

Climate Change & Water

Sonja Koeppel

Co-coordinator of the UN-Water expert group on
water and climate

Secretary of the Water Convention, UNECE

WHY CLIMATE CHANGE & WATER?

Water is essential to achieving ALL of the SDGs

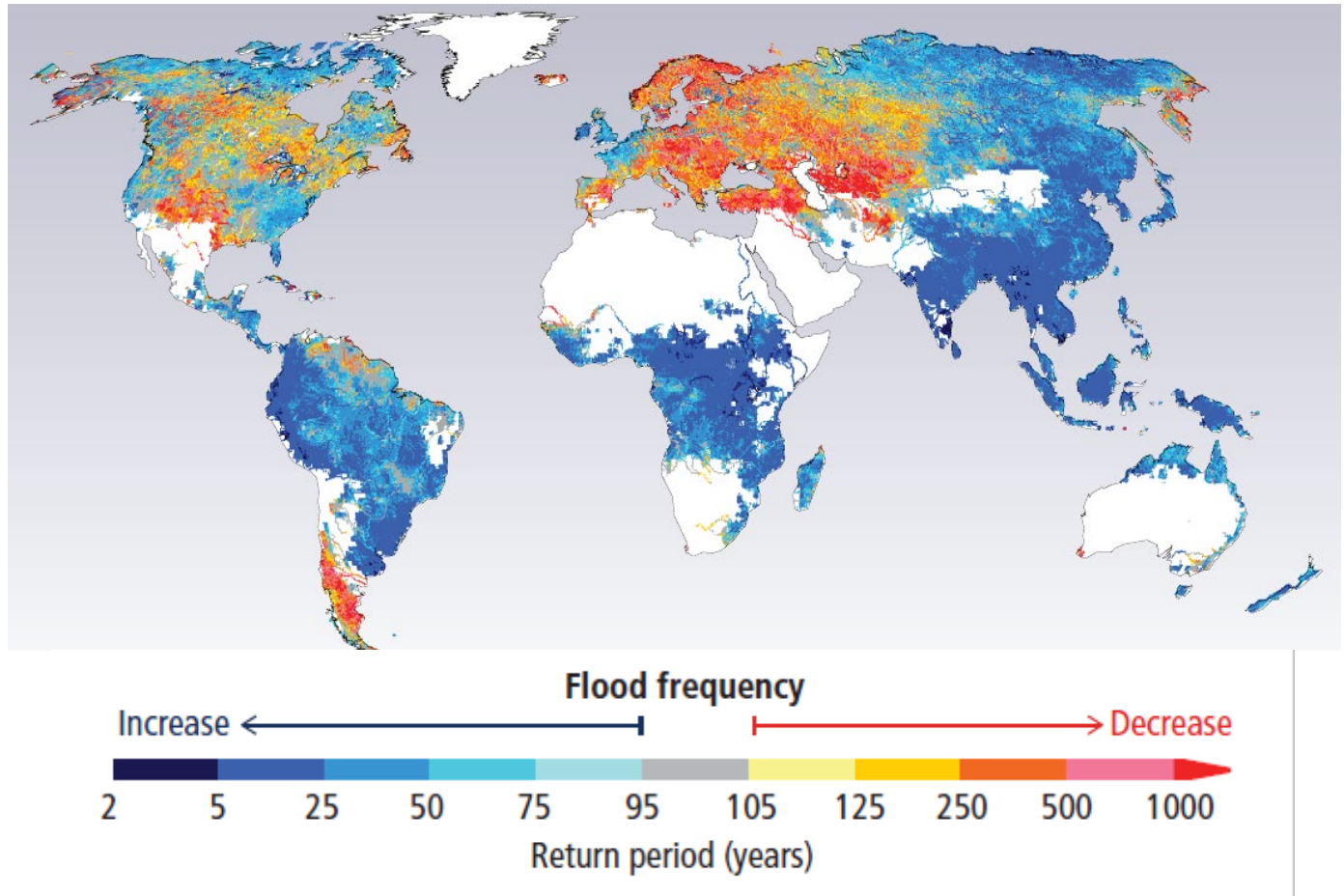
The global climate crisis undermines **sustainable development and water security** including such human rights as access to safe drinking water and sanitation

Water is crucial for both climate change adaptation and mitigation—greater **water stress increases carbon emissions** in the form of energy needed to extract, treat, and transport water, as well as from destruction of natural carbon sinks such as wetlands and forests



WHY CLIMATE CHANGE & WATER?

