



# **Water in Africa: Hydro-Pessimism or Hydro-Optimism?**

# **Água em África: Hidro-pessimismo ou Hidro-optimismo**

**Centro de Estudos Africanos da Universidade do Porto**  
Porto, Portugal, 2-3 October 2008

# Water supply and sanitation in Africa

Optimism *or* pessimism?  
Some reflections

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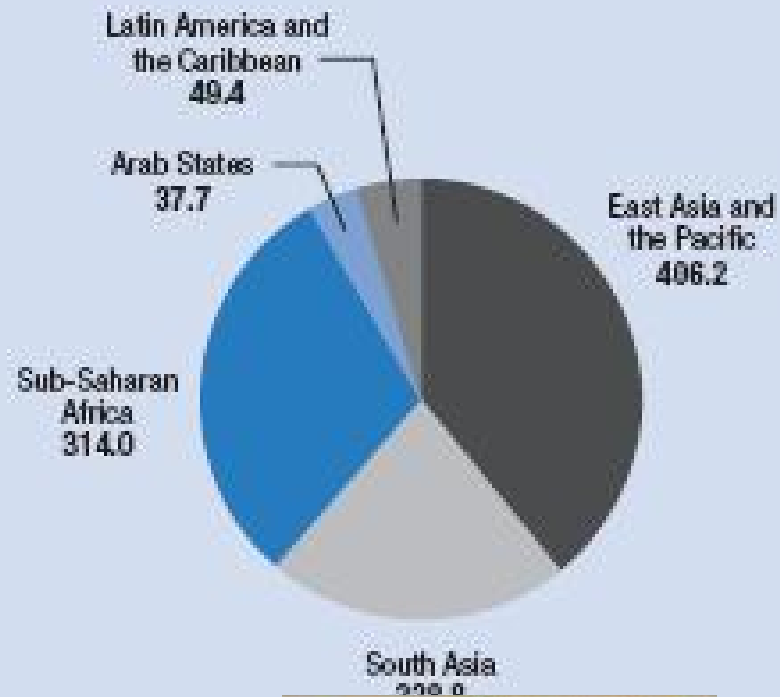
# Two views

- It's bad, and getting worse Supply is barely matching population-driven demand ☹️
  - Urbanisation is causing new problems (rural-urban)
  - Sustainability is still a problem—for coverage figures
- It's getting better, slowly 😊
  - Government is managing the sector more effectively and new aid instruments are assisting in this
  - A private sector is emerging alongside a stronger civil society, and able to 'fill the gaps'
  - Coverage is increasing, but incrementally only—no 'great leap forward'

# Comparative view...

People with no access to improved water in 2004 (millions)

