



# The Impact of Water on World Health

Teaching Water:  
*Global Perspectives on a Resource in Crisis*

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# Roadmap

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- 1. Introduction to HGHI**
- 2. What is 'global health'?**
- 3. Water in the white space**
- 4. Global responses to the water crisis**
- 5. Final messages: Bringing it home**
- 6. Q&A**

# Introduction to the Harvard Global Health Institute



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GOING GLOBAL

PREPARING LEADERS

WORLDWIDE WORK

LATEST ACTIVITIES

ABOUT HGHI



### Working for a more equitable world of health

It's not about fixed borders and static processes, but fluid populations and dynamic policies; not about serving others somewhere else, but about us, together, working for the well-being of all.

### News Feed

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[In pursuit of science](#)

[Avoiding the digital 'flock'](#)

[Healthy menus for people and planet](#)

[Reflections on justice delayed](#)

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### Reframing The Future

We face a global health paradox: in a world where technological advances in everything from cell phones to cellular microbiology have touched lives everywhere, there has never been as broad a divide in health status...[more](#)



Objectives



Context



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### New & Newsworthy

Knowledge for the Public Good

When it comes to research and development (R&D) for health technologies, whether for pharmaceuticals, diagnostics, or other devices, there is often a gap between where investments are directed and the point of greatest need. To address these challenges in health R&D, the World Health Organization established [read more](#).

### Global Health Resources



At Harvard



Teaching & Learning



Funding Opportunities



For Students

#### • Harvard Schools

Gateways to global health commitments at every Harvard school...[more](#)

#### • Institutes & Centers

Multi-disciplinary partnerships with global health ambitions...[more](#)

#### • Affiliated Hospitals

Hospital-based global health centers and clinical training programs...[more](#)

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Image Source: Jenn Durfey. Flickr, 2010

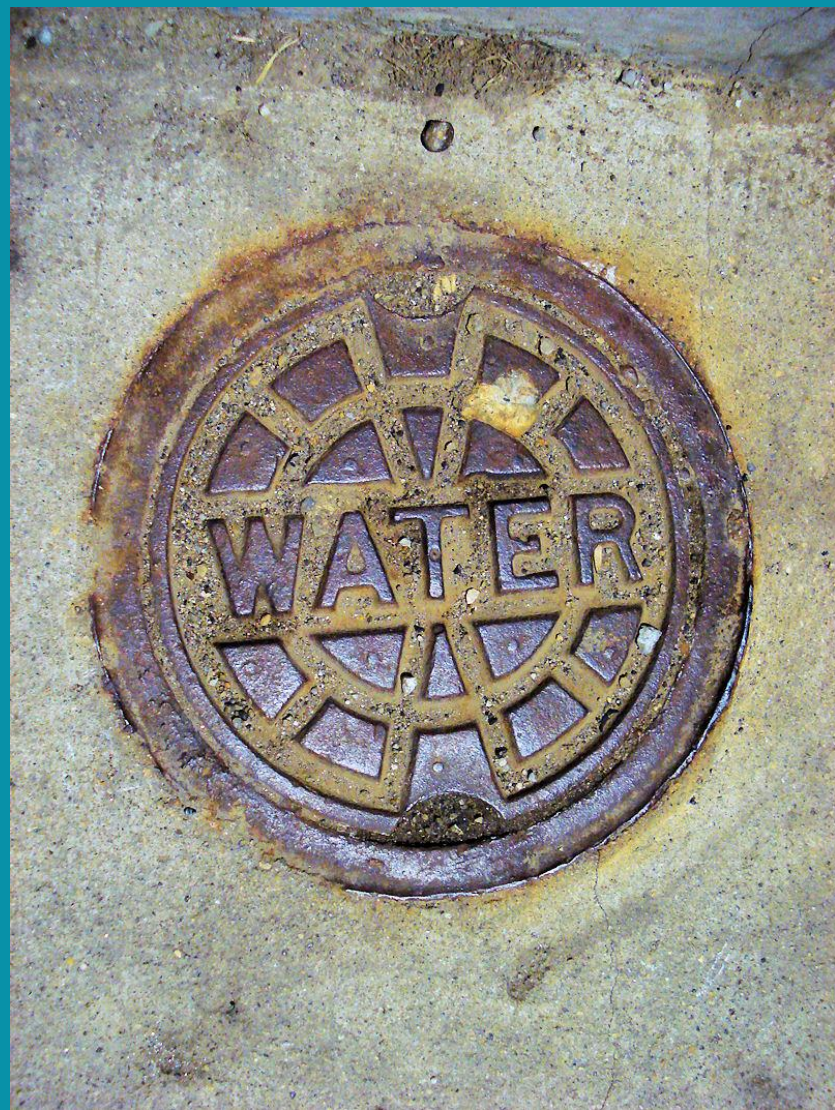


Image Source: Bob Fornal. Flickr, 2007





Image Source: Arne Hoel, World Bank Flickr, 2007

Image Source: Wikimedia, 2009





Michael Dwyer/Associated Press

In the suburb of Chelsea, residents stocked up after a main break rendered water in the area undrinkable.

