Tradeoffs and inequalities in water and international development- examples from health

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Water is the point where key areas of international development intersect

Agriculture
- food security
- poverty reduction

Industrial development– eg power

Health

Climate change

Interventions in water management can have unpredictable effects

… especially if no attempt is made to predict them.

There can be knock-on effects over both time and space.

There can be unexpected effects on other sectors in the same time and space.

Non-communicable diseases

Mainly through effects on nutrition.

In some places due to chemicals eg arsenic, flouride.

Communicable

- Water borne
- Water washed
- Water based
- Water associated

Water borne

- Cholera
- Leptospirosis
- Cryptosporidium

- Typhoid (in part)
- Other diarrhoea

- Lack of *clean* water

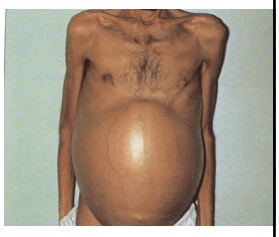
Water washed

- Typhoid (again)
- Diarrhoeal diseases
- Trachoma
- Scabies

- Lack of *enough* water

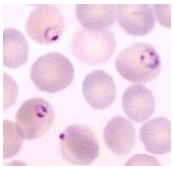
Water based

- Schistosomiasis
- Guinea worm
- Paragonomiasis
- Clonorchis



Other water associated- mainly vector-borne

- Malaria



- Onchocerciasis
- Dengue
- Filariasis

- Changes to water and land use can have a significant impact on malaria

Issues are different in urban and rural settings

Urban v rural

Urban

-Water washed, water borne

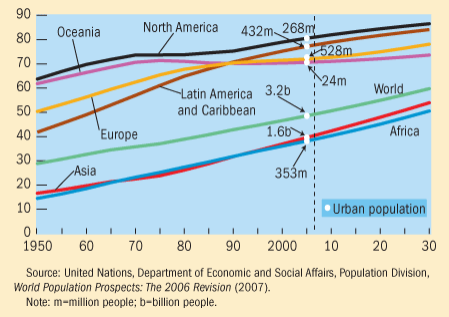
-Sewers

Rural

-Water washed, water borne, water based, water associated

-Agricultural use and green water

Urban population as a percentage of total



Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2006 Revision* (2007).
Note: m=million people; b=billion people.

Percentage with access to drinking water (UNICEF)

In most societies there are engineering solutions- if you pay enough

Complex tradeoffs around water- especially when it is limited, but even when it is not.

- Sometimes geographical.
- Occasionally inter-generational.
- Frequently between sectors and groups in society. A significant cause of conflict?

When there is a conflict of interest between the richer and the poorer the poorer seldom win.

There are dangers to utilitarian tradeoffs between groups as water becomes a scarcer resource.

- The greatest happiness to the greatest number
- Prevent greatest amount of harm to greatest number (negative utilitarianism)