<https://www.ipcc.ch/report/ar5/wg2/freshwater-resources/>

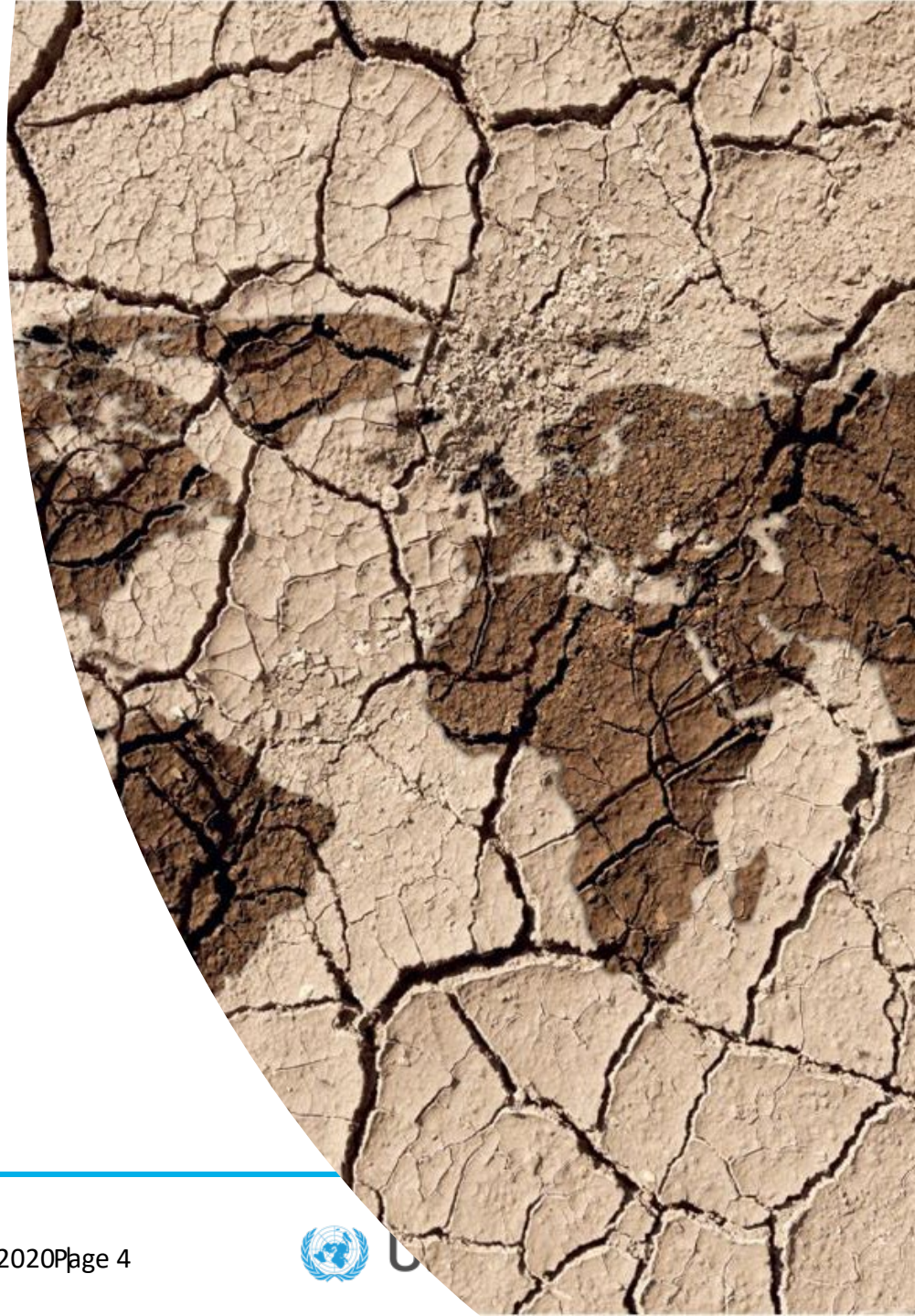


Flood frequency increase and decrease around the world under climate change.

