

# Rebalancing the Global Water Cycle as a Common Good

**Aromar Revi**

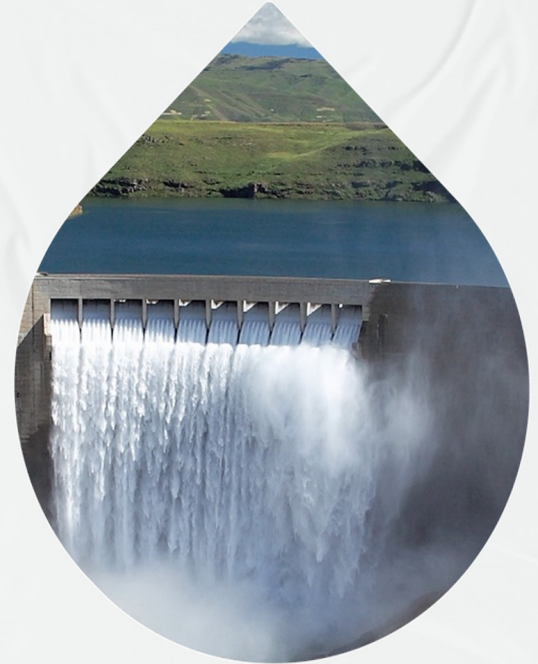
**Commissioner & Lead Expert, GCEW**

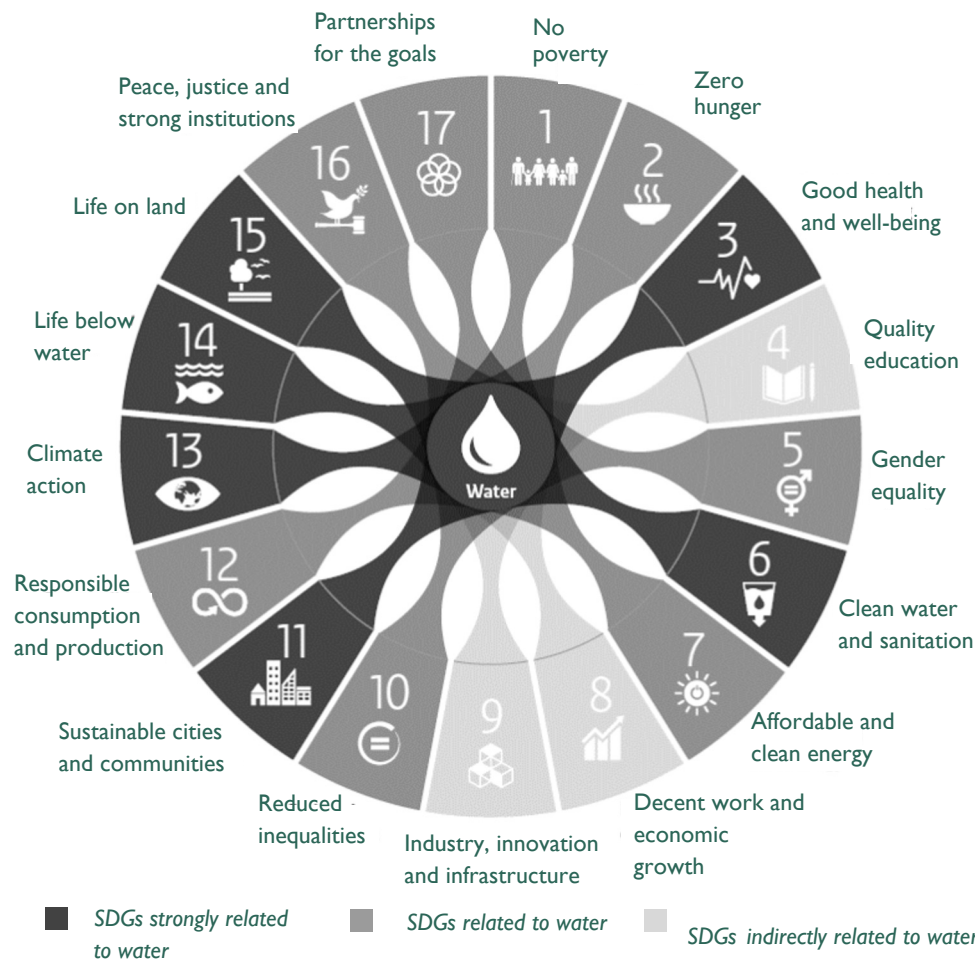
**Co-Chair, UN Sustainable Development Solutions Network**