# Global Health: Conceptual Foundation

**What is 'global health'?**



# Global Health: Conceptual Foundation

**What is 'global health' **not**?**

# Global Health: Conceptual Foundation

## What is global health **not**?

- It is not “international health”
- It is not foreign health
- It is not health of the poor
- It is not communicable diseases
- It is not about risks moving from South to North
- It is not about solutions moving North to South

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

-Preamble to the Constitution of the World Health Organization



# What does global health encompass?

‘Global health’ or ‘world health’ refers to the health of all populations in the world, regardless of nation, state, geographical position or stage of development. It includes an **interdisciplinary** set of challenges involving health **determinants** (social, political, economic), collections of **health problems**, and the **societal responses** to both.

Global health is inclusive of **population-level** policies as well as individual approaches to health promotion and pays special attention to the needs of the most vulnerable populations.

# Population-level of Analysis

**Refers to all populations in the world, regardless of nation state, geographical position or stage of development**



- **National populations**
- **Migrants**
- **Populations of failed or fragile states**
- **Refugees and displaced populations**
- **Victims of humanitarian crises**
- **Victims of human rights violations**

# How do we define 'global health'?

The defining characteristic that makes global health 'global' is its central concern with the **interconnectedness** among populations, the principle of **health as a fundamental human right** for all people in the world, the **transfer of health risks** across national borders, and the **consequences of globalization** on evolving patterns of health, disease, and social determinants. A core component of the HGIH global health agenda—more **equitable conditions** for health and more equitable *access* to health services—underlies our focus on disparities between and within countries, including those in our own communities.



