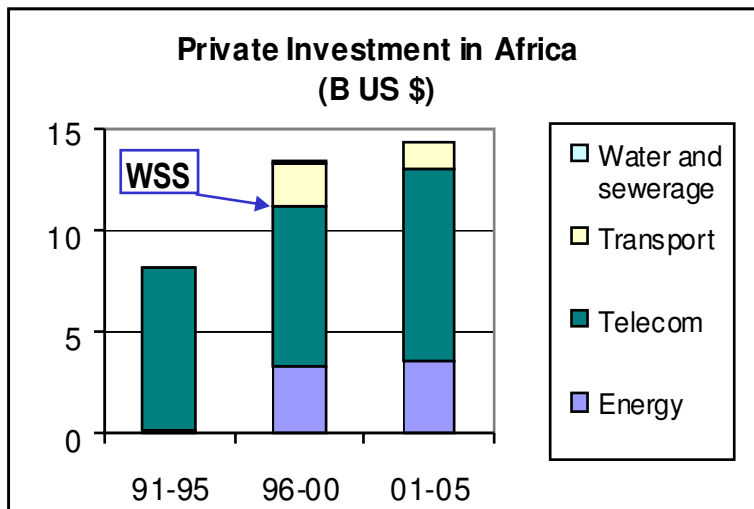
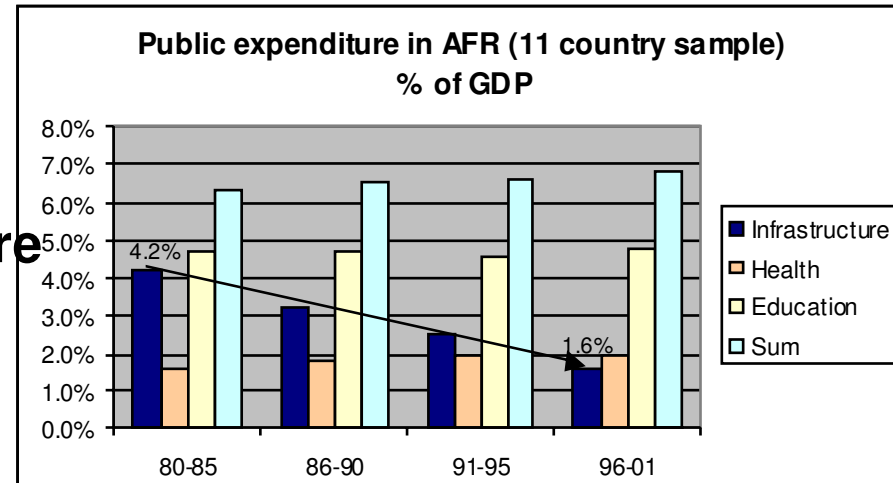


Trend 4: Financial flows going down

Private investment is increasing,
but not in water

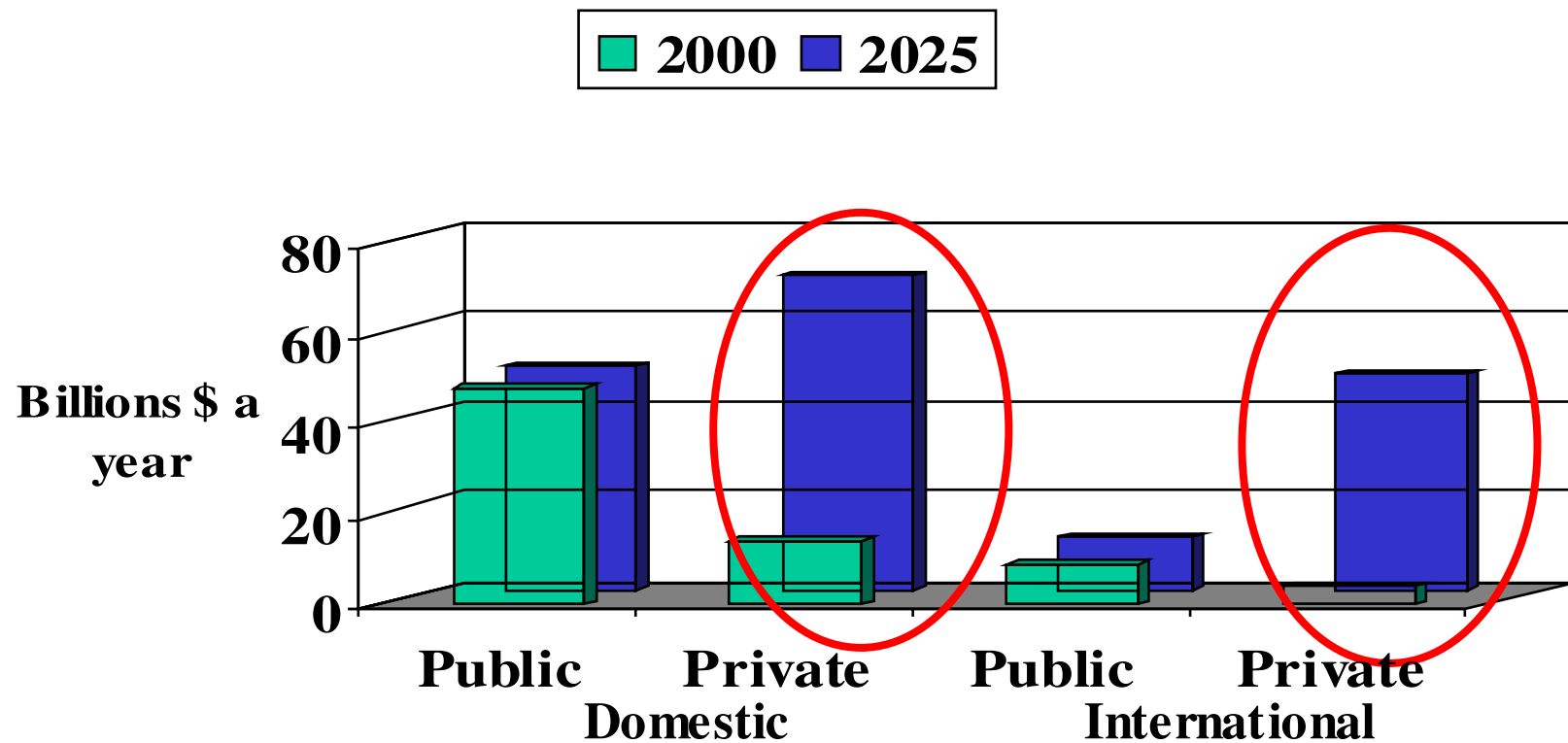
Public investment in infrastructure
decreasing