**Coordinating Lead Author, IPCC AR6 and AR5**

**Director, Indian Institute for Human Settlements**

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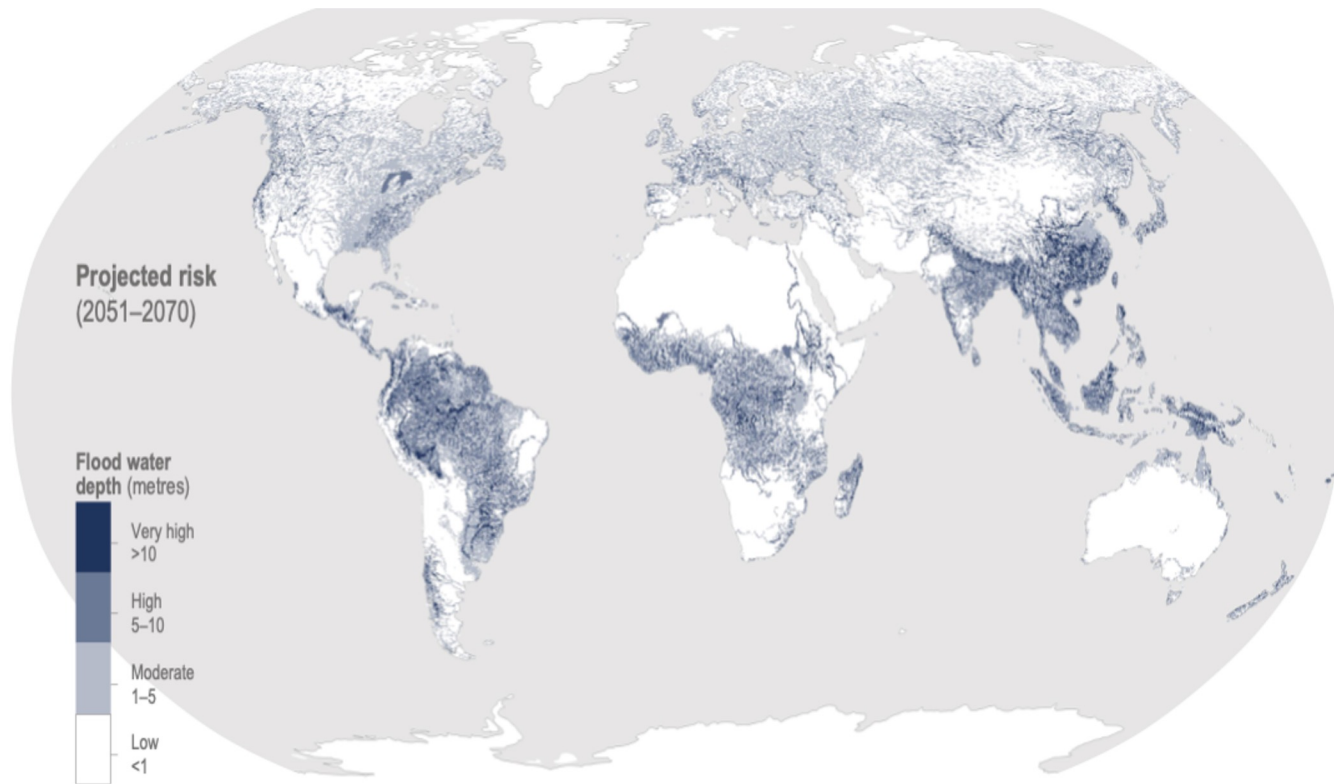




# Water is the common thread that connects all the SDGs



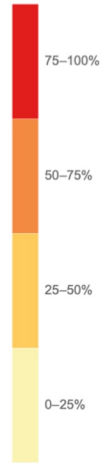
# Water is the key to Climate Resilient Development



Projected  
Flood risk (2050-70)



Percentage of  
biodiversity loss



Present biodiversity loss  
at **+4°C** global warming level

Projected biodiversity loss  
at **+3°C** global warming level

Projected biodiversity loss  
at **+2°C** global warming level

Projected biodiversity loss  
at **+1.5°C** global warming level

# Water & Biodiversity conservation are tightly coupled

Loss of terrestrial and freshwater biodiversity in a warming world



There is a large unrealised development and economic potential to use water as an organizing principle to accelerate SDG, Climate and Biodiversity implementation

