

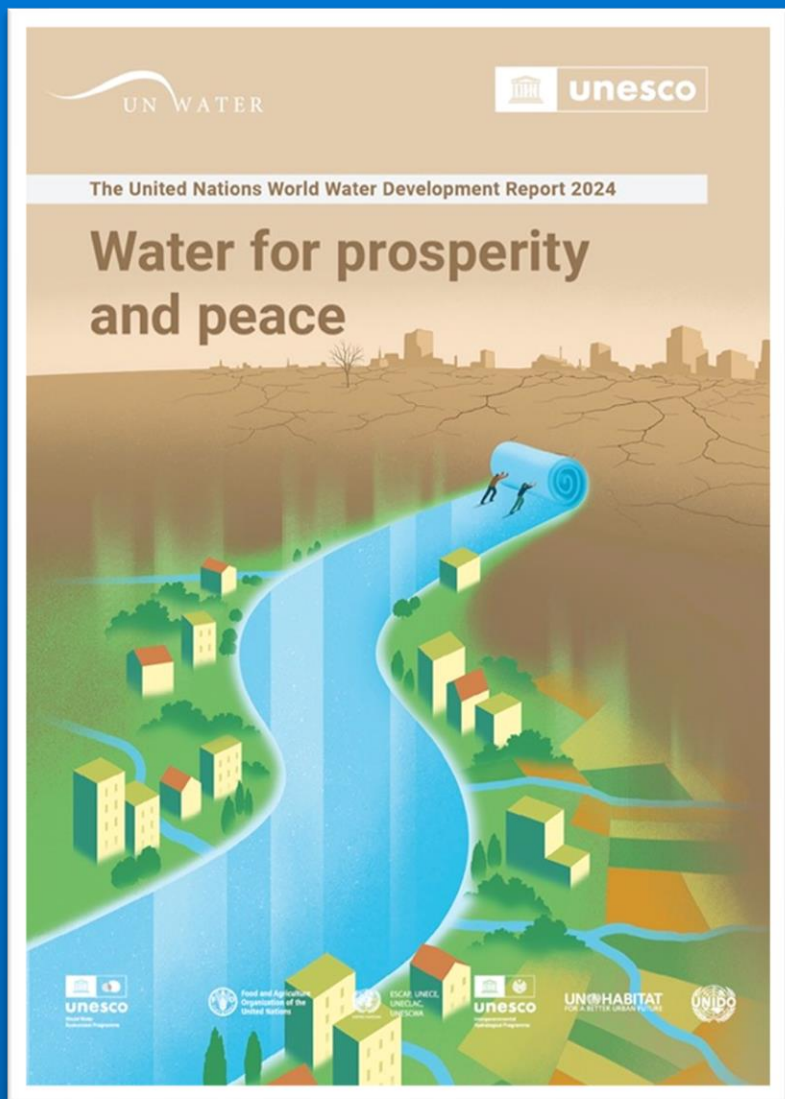
# Water for prosperity and peace

## The United Nations World Water Development Report 2024

UNESCO Science Sector (April 8, 2024)

*Richard (Rick) Connor*  
Editor-in-Chief, UNESCO WWAP





Food and Agriculture  
Organization of the  
United Nations



ESCAP, UNECE,  
UNECLAC,  
UNESCWA



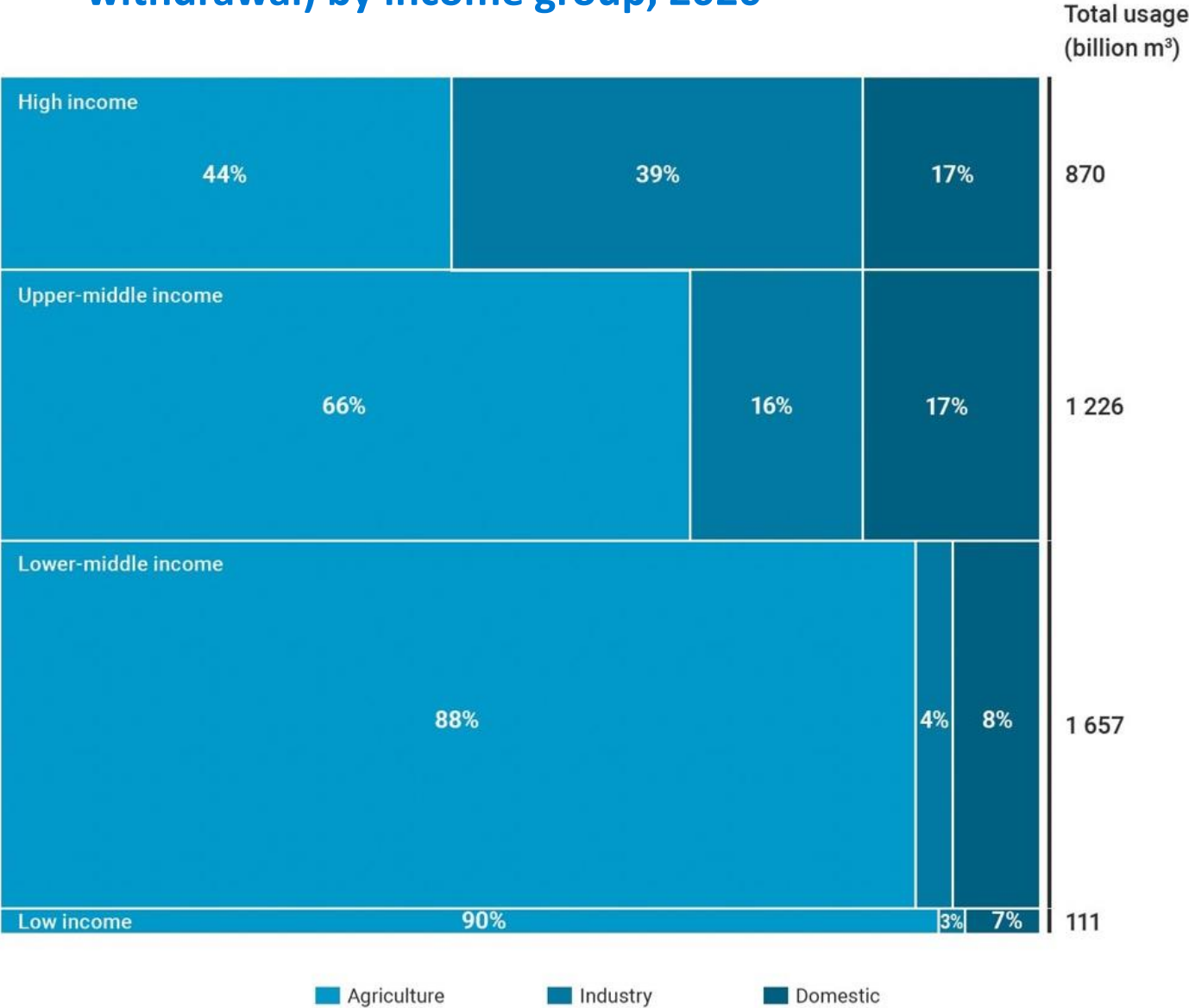
**UN-HABITAT**  
FOR A BETTER URBAN FUTURE





# The World's Water Crises in Numbers

Water withdrawal by sector (% of total freshwater withdrawal) by income group, 2020



