

Water, Sanitation & Hygiene in the Developing World



Challenges and Opportunities to Improving Child Health

Katryn Bowe
Global Water Futures Project
Center for Strategic and International Studies

“Lack of access to water for meeting basic needs such as health, hygiene, and food security undermines development and inflicts enormous hardship on more than a billion members of the human family”

Kofi Annan, *World Water
Development Report*
(2004)

“Lack of access to water for meeting basic needs such as health, hygiene, and food security undermines development and inflicts enormous hardship on more than a billion members of the human family”

“And its quality reveals everything, right or wrong, that we do in safeguarding the global environment.”

Kofi Annan, *World Water Development Report*
(2004)

Lack of access to safe drinking water
+
Sanitation
+
Hygiene
=
WASH

Course Objectives

- Understand the role of sanitation, safe water, and personal hygiene in preventing disease and mortality
- Describe methods and challenges of improving access to safe water, sanitation, and hygiene
- Provide an overview of US Government, NGO, and multi-lateral efforts to address the sanitation and water crisis
 - Assess these efforts

Overview

- Part 1:
 - The global WASH crisis:
 - the impact on health & development
 - access to water, sanitation, and hygiene
 - the fecal-oral cycle & WASH
 - WASH interventions: lessons on what works
- Part 2:
 - The response of the developed world
 - Challenges & recommendations for aid donors & recipient countries

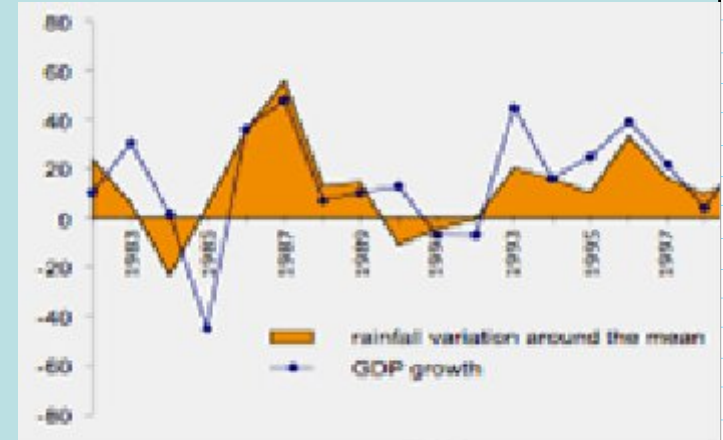
The Impact of poor WASH



Health



Human development



Economic development

Almost half the developing world population has at least one disease or infection caused by inadequate WASH

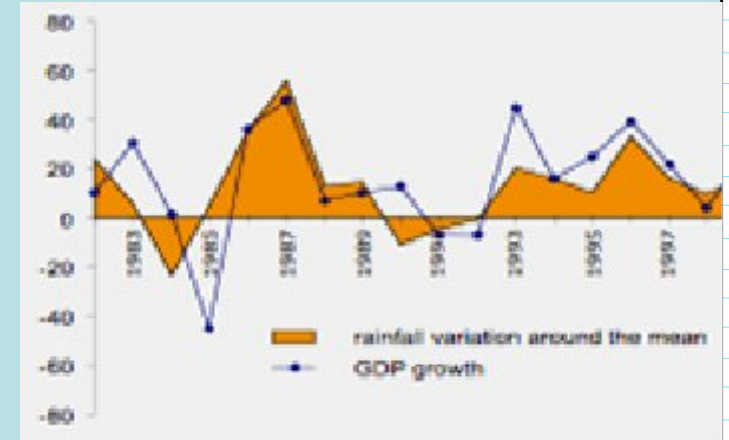
The Impact of poor WASH



Health



Human development



Economic development

150 million people infected with schistosomiasis

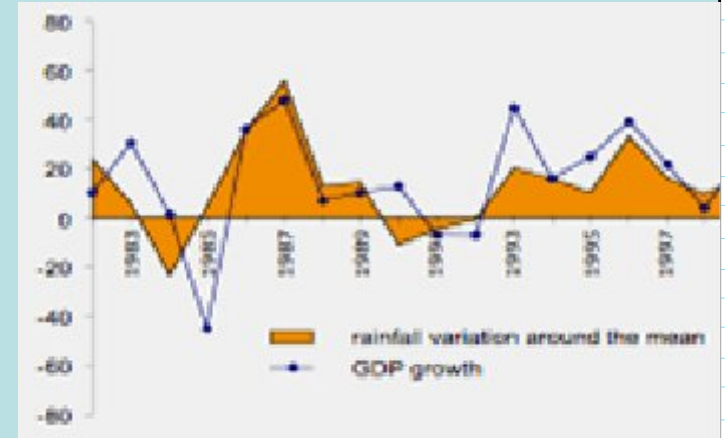
The Impact of poor WASH



Health



Human development



Economic development

1.8 million child deaths from diarrhea

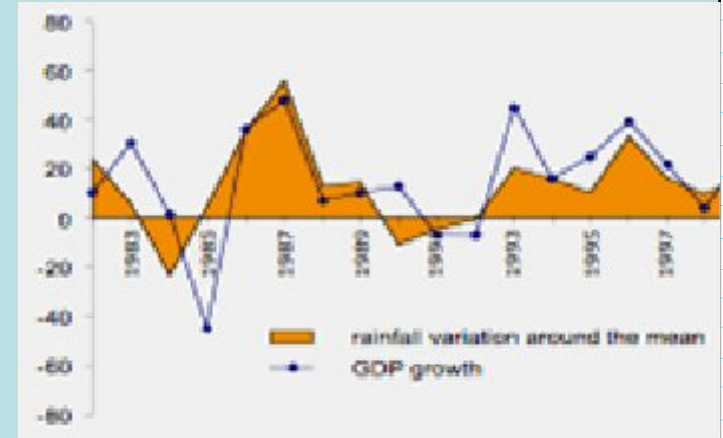
The Impact of poor WASH



Health



Human development



Economic development

6 million people blind from trachoma. 150 million people need treatment.

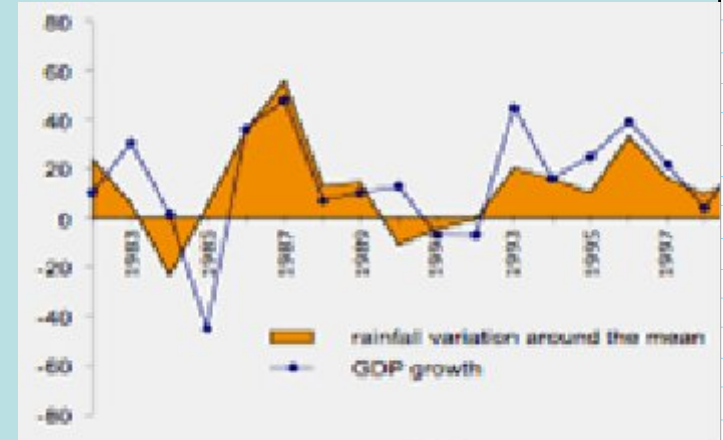
The Impact of poor WASH



Health



Human development



Economic development

Impaired cognitive development
Malnutrition
Stunting

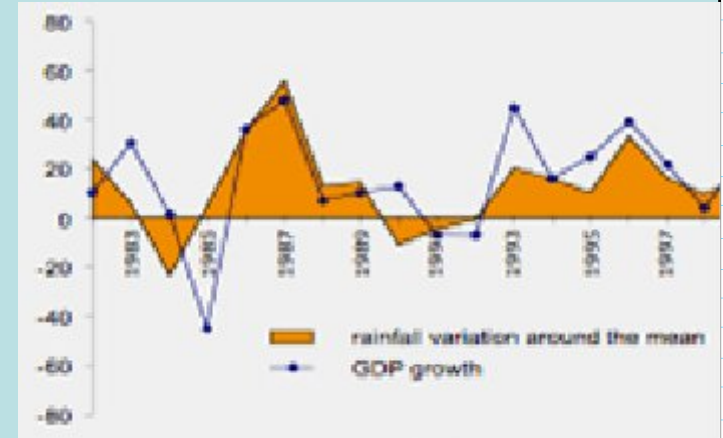
The Impact of poor WASH



Health



Human development



Economic development

Education: 443m school days are lost annually to WASH-related illness.