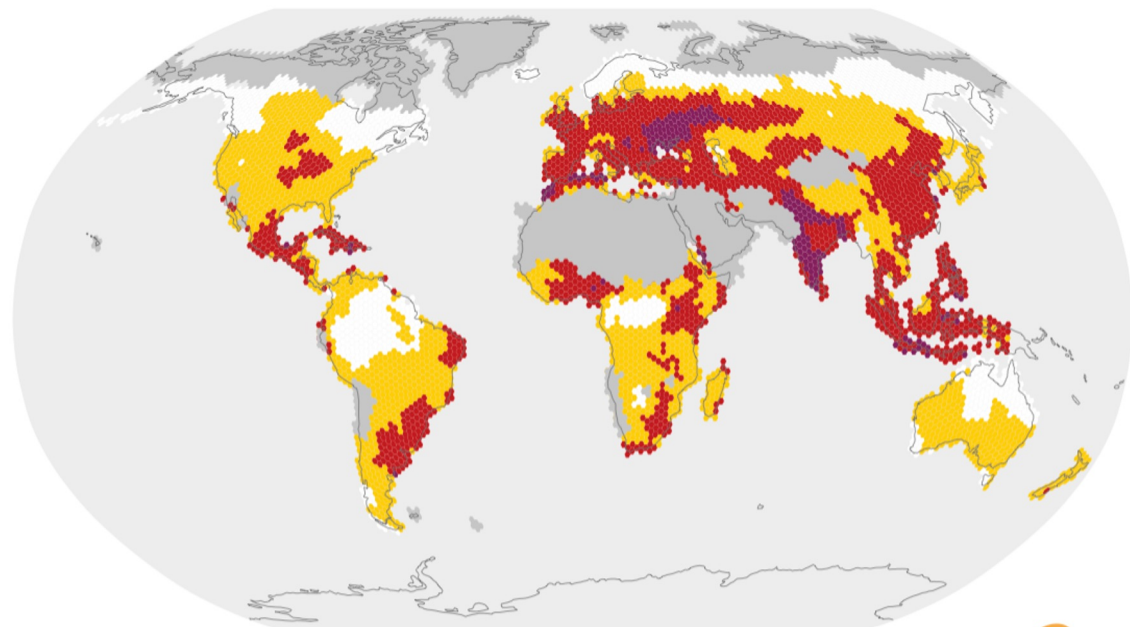




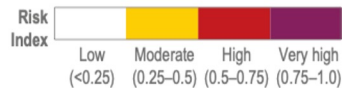
Human action  
embedded in the current  
global economy has  
thrown the Global Water  
Cycle out of balance

Every person, ecosystem and  
place, is at risk until this  
balance is restored.



