Global Drying

The Other Inconvenient Truth

Footprint Forum 2010
Colle di Val d'Elsa, 7 June 2010

Dr. Claus Conzelmann, Vice President, Nestlé


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IWMI International Water Management Institute

Water for Food – 1 liter per calorie

	Liters of Water
Daily Drinking Water	2 – 5 Liters of Water
Daily Household Use	20 – 500 Liters of Water
1kg of Grain	500 to 2,000 Liters of Evapotranspiration (ET)
Livestock products (meat, milk)	5,000 to 15,000 Liters of ET

2.5b more mouths means finding another 2500 - 5000 cubic km of water!

We are facing a severe near-term crisis of increased demand on limited resources

- 25% of the world's population lives already under water stress (= less than 1700 m3/person/year).
  - Expected to rise to >60% by 2025.
- By 2030 global water requirements will grow from 4,500 km^3 to 6,900 km^3, 40% above currently available supply.
  - In many developing countries, supply gap will exceed 50%.
- In China, demand driven by industry and urbanisation will reach 820 km^3 in 2030, with a current availability of 620 billion m^3.
  - In reality, the gap is far bigger due to pollution, which already today renders >20% of the available surface water unfit even for agriculture.

Water tables are dropping in many places due to over-consumption

- In parts of India, the water table is dropping up to 6 meters per year
  - Partly due to over 20 million motorised pumps, compared with 100,000 in 1955.
  - Energy to run the pumps is free.

- The Ogallala aquifer - the largest in North America and a major source for agriculture from Texas to South Dakota - is being pumped at a rate 14 times greater than it can be replenished.

- Increasing amounts of groundwater used is from fossil aquifers and is non-renewable (“black water”).

The challenges

- Oil prices have fallen from their recent peaks, but concerns about the availability of freshwater show no sign of abating.
- Global water consumption is doubling every 20 years at an unsustainable rate of growth.
- Water, unlike oil, has no substitute.
- For businesses and communities alike, water is not discretionary. Without it, industry and the global economy falter, and social development is stifled.

The key issue: From water shortage to food shortage

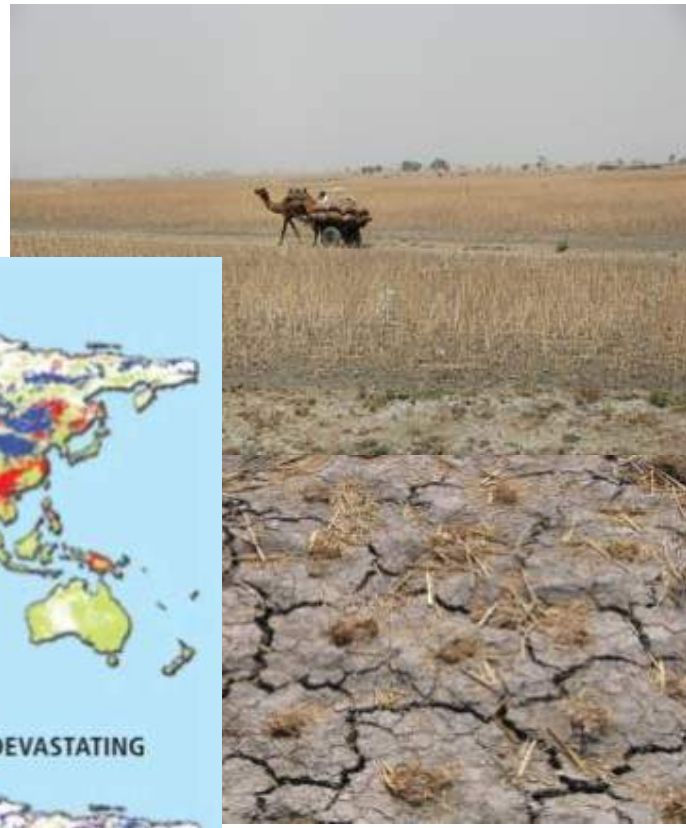
"If present trends continue the livelihoods of one third of the world's population will be affected by water scarcity by 2025.