Total: 1.1 billion

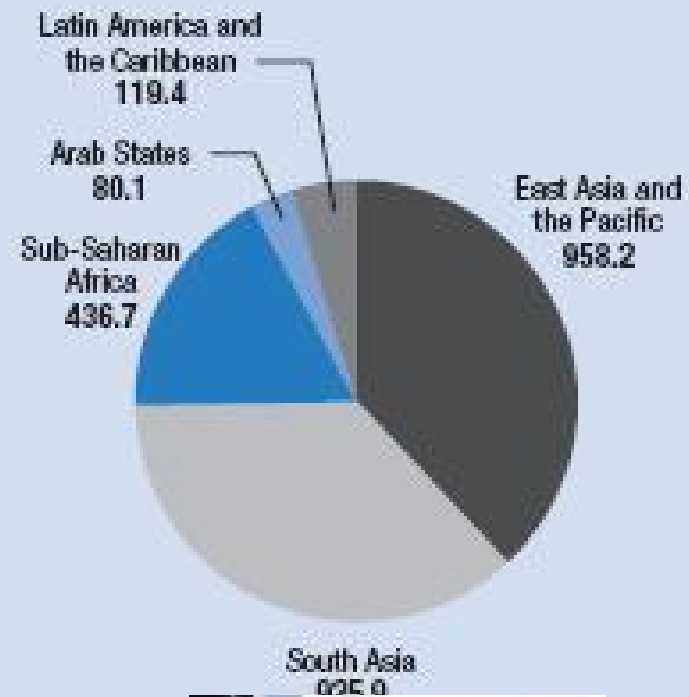


Source: Calculated based on



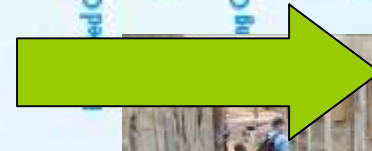
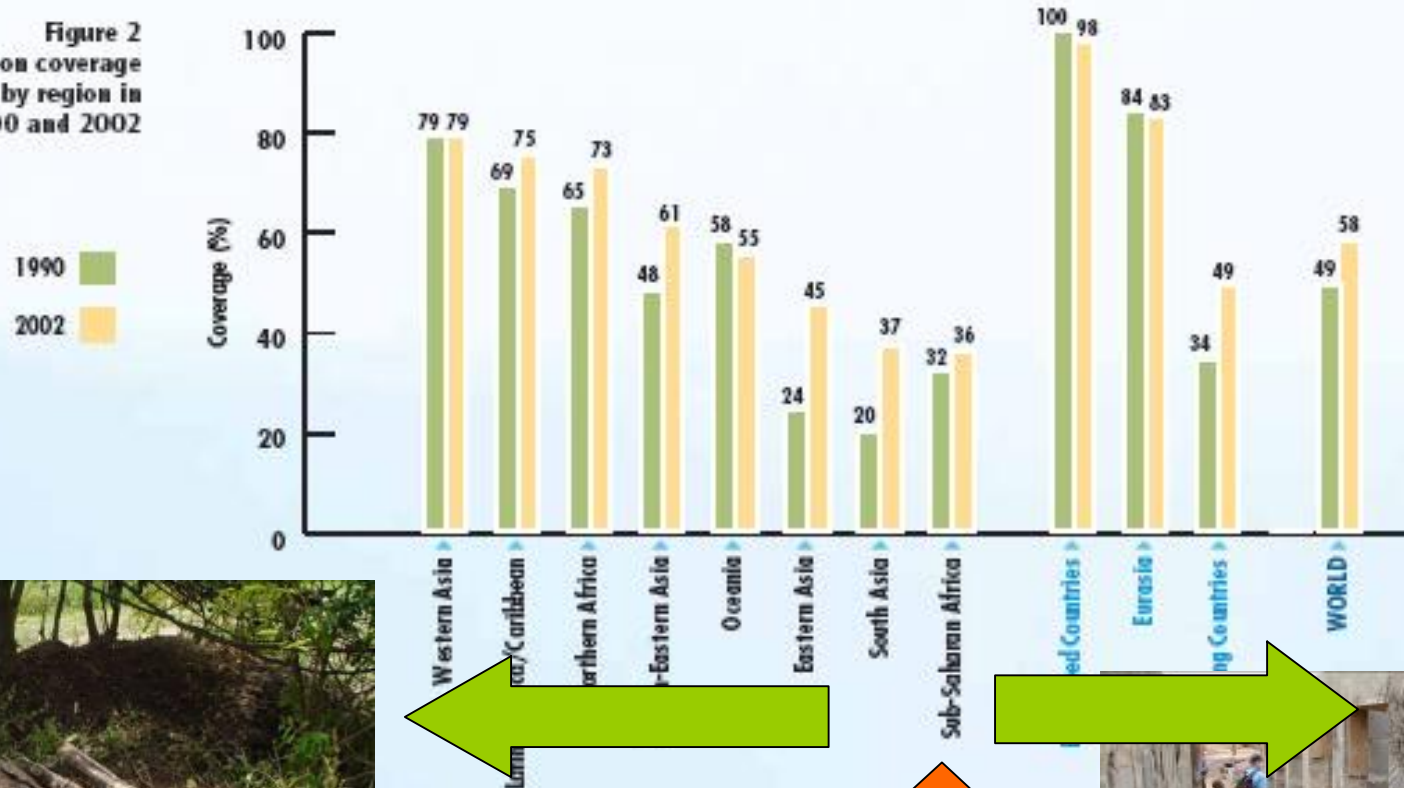
People with no access to improved sanitation in 2004 (millions)