Donor financing stable at best



Financing remains a major challenge

Consensus in the late 1990s: Increased financing will come from private sector



The change in financial and aid architecture

◆ Changes in financial and aid architecture have an impact on

~ The markets/countries that the Bank is serving:

- The role of IDA versus IBRD
- The role of emerging and non-emerging market economies

~ The role of the Bank in these different market segments

◆ The standing of the Bank amongst donors

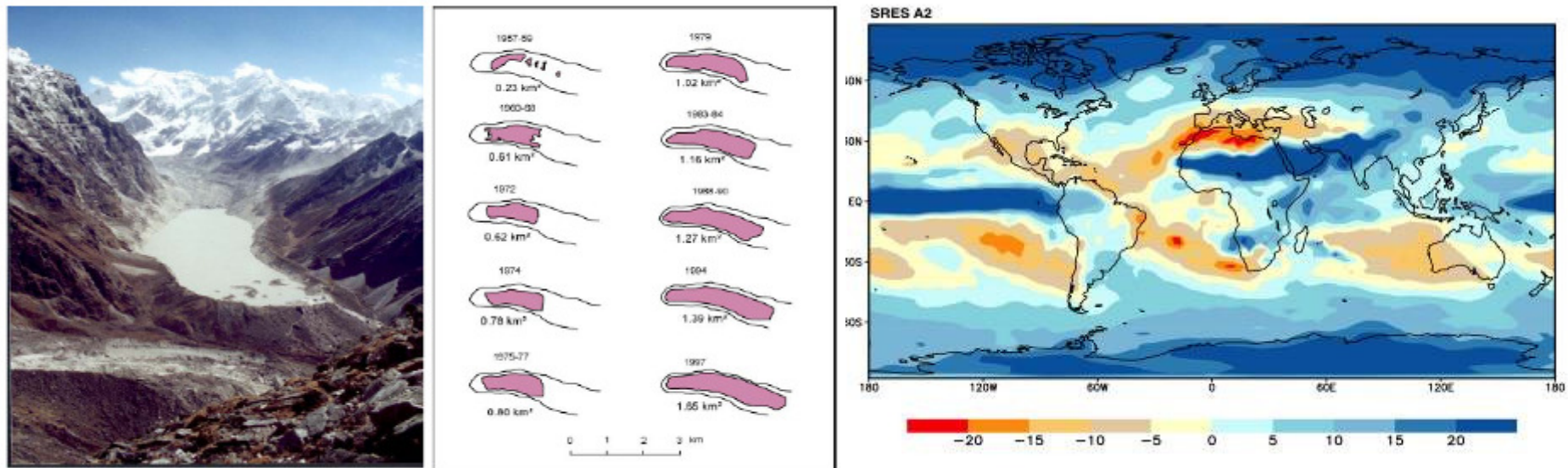


Trend 6: Climate change



- 💧 Some areas drier others wetter
- 💧 Extreme events
- 💧 Sea level rise

Climate Change: A dominant issue for the Water Practice