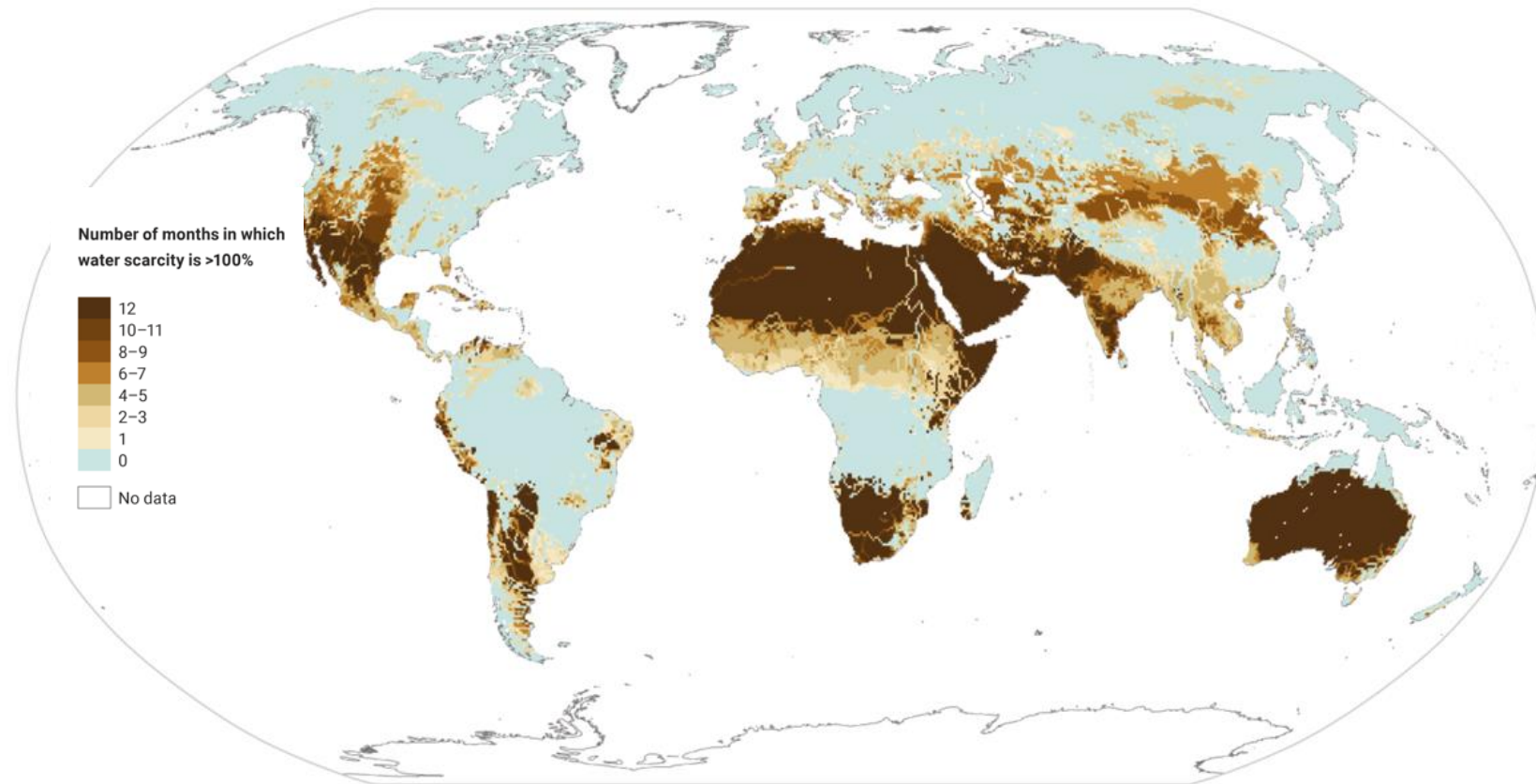
# Main Water Use Sectors

Global water demand increases by about 1% annually

The number of months per year with severe water scarcity  
(ratio of water demand to availability >1.0)

# Water Stress

One quarter of the world's population face 'extremely high' levels of water stress



# Access to Water Supply and Sanitation

2.2 billion people are  
without access to safely  
managed drinking water

Global urban and rural population without safely managed  
drinking water, safely managed sanitation, and basic hygiene  
services, 2015/17–2022