Total: 2.6 billion



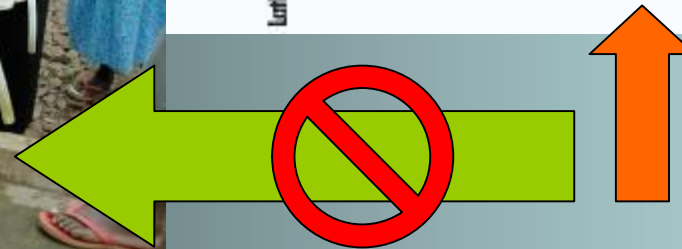
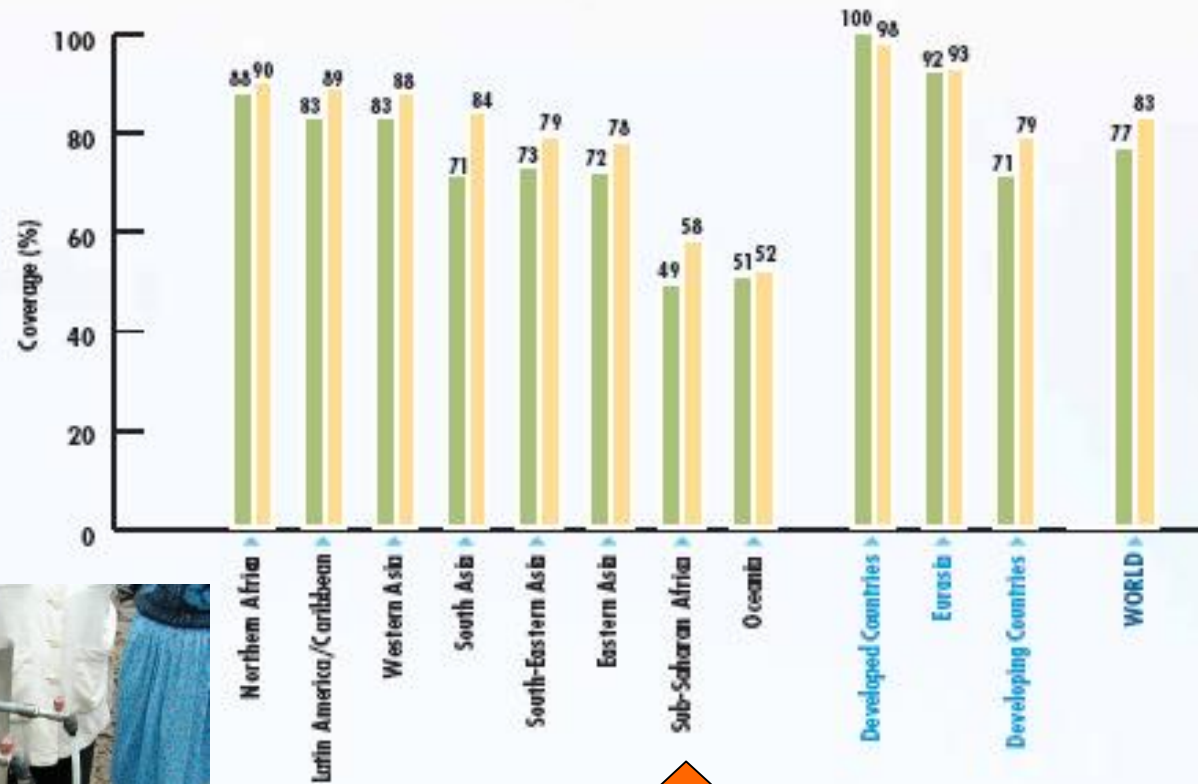
# sanitation