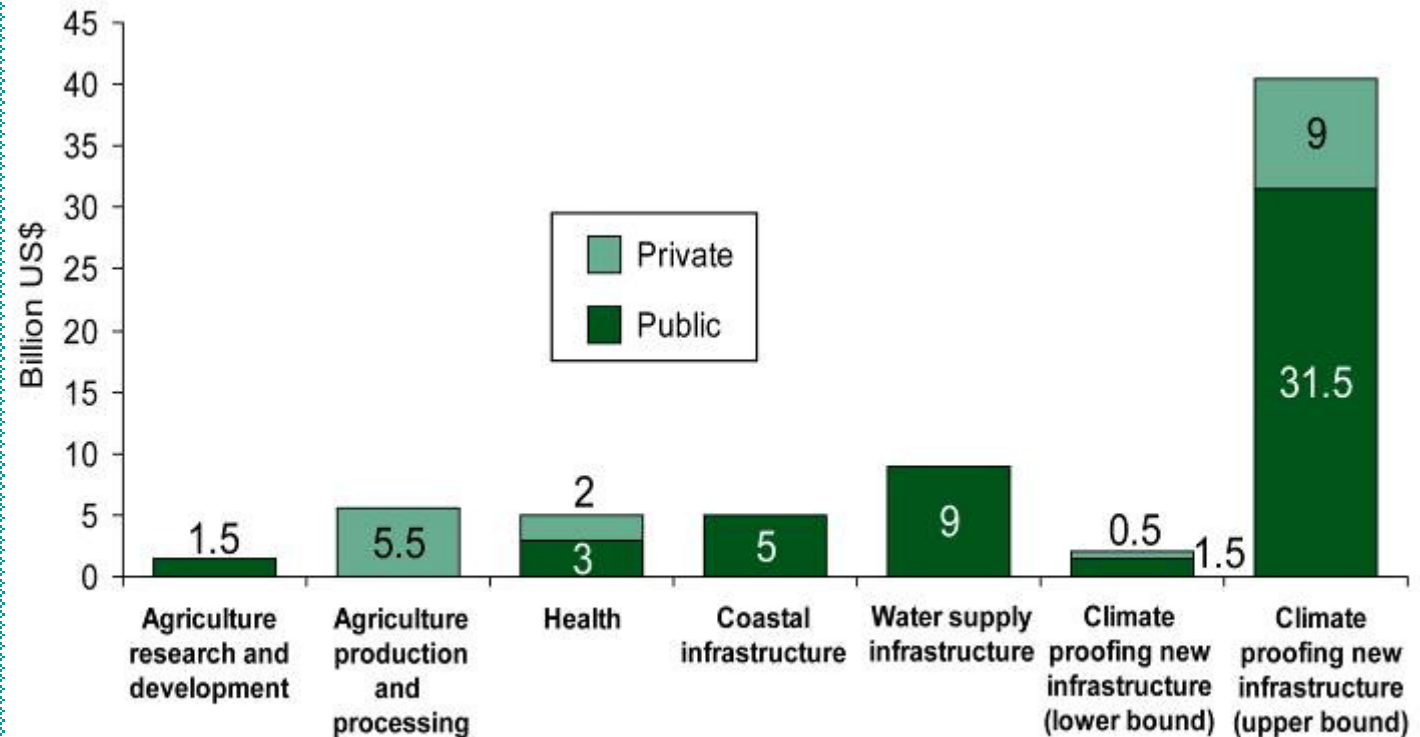
- Climate Change impacts on the hydrology has long lasting impacts on water systems
- Water must become the focus of adaptation as energy is for mitigation
- Large flows of resources are needed to cope with unavoidable consequences of Climate Change

How Much Does Adaptation Cost?

There Are Some Estimates, but Ranges Are Wide & Uncertain

- The implied change in temperature is 1.5° C for 2030
- Cost estimates based on expert opinion
- Wide range of possible infrastructure costs due to information gaps

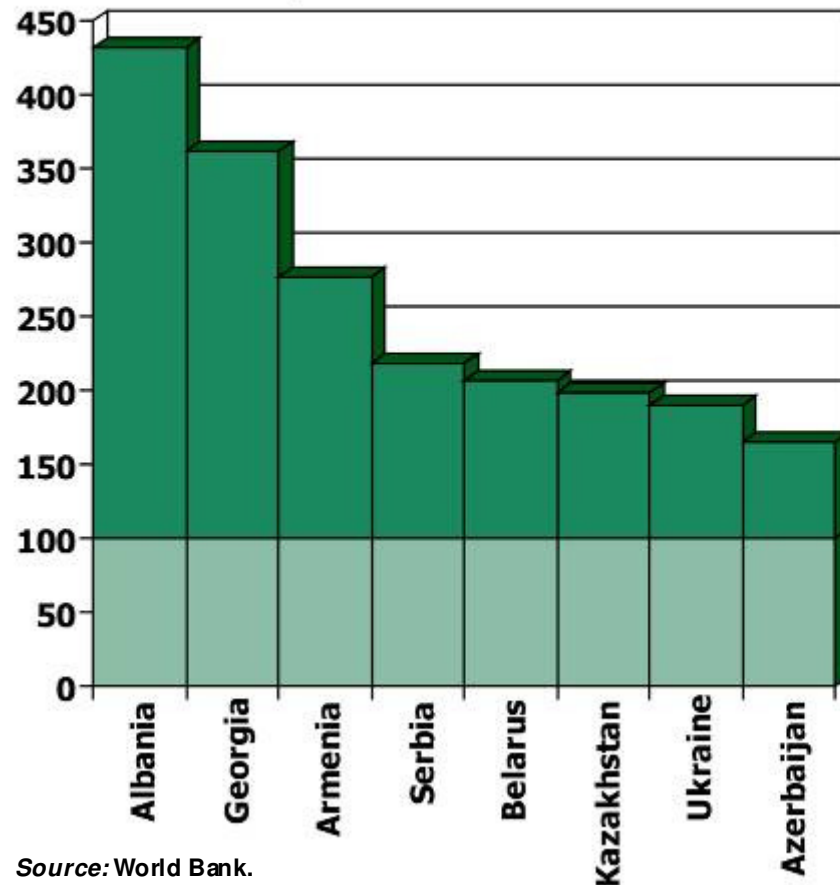
Developing Countries — Estimated Cost of Adaptation by 2030



Source: UNFCCC 2007.