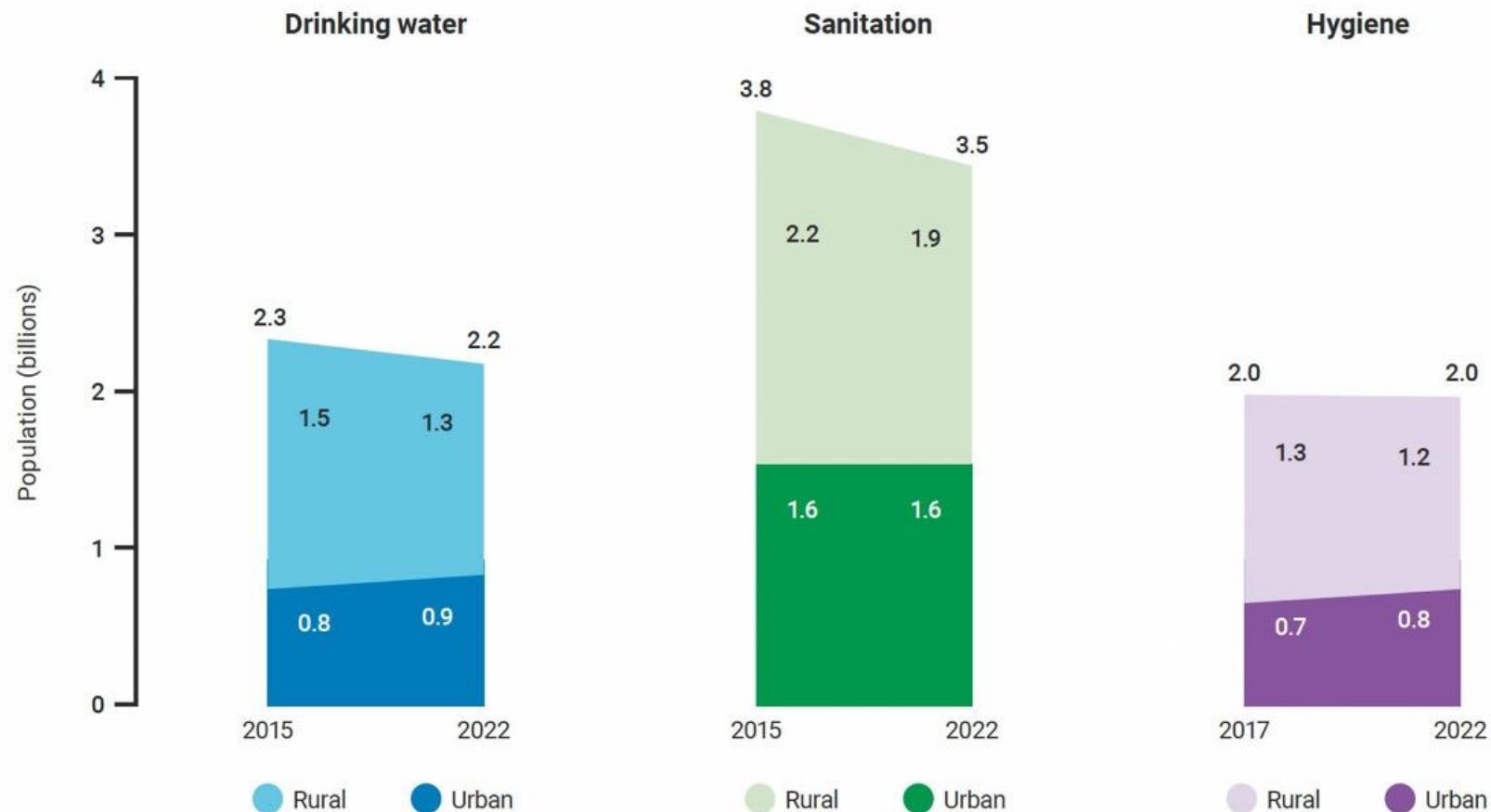


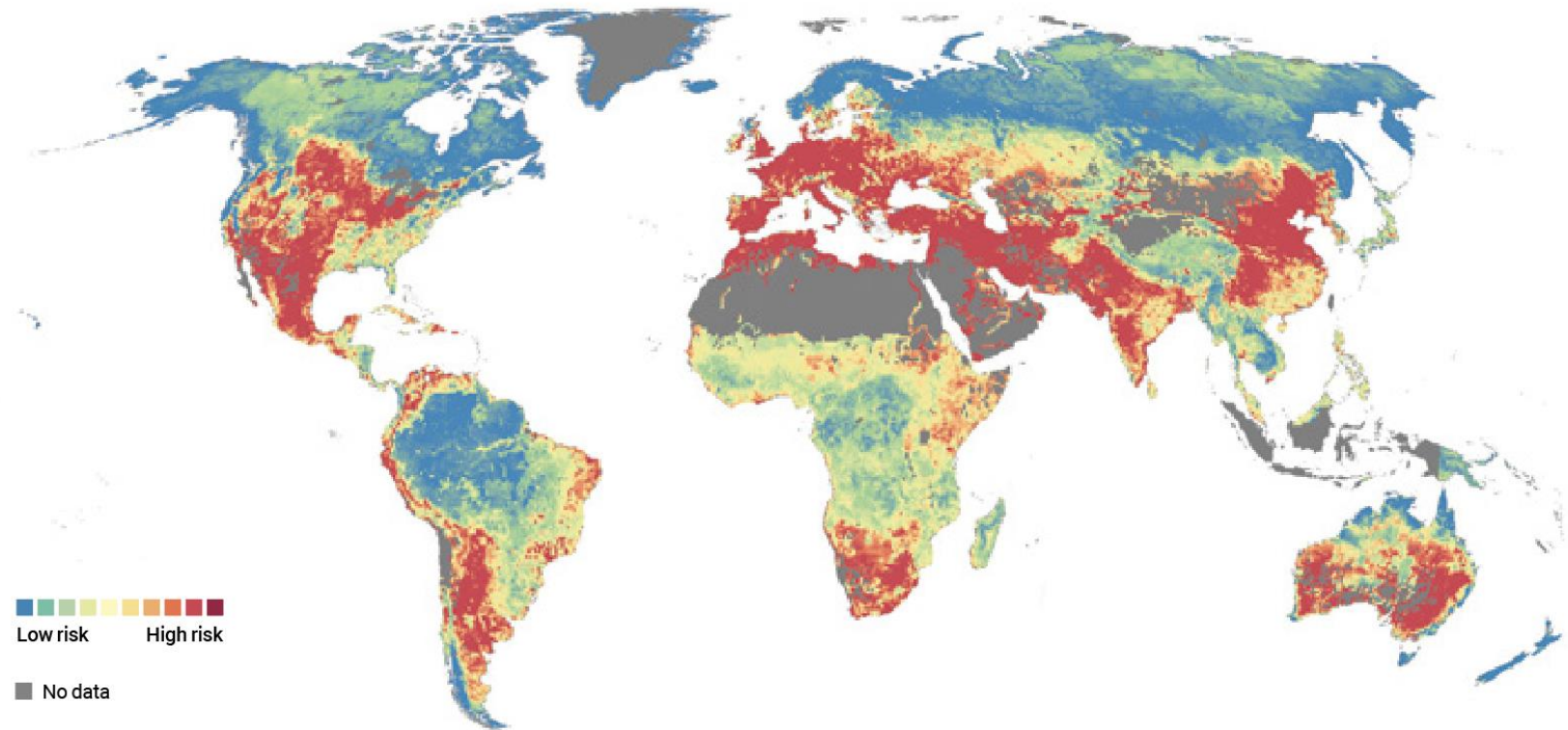
Figure P.7 (UN WWDR 2024)



# Water Quality

Pollution from untreated wastewater is a major cause of water-related disease and death