Figure 2  
Sanitation coverage  
by region in  
1990 and 2002



# ...and water?

Figure 1  
Drinking water  
coverage by region in  
1990 and 2002



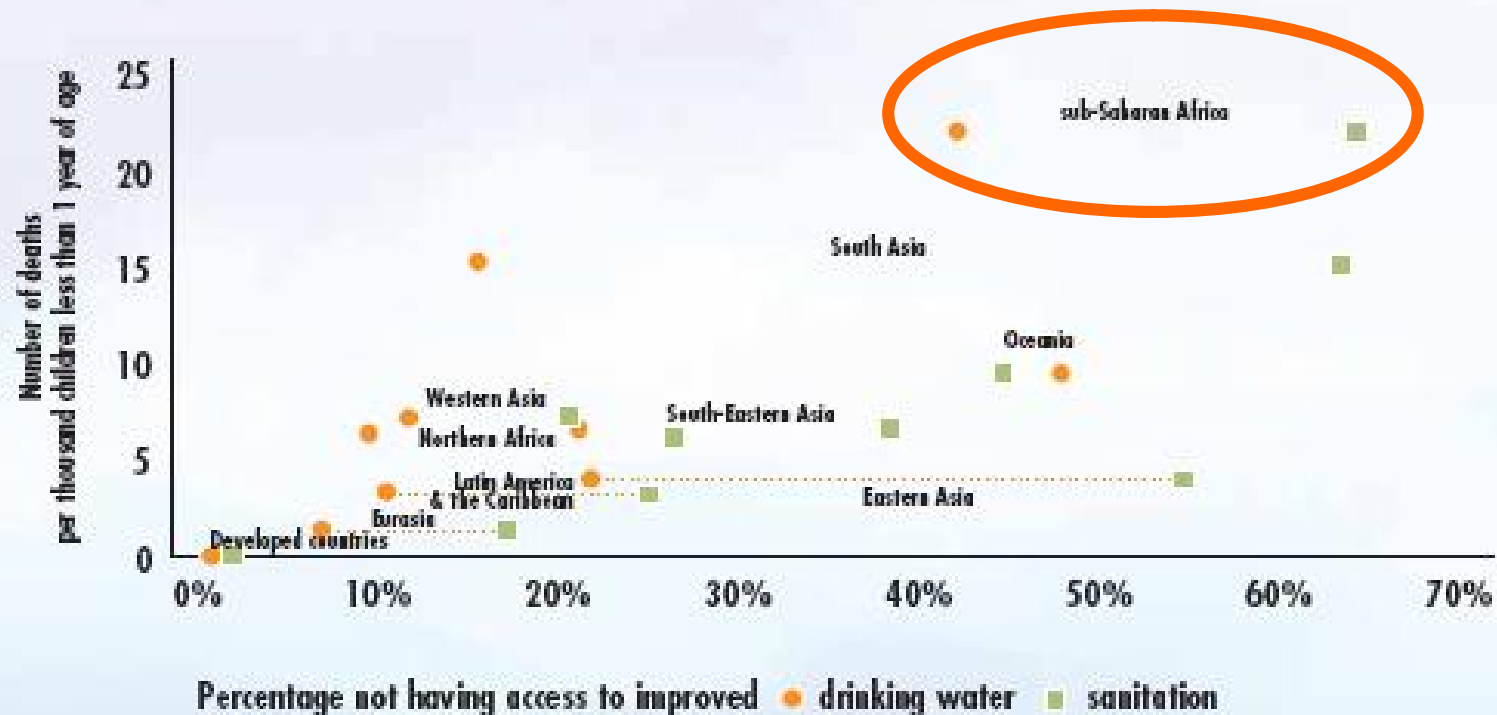
# Which, in global terms could mean...