But...Good Adaptation is Cost-Effective

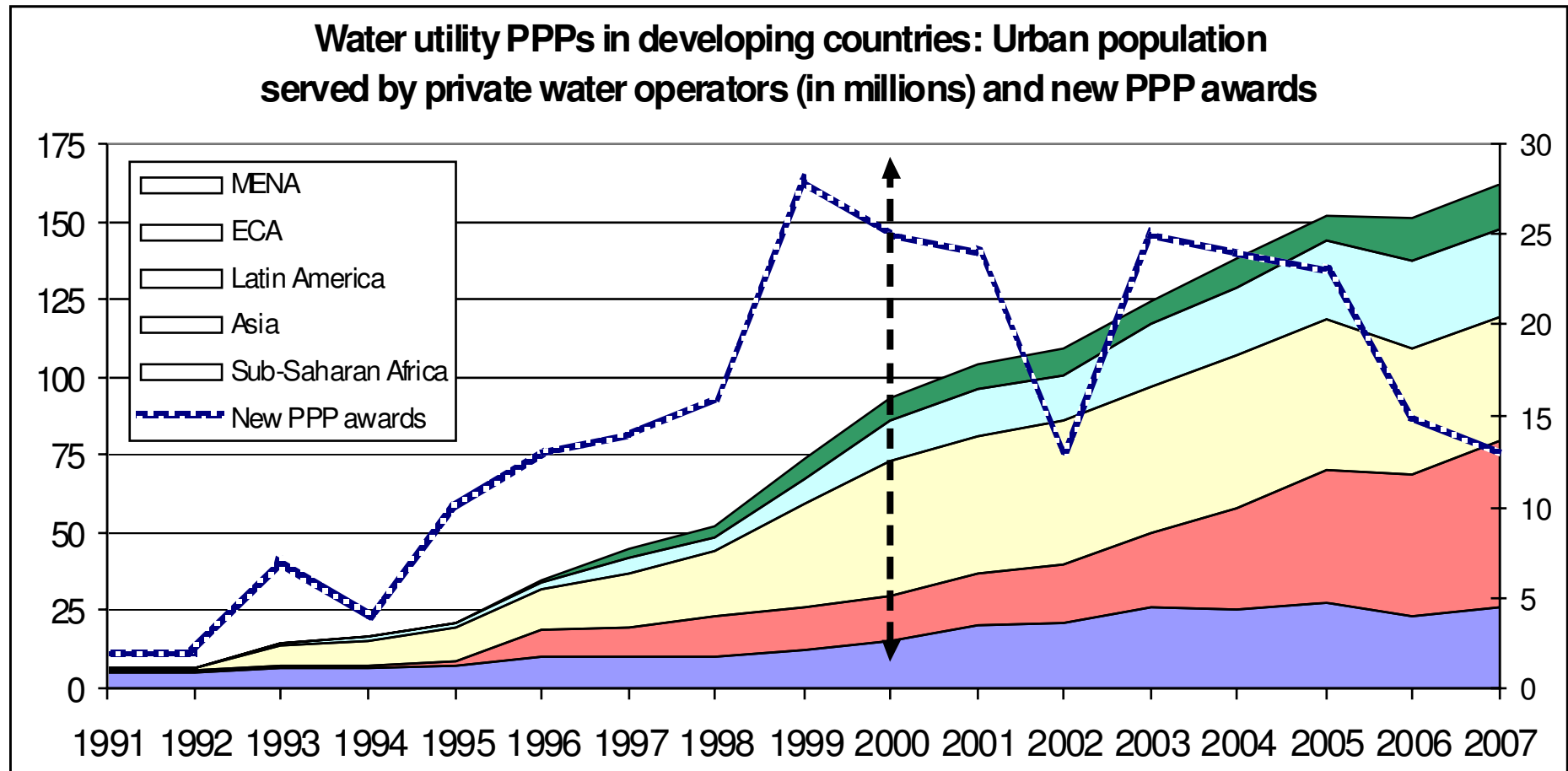
ECA — Avoided damages per 100 Euros spent on National Meteorological and Hydromet Services