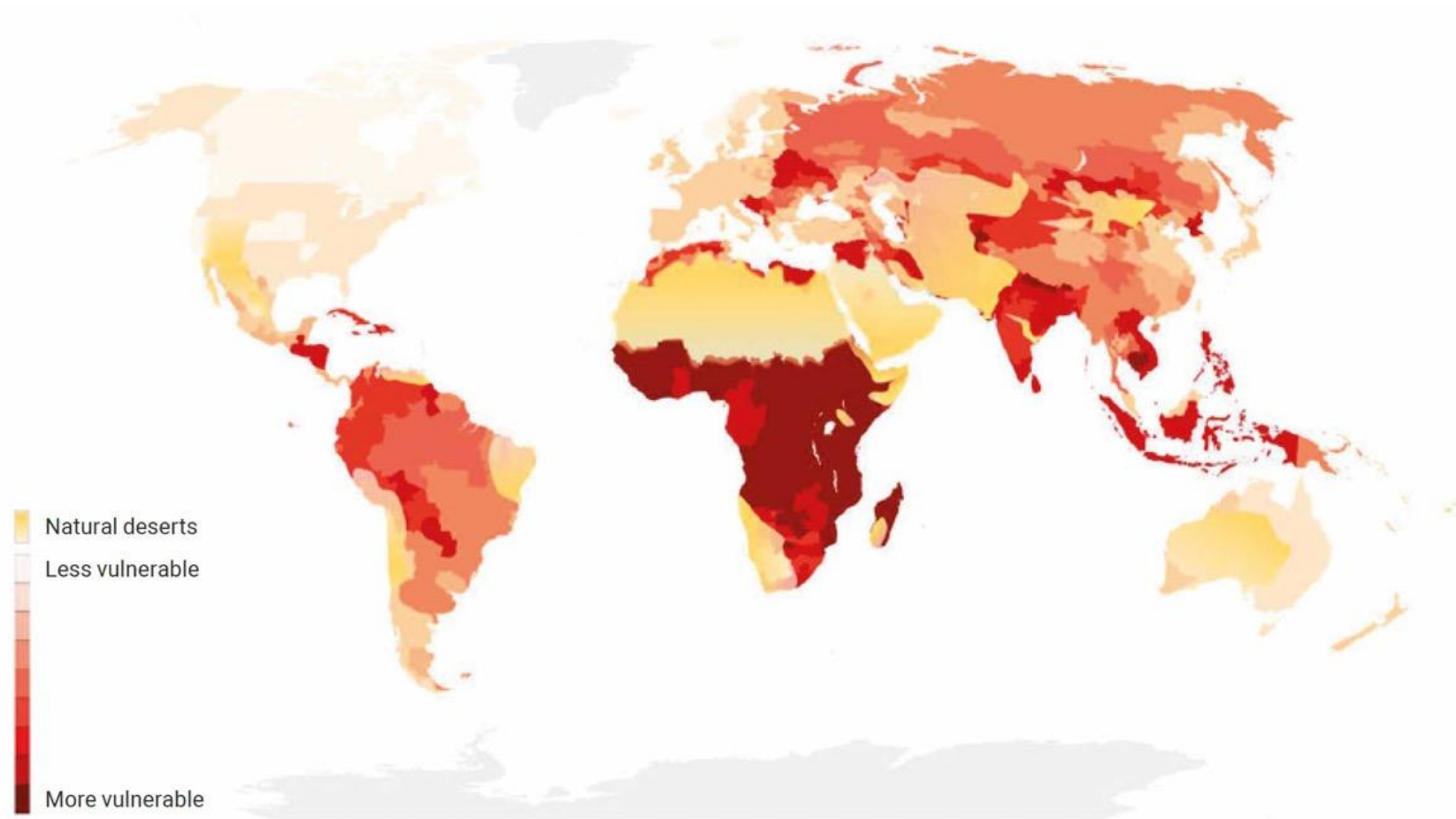
## Global risks of poor water quality



# Climate Change and Extreme Events

Global warming  
increases the frequency  
and severity of droughts  
and floods

## Drought vulnerability index, 2022







# Water and Prosperity

# Water Availability and Economic Growth

There is no clear relationship between a country's per capita GDP and its water availability

## GDP vs. water availability

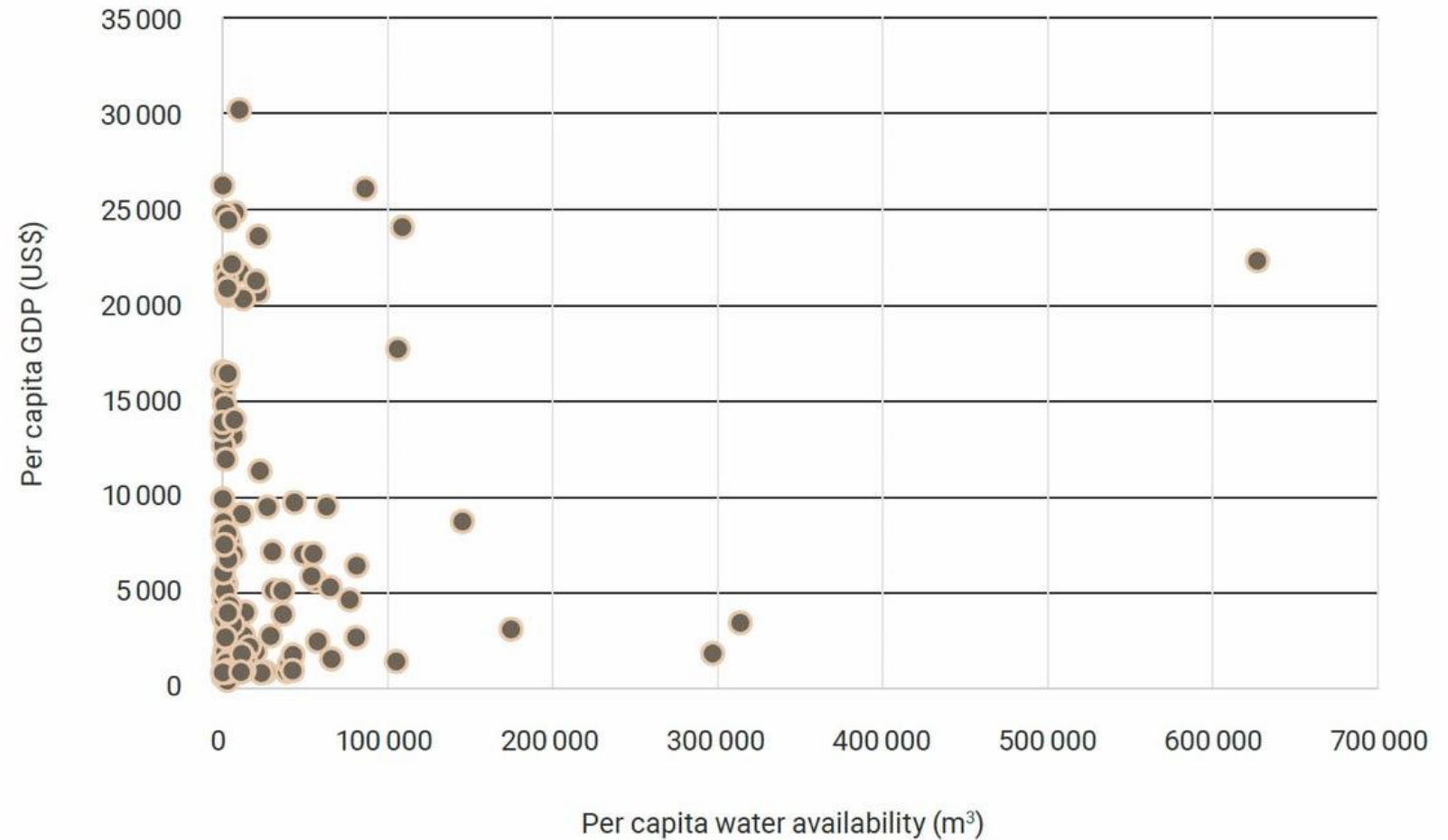
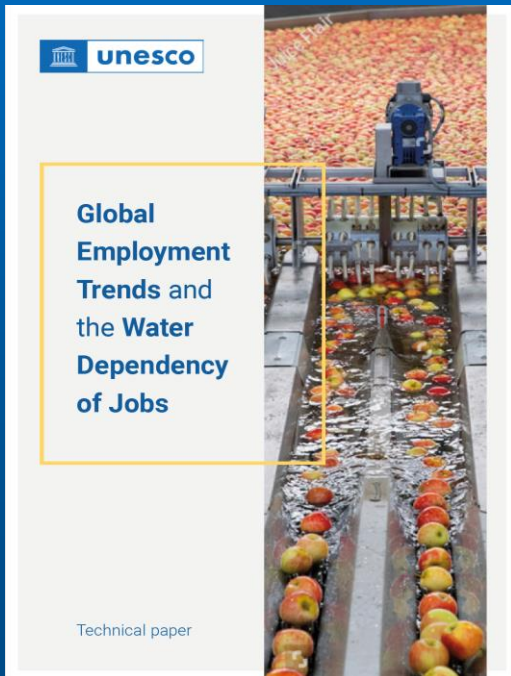