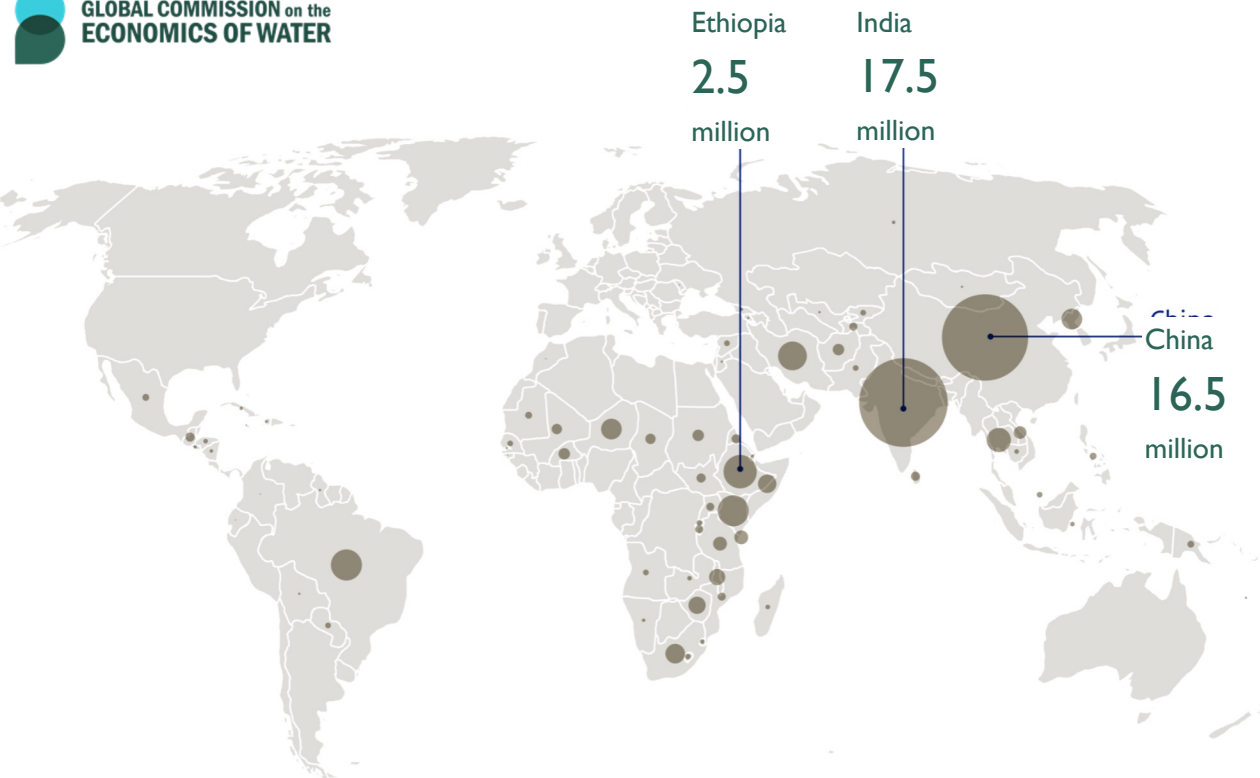


Desert or cold region  
No data



# Too little water

**Global drought risk  
(1900-2010)**



# Too little water

Droughts lead to water scarcity, agricultural losses, local food shortages, & wildfires

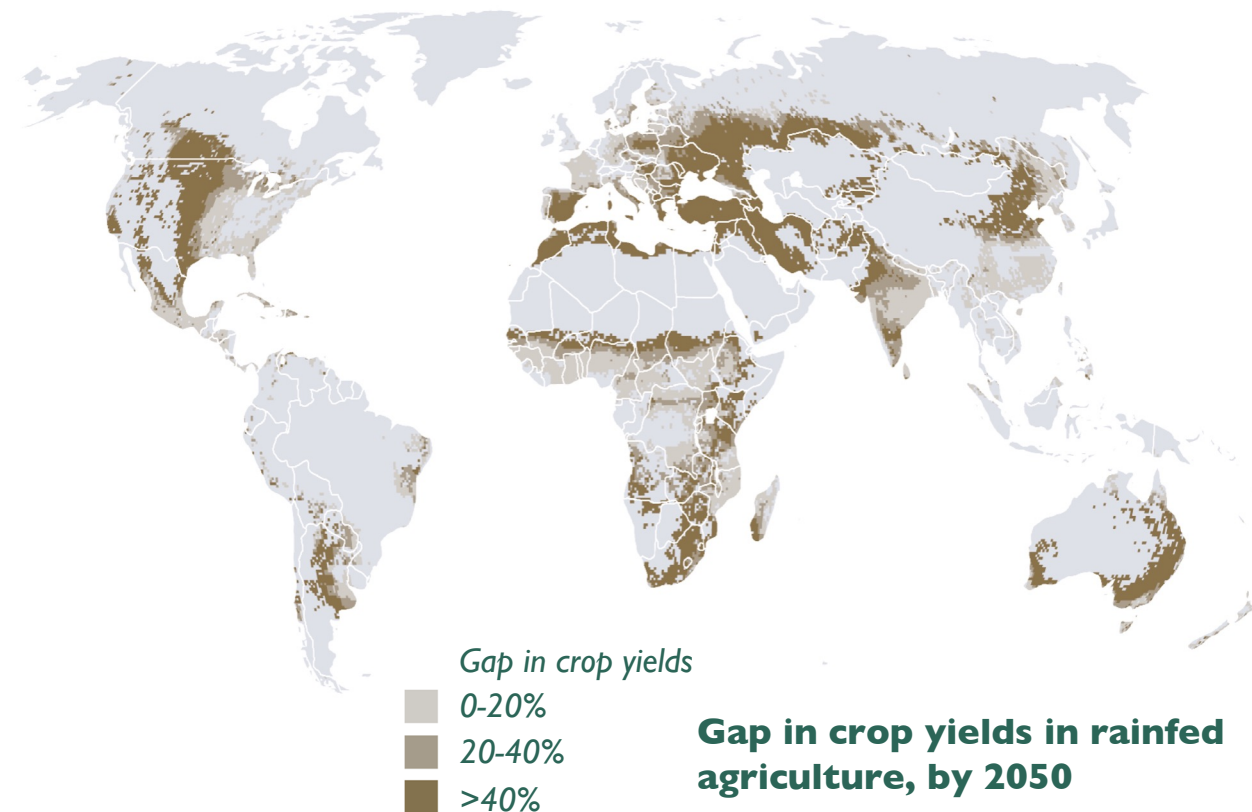
## Drought affected People (1996–2015)