WHY CLIMATE CHANGE & WATER?

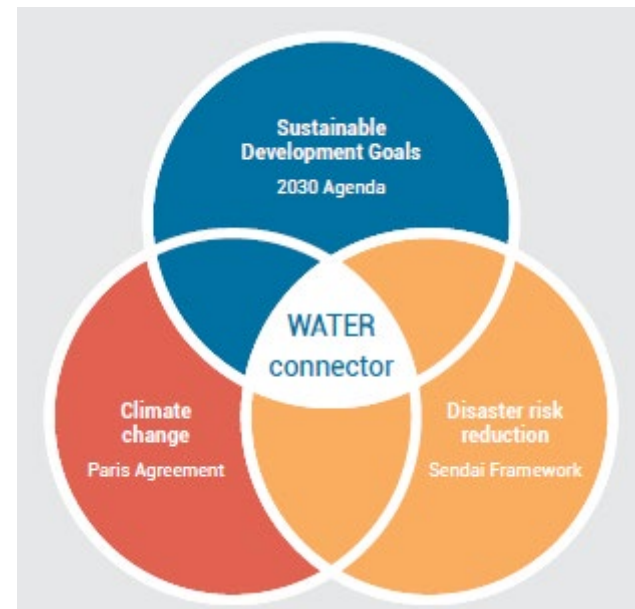
3.6 billion people worldwide now live in **water scarce areas**. That will increase to **4.8–5.7 billion people by 2050** thus creating unprecedented competition among water users and across political boundaries.

This affects multiple other sectors: agriculture, energy, health, tourism, navigation etc.



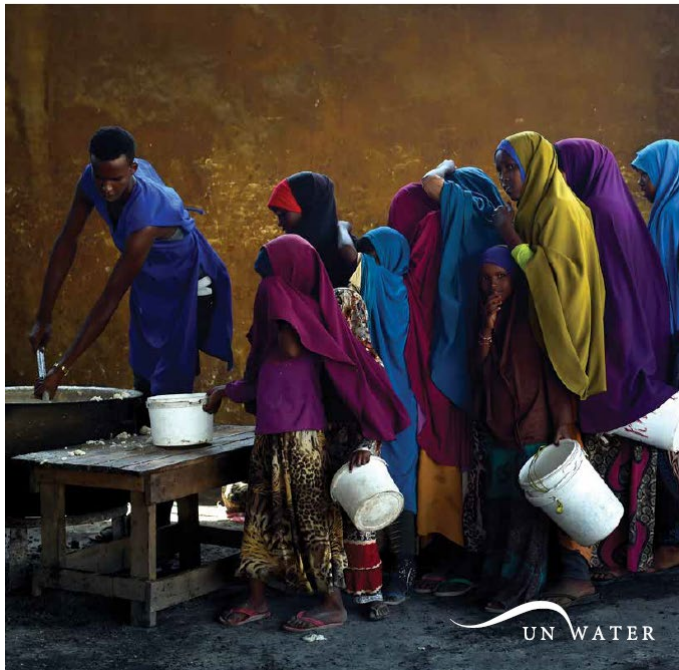
WHY CLIMATE CHANGE & WATER?

- Water as a means of coherence between the SDGs, Paris Agreement and Sendai Framework
 - Resilient, integrated water management can provide important co-benefits for sustainable development, climate change mitigation & adaptation, and disaster risk management



KEY MESSAGES of the 2019 policy brief

Climate Change and Water
UN-Water Policy Brief



- ✓ Acting now
- ✓ Considering water as part of the solution
- ✓ Improving water management practices
- ✓ Ensuring transboundary cooperation in adaptation
- ✓ Rethinking financing

<https://www.unwater.org/unwater-policy-brief-on-climate-change-and-water/>

KEY MESSAGES

- **Acting now**
 - **uncertainty** about the future **cannot be an excuse for inaction** today
 - climate policy must address **water across all sectors** of the economy and the environment to ensure a climate-resilient and sustainable future for all.