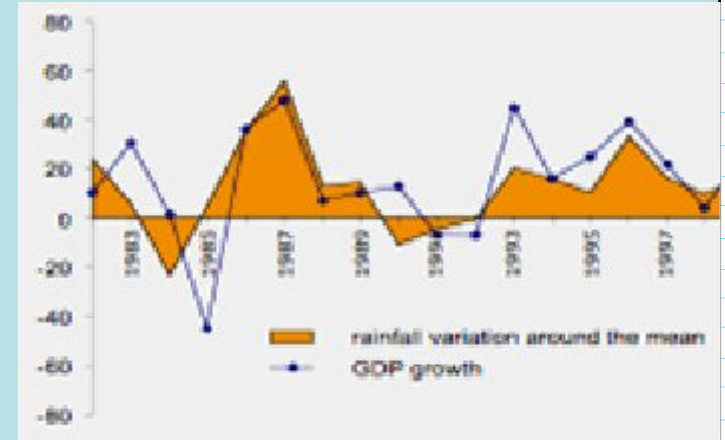
The Impact of poor WASH



Health



Human development



Economic development

Gender equity:
School absenteeism during
menstruation

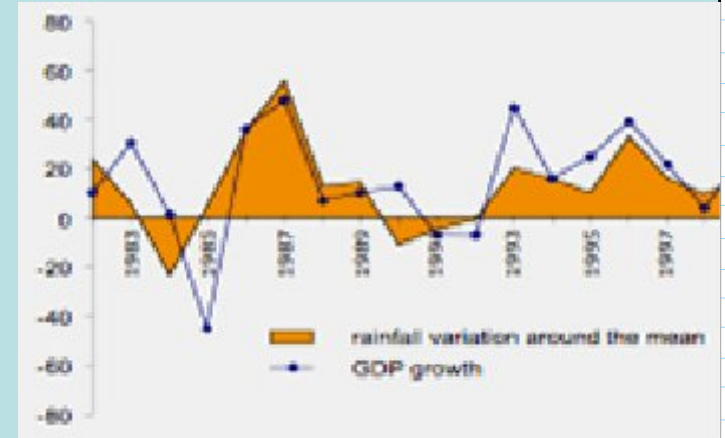
The Impact of poor WASH



Health



Human development



Economic development

Women in Africa spent 40 billion hours fetching water last year

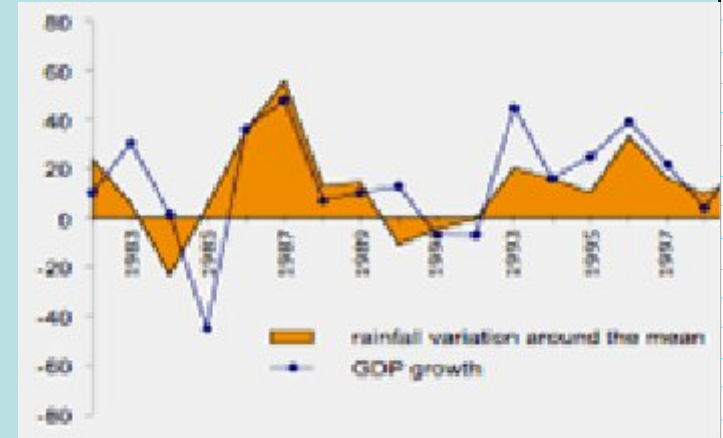
The Impact of poor WASH



Health



Human development



Economic development

Cambodia, Indonesia, the Philippines and Vietnam – lost an estimated US\$9 billion a year because of poor sanitation.