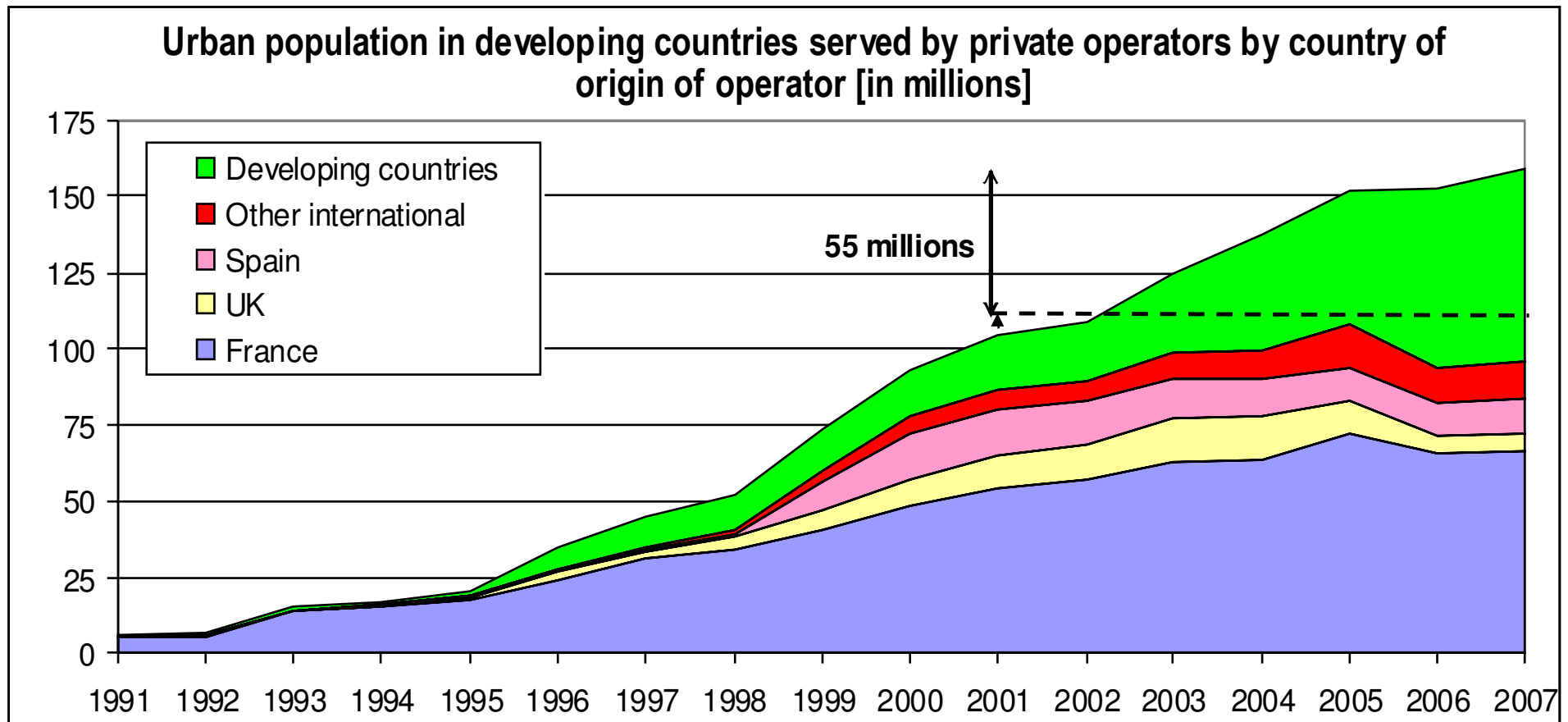
Source: World Bank.

For instance, investment information and knowledge: each 100 Euros spent in meteorological systems yields at least 200 Euros in avoided damages in

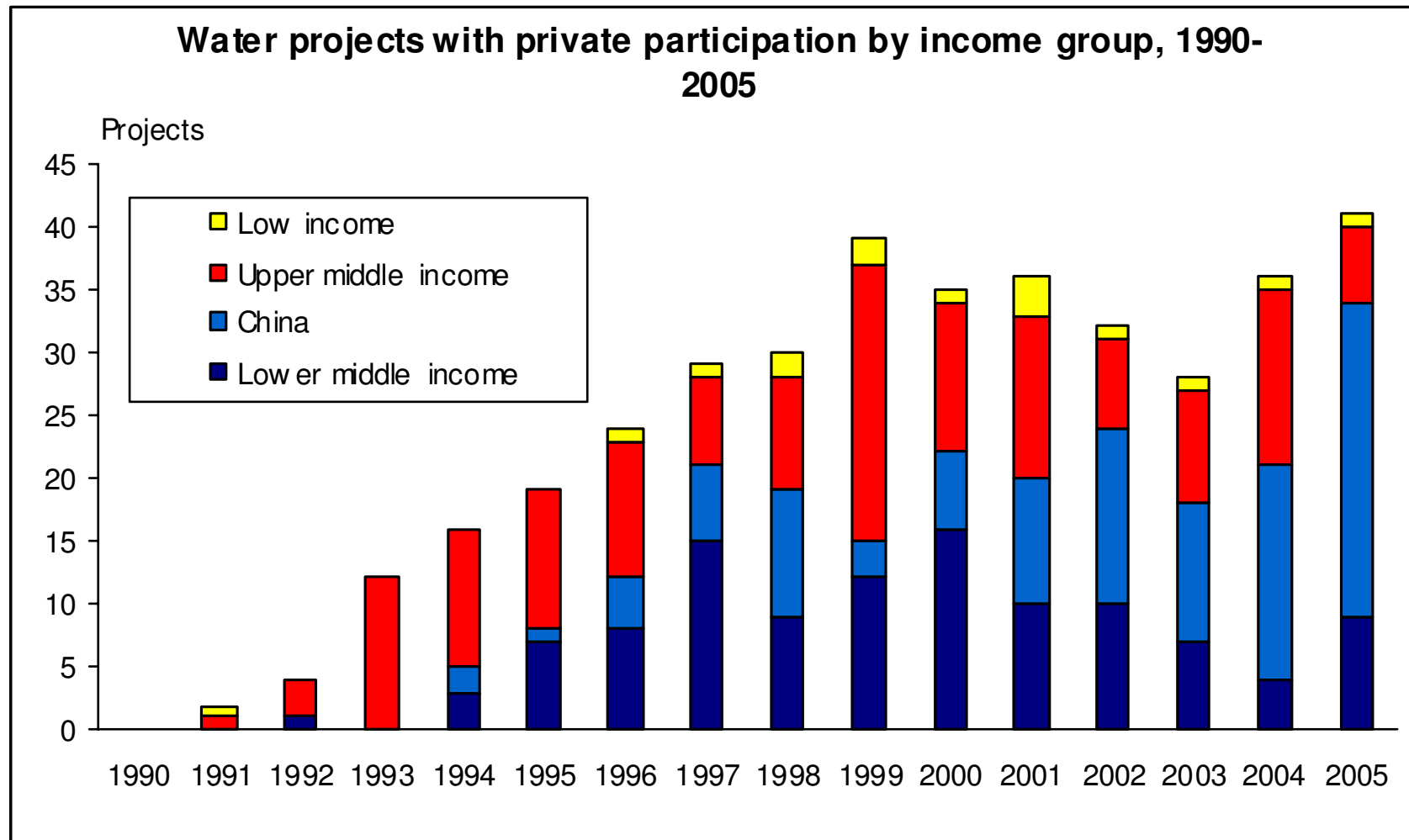
Trend 7: The changing face of the private sector