WE CANNOT AFFORD TO WAIT

Climate policy makers must put water at the heart of action plans.



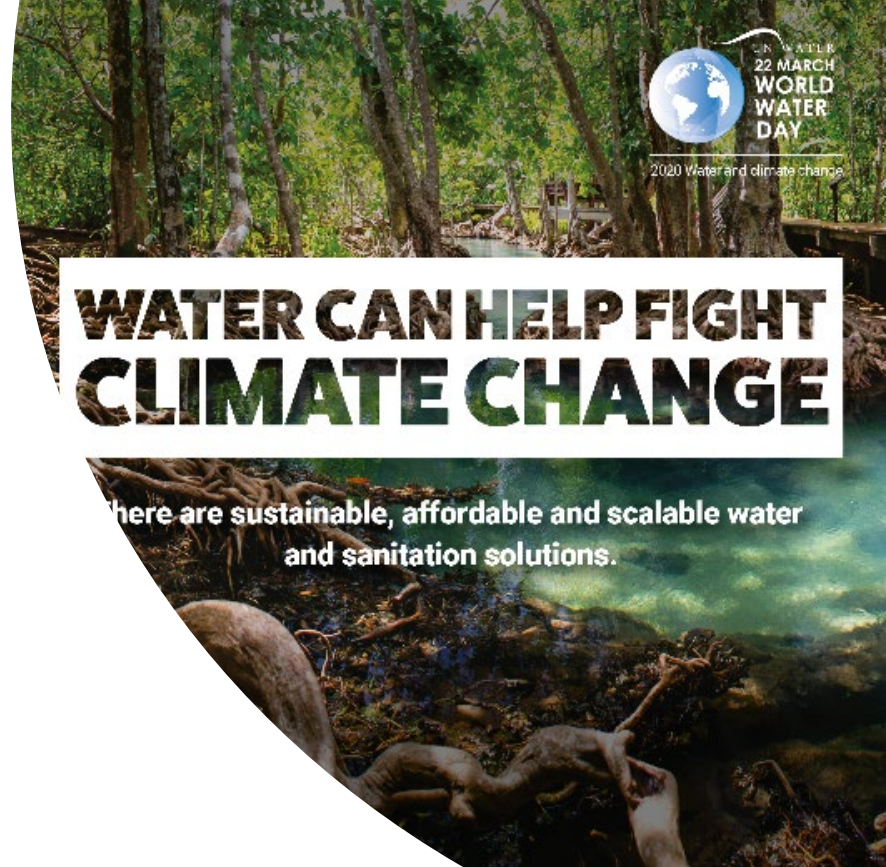
WHAT CAN WE DO NOW?

- Raising **awareness** on climate change among **sectoral agencies** and **public**
- Adopting **risk-based water management strategies** to ensure today's decisions do not lock us into unsustainable development pathways
- Integrating **water issues into development and sectoral adaptation strategies and plans**
- Establishing **national-level coordination mechanisms** incl. ministries of development and infrastructure, while developing and implementing SDG, NDC, NAP and DRR plans



KEY MESSAGES

- **Considering water as part of the solution**
 - Improved **water management**, including sanitation, is an essential component of successful climate **mitigation and adaptation strategies**



WHAT CAN WE DO NOW?



- **Climate-proof** new and existing **water and sanitation infrastructure**
- **Water saving technologies**
 - e.g. **using wastewater** as a cost-efficient and sustainable source of energy, nutrients, organic matter and other useful by-products
- Integrating **urban planning** to weigh development trade-offs
- Expanding access and use of **early warning systems**
- Improving **community engagement**

KEY MESSAGES

- **Improving water management practices**
 - **Climate-resilient water management** practices are necessary to ensure water security and to make **risk-informed decisions**
 - Including water into **National Adaptation Plans (NAPs)** and **Nationally Determined Contributions (NDCs)**



WHAT CAN WE DO NOW?