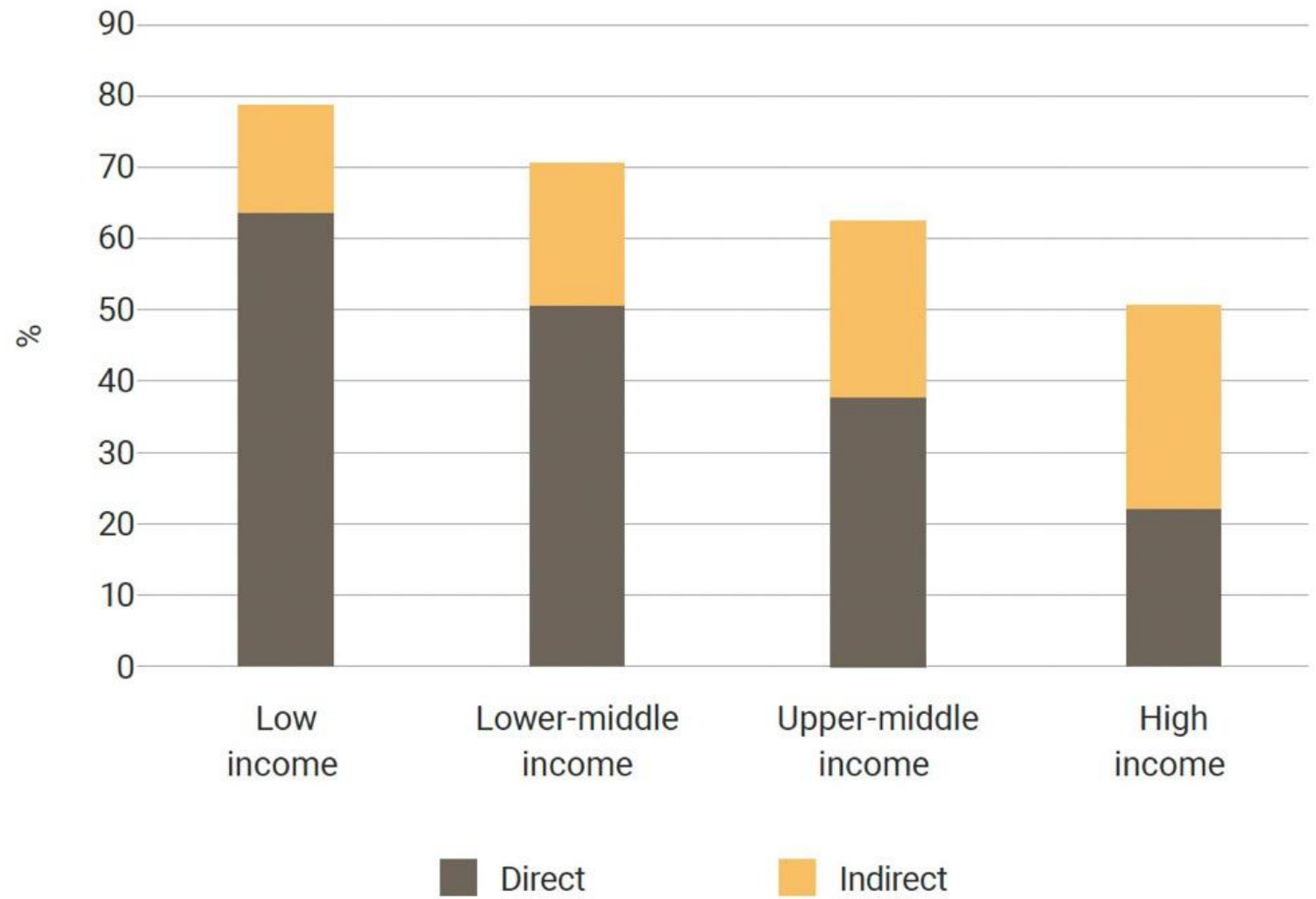
Figure P.9 (UN WWDR 2024)

# Water and Employment

80% of jobs in low-income countries are water-dependent



Workforce water dependency by country income level, 2021





# Water and Peace

# Water, Peace and Conflict Situations

“Without effective management of our water resources, we risk intensified disputes between communities and sectors and even increased tensions among nations. So far, water has historically proven to be a catalyst for cooperation not for conflict”.

**Antonio Guterres**  
Secretary-General of the United Nations



Most disputes over water happen at the *community* level





# Thematic Focus



# Food and Agriculture

Irrigation stabilizes production,  
increases profitability, and  
reduces risk of crop failure

# Human Settlements

Inequalities in access to water and sanitation services can provoke tensions amongst and between communities







# Industry

Decoupling water from industrial productivity can improve water availability and quality

