

THE GLOBAL DROUGHT ATLAS

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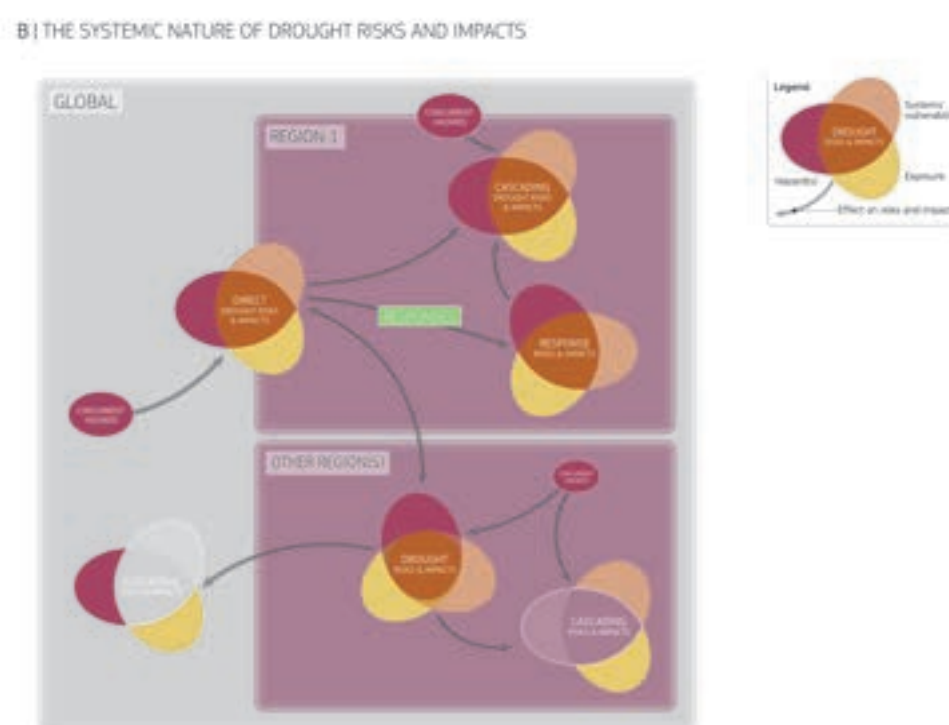
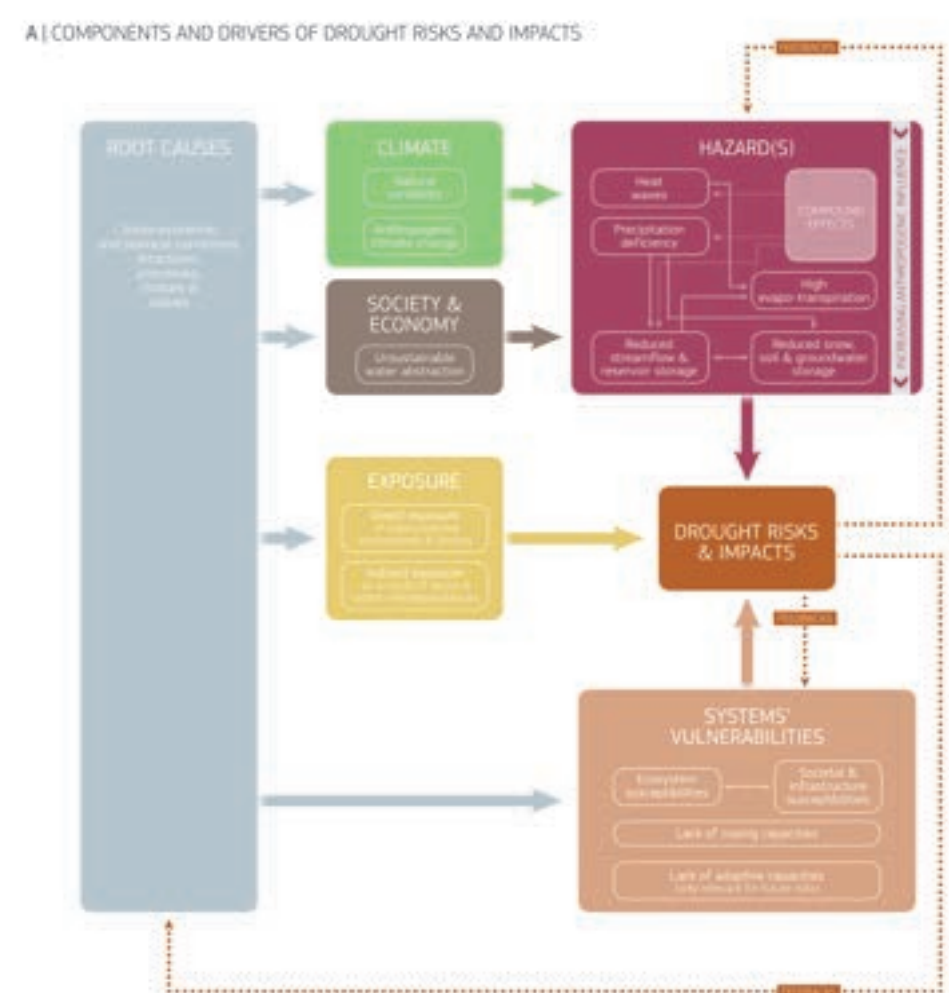
PART 1: The complexity of drought and drought risks