- Conserving **wetlands and floodplains**, reforesting coastal mangrove forests
- Accounting for **water availability and demand** in all climate **mitigation and adaptation plans**
- Expanding usage of **water-efficient renewable energy** such as solar pumps
- Practicing **conservation agriculture** to improve soil organic matter (needed for the soil to retain water)
- **Reducing post-harvest losses and food waste**, and transforming waste into a source of nutrients or biofuels/biogas to address



KEY MESSAGES

- **Ensuring transboundary cooperation in adaptation**
 - to address **climate impacts** that **cross national boundaries** and to **avoid maladaptive consequences** from a basin perspective
 - harness the potential co-benefits of **improved regional cooperation**, such as reduced uncertainty, peace and stability and shared costs and benefits.



WHAT CAN WE DO NOW?



- **Exchanging data** between countries and joint monitoring
- Developing **basin-wide adaptation strategies and plans** and implementation of **join measures** such as **infrastructure on shared waters**
- Empowering **basin organizations** to address climate change
- Establishment of **transboundary bodies** covering different sectors to address climate change

KEY MESSAGES

- **Rethinking financing**
 - investment in **climate-resilient water infrastructure** can leverage broader climate finance for catalytic change
 - **insurance** helps to improve societal **resilience to climate change**, especially to **disasters**



WHAT CAN WE DO NOW?



- **Building capacity and institutional coordination** to receive funding e.g. by developing bankable projects proposals
- **Investing** in improved **hydrological data**, **risk assessment** and **knowledge** management
- Expanding **crop insurance programmes**
- Investing in natural infrastructure such as aquifers and wetlands which can provide both **nature-based climate mitigation** (carbon sinks) and **adaptation benefits** (buffers from storms and flooding, drought protection, refugia)



2020 Water and climate change

<https://www.worldwaterday.org/>

- ✓ 22 March: events around the world: also in your countries?
- ✓ Pivot event together with World Meteorological Day on 23 March, Geneva with launch of World Water development report
- ✓ 23-29 August: World Water Week, Stockholm
- ✓ 9-20 November: COP26 in Glasgow
- ✓ Many other events during the year



Thank you.

Contact us:

Sonja.Koeppel@un.org

Link to policy brief:

<https://www.unwater.org/publications/un-water-policy-brief-on-climate-change-and-water/>

http://www.unece.org/env/water/water_climate_activ.html

WHAT CAN WE DO NOW?

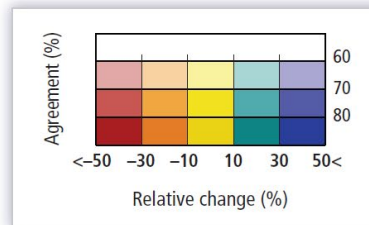
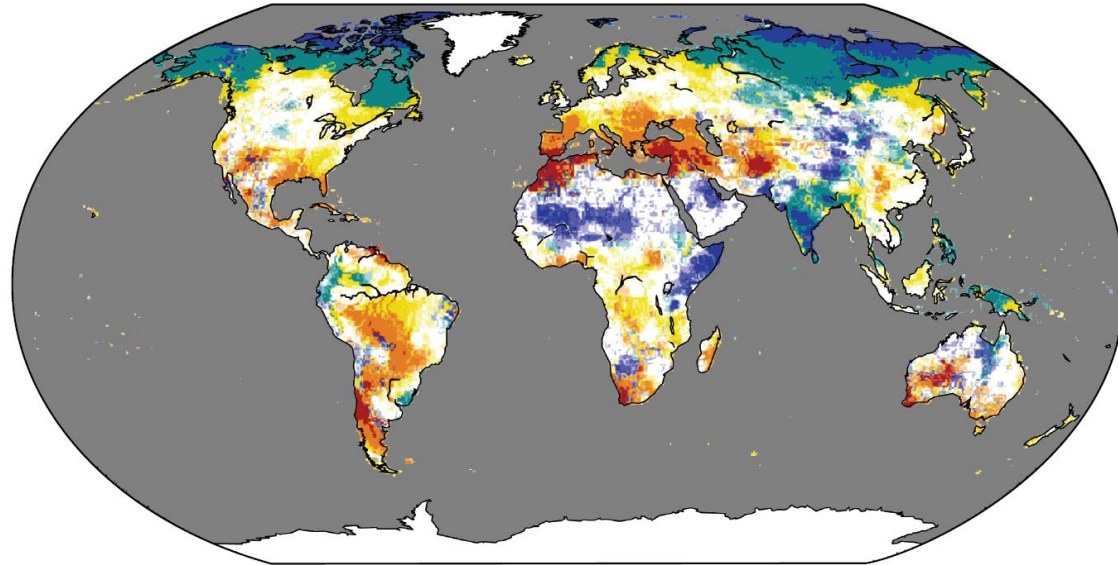
- Policy interventions to reduce exposure to water-related climate risk including:
 - secure land tenure in rural regions
 - increase access to electricity and agricultural extension services