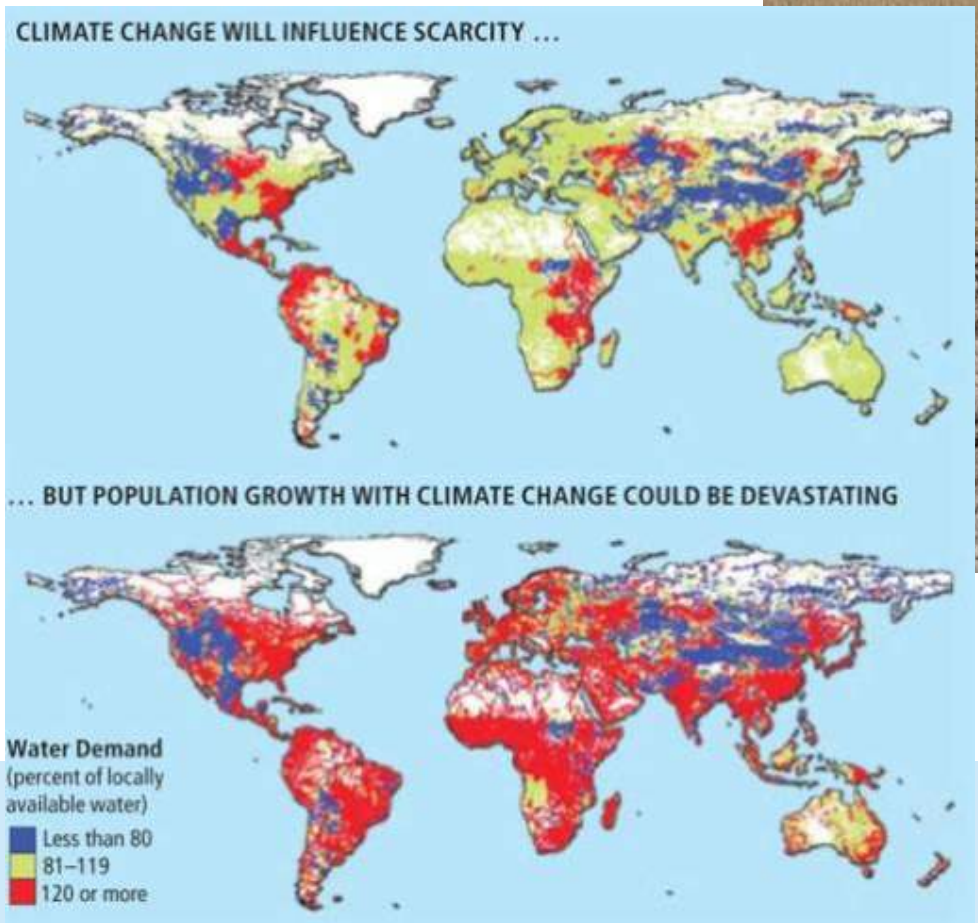
We could be facing annual losses equivalent to the entire grain crops of India and the US combined."

Frank Rijsberman, former

Director General

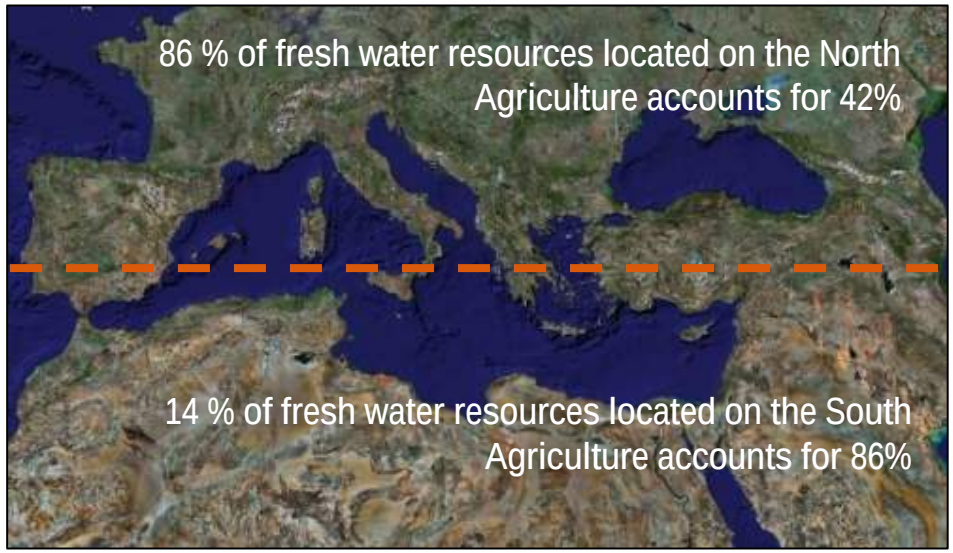
International Water Management Institute