Increasing role of private operators from developing countries

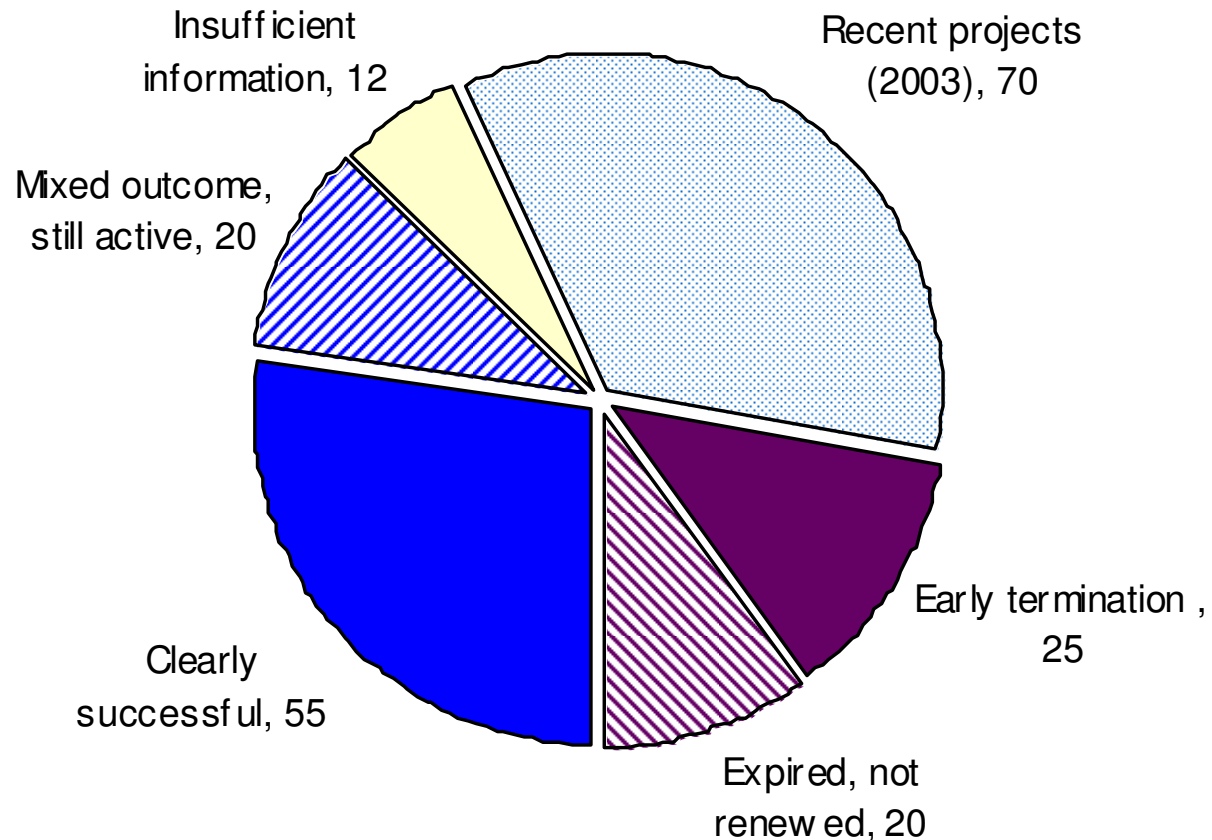


PPP is concentrated in middle income countries (especially China)