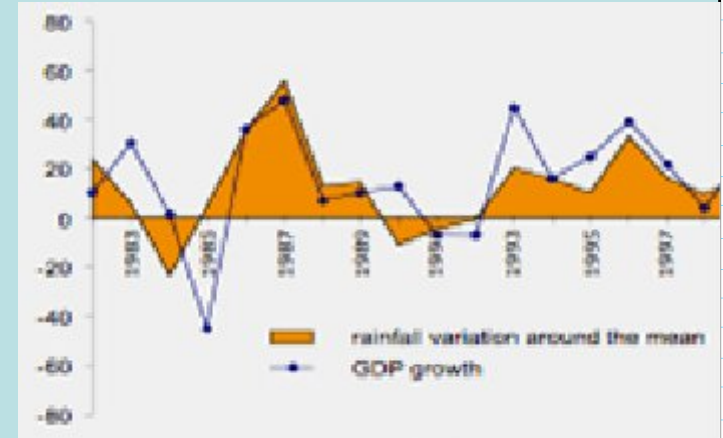
The Impact of poor WASH



Health

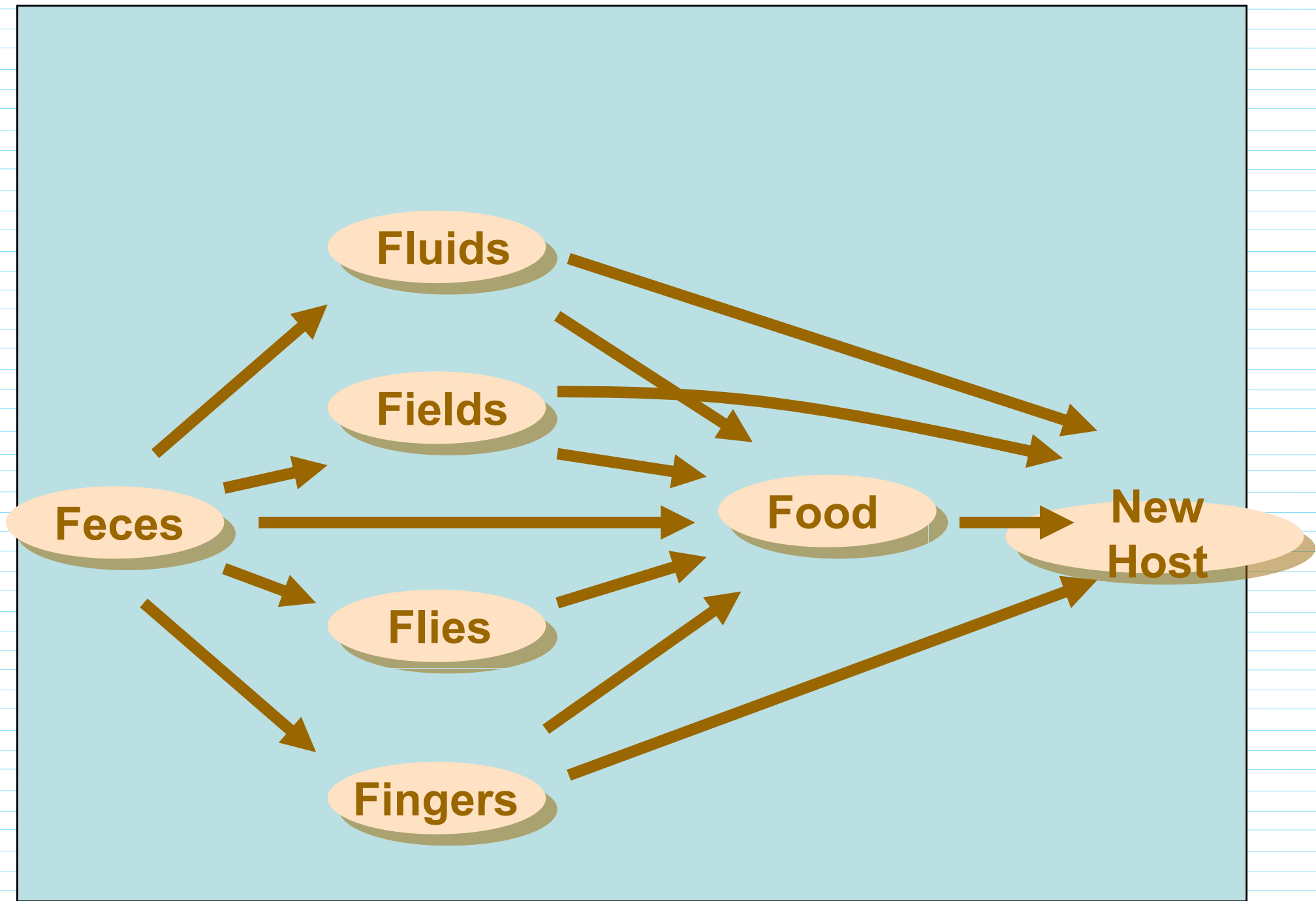


Human development

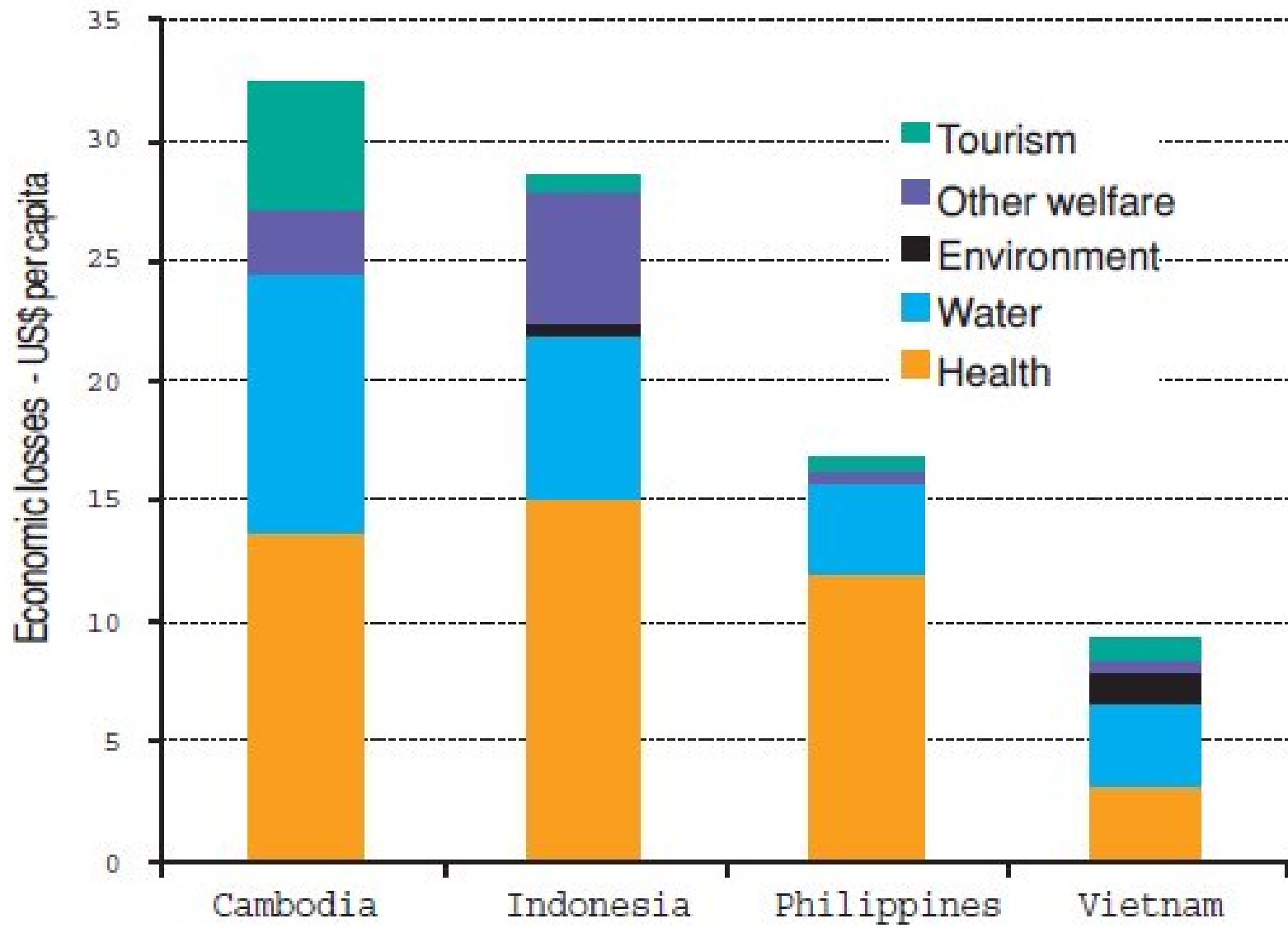


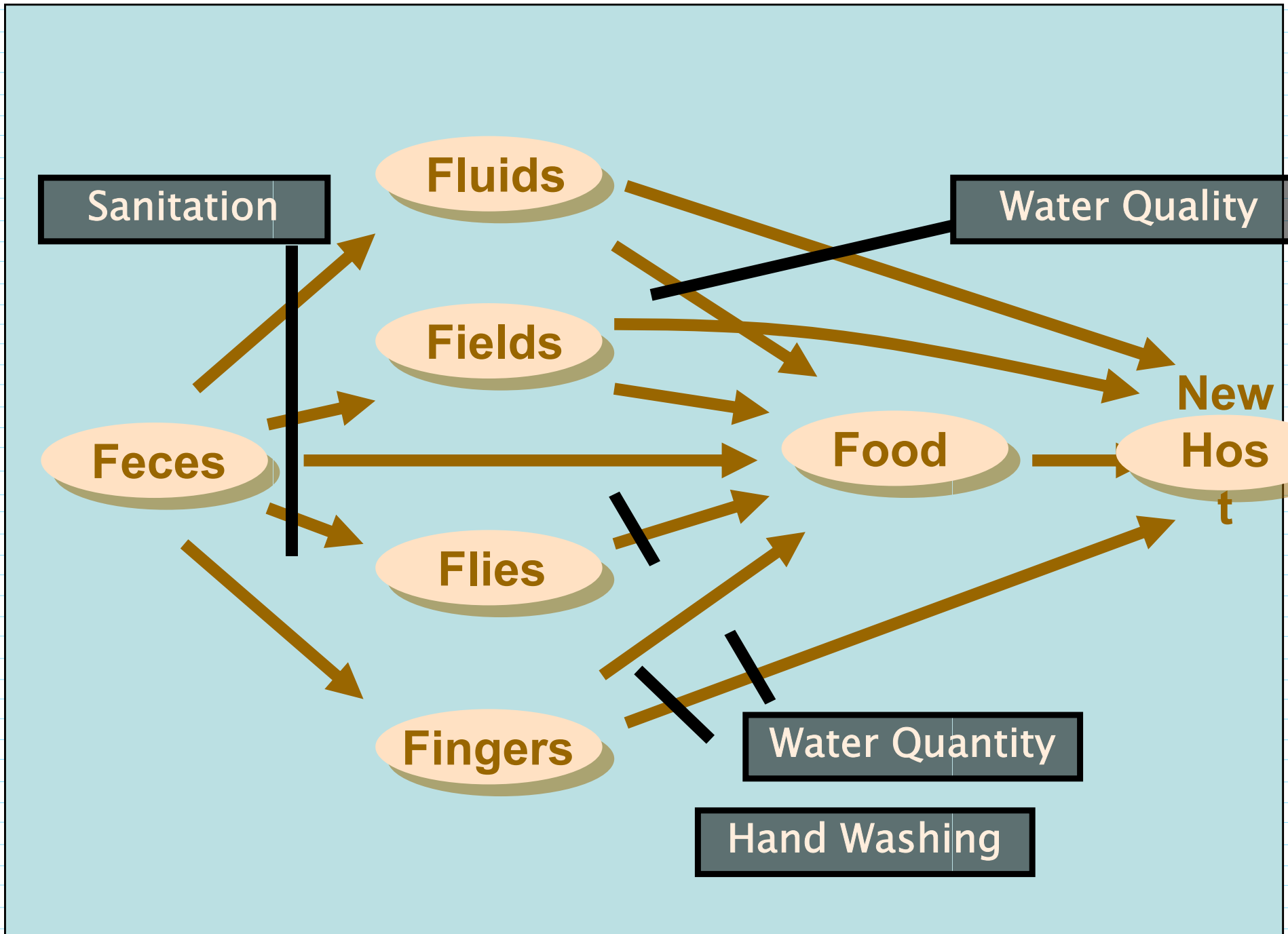
Economic development

2% - 7% of GDP of developing countries lost annually from reduced productivity, tourism, environmental damage