ADDITIONAL RECOMMENDATIONS

- Build capacity for adaptive water governance (*plans, institutions, finance, and infrastructure*) at both national and local levels.
- Embrace innovative finance solutions and enhance funding modalities within existing and new climate funds that are conducive to financing integrated approaches to building climate resilience.

WHY CLIMATE CHANGE & WATER?

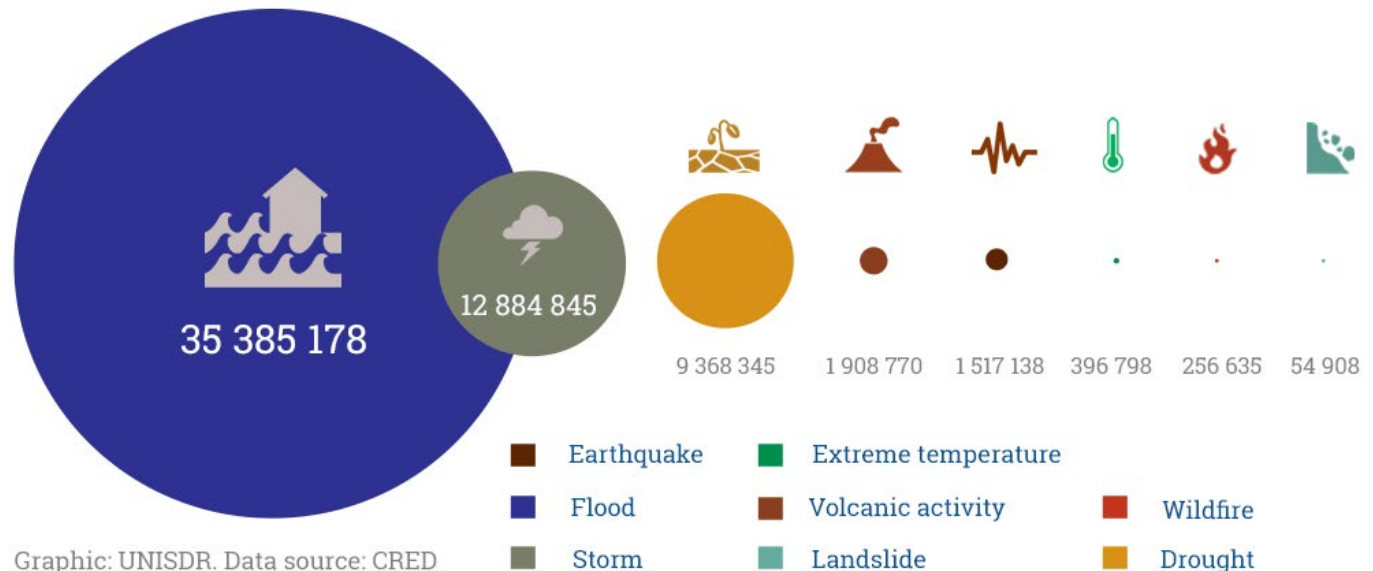
<https://www.ipcc.ch/report/ar5/wg2/freshwater-resources/>



Average percentage **change** in **average annual runoff** for an increase in global average temperature of **2°C above**.

WHY CLIMATE CHANGE & WATER?

Number of people affected per disaster type 2018



Climate change is inextricably linked with water. We feel the **impacts of climate change through the water cycle**: drought, floods, storms, sea level rise. Water-related disasters lead to **forced migration**.