# Energy

700 million people lack access to electricity

## People without access to electricity worldwide, 2012–2022

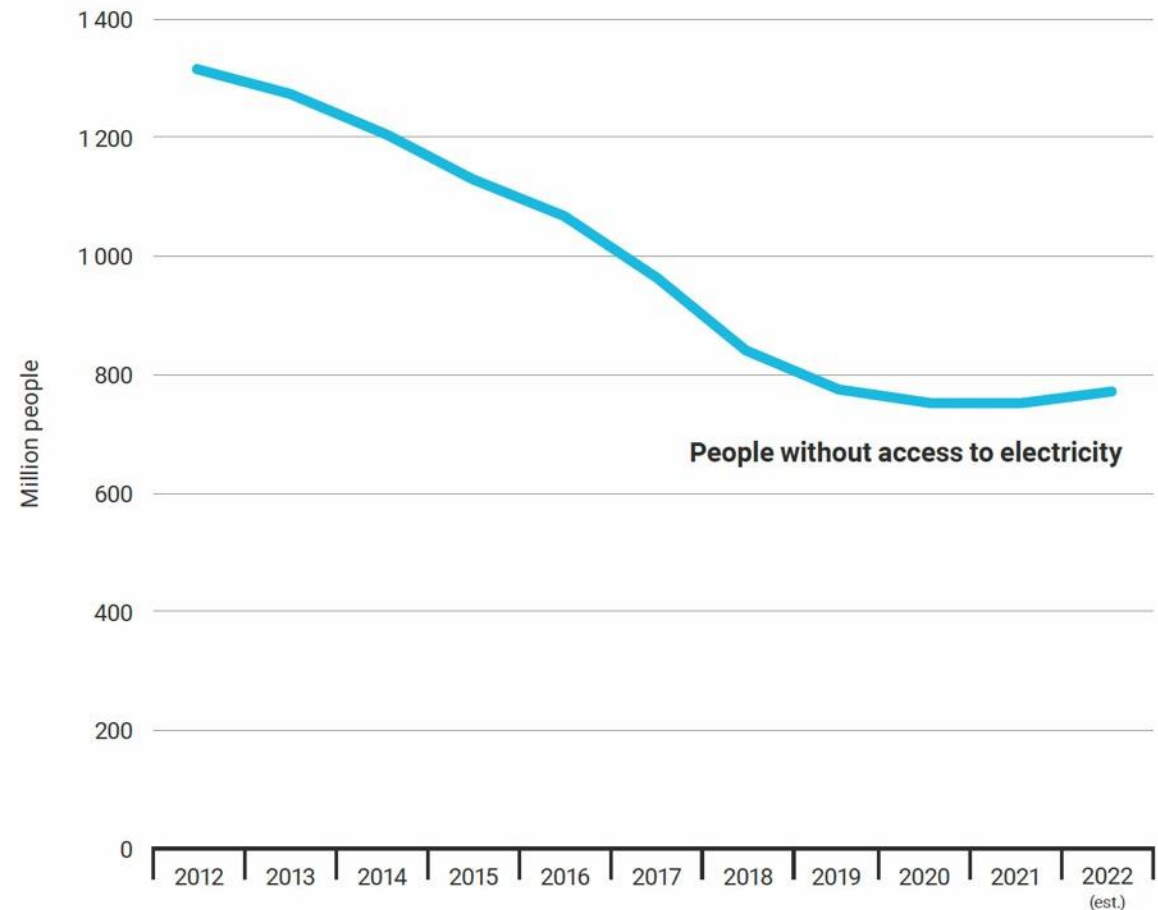


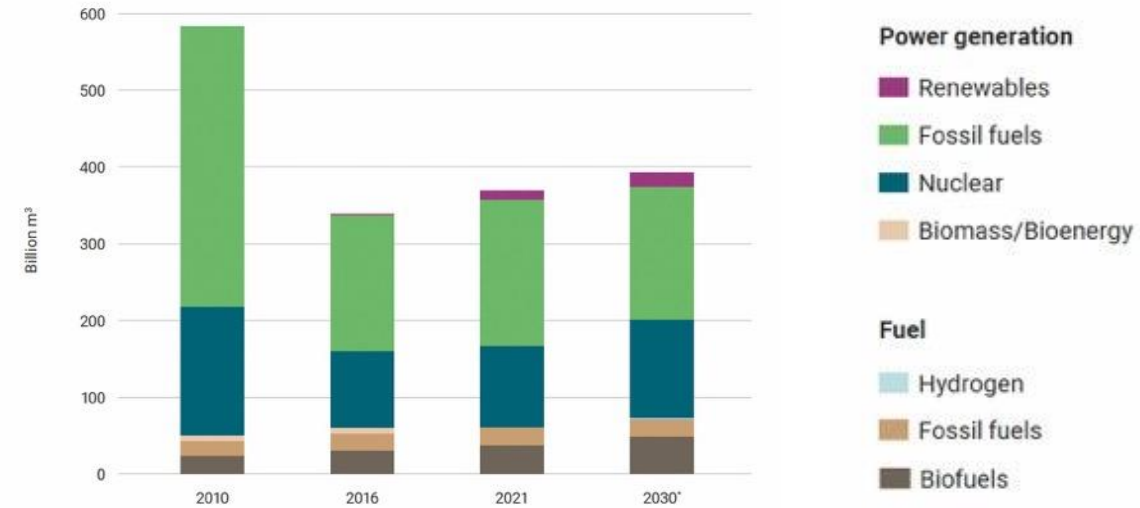
Figure 5.1 (UN WWDR 2024)



# Energy

Water is extensively used for electricity generation

Global water withdrawal by fuel and power generation type



Global water consumption by fuel and power generation type

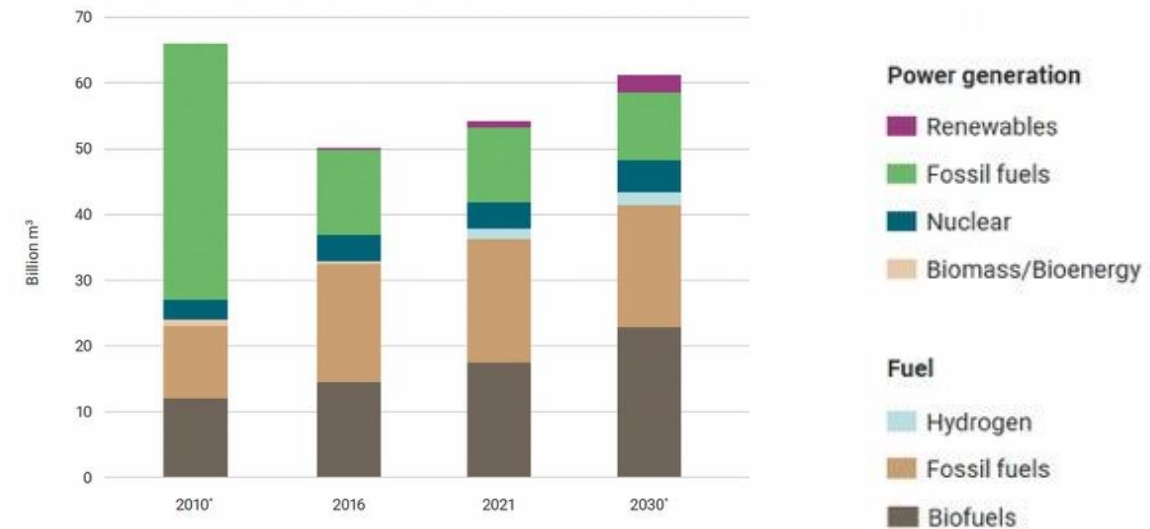
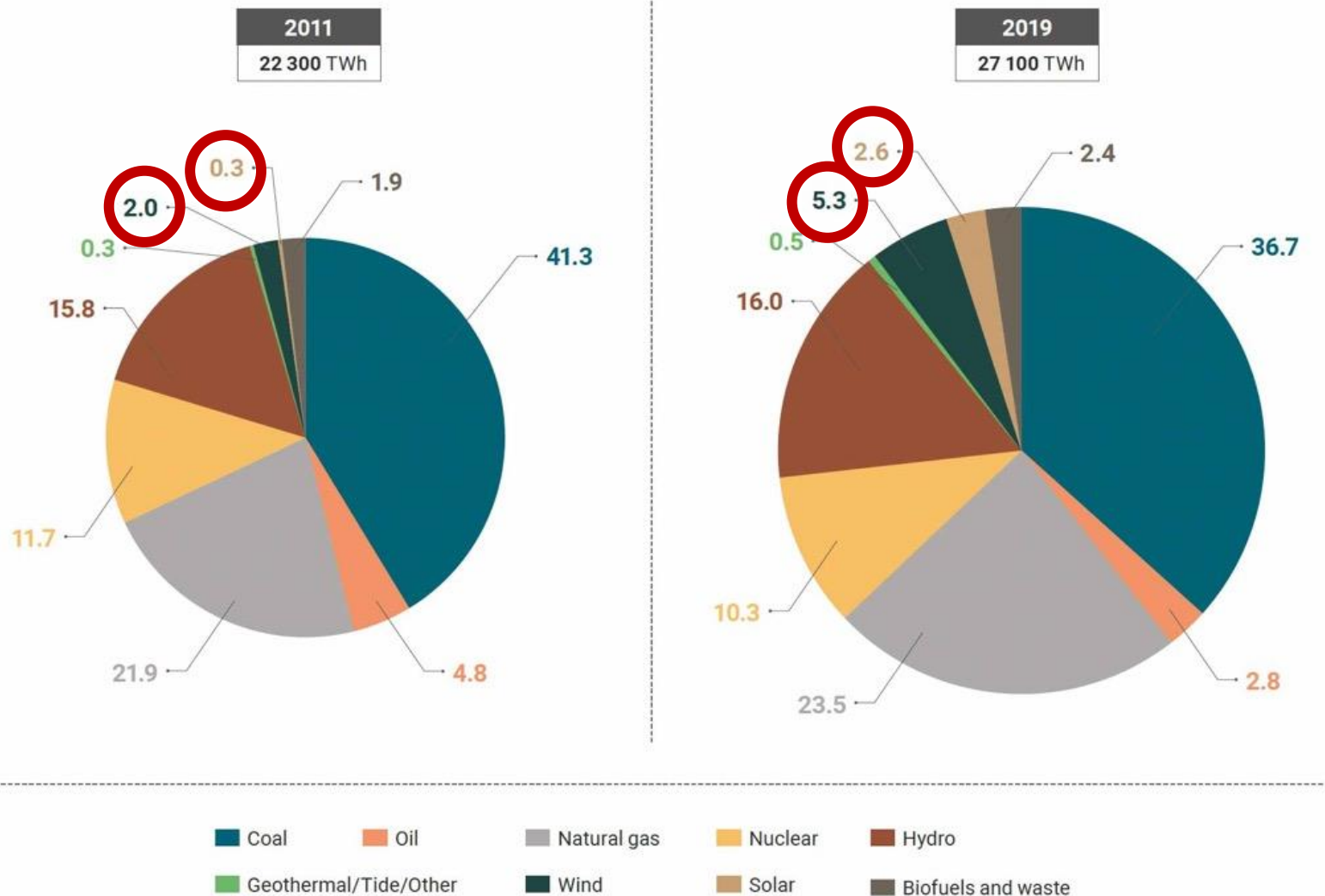