Number of people  
affected, annually



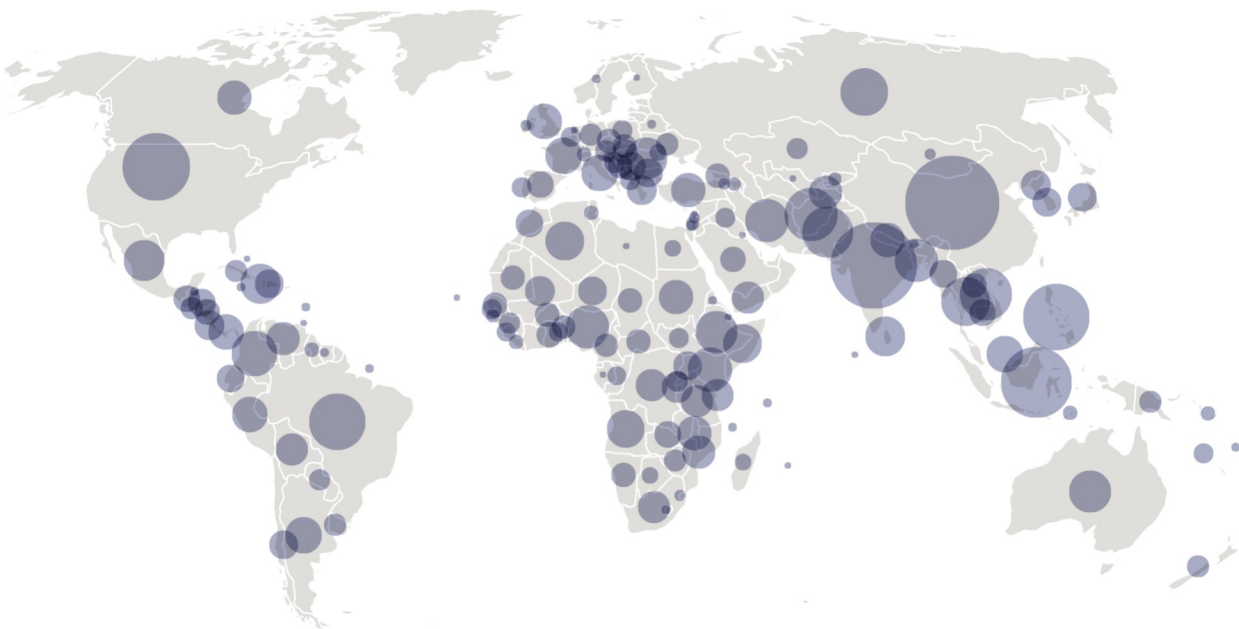


# Too little water



Water shortages will  
cause large crop yield  
gaps by 2050





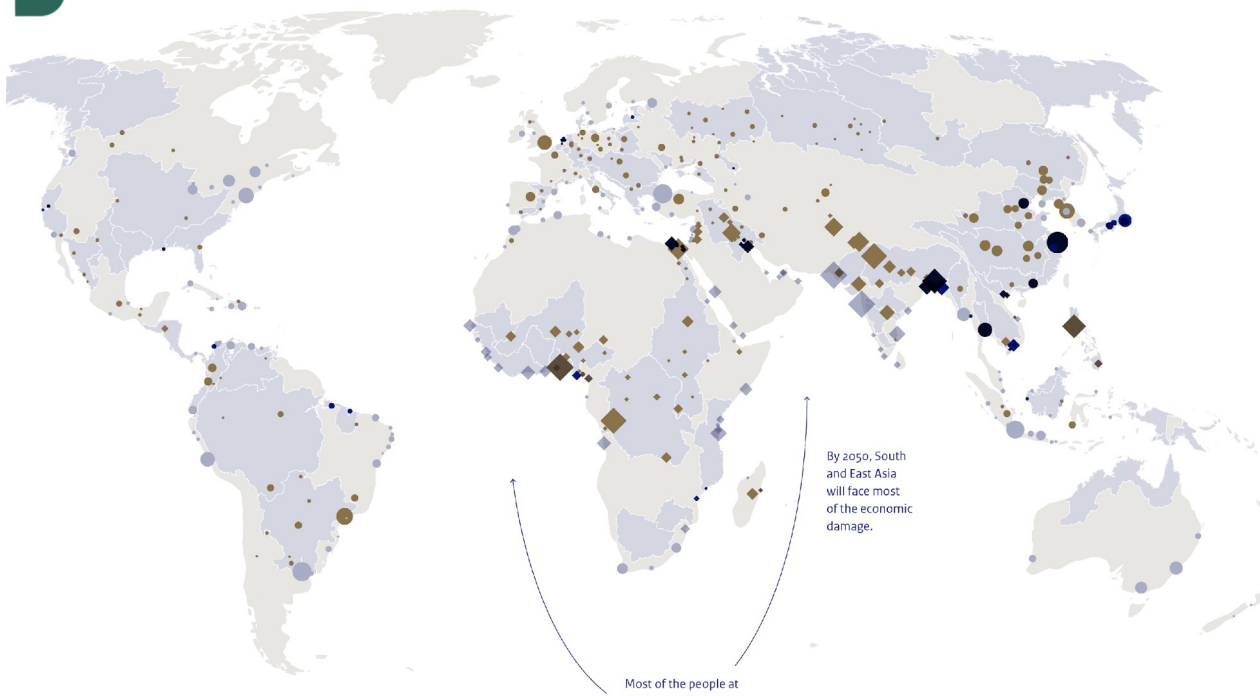
**Flood events 1996–2015**

Number of  
occurrences



# Too much water

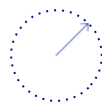
## Increasing flooding across the world



## Rapidly growing delta, coastal and river cities

- ◆ Rapidly growing delta city
- ◆ Rapidly growing coastal city
- ◆ Rapidly growing river city