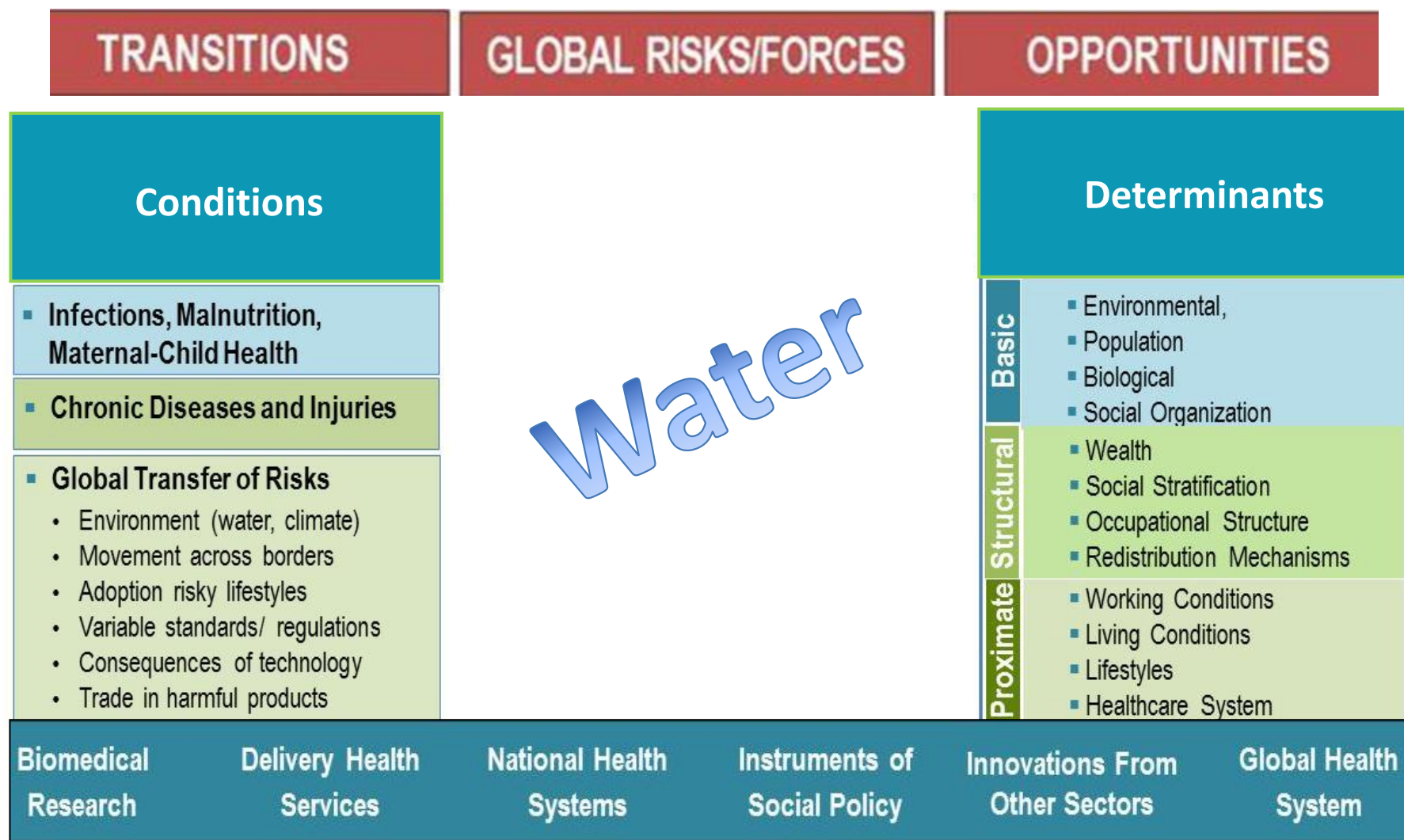
# Global Health: **Core Concepts**

**Interdependence**

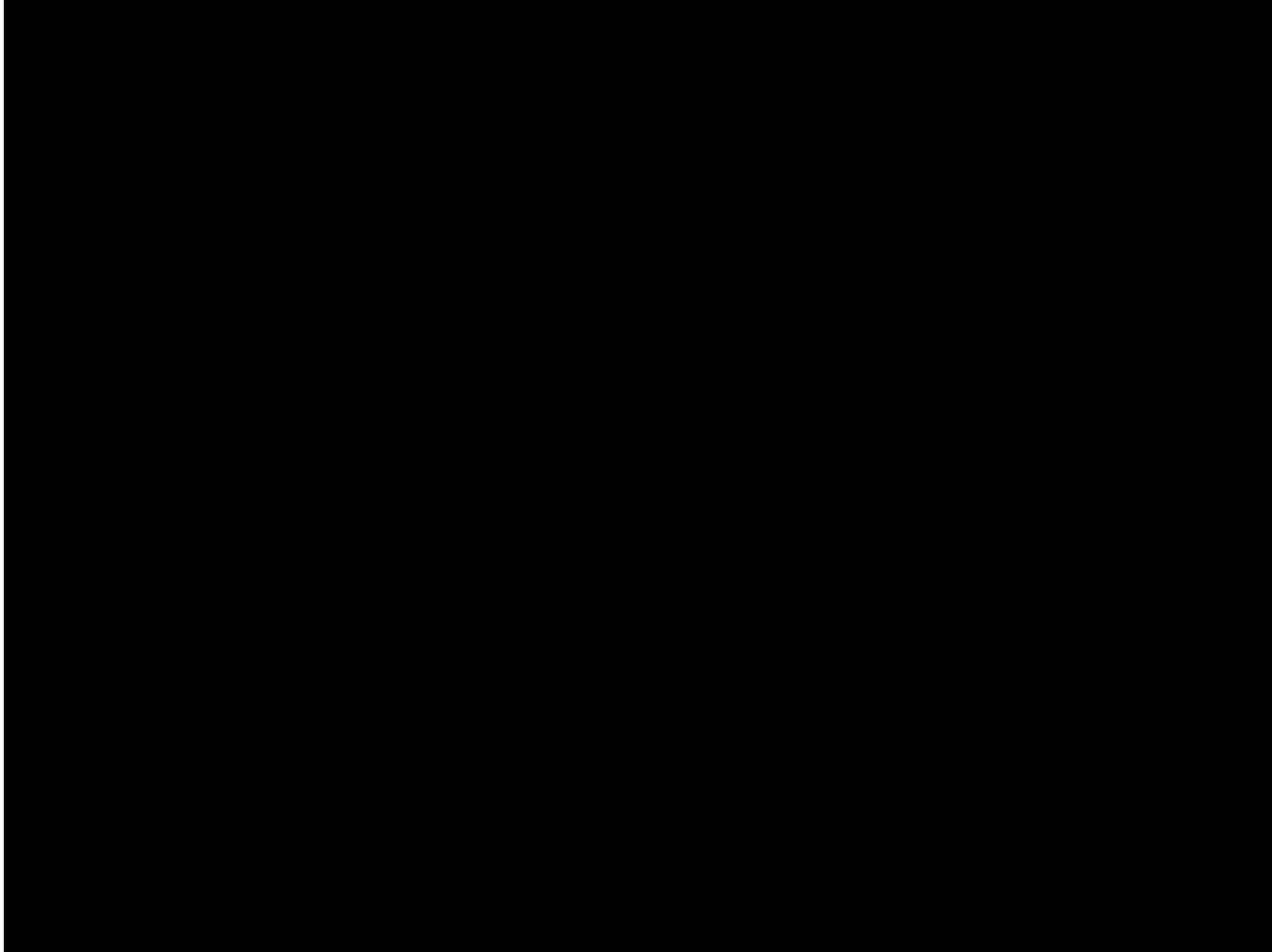
**Inequalities among and within populations**

**Population-level of analysis**

# Global Health: White Space



# “Water Changes Everything”





# State of the World: **Big Picture**

TRANSITIONS	GLOBAL RISKS/FORCES	OPPORTUNITIES
Demographic Transition Population Growth Urbanization Health Transition Inequities	Geopolitical Risk/Conflict Climate Change Natural Resource Scarcity Economic Inequality Weak Governance	Scientific Progress Technology Telecommunications Information Systems Systems Thinking/Analysis

# Global Transfer of Health Risks

- Environment (**water**, climate change)
- Movement people across national boundaries
- Adoption of risky lifestyles across cultures
- Variable standards/regulations (e.g., occupational, safety)
- Consequences of technology spread (e.g., resistance)
- Trade in harmful products, legal (tobacco) or illegal

# Which global trends impact the water-health equation?

Population dynamics

Urbanization

Poverty

Climate change

Globalization

Trade and investment policies

Intensification of agriculture

# How is human wellbeing influenced by water and sanitation provision?

Lack of access to safe water and adequate sanitation are the leading causes of morbidity and mortality, particularly amongst children.