Overall track record of PPP

**Water PPPs: project outcome by population served
(million)**



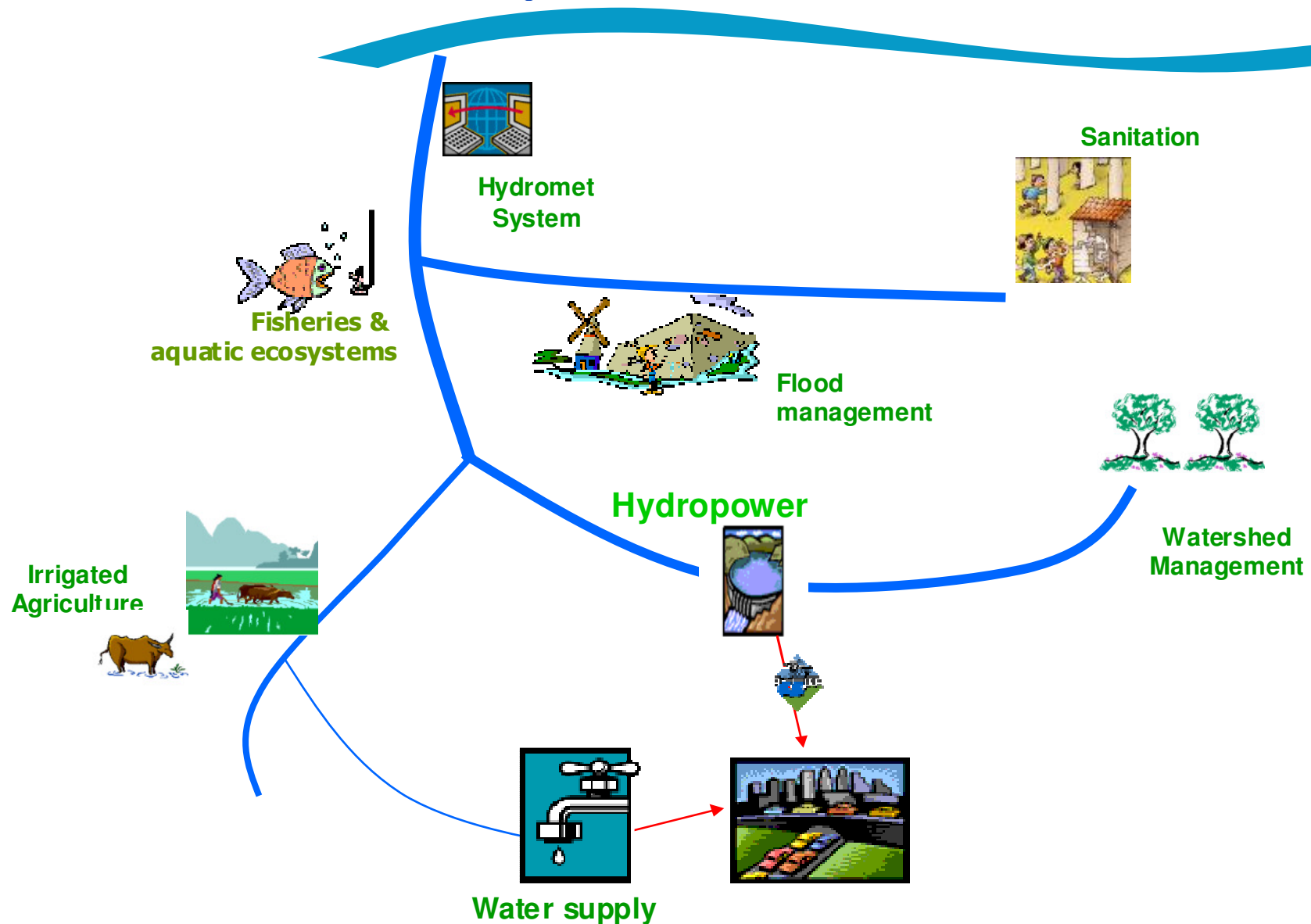
Outline



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& improving water

Integrated water resources management: moving from rhetoric to practice



IWRM

Basic sanitation

**Large
irrigation
systems**

**Water
& climate
adaptation**

**Sustainable
water
management
and services**

**Rainfed
agriculture
management**

**Large water
infrastructure**

**Utility
management &
governance**

**Floods &
drainage**

**Peri-urban
agriculture**

Hydropower

Response: Integration of the Water Agenda in the World Bank

- Internal integration of the water sector
- Integration with Sustainable Development:
 - ~ Cross-cutting issues and structure
 - ~ Internalizing the cost of environment
 - ~ Spatial development

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Response: Look at different ways for managing water scarcity

- Where water use is currently unsustainable, need to bring consumption down to productivity
- ~ Consider actual evapotranspiration (ET) not abstraction
 - Measures groundwater and surface water together
 - Measures net (takes account of return flows)
- ~ Establish target ET for at appropriate level (country, county, basin, irrigation area, plot)
 - Keep consumptive use (ET) of
 - ET of surface water sufficient for basic and ecological functions, including outflow to sea
- ~ Maximize value generated by water consumption within those limits
 - Infrastructure measures (e.g. canal lining, micro irrigation) increase the share of ET that is beneficial (ie transpired by “useful” plants)
 - Agriculture management measures (e.g. cropping pattern, varieties, soil moisture management, irrigation timing) increase value of water use

