

UN WATER



Groundwater: Making the Invisible Visible

The United Nations World Water
Development Report 2022

22.03.2022 - Warsaw

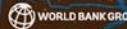
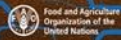
Name Surname

Affiliation, Organization



GROUNDWATER

Making the invisible visible



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World Water
Assessment Programme



Food and Agriculture
Organization of the
United Nations



Empowered lives.
Resilient nations.



UNITED NATIONS

UNECE, UNECLAC,
UNESCAP, UNESCWA



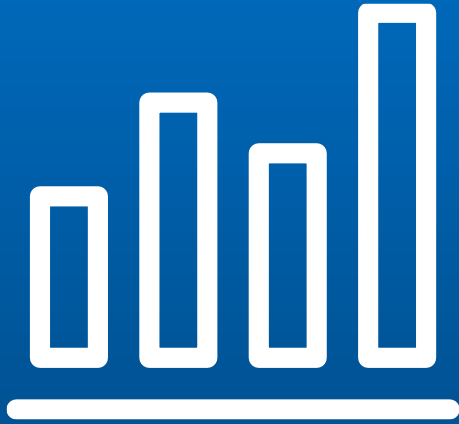
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Intergovernmental
Hydrological Programme

UN HABITAT
FOR A BETTER URBAN FUTURE