- “If the average one hour per day saved by each household member through the convenience of nearby safe drinking water and sanitation facilities could be used to earn the daily minimum wage, that time would be worth \$63.5 bn a year” ...globally

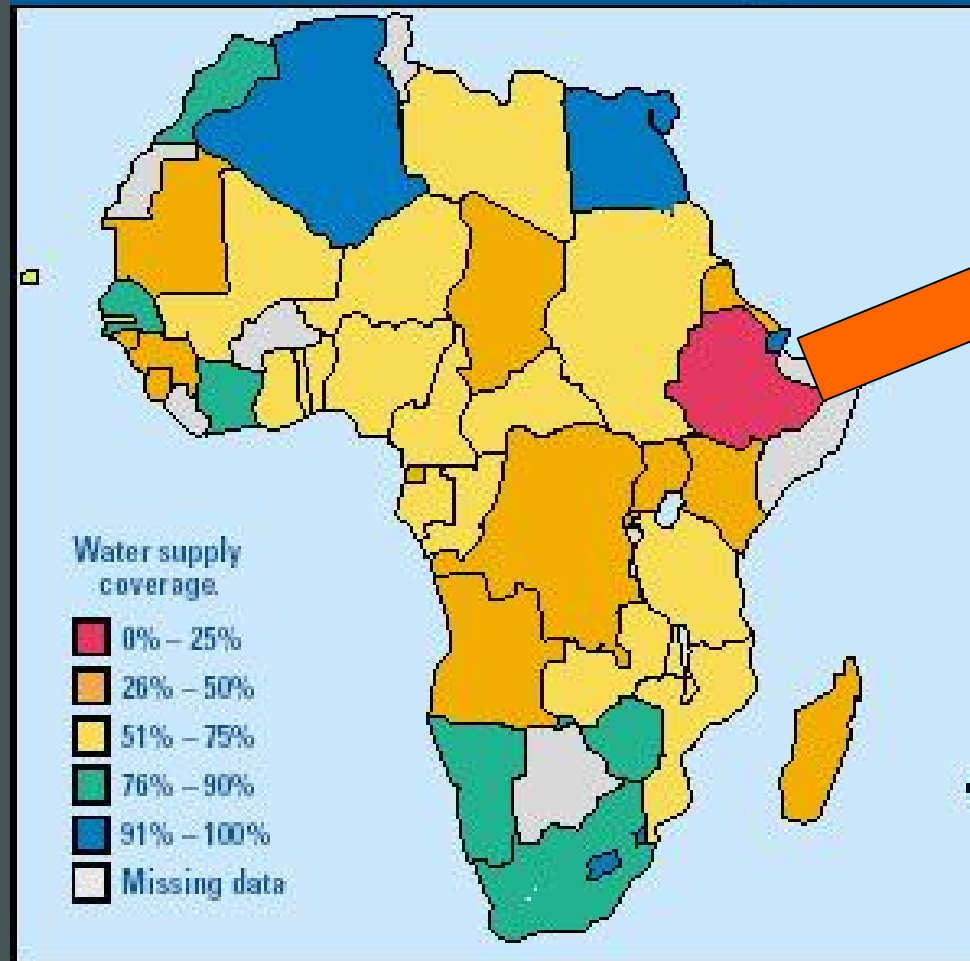
# At present the situation suggests a pessimistic perspective in SSA

Figure 4 Association between lack of improved sources of drinking water and sanitation facilities, and deaths attributable to diarrhoeal diseases





## AFRICA: WATER SUPPLY COVERAGE, 2000



So, it is useful to look a little more in-depth at a 'meso level'

# Where, in rural, areas...



- It's a long walk to water...and time is money
  - One person-day lost a week = ~ \$1?
  - Which is enough to purchase 100 litres?
- Water is *very* expensive and often poor quality

## ...and in towns



- Rich people pay the same amount for ~ 5,000 litres with a connection
- Water is *cheap or expensive?*