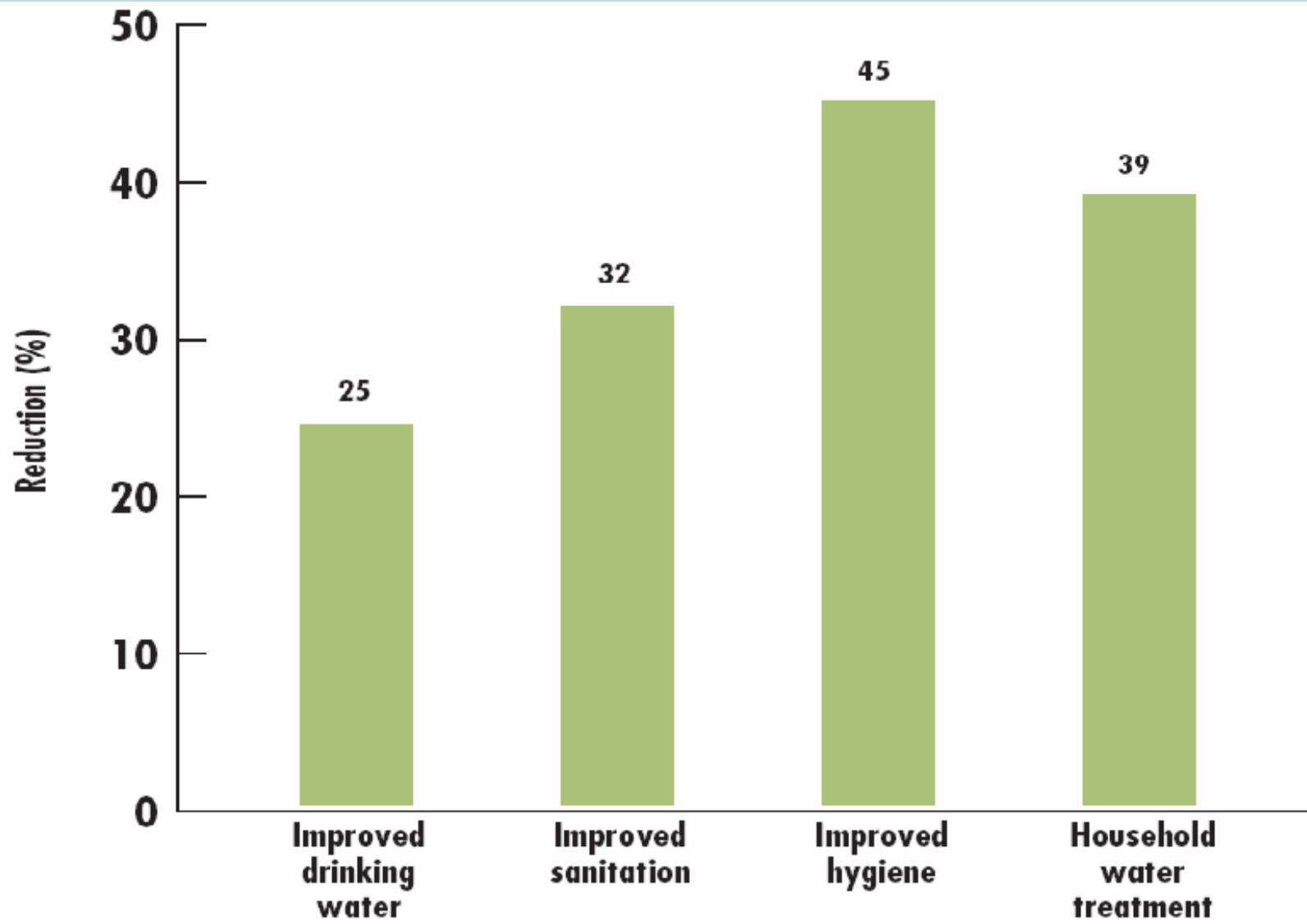


Annual Per Capita Losses, by Impact (US\$)





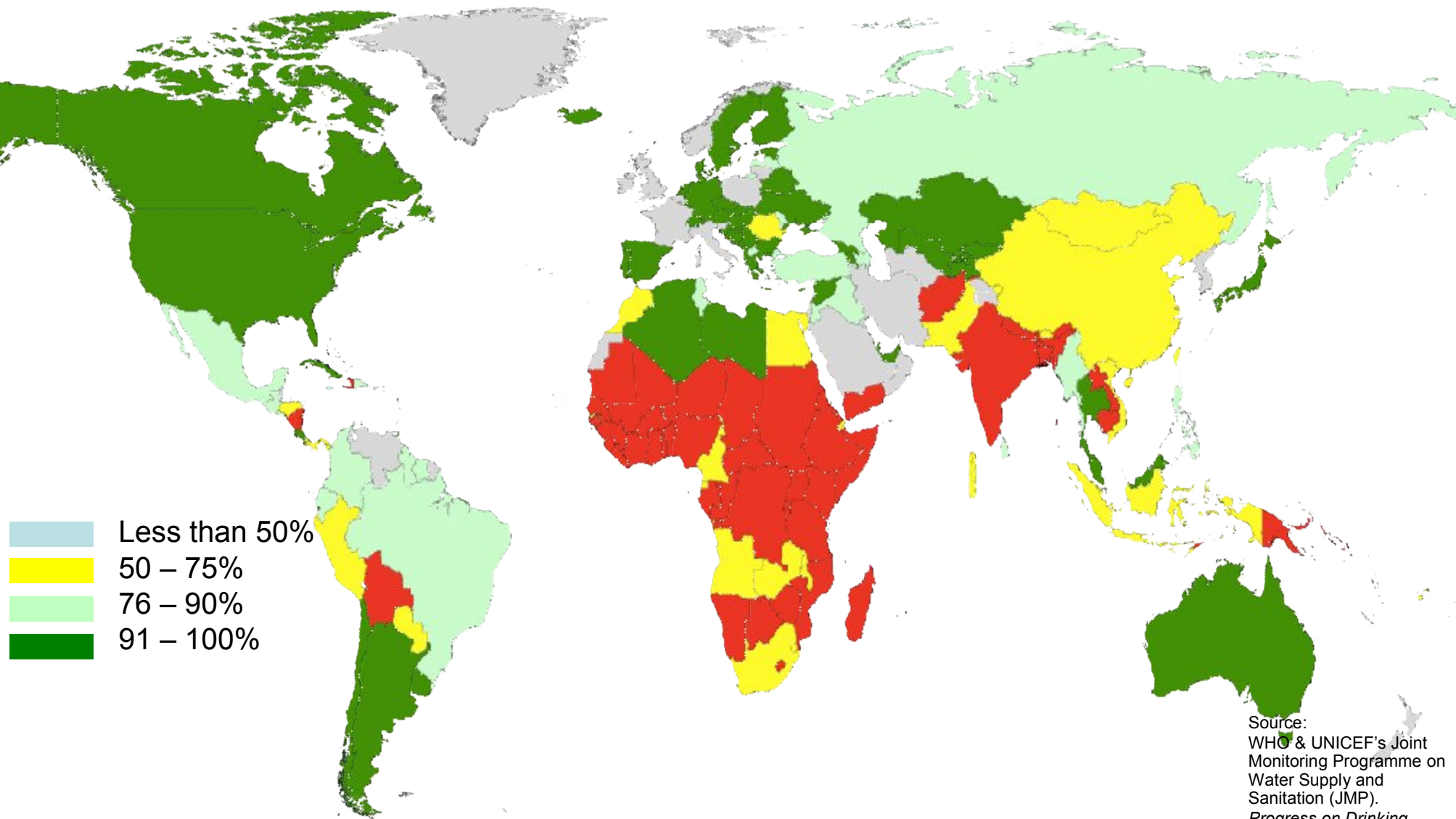
Reduction in diarrheal disease morbidity resulting from improvements in drinking water and sanitation services



WASH: Water, **Sanitation**, and Hygiene



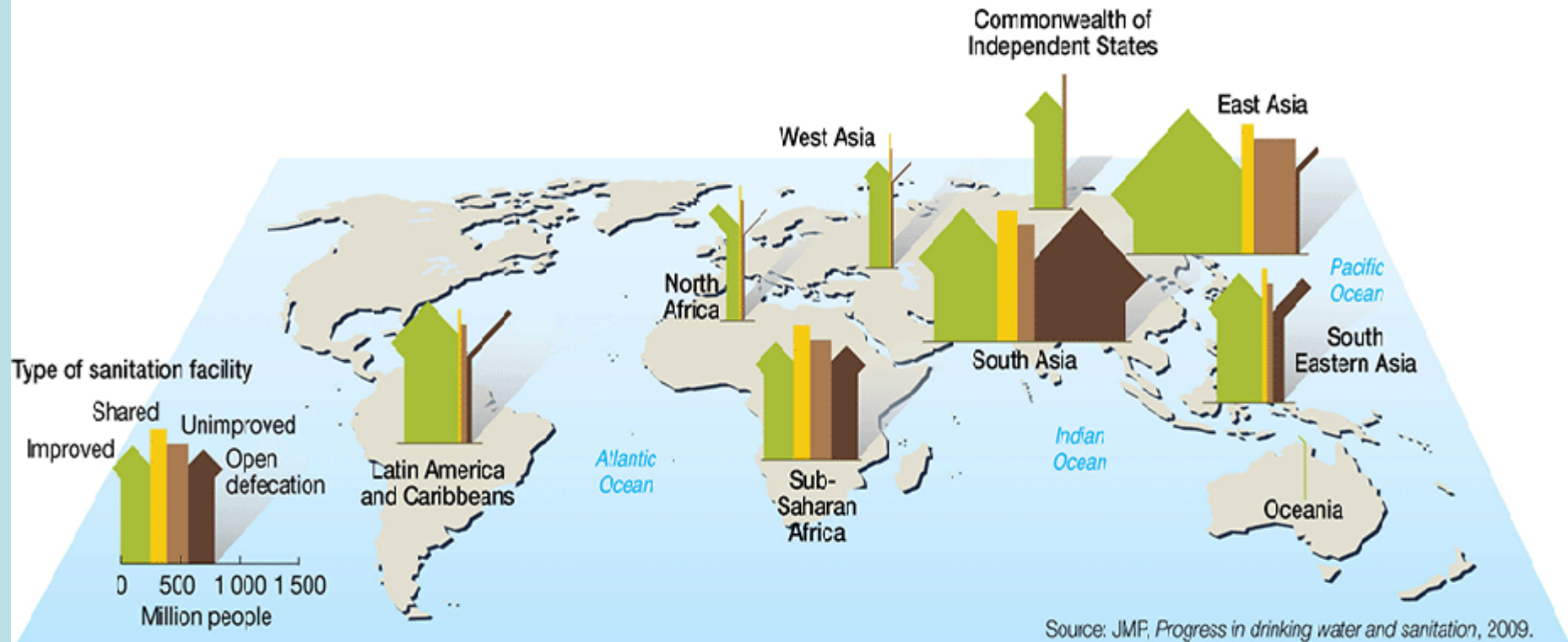
Total Sanitation Coverage



Source:
WHO & UNICEF's Joint
Monitoring Programme on
Water Supply and
Sanitation (JMP).
*Progress on Drinking
Water and Sanitation:
Special Focus on
Sanitation*. UNICEF, New
York, and WHO, Geneva,
2008.