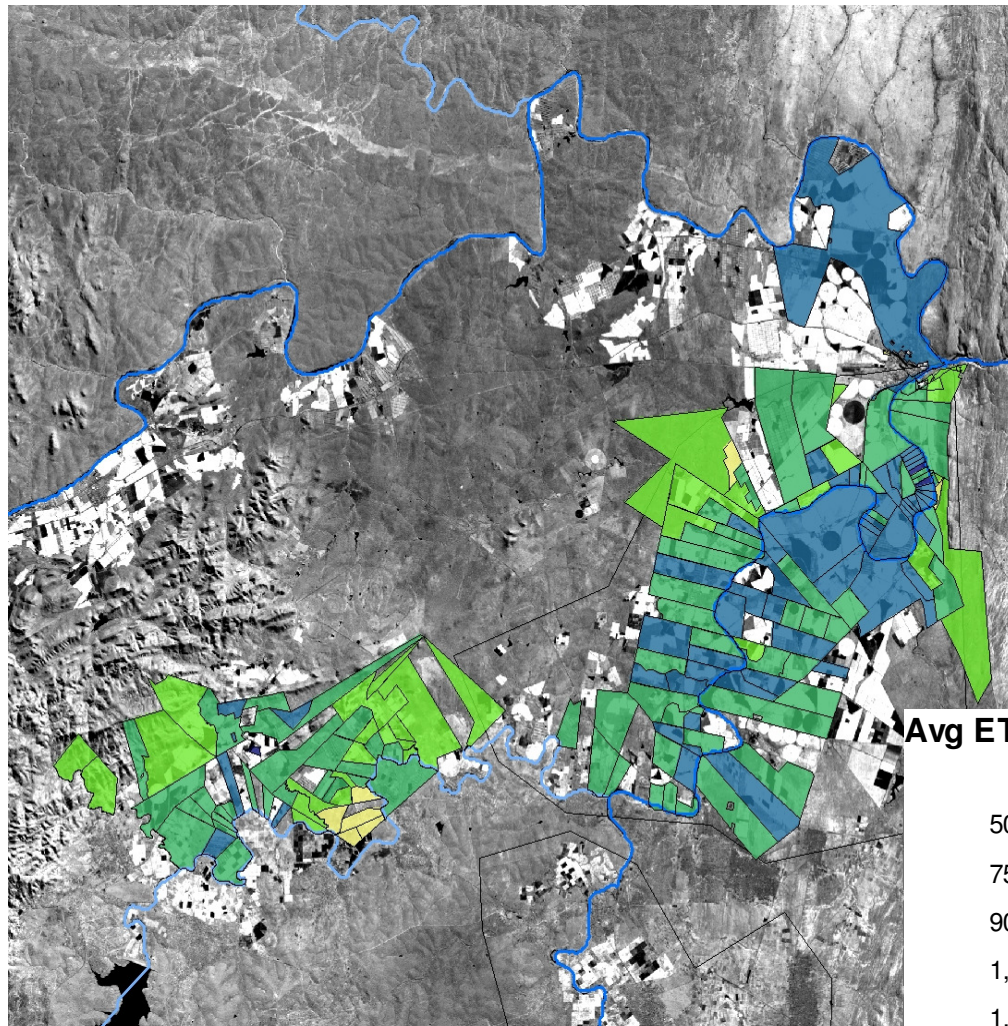
sustainable levels and increase water

consumption

use

f

An example: Cap overall water consumption at the basin, irrigation area or plot level



Avg ETa per plot

- 501 - 750
- 751 - 900
- 901 - 1,050
- 1,051 - 1,200
- 1,201 - 1,350

Remote sensing tools can help determine water uses, and water productivity.

Plot-level balances can show over-use of groundwater (blue) and be used to target inspection activities

balances, water

Response: Expanding Existing Business Lines

- ◆ Refocus on sanitation
- ◆ Implementing the Africa Irrigation Business Plan
- ◆ The role of hydrology in dealing with climate change



Response: Adaptation to Climate Change



- Link between applied climate science, adaptation policy and development projects
- Strategic and operational responses are obtained through a top down and bottom up approaches
- Partnership with top climate agencies

Response: Knowledge Management and Learning



- To confront this challenge, we need to work together, learn from each other, and share knowledge
- Expo Zaragoza 2008 – an excellent forum for knowledge sharing and learning
- Results measurement is key to underpinning response to the challenges in the water sector, and is a tool to
 - ~ Improve governance in the water sector
 - ~ Offer client a more tailor made approach



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Feature

The Ethiopia Water Supply & Sanitation Project provides US \$100 million to improve water supply for 2 million people.



About Us

The World Bank supports water management and extends water services through lending operations, sharing and applying knowledge, and our global expertise. Our work is guided by our vision statement.

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- Tanzania: Irrigation Efficiency
- China: Rebuilding a Watershed
- India: Toilet in

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start

7:01 PM Tuesday 02/24/2010