It is estimated that diseases resulting from poor water, sanitation and hygiene account for almost 10% of the total global burden of illness.

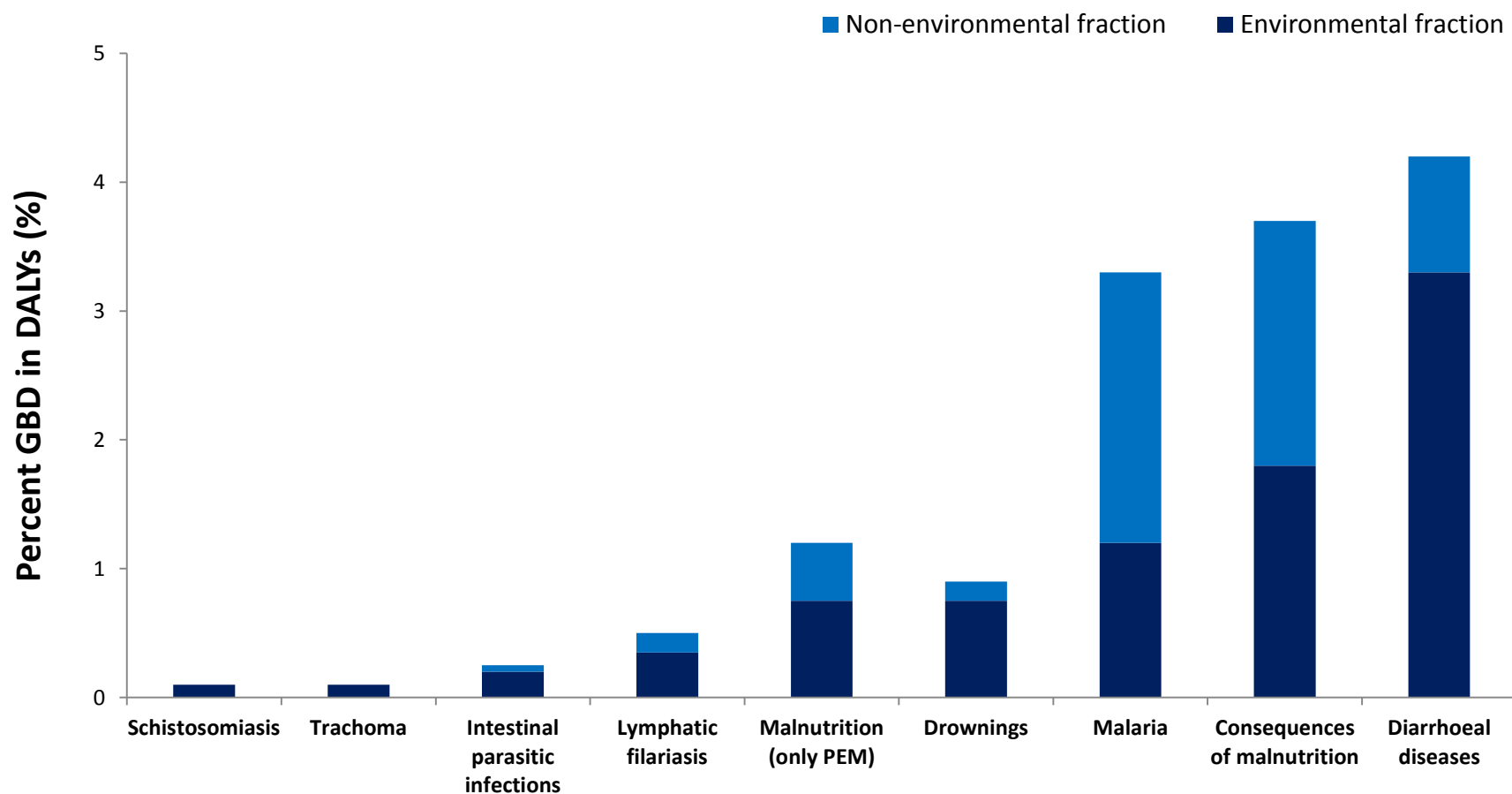


900 million people live without access  
to safe water supplies.

2.5 billion people live without access  
to improved sanitation.

# Diseases with the largest water, sanitation and hygiene contribution in 2000:

Fraction of the total global burden of disease in DALYs



Improved access to clean water can reduce diarrhea and waterborne diseases by at least 25%; improved sanitation is accompanied by more than a 30% reduction in child mortality.

**How has the world responded?**



# Millennium Development Goals Indicators

The official United Nations site for the MDG Indicators

In September 2000, 189 heads of state adopt **UN Millennium Declaration** to reduce poverty and hunger, ill-health, gender inequality, lack of education, access to clean water and environmental degradation.