WASH: Water, Sanitation, and Hygiene

Access to sanitation facilities



Improved: facilities that ensure hygienic separation of human excreta from human contact. Includes connection to a piped sewer system, septic tank, or pit latrines.

Shared: Sanitation facilities of an otherwise acceptable type shared between two or more households.

Unimproved: Facilities that do not ensure hygienic separation of human excreta from human contact

Open defecation: in fields, forests, bushes, bodies of water or other open spaces, or disposal of human faeces with solid waste.

WASH: Water, **Sanitation**, and Hygiene



WASH: Water, **Sanitation**, and Hygiene



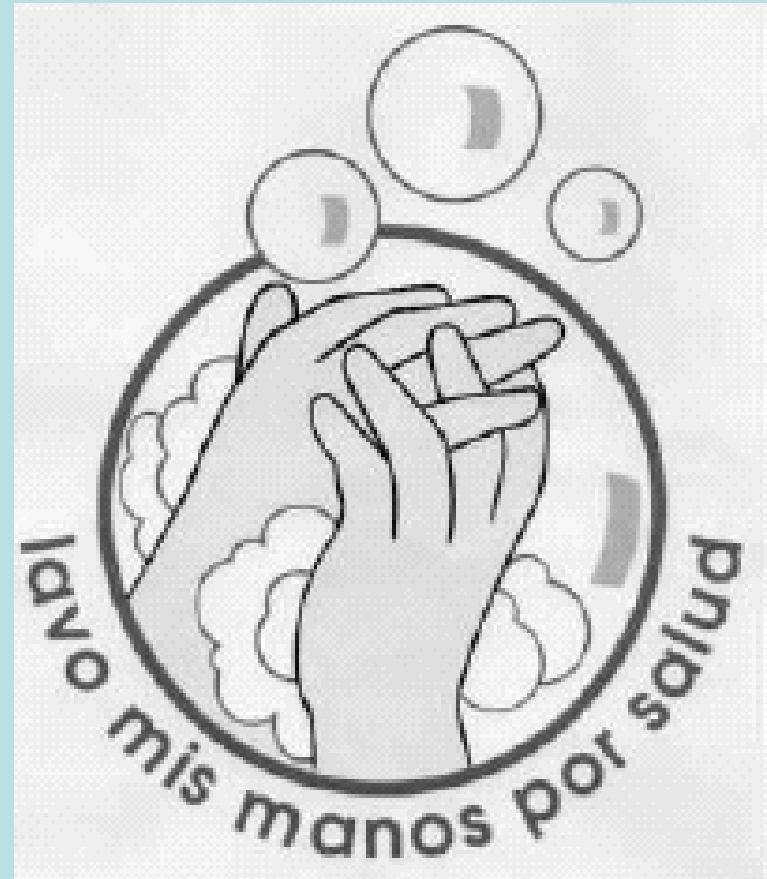
WASH: Water, Sanitation, and **H**ygien



WASH: Water, Sanitation, and **Hygiene**

Handwashing with soap has been shown to reduce:

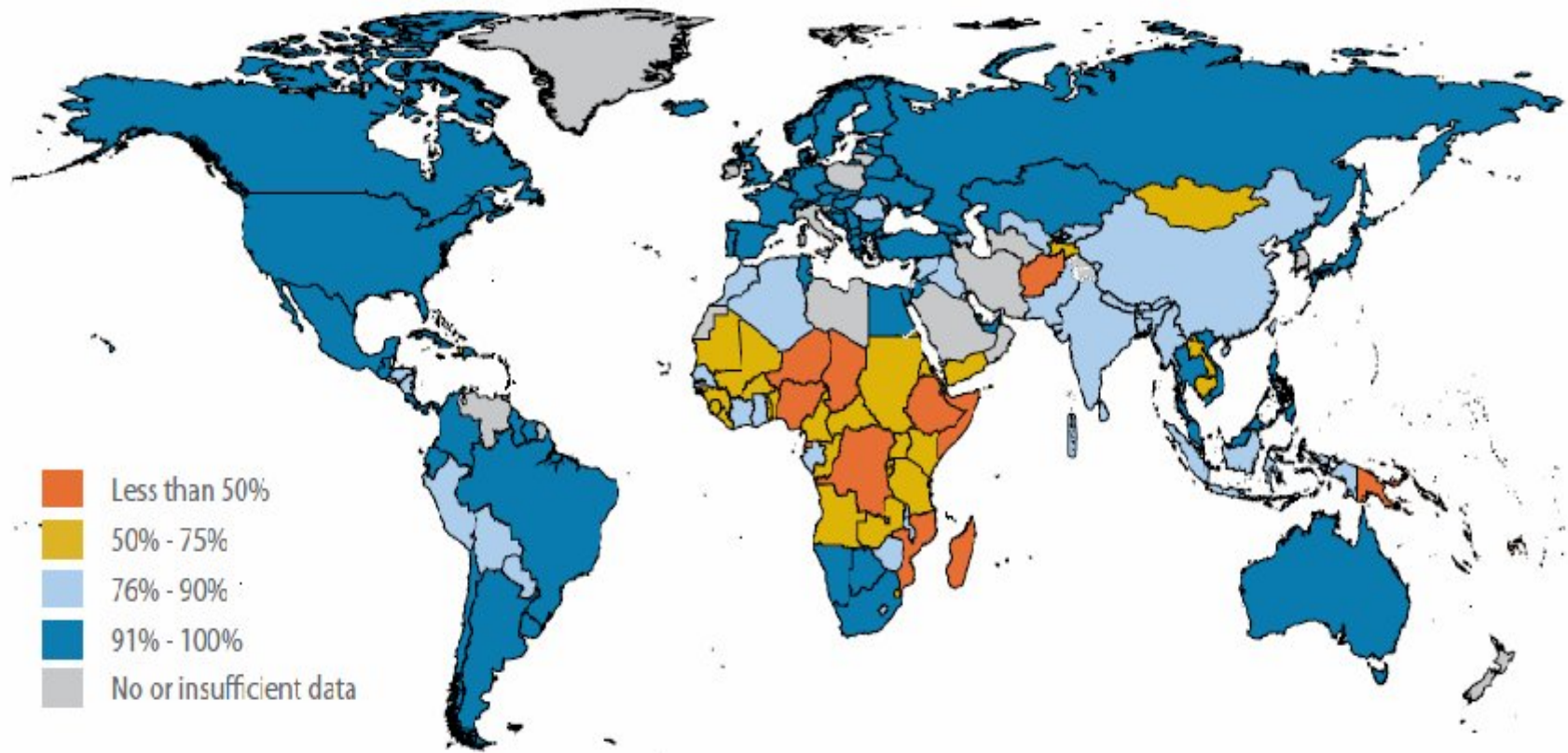
- pneumonia in children by 50%
- diarrheal disease by over 50%
- impetigo by 34%



WASH: **Water**, Sanitation, and Hygiene



Access to improved drinking water



Source:
WHO & UNICEF's Joint
Monitoring Programme on
Water Supply and
Sanitation (JMP).
*Progress on Drinking
Water and Sanitation:
Special Focus on
Sanitation*. UNICEF, New
York, and WHO, Geneva,
2008.

WASH: **Water**, Sanitation, and Hygiene

BUREAU OF WATER

Notice to Householders

BOIL YOUR WATER

Oct. 25. 1912.

Boil all water used for drinking purposes at least five minutes, until further notice. An accident compels the Bureau to supply this neighborhood with Raw unfiltered water.

Typhoid fever is caused by taking typhoid germs into the body with food or drink. These germs are most generally carried by means of water, and this warning is given to you that you may protect yourself and family by boiling all City water used for drinking and cooking purposes in your household until further notice.