# Ethiopia's complex policy and institutional environment

- Federal state, increasing decentralisation of delivery
- Fragmented decision making and poor coordination
- Complex aid environment: many actors
- Shifting to a sectoral programme, but problems in progress



# Some brief findings of the research to date...

- Financing
  - Budget utilisation is a problem—you can't simply throw money at local levels and expect progress
  - Matching funds are difficult—there are complexities in the way programmes are understood, delivered and managed
- Governance and planning
  - Sustainability is a major issue
  - Communicating new plans and approaches needs improving
  - Yet strong political championing can work (but too much politics can skew results?)



# ...Case studies looking at:

- Economic impacts of access to water and sanitation in Ethiopia— Evidence from the Welfare Monitoring Surveys
- Poverty impacts of improved access to water and sanitation in Ethiopia: Evidence from a household survey
- The costs and benefits of multiple uses of water in East Hararghe Zone
- Linkages between water supply and sanitation and food security: A case study in four villages of East Hararghe Zone



# Evidence from the Welfare Monitoring Surveys

- Statistically significant relationship between HH improvements in sources of drinking water and improvements in self-reported food situations
- But not a statistically significant relationship to changes in (self-reported) overall welfare situation
- No statistically significant relationship between changes in sources of sanitation and self-reported food or overall welfare



# Evidence from a household survey

- Investments more likely where kebeles are well-connected
- Complex relationship of proximity and health impacts
- Significant links between off-farm employment and improved WS access
- Significant poverty-access to improved water supply relationship
- Potential poverty impact of improved WS access also depends on the availability of other livelihood assets
- Roads are important: enabling access to WS and enhancing poverty impacts





# Costs and benefits of multiple uses of water

- Benefits outweigh costs at HH and system level
- Benefit-cost ratio for domestic water supply interventions higher than for irrigation
- Benefits from irrigated agriculture are very high and an important source of income; but less 'equal' than improvements in WS
- Questions of additional benefits of improved systems over traditional (poor design?)
- Population growth and future demand scenarios are important



# Tentative conclusions...

- Water-growth relationships are neither simple nor linear:
  - Health linkages are complex (many intervening factors) (water brings problems too)
  - Access is a two-way issue: to water (use), from use to markets (productivity)—growth corridors
  - Income diversity-water relationships are significant, but assets crucial (who has?)
  - Water into money: yes, in combination with other interventions
  - Equity: what about benefits distribution?

# Taking forward thinking at a micro level...in relation to adaptation

- Conceptualising household water economies
- Water as an economic and social good
- Thinking about maximizing poverty impacts through greater sectoral linkage
- Thinking more about the resource, as well as delivering it effectively