# Millennium Development Goals (MDGs)



1

ERADICATE EXTREME  
POVERTY AND HUNGER



2

ACHIEVE UNIVERSAL  
PRIMARY EDUCATION



3

PROMOTE GENDER  
EQUALITY AND  
EMPOWER WOMEN



4

REDUCE  
CHILD MORTALITY



5

IMPROVE MATERNAL  
HEALTH



6

COMBAT HIV/AIDS,  
MALARIA AND OTHER  
DISEASES



7

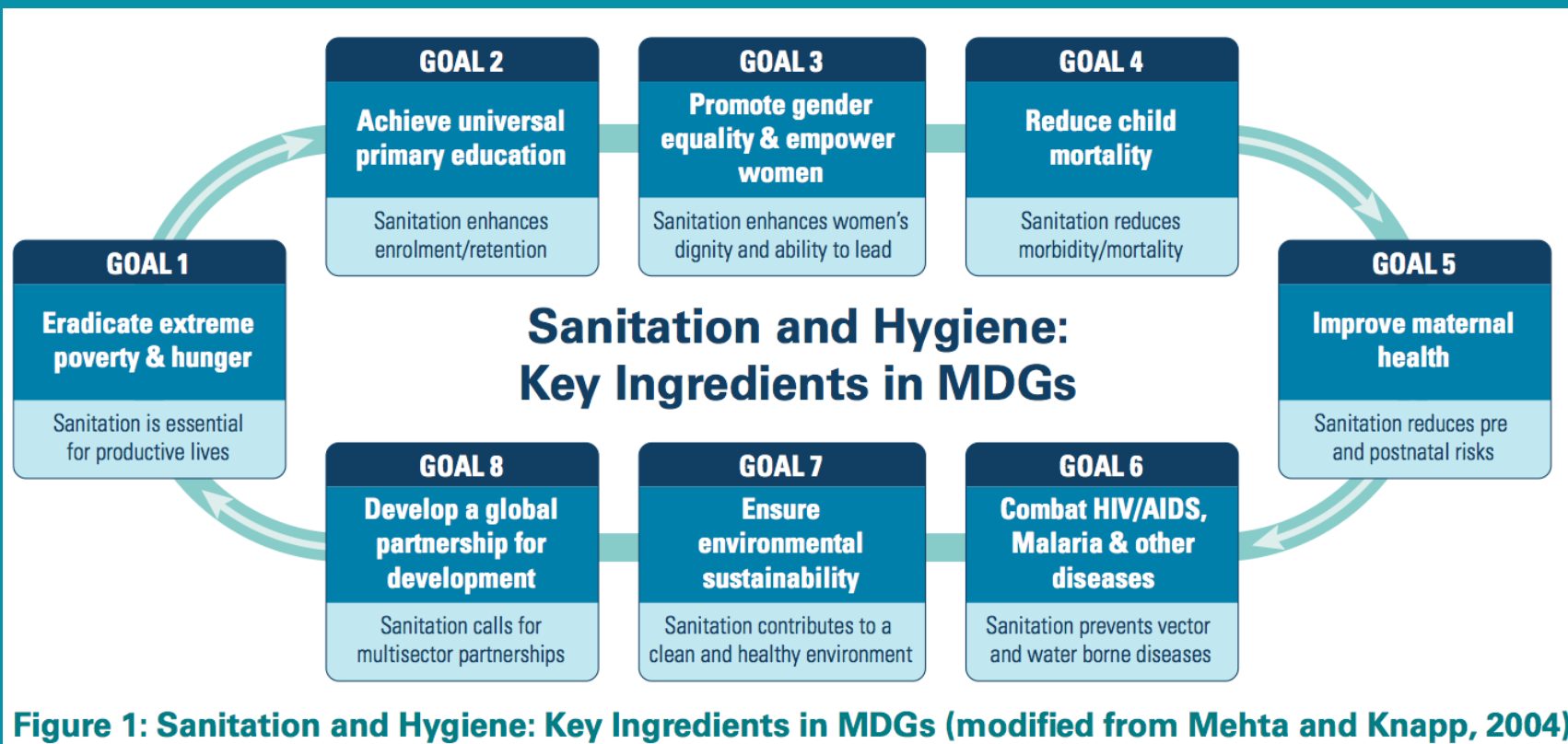
ENSURE  
ENVIRONMENTAL  
SUSTAINABILITY

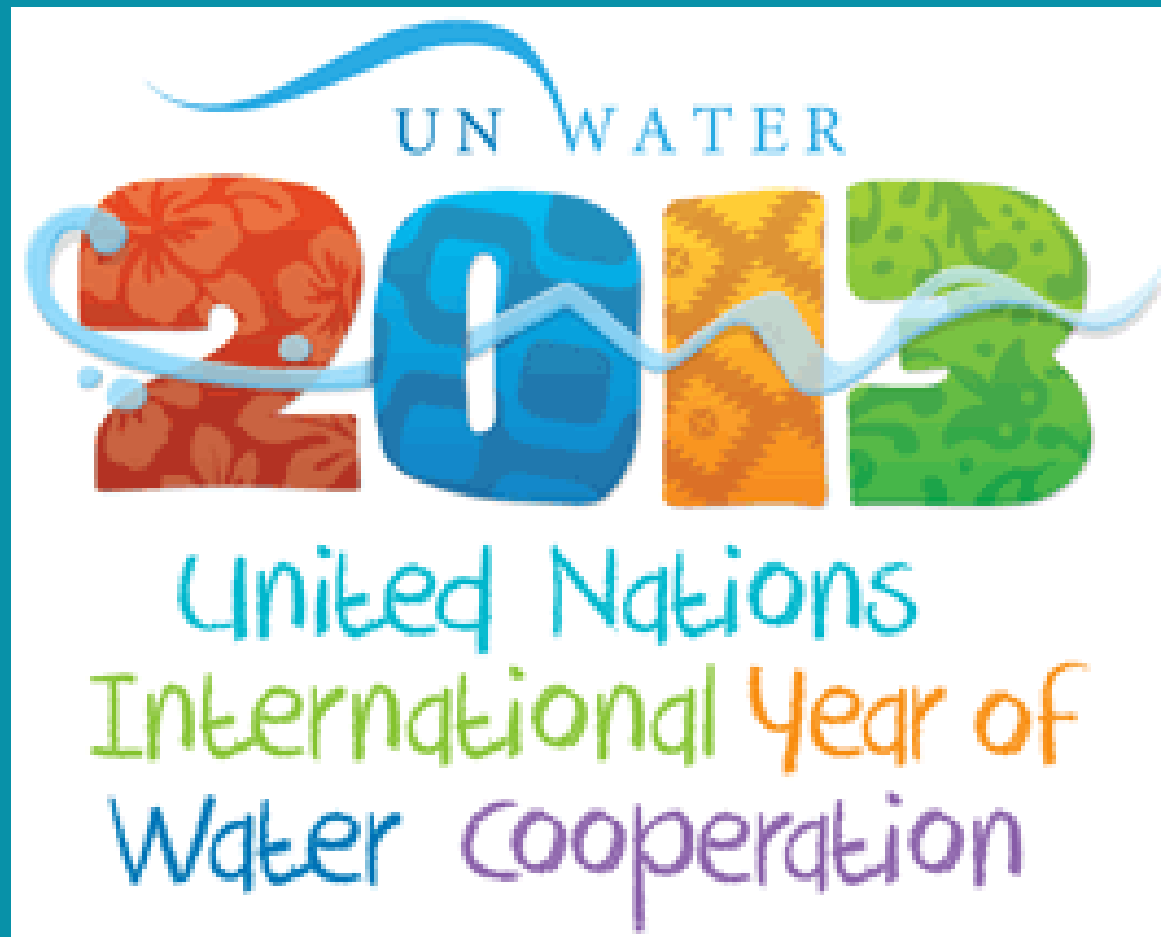


8

GLOBAL  
PARTNERSHIP FOR  
DEVELOPMENT

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality
4. Reduce child mortality
5. Improve maternal survival
6. Combat HIV/AIDS, malaria, other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development





# Which research questions are essential, but unanswered globally?

- How can we better understand the social, political, cultural and economic systems through which water flows?
- What are the potential impacts of climate change on the distribution of and access to water resources?
- How can we integrate knowledge from the social, health, physical and other sciences to conserve natural systems, manage water properly, and protect and promote human health?
- What kind of data-driven models can we create to link provision of water and sanitation to human health and well-being to test the efficacy of policy interventions?
- How can we create a globally accessible platform that provides visual representation of vulnerability to specific diseases and water-related hazards to inform and empower all levels of civil society?