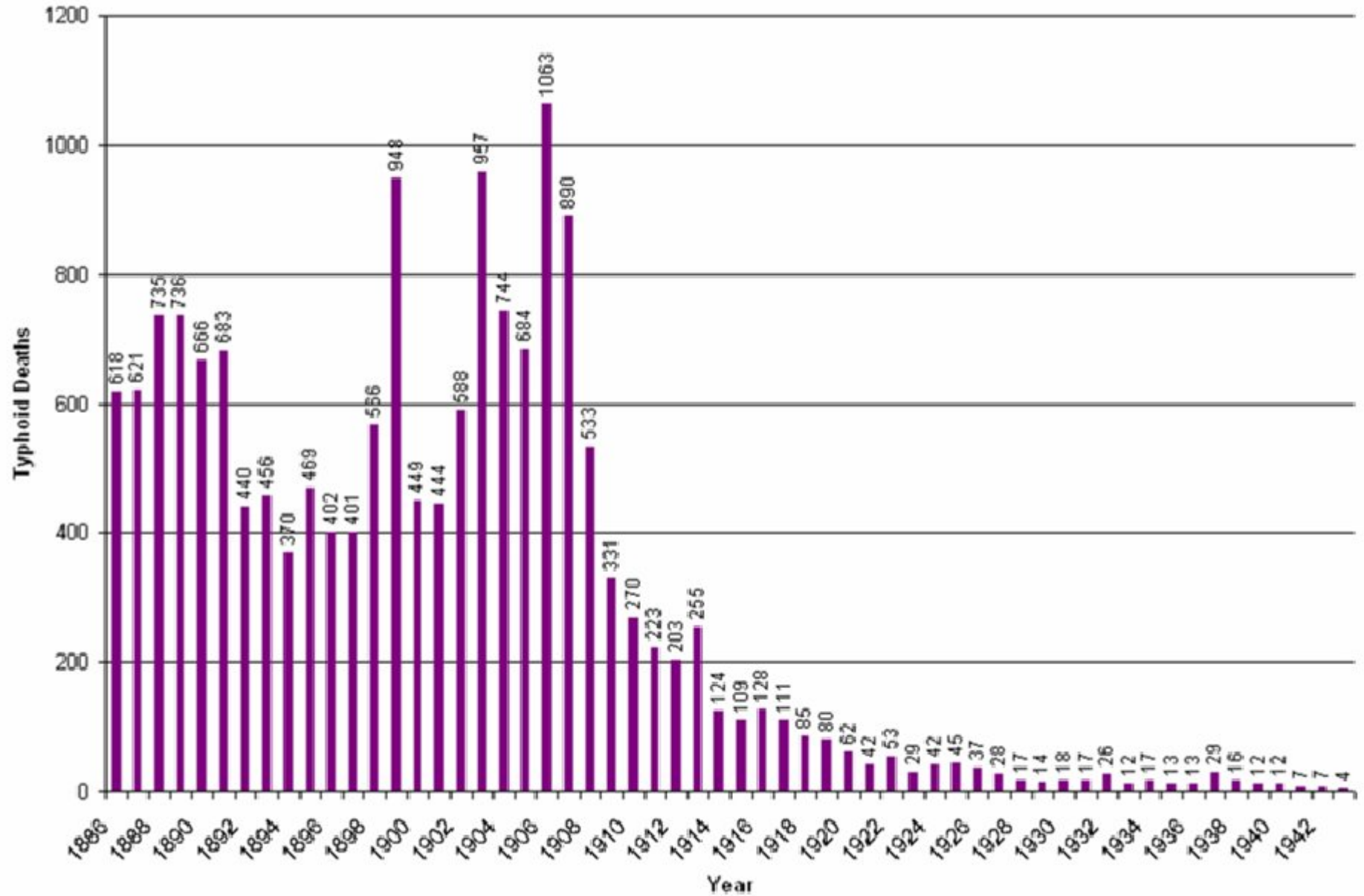
Neglect of this notice may result in serious illness and even death itself may follow.

Typhoid fever is particularly fatal in the age period 15 years to 30 years, and about one-third of the total deaths from this disease will occur in persons between those ages.

There is no uncertainty in the means by which we catch typhoid fever, and it is reasonably certain that about 500 persons out of every 100,000 people exposed to infection will catch this disease and that about 50 of those 500 will die.

Do not take any chances on being one of the 500 or you may help to make up the 50. Obey this warning.

WASH: Water, Sanitation, and Hygiene



WASH: **Water**, Sanitation, and Hygiene



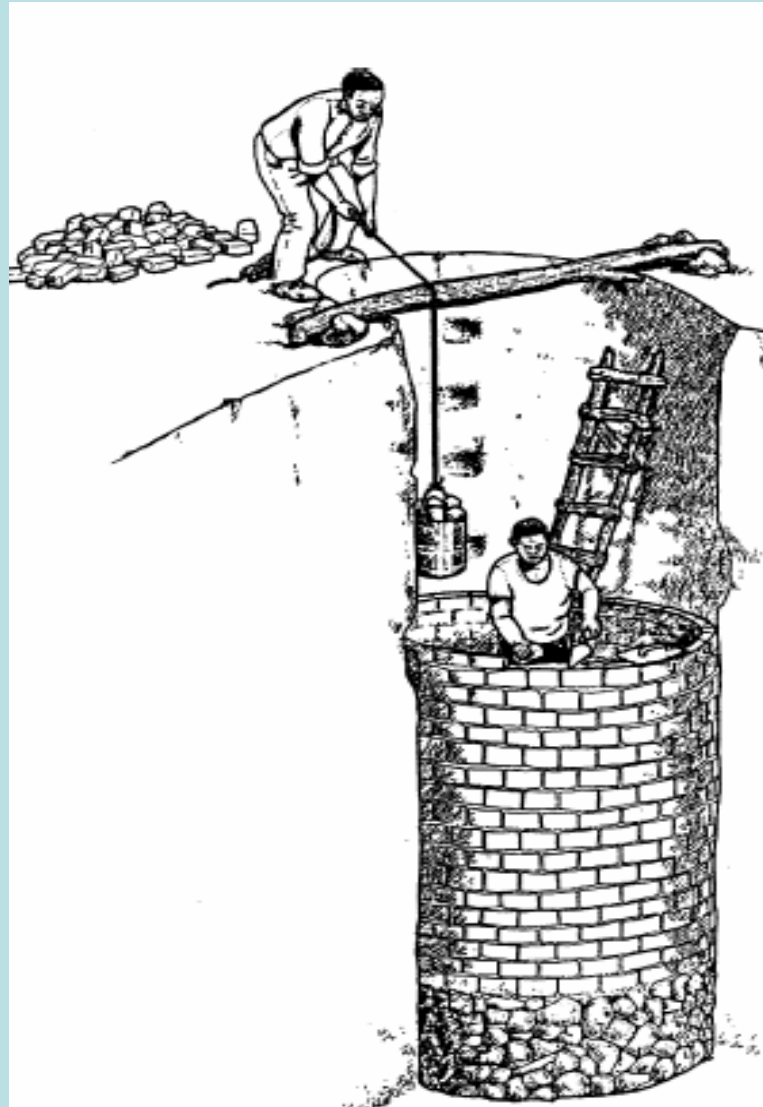
WASH: **Water**, Sanitation, and Hygiene



WASH: **Water**, Sanitation, and Hygiene



WASH: **Water**, Sanitation, and Hygiene



WASH: Water, Sanitation, and Hygiene

Use
Clorin

*to Treat Our Water Because it is
Cheaper Than Boiling Water.*

ONLY
K10
to TREAT 20 L of water

K600
to BOIL 20 L of water

Even Tap Water Can Have Germs

Treat your **WATER** with



DISTRIBUTED BY



SOCIETY FOR FAMILY HEALTH

P.O. BOX 80770, Lusaka, Zambia. TEL: 260-1-253244
FAX: 260-1-253245, 260-1-253246

This information is brought to you by the Society for Family Health (SFH)

Image courtesy of SFH

View from the ground:
Developing country-based WASH programs

Lesson 1:

WASH technologies are
not rocket science.

View from the ground:
Developing country-based WASH programs

Lesson 2:
BUT there is no silver
bullet.

View from the ground:
Developing country-based WASH programs

Lesson 3:
Culture is everything.

Lesson 3: Culture is everything



Lesson 3: Culture is everything



Lesson 3: Culture is everything



View from the ground:
Developing country-based WASH programs

Lesson 4:
Money Matters.

Lesson 4: Money Matters.



Lesson 4: Money Matters.



Lesson 4: Money Matters.



Lesson 4: Money Matters.