Figure 5.2 and 5

# Energy

Wind and solar-  
photovoltaic (PV)  
production have more  
than doubled between  
2011 and 2019

## World electricity generation by source (%)





# Ecosystems

Ecosystems regulate water  
quality and availability



# Response Options









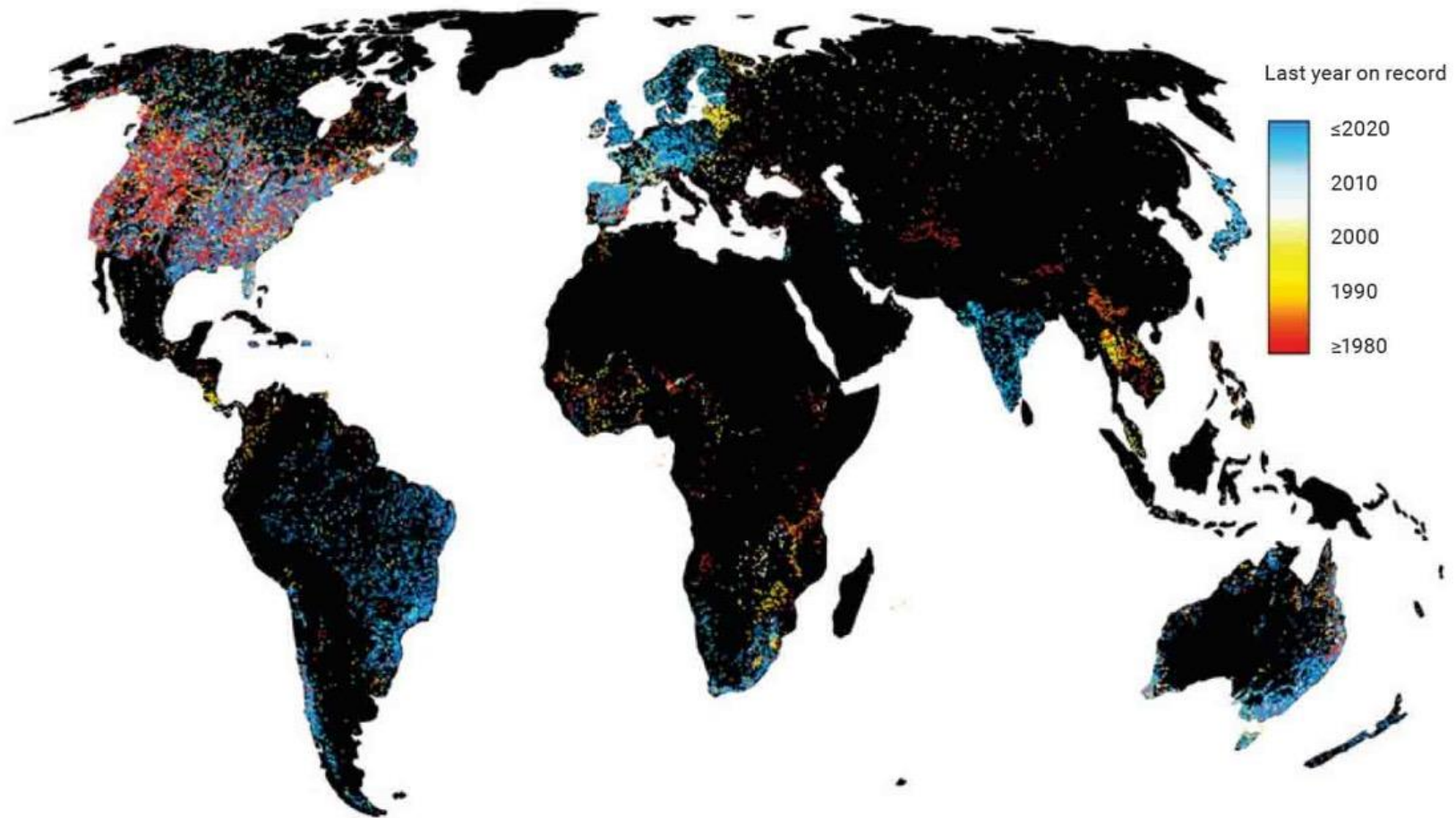
# Transboundary Cooperation

Awareness and support of joint transboundary aquifer management is increasing

# Science, Technology and Information

The number of gauging stations desperately needs to increase

## Global distribution of river gauging stations





# Education and Capacity Development

Citizen science represents an opportunity for both data collection and public participation





# Financing

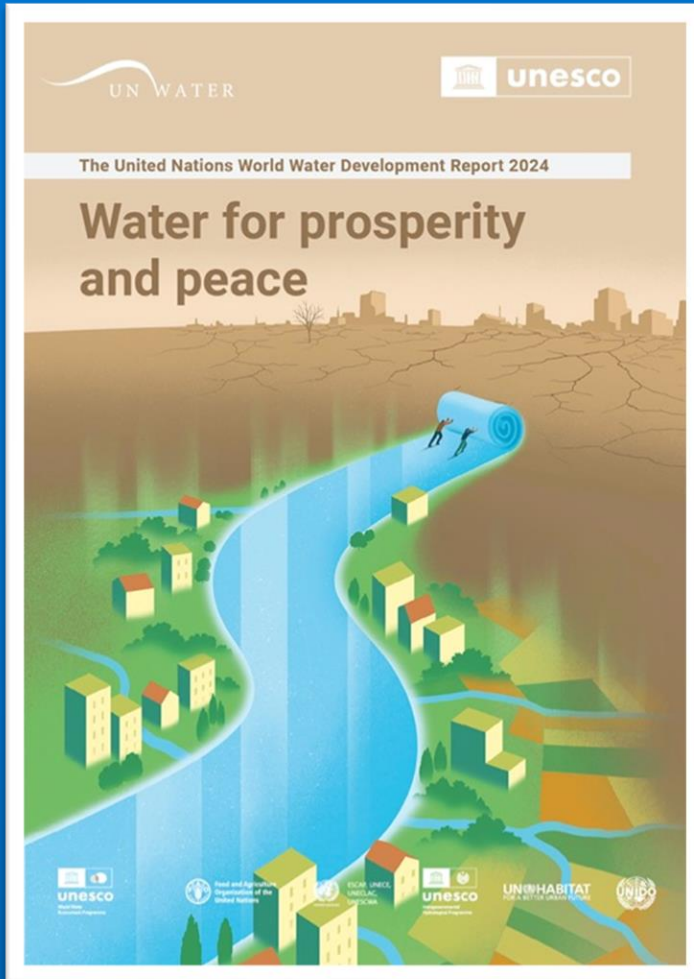
Nearly all solutions to the water crisis will require capital



# Take Away Messages



# Take away messages



- Water infrastructure and resources management promote growth
- Water supply and sanitation systems foster prosperity
- All water-dependent sectors are vulnerable to climate change
- Ecosystem protection/restoration addresses many water-related challenges
- Affordable water supply and sanitation technologies are emerging