Droughts increasingly and more severely affect the lives and livelihoods of millions of people and the integrity of ecosystems that humans depend on.

Droughts emerge from the interaction of natural variability, climate change and the way communities manage water resources, materializing in surprising ways at all latitudes and sparing almost no productive sector.

However, their elusive complexity is still a challenge to understand, monitor and respond to. A systemic perspective can help highlight the role of different drivers of hazard, exposure, vulnerability and their root causes in creating drought risks. Such an approach is especially critical for understanding how these drivers disrupt our interconnected systems through direct, cascading and response effects, felt through diverse temporal and geographical scales. Systemic measures are needed find sustainable solutions to drought risks together with risks connected with other hazards, with the objective of ensuring water security for all.

Drought is a complex hazard that affects multiple sectors and systems

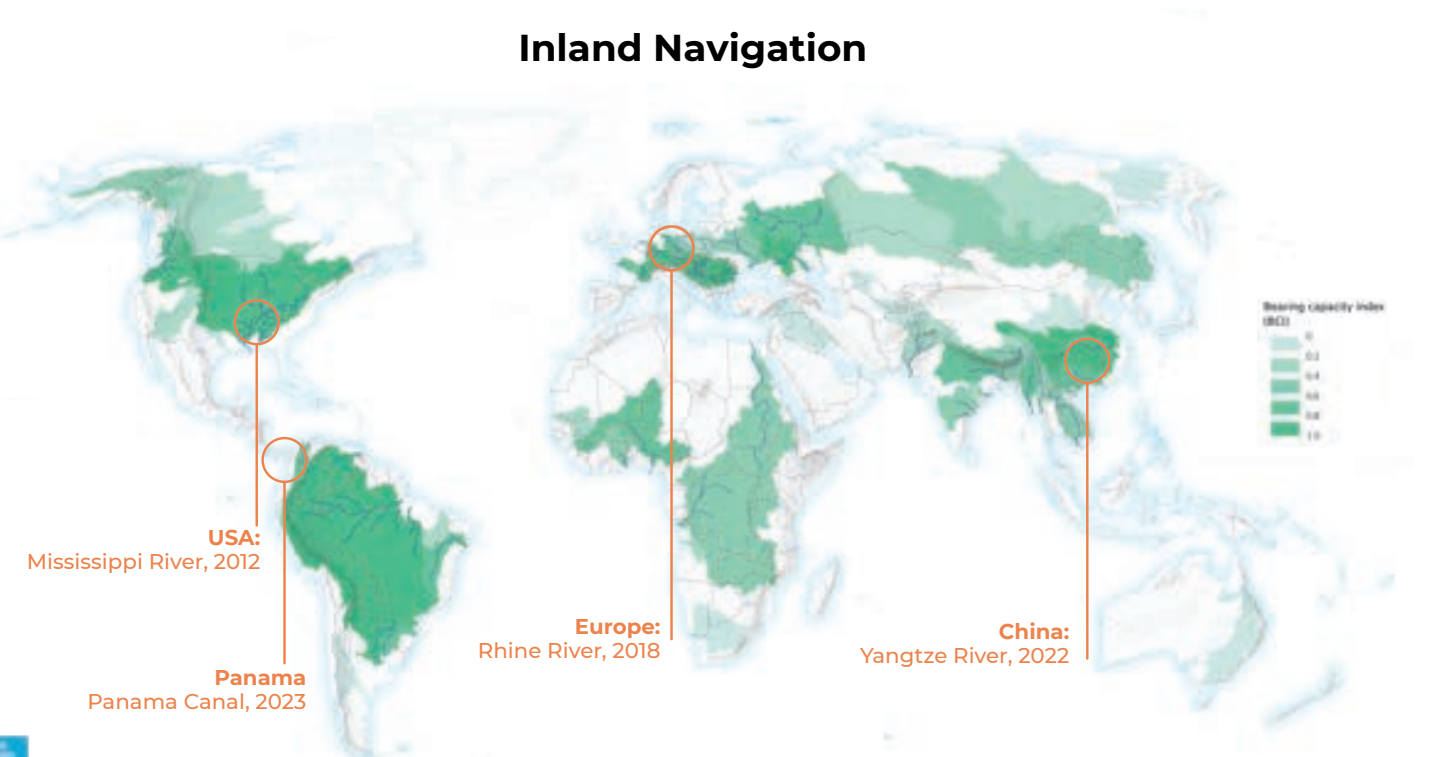
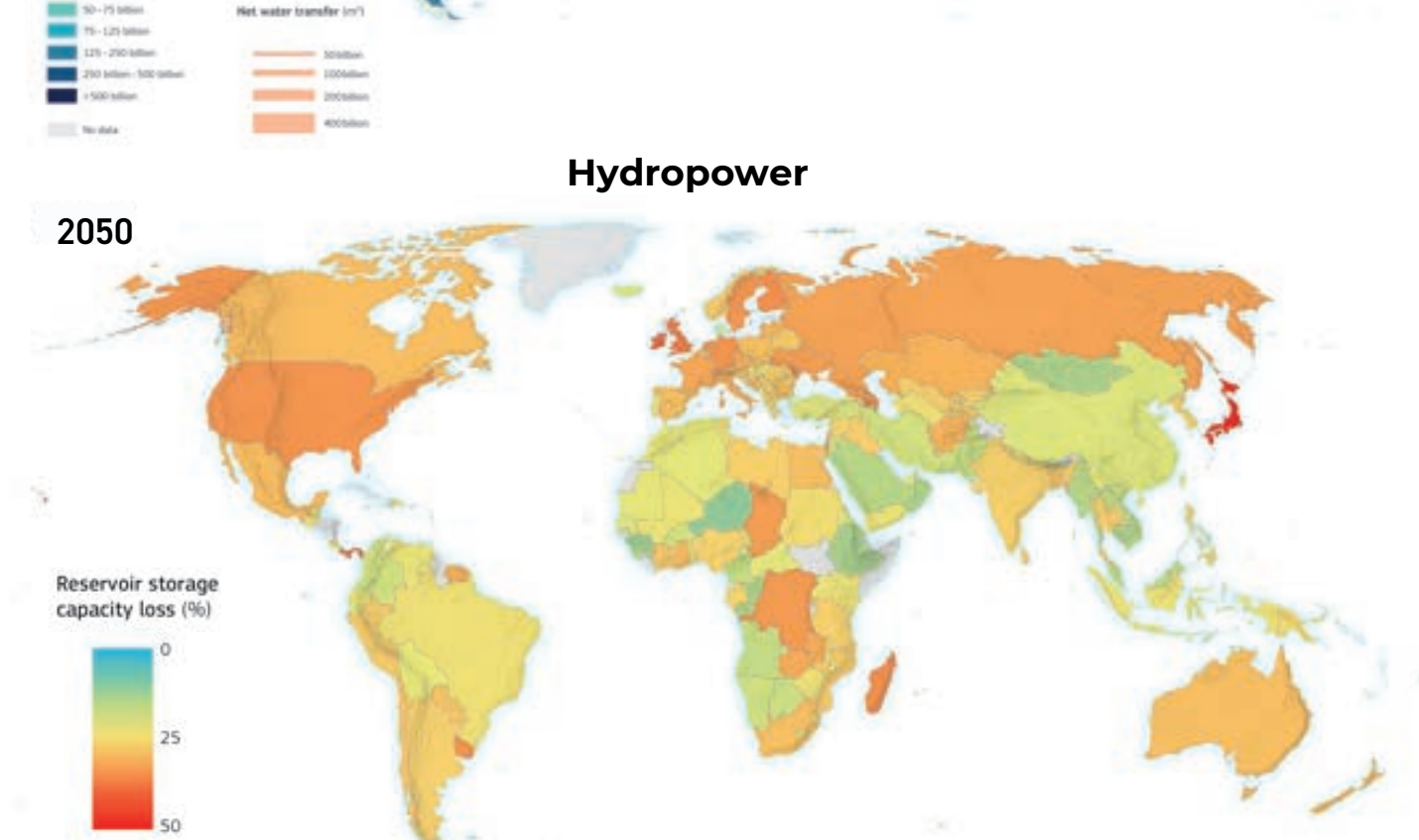
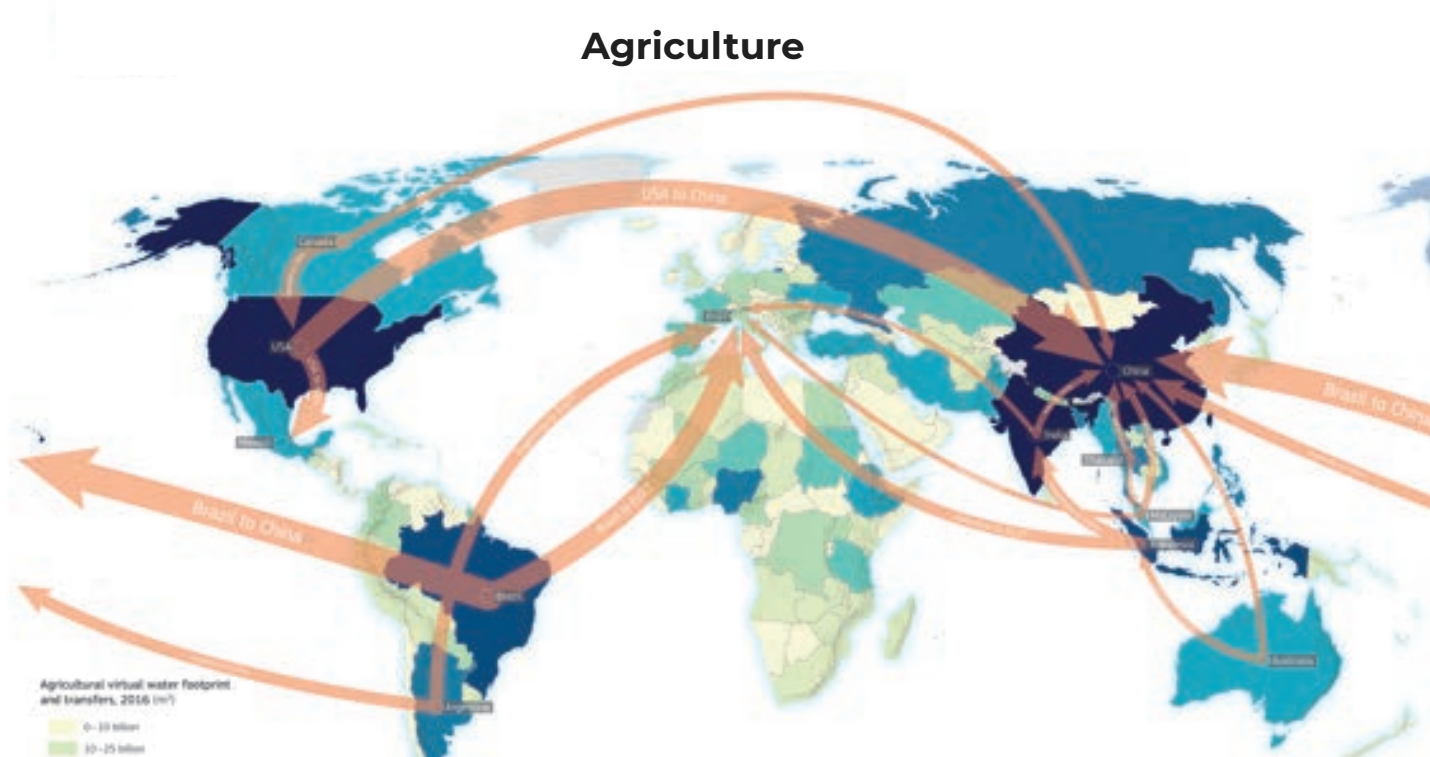
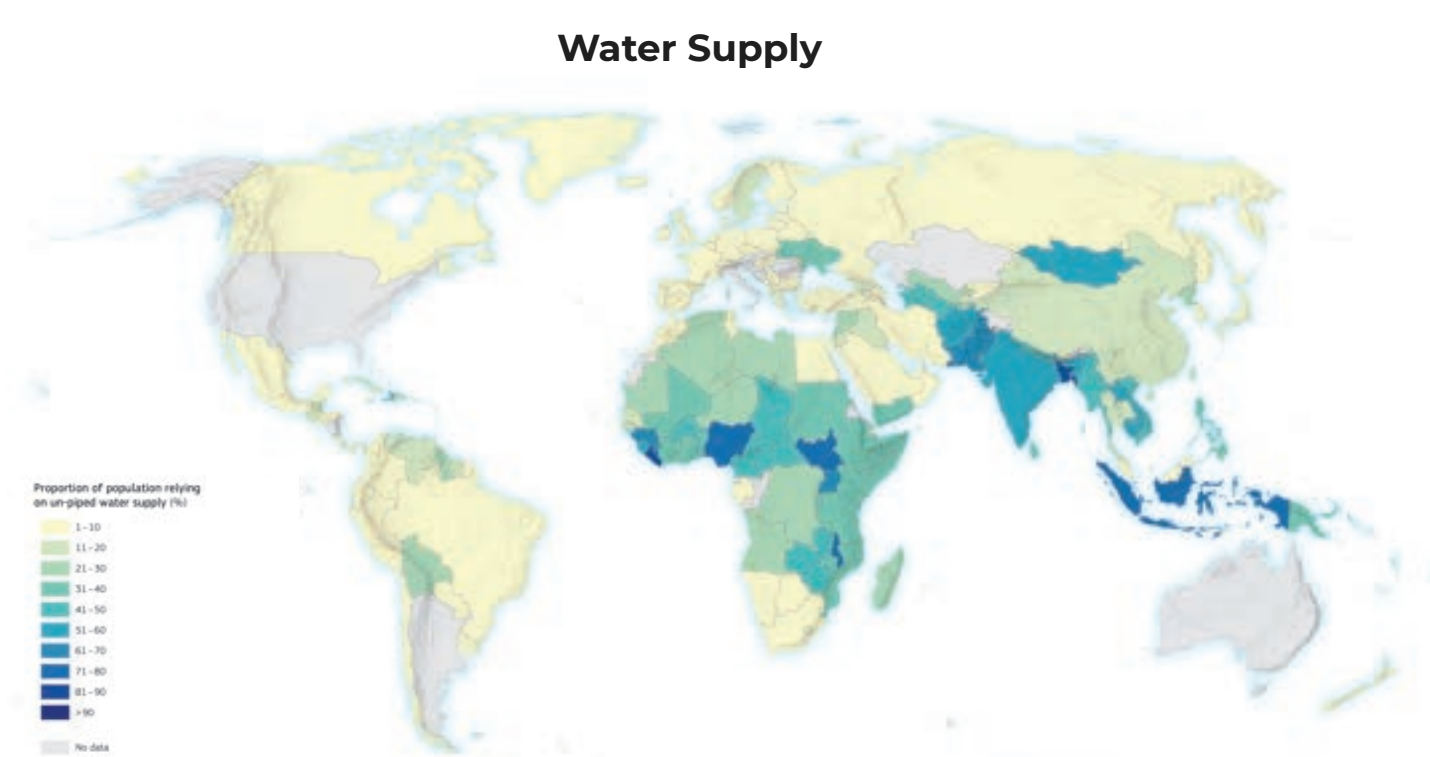