Squaring the circle between development and limited water resources

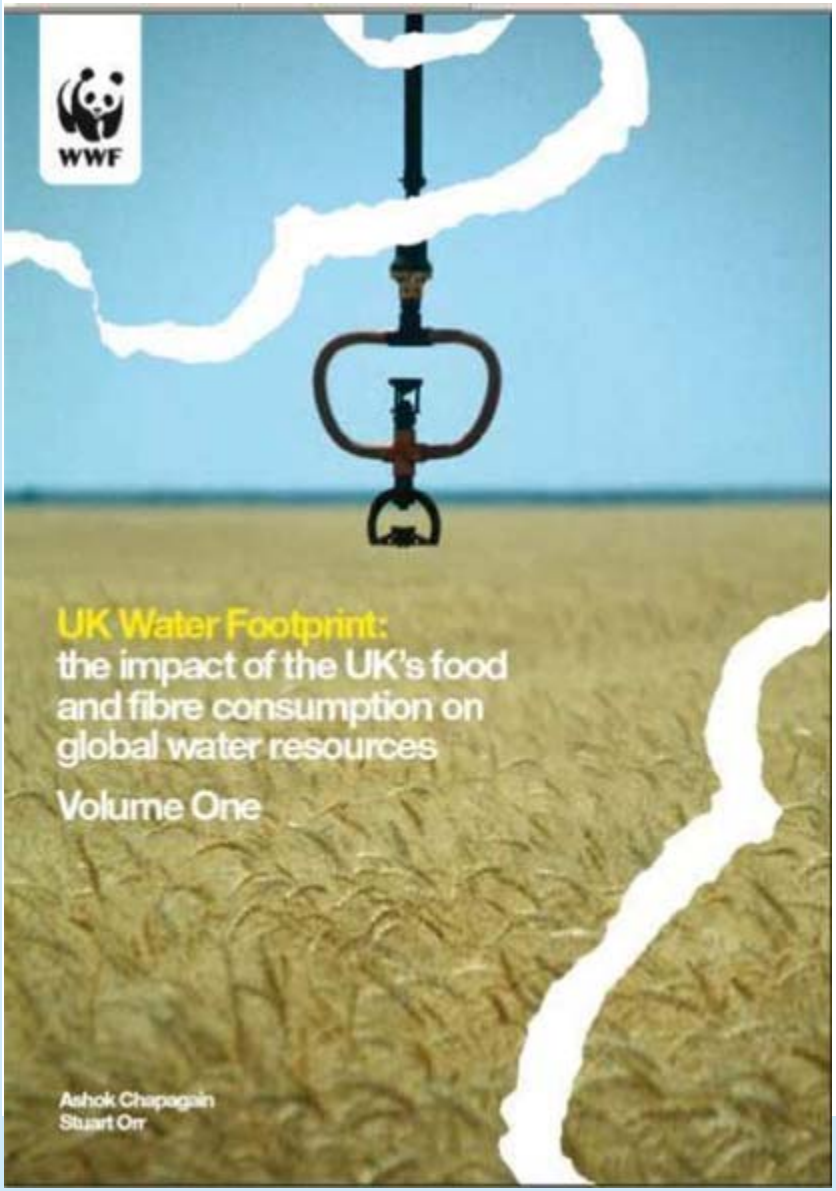
- Trebling of the population in one century (+ 150 millions foreseen between 2000 and 2025)
- First tourist destination worldwide. Tourists use 8 times more freshwater than locals.
- 280 km3 of water mobilised / year; +17% / year; 35% of distributed water lost
- In the South 86% of water for agriculture
- 5 out of the 10 countries with the biggest « water footprint » are in the Mediterranean (Portugal, Spain, Italy, Greece, Cyprus)



→ Wetlands seen as competitors for scarce water resources

(Tour du Valat, 2010)

Water Footprint: You take 58 baths a day – virtually



WWF estimates that only 32% of the UK's total water use comes from national sources.

Country	Export	Import	Net import
Brazil	91	199	107
Mexico	19	103	84
Japan	4	86	83
China	55	133	78
Italy	38	88	50
UK	15	55	40

Country	Export	Import
USA	298	137
Australia	71	10
Argentina	58	4
Canada	70	27
Thailand	52	9
India	66	24

Water needs a price – with exemptions for the poor and quotas to ensure enough water remains for Nature

The benefits of subsidised municipal water supply:

"If you don't have a price, the rich will get it free, the poor will pay a lot."

Nancy Birsdall, Center for Global Development

Charting our water future:

Economic frameworks to inform decision making (McKinsey et al. 2010)

- The world faces a significant water resource challenge
- Business-as-usual practices will not close the “water gap”
- A cost-effective, sustainable solution is possible, but requires economy-wide actions