- Delta city
- Coastal city
- River city



Delta river basin

Diameter = relative size of urban population

# Too much water

## Cities are flood-risk hotspots



Average number of deaths  
per year, 1980–2015  
x 1,000

63

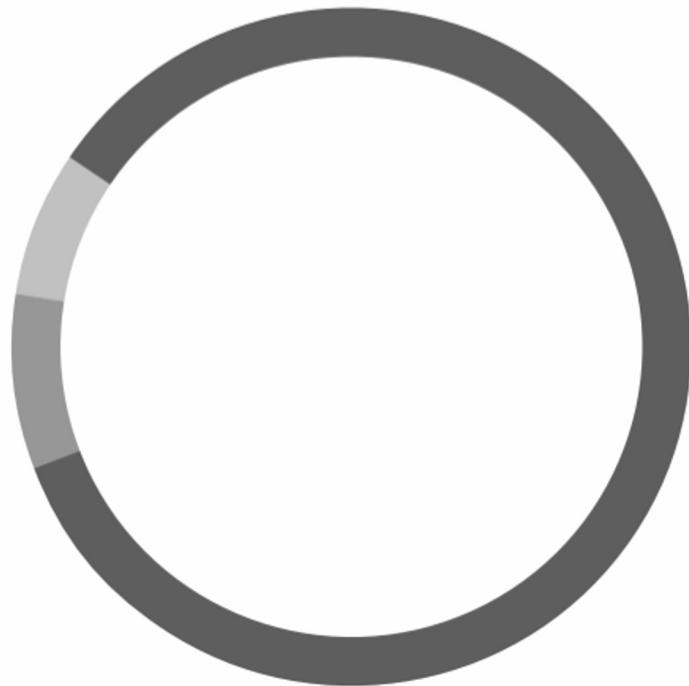
Natural  
disasters

75

Conflicts

780

Unsafe water

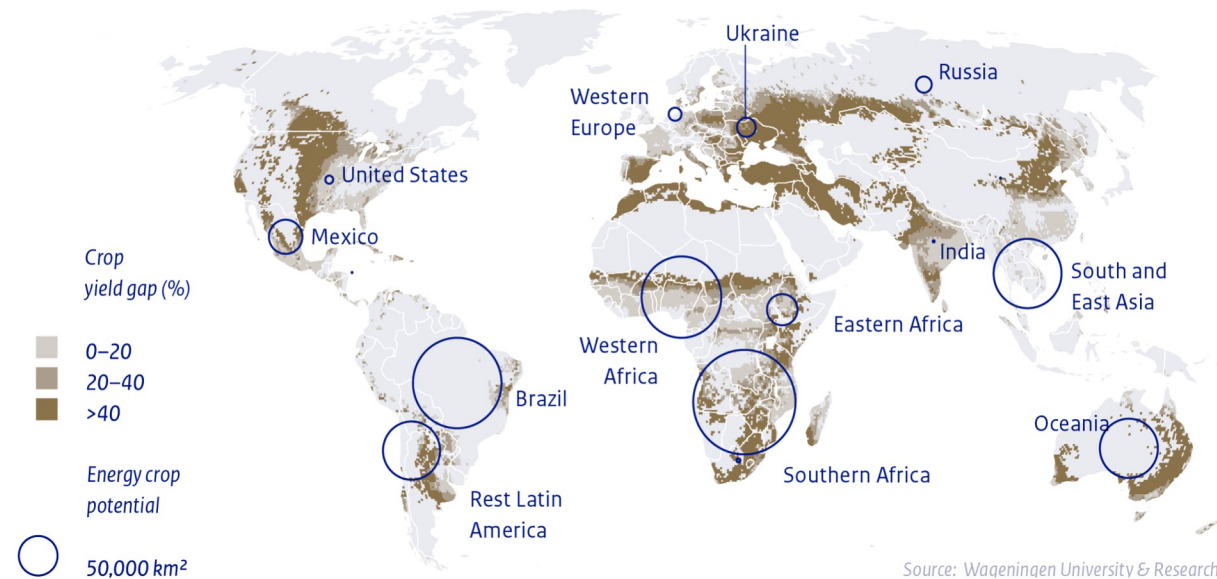


# Dirty & Polluted Water

0.8 million died  
annually due to lack of  
access to clean  