PART 2: Impacted Systems

Droughts pose a significant threat to water resources, disrupting the functioning of natural and socio-economic systems and causing a wide range of impacts.

For instance, droughts can severely affect ecosystem biodiversity and carbon storage potential, potentially leading to long-lasting harm to both nature's intrinsic value and its contributions to human well-being. Additionally, shortages of rain, surface water, and groundwater can directly impact humans by reducing drinking water supplies and affecting food production due to agriculture's dependence on soil moisture and, in some areas, irrigation. Beyond these direct impacts, droughts can indirectly affect livelihoods and socio-economic systems. Reduced hydropower generation can lead to higher energy costs or outages, while low water levels disrupt local and international supply chains by hindering inland waterway transport. These impacts are interconnected, often triggering cascading effects, such as worsening inequalities, fueling conflicts, and threatening public health.

Impacts are diverse, cross-sectoral, interconnected, and they threaten the achievement of the SDGs.



Cross-sectoral impacts and cascading effects

Drought risks and impacts in single sectors and systems can compound between them and with other risks and drivers of risks to create cascading impacts.

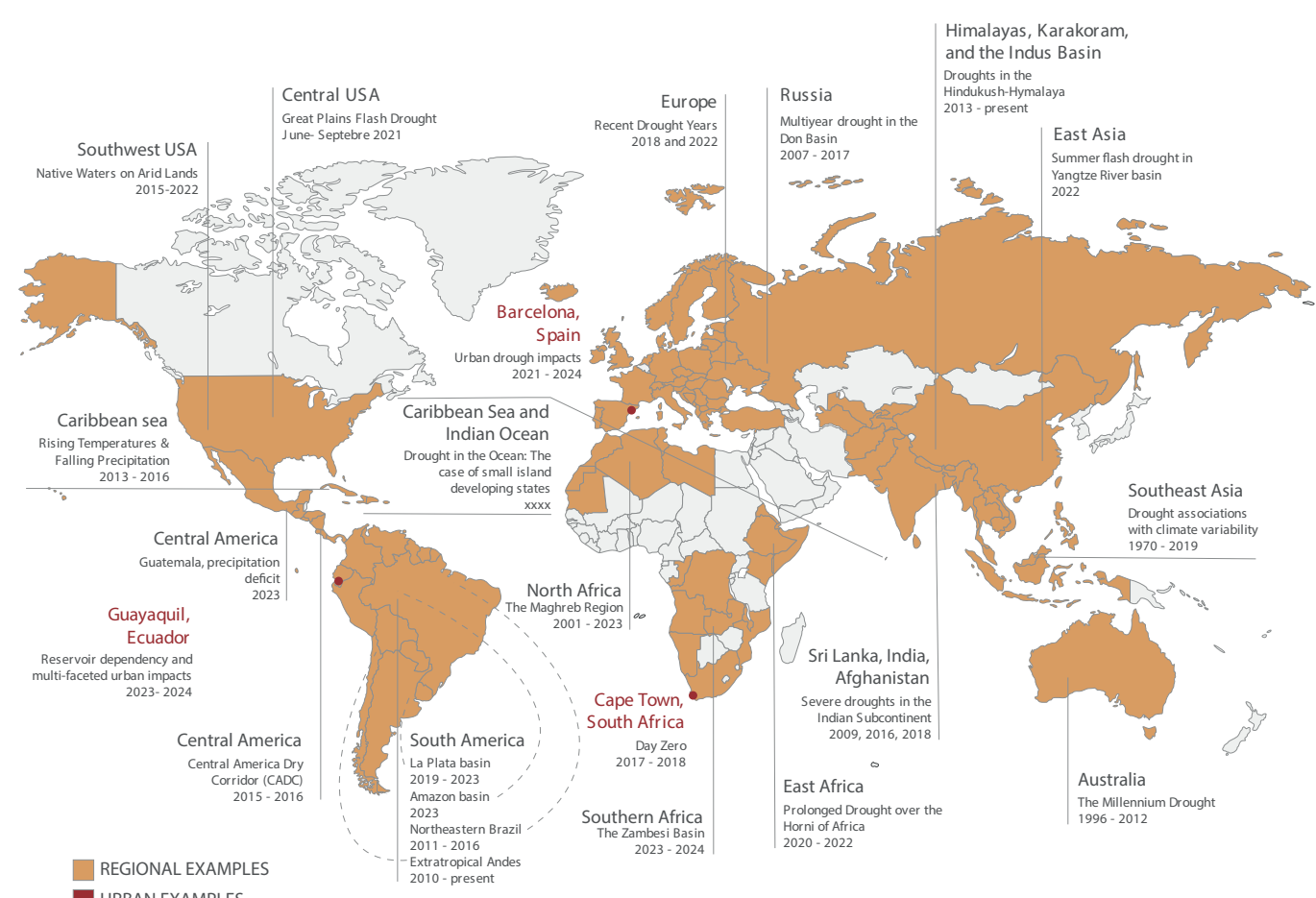
PART 3: Regional Perspective

Droughts are not confined to arid regions; they occur globally, affecting areas as diverse as tropical rainforests, alpine mountain ranges, and small islands.

The impacts of droughts vary widely per geographic context, but they consistently pose significant challenges to both people and ecosystems. While droughts are often associated with vegetation loss and agricultural stress in rural areas, urban centers around the world are also severely affected, particularly in terms of water supply. Communities respond to droughts in ways that reflect their specific circumstances, yet there are commonalities that offer valuable opportunities for shared learning and collaboration.

Learning from past drought events globally is crucial to understanding the full scope and dimension of drought risk

More than 20 local contributors from around the world



PART 4: Managing and adapting to drought risks

Comprehensive drought risk management and adaptation that is forward looking, inclusive and prospective is needed in order to mitigate the worst impacts of climate change.

This requires comprehensive and coordinated decision making to implement diverse drought risk management and adaptation pathways that have benefits across multiple sectors. When combined, different mitigation and adaptation options and pathways can create synergies and have positive cascading effects, strengthening the resilience of human and more-than-human systems.

Comprehensive and prospective drought risk management is needed to mitigate drought impact in both present and future contexts