UN WATER

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The United Nations World Water Development Report 2024

# Water for prosperity and peace

At the heart of the sustainable future

UNESCO  
World Water Institute

Food and Agriculture Organization of the United Nations

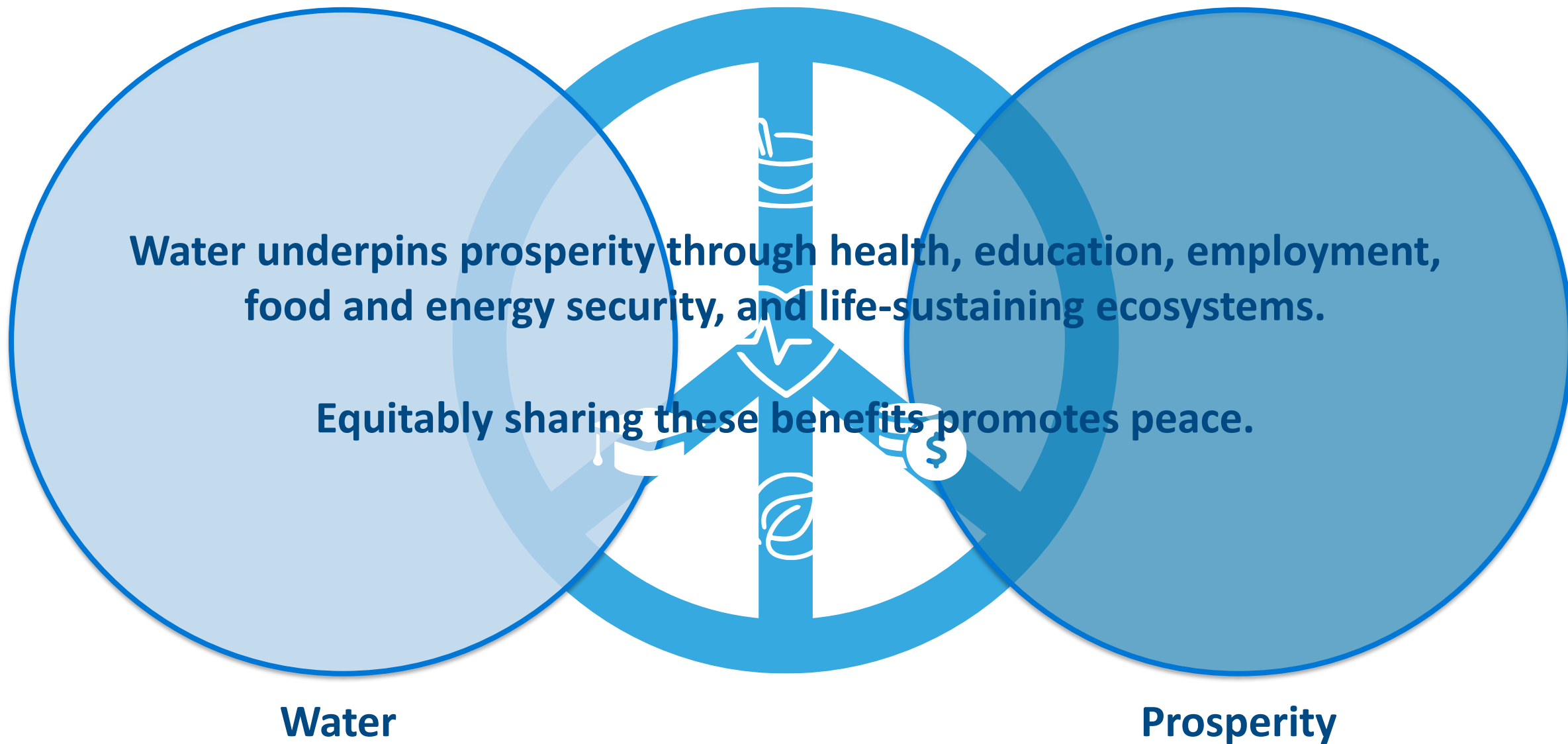
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UNEP  
UNEP/WHO  
UNEP/WHO

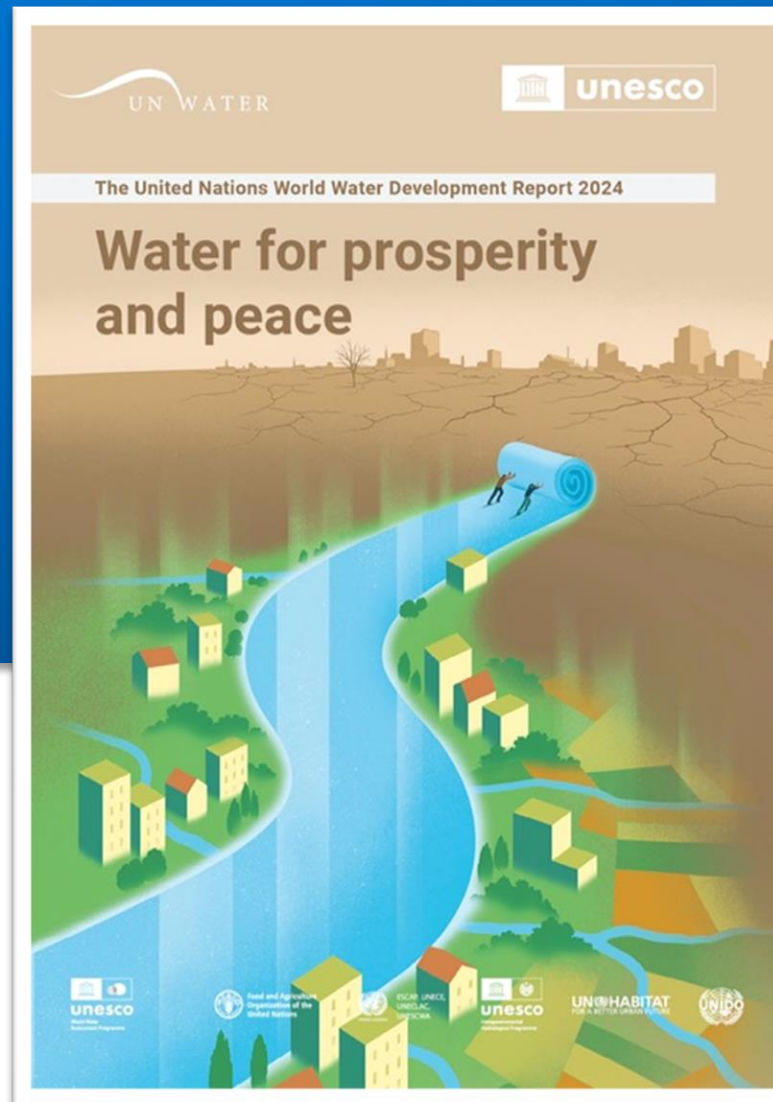
unesco  
World Water Institute

UN HABITAT  
United Nations Human Settlements Programme

UNEP  
United Nations Environment Programme

- Appreciation for local/traditional knowledge and stakeholder involvement is growing
- Benefit-sharing is central to equitable water allocation and governance
- Transboundary cooperation strengthens regional integration
- Investing in water delivers (multiple) social, economic and environmental co-benefits





**The UNESCO World Water Assessment Programme  
is financed by the Italian Government**