drinking water and  
sanitation (1980-2015)



# Serious trade-offs between food, water and energy



Potential conflict  
between biofuel & food  
production in water-  
scarce areas (2050)

There are a suite of feasible and effective solutions to the global water crisis.

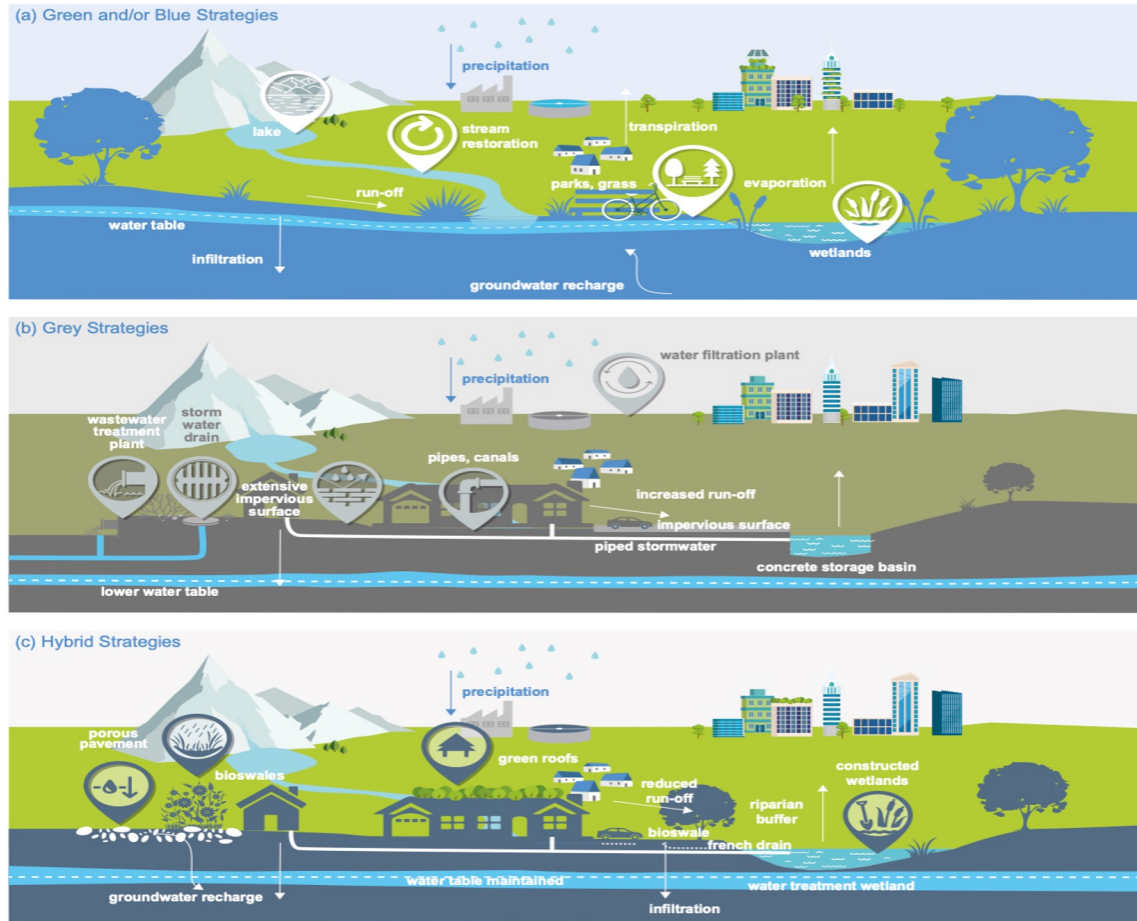
They need to be brought together in each region to enable a set of transitions towards prosperity, human well-being and ecosystem health.