# Global Health: Responses

R&D

DELIVERY  
HEALTH  
SERVICES

NATIONAL  
HEALTH  
SYSTEMS

SOCIAL  
POLICY

INNOVATIONS  
FROM OTHER  
SECTORS

GLOBAL HEALTH  
SYSTEM

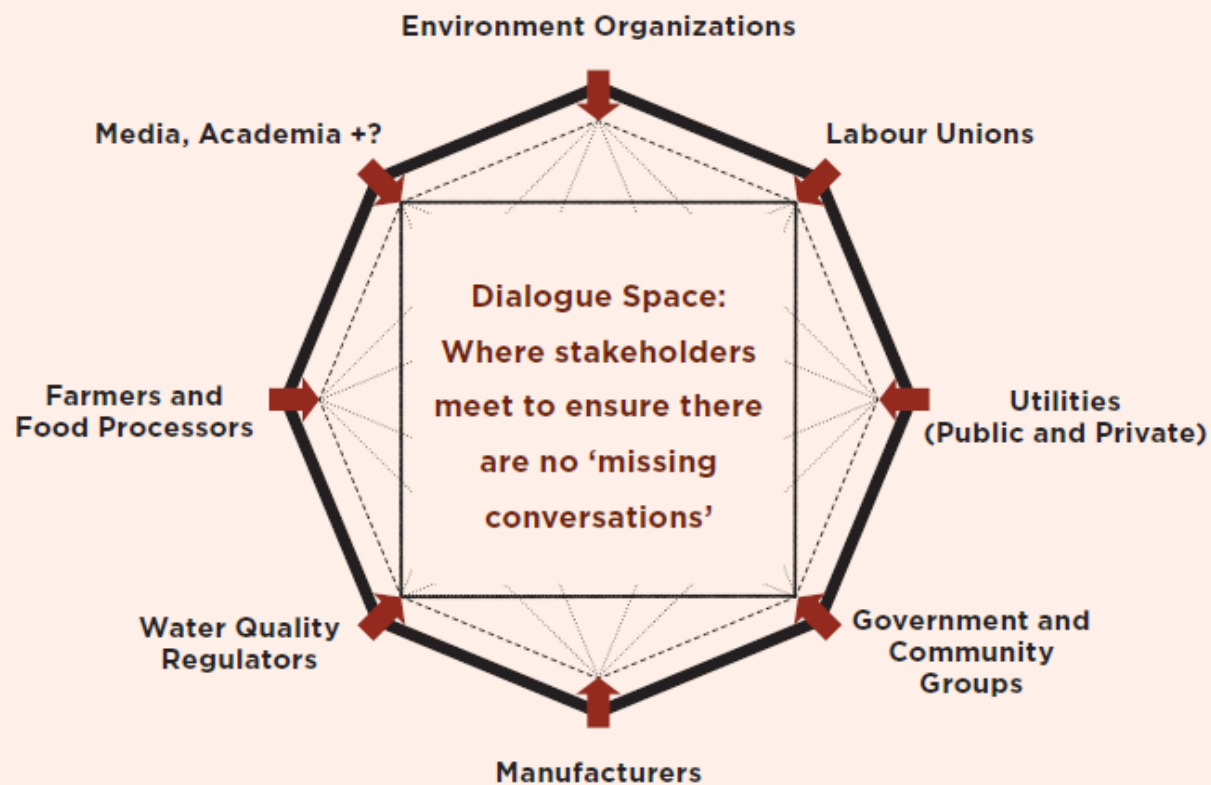


HEALTH SECTOR

NON-HEALTH SECTORS

**FIGURE 10.2**

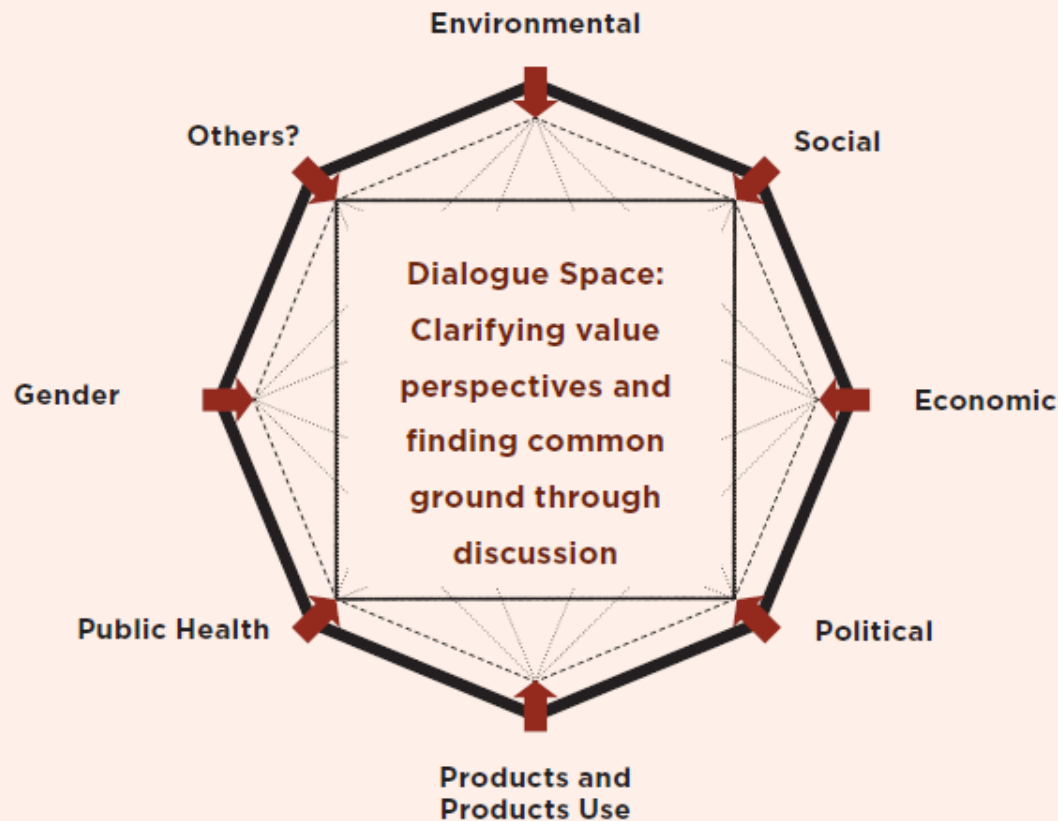
Parties in the water dialogue space



Source: Adapted from Moss et al. (2003, p. 37).