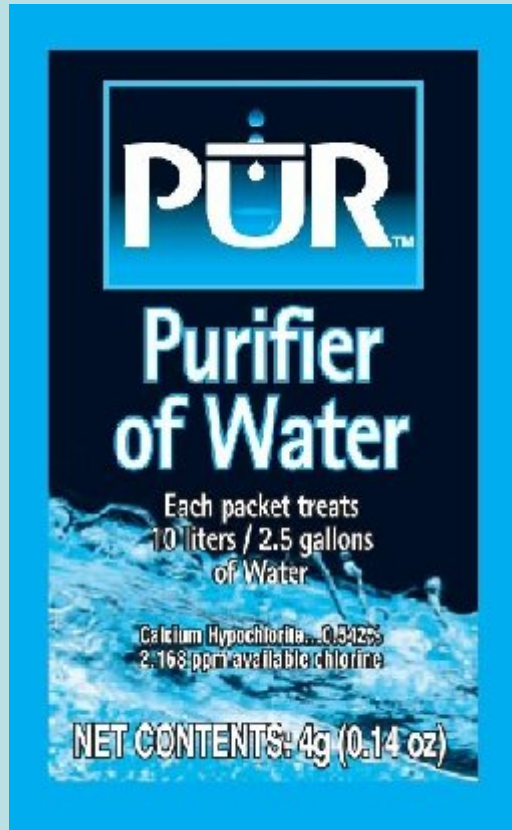


How are developed countries,
particularly the United States,
addressing the global WASH crisis?

Actors: Non-Government Organizations (NGOS)



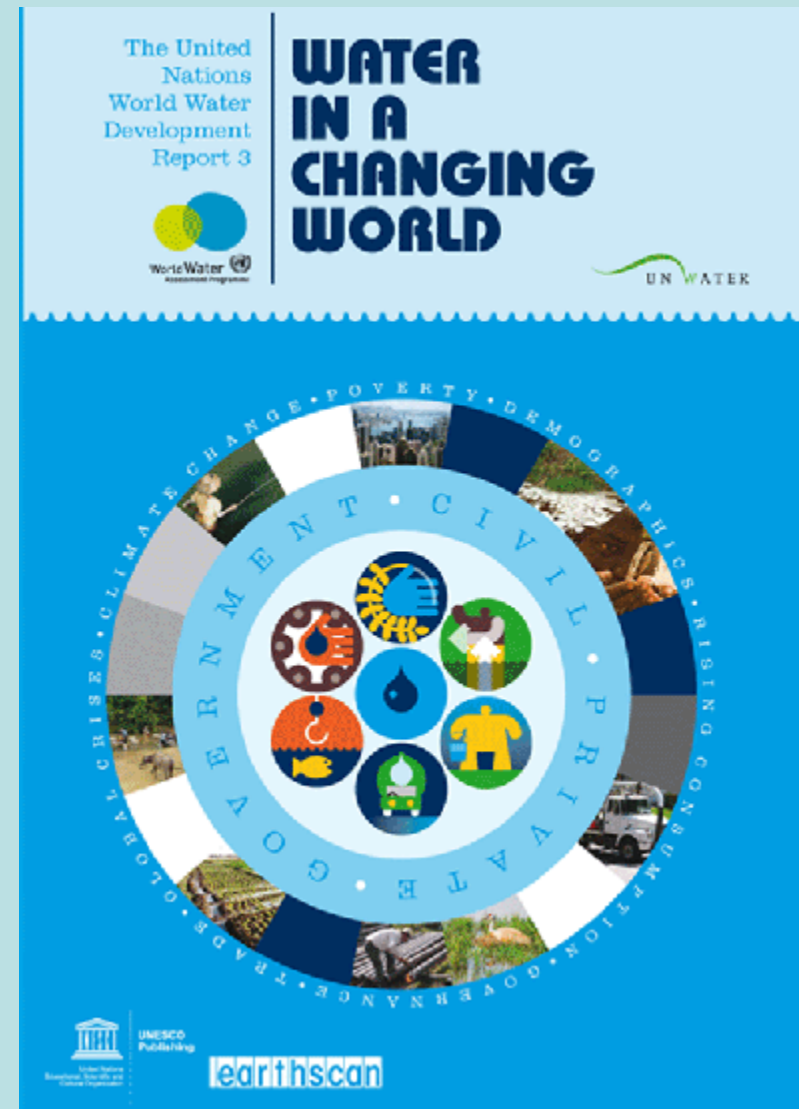
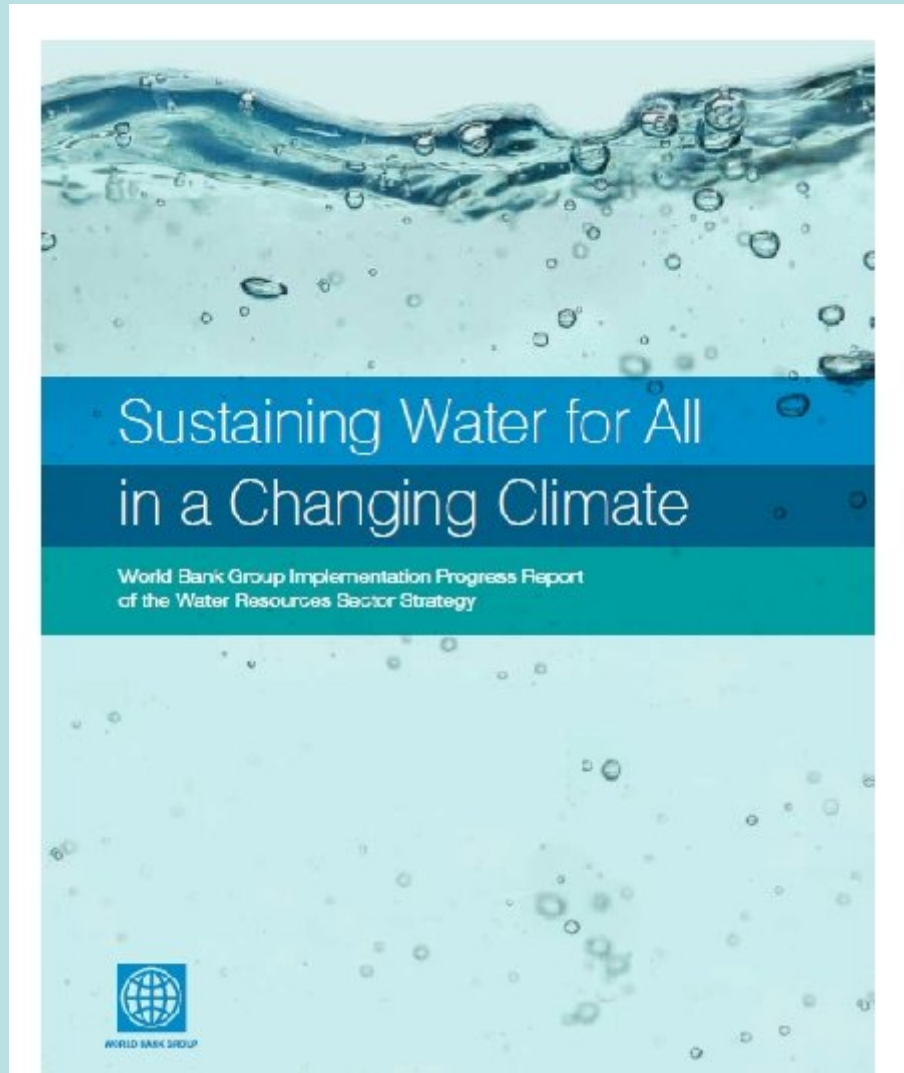
Actors : Private Sector



ITT watermark

Because every drop counts

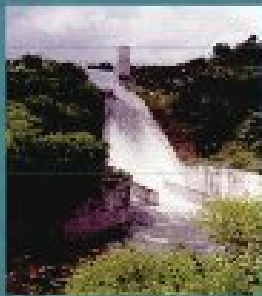
Main Actors: Multilateral organizations - World Bank, United Nations.