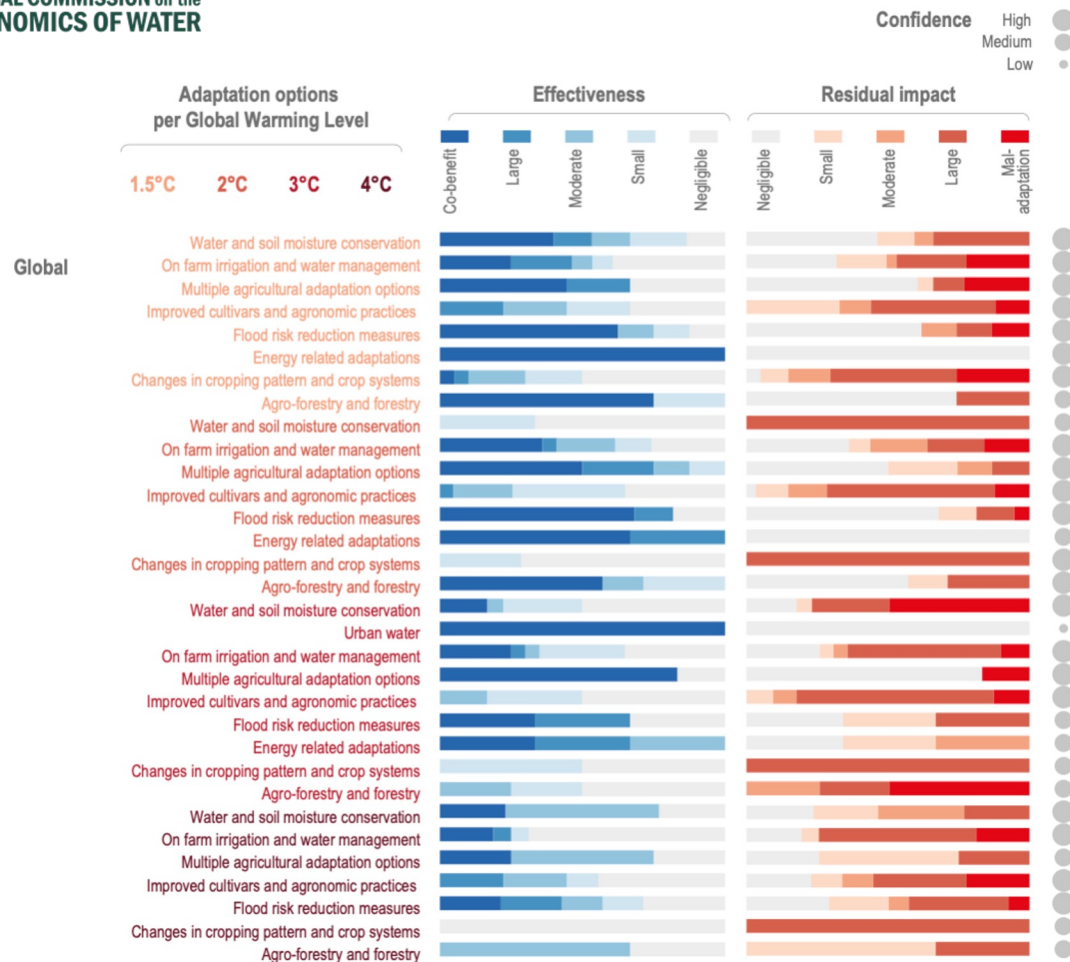






# Strategies to address the various colours and hues of water





# Water-related Climate adaptation options for a warming world

# The global water cycle is a **Global Common Good**

Restoring the balance in the  
water cycle through  
collective action from the  
local to the global is in the  
shared interest of all nations.





A sustainable, just, and equitable water future requires much higher levels of collective ambition and transformational changes in governance, finance, technology, institutional capacities and what we value