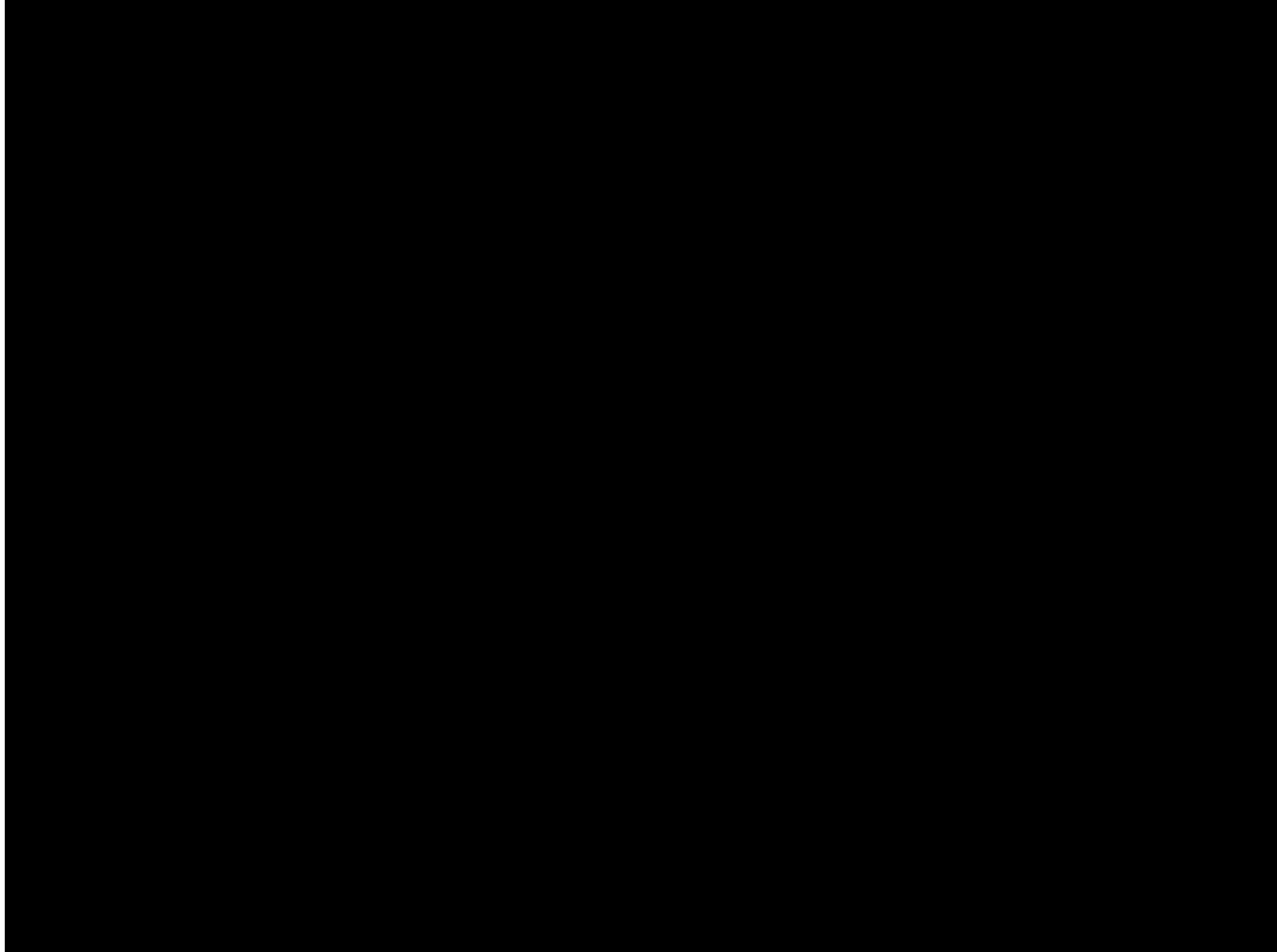
**FIGURE 10.3**

Value perspectives in the water dialogue space



Source: Adapted from Moss et al. (2003, p. 36).

# “Water Changes Everything”



Ban Ki-moon

*Secretary General of the United Nations*

“Just as water is central to every aspect of life on earth, it must lie at the heart of the new vision we forge for sustainable development for the century ahead... [This] is a call to action – to strengthen mechanisms of global coordination, to improve national institutions and to weave the two levels more tightly together.”



# Final messages

1. Water is essential to live and yet it is a limited resource that must be responsively governed.
2. We live in a globalized, interdependent world. The water crisis is taking place here at home as well as in resource-poor settings abroad.
3. We need to work together across disciplines to find solutions.
4. It starts with education. Educators have an important role to play in helping to emphasize the central importance of water in our everyday lives and in teaching conservation so that it becomes second nature.

# Q&A



A girl washes her hands in a UNICEF provided WASH facility in Port-au-Prince, Haiti

Source: UNICEF, 2012

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