Main actor: the United States Government

Senator Paul Simon

Water for the Poor Act



- made access to safe water and sanitation for developing countries a specific policy objective of the US Foreign Assistance Program : codified MDG 7
 - \$300m appropriated in FY08
 - \$125m targeted to Sub-Saharan Africa

Actor: US Government

- Expanding WASH access
 - Hardware
 - Software
- Water Resources Management
- Water Productivity



Actor: US Government

Accomplishments

- in 2009: two billion gallons of disinfected drinking water
- 5.7 million people gained improved access to drinking water
- 1.3 million people gained improved access to sanitation



USAID
FROM THE AMERICAN PEOPLE

Actor: US Government



Shortcomings to donor response

AKA

Opportunities for improving donor response

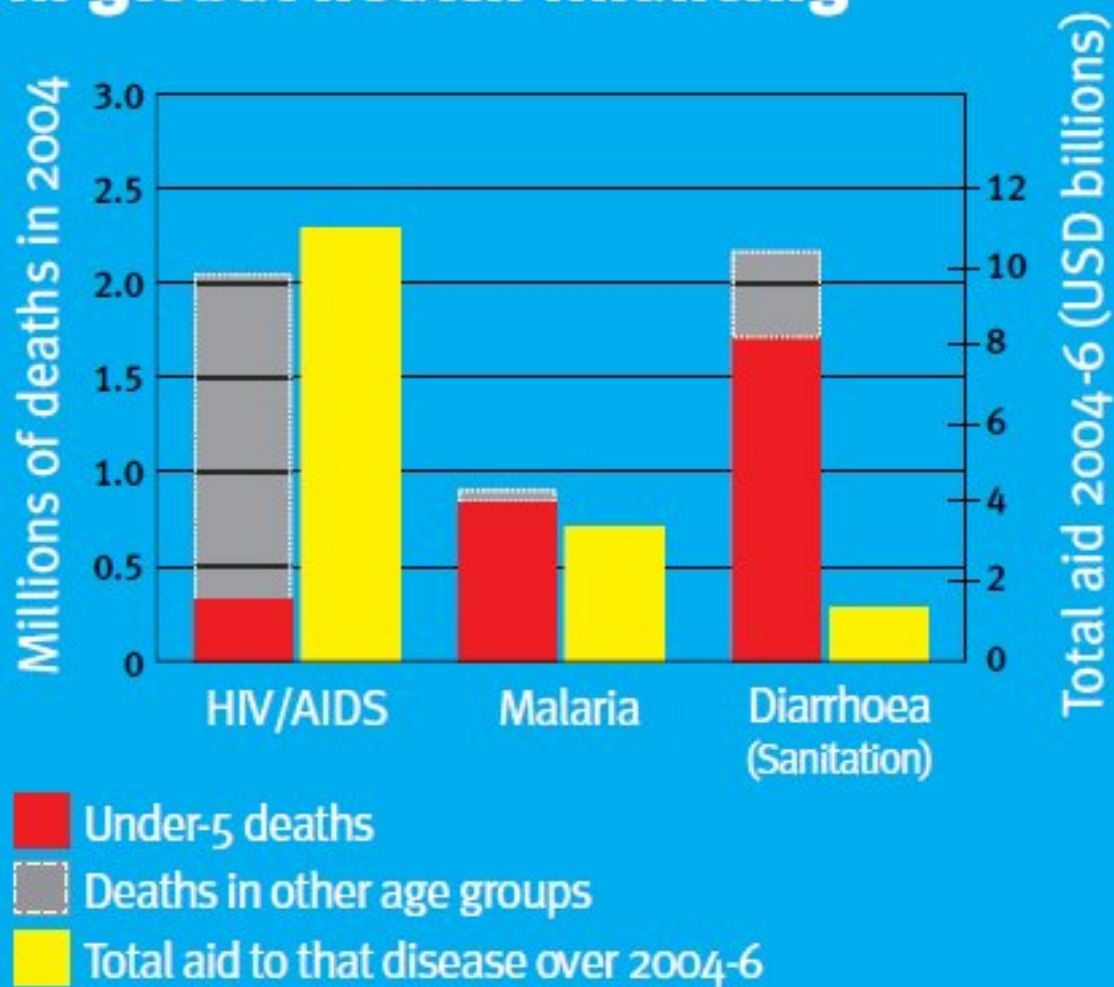
Aid resources are
Insufficient
Not proportional to crisis

Donor Shortcomings/Opportunities



**Aid resources are insufficient &
not proportional to crisis**

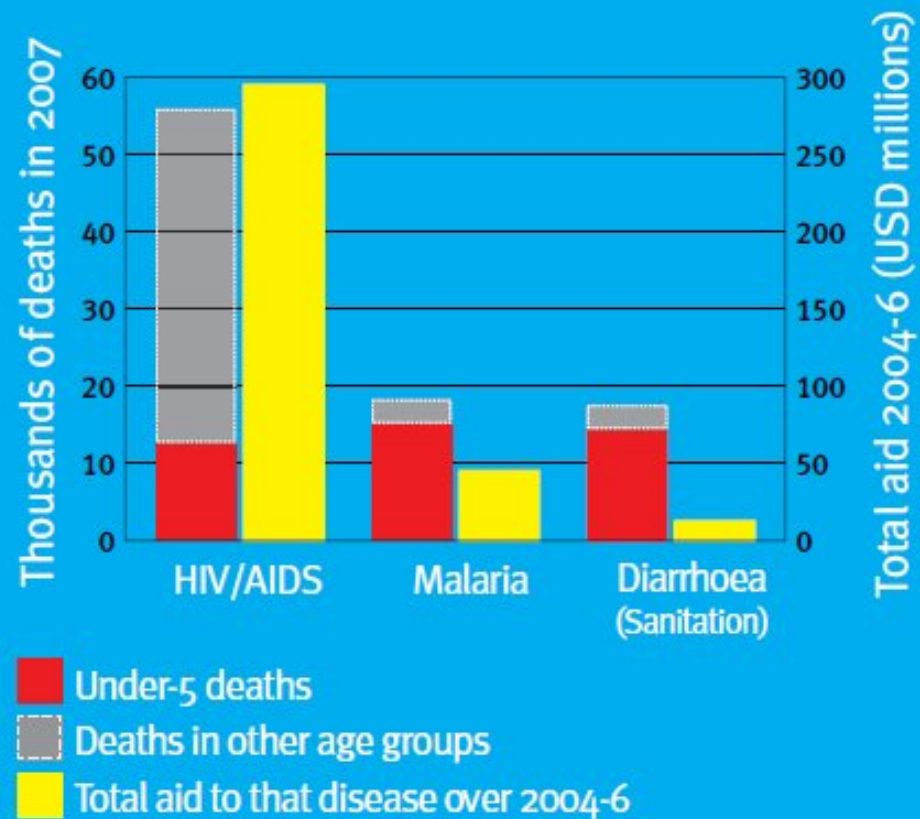
The relative neglect of sanitation in global health financing



Sources: OECD DAC database, WHO (2008), and WHO (2005)

Donor Shortcomings/Opportunities

The relative neglect of sanitation in health financing in Zambia



OECD DAC database, UNICEF (2009), UNAIDS (2008) and WHO (2008)

No



Investing in our future

The Global Fund

To Fight AIDS, Tuberculosis and Malaria

**Aid resources are insufficient &
not proportional to crisis**

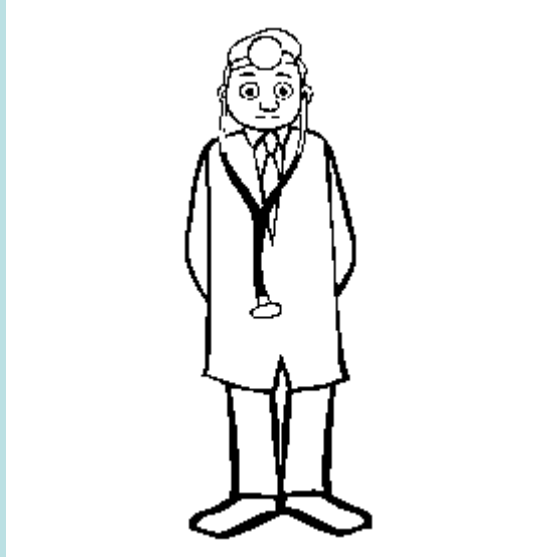
Donor Shortcomings/Opportunities



Aid resources are insufficient & not proportional to crisis

Water is everywhere and nowhere

Donor Shortcomings/Opportunities



Water is everywhere and nowhere

Donor Shortcomings/Opportunities



Water is everywhere and nowhere

Water is everywhere and nowhere
→ fragmentation, poor
coordination

USG: no overarching strategy

(un)Sustainability:

Aid poorly targetted

“Success” not defined, measured

Donor Shortcomings/Opportunities



(un)Sustainability:

Aid poorly targetted

“Success” not defined, measured

Donor Shortcomings/Opportunities



(un)Sustainability:

Aid poorly targetted

“Success” not defined, measured

(un)Sustainability:

Aid poorly targetted

“Success” not defined, measured

Donor Shortcomings/Opportunities



(un)Sustainability:

Aid poorly targeted

“Success” not defined, measured

Institutional capacity

Human resource constraints

Donor Shortcomings/Opportunities



**Institutional capacity Human
resource constraints**

Water > Sanitation

Promising developments



Promising developments



Promising developments

**Sanitation
and Water
for All**