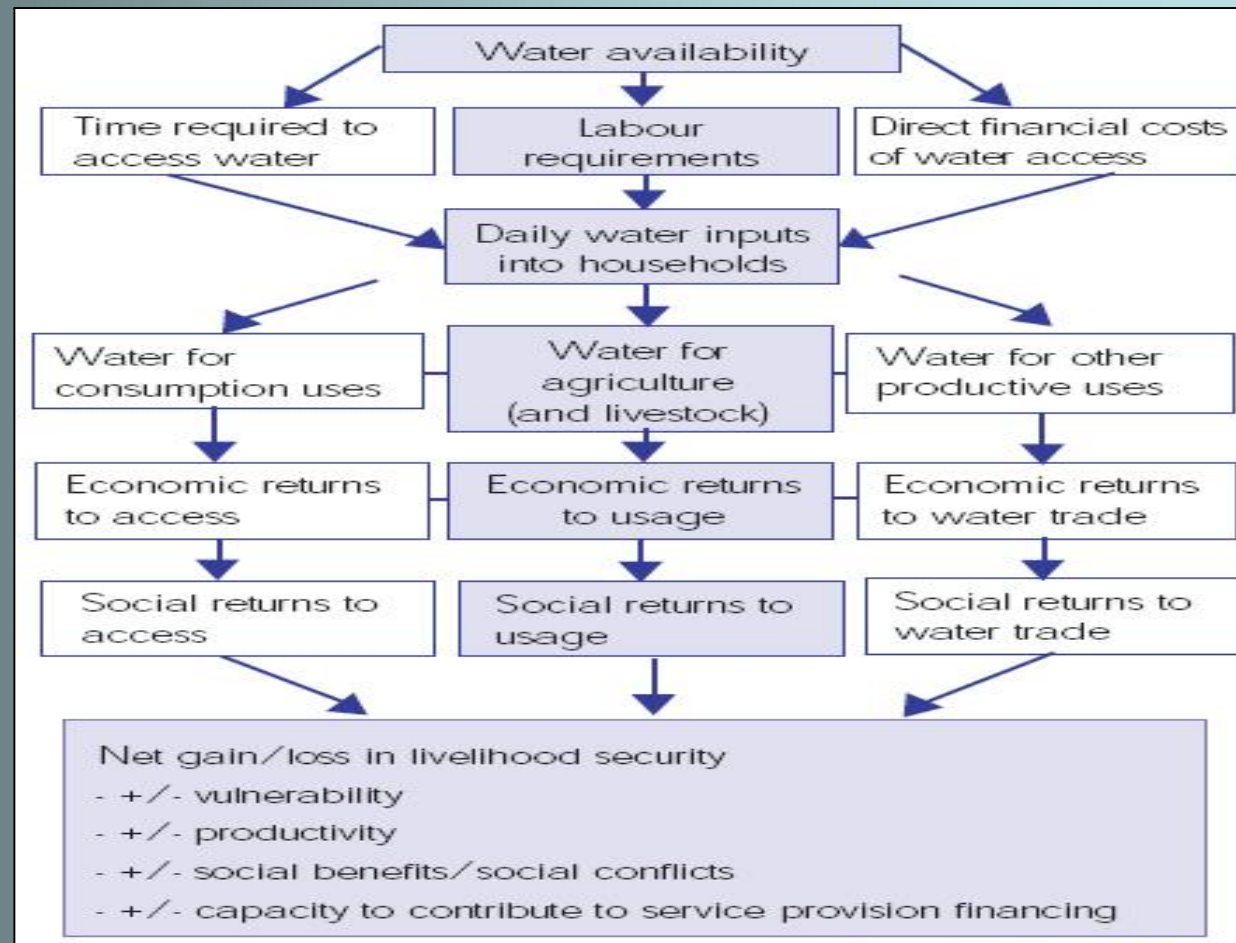
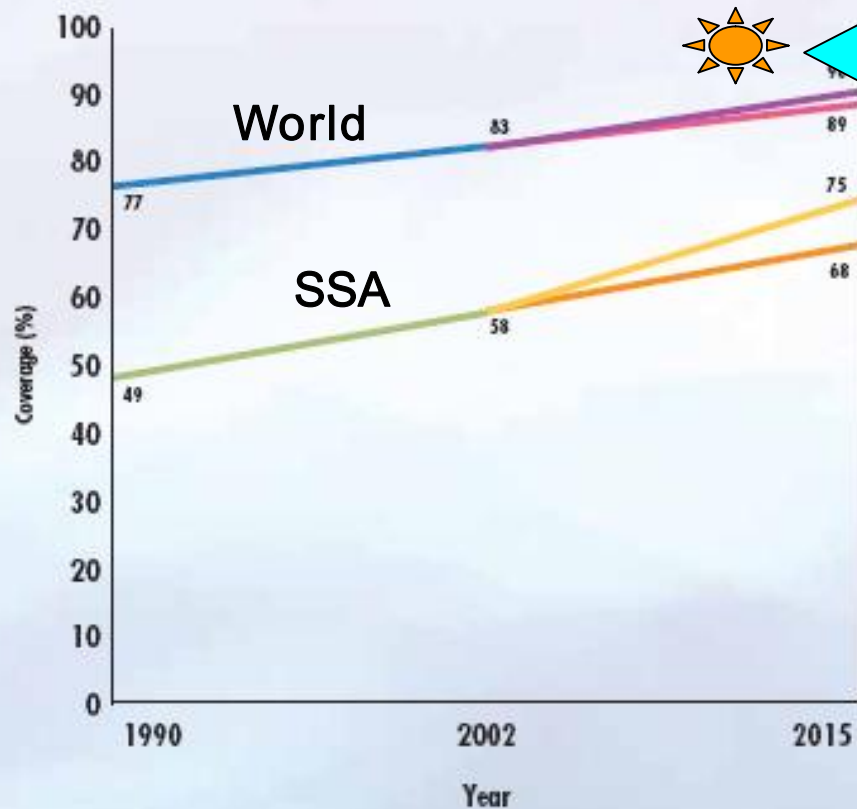


Figure 10 Change in drinking water coverage from 1990 to 2002, projection of change from 2002 to 2015 and MDG target globally and in sub-Saharan Africa



- World coverage change 1990–2002
- Projected change in the world 2002–2015
- Coverage change required in the world to reach target in 2015
- Coverage change in sub-Saharan Africa 1990–2002
- Projected coverage change in sub-Saharan Africa 2002–2015
- Coverage change required in sub-Saharan Africa to reach target in 2015

Back to the challenge

# So, addressing the issue optimistically...

## DRINKING WATER

Region	Coverage in 1990 (%)	Coverage in 2002 (%)	Projected coverage in 2015 (%)	MDG attained target (%)	Population served and unserved in 2002 (thousands)		Projected population served and unserved in 2015 (thousands)		Annual increase in people served 1990–2002 (thousands)	Annual increase needed in people served 2002–2015 to reach the MDG drinking water target (thousands)
					Served	Unserved	Served	Unserved		
					<b>World</b>	77	83	90		
<b>Developed countries</b>	100	98	96	100	978 159	14 896	997 505	41 563	3 897	4 685
<b>Eurasia</b>	92	93	94	96	260 965	20 005	257 217	16 418	12	133
<b>Developing regions</b>	71	79	88	86	3 911 045	1 039 805	5 187 321	697 227	86 913	88 436
<b>Developing regions</b>										
Northern Africa	88	90	92	94	132 941	14 378	168 395	14 643	2 383	3 009
Sub-Saharan Africa	49	58	68	75	396 824	287 944	613 022	288 481	12 524	21 485
Latin America and the Caribbean	83	89	96	92	475 422	60 204	603 131	25 130	9 135	7 891
Eastern Asia	72	78	85	86	1 072 374	302 464	1 264 065	223 070	16 086	15 889
South Asia	71	84	98	86	1 246 402	233 885	1 769 174	36 106	34 350	23 549
South-eastern Asia	73	79	86	87	421 044	114 567	540 374	87 968	8 208	9 663
Western Asia	83	88	93	92	161 628	22 333	223 515	16 824	4 034	4 576
Oceania	51	52	53	76	4 410	4 030	5 645	5 005	93	283

# How about some 'pessoptimism'?

- Population is rising fast and outstripping improvements...maybe
- As food (and fuel) prices rise, users bearing some proportion of service cost becomes increasingly problematic (and politically unpalatable)...likely, so safety nets are key as are realistic expectations
- Capacity to deliver, manage and monitor remains low...so do we really know about progress?
- **But** there is no option other than improving on the current situation
- So downward accountability should increase...not simple
- Other models exist that may work and are being explored elsewhere (e.g. Kenya)—the community as private sector company?
- Can or should people do it for themselves?
- If water and sanitation are basic rights, then where and how should responsibility be shouldered across the state-society continuum?

- Finally, it's both half full and half empty...
- You can stare into a well for as long as you like, but you may have to jump in to find out how deep it is
- (a call for more research)



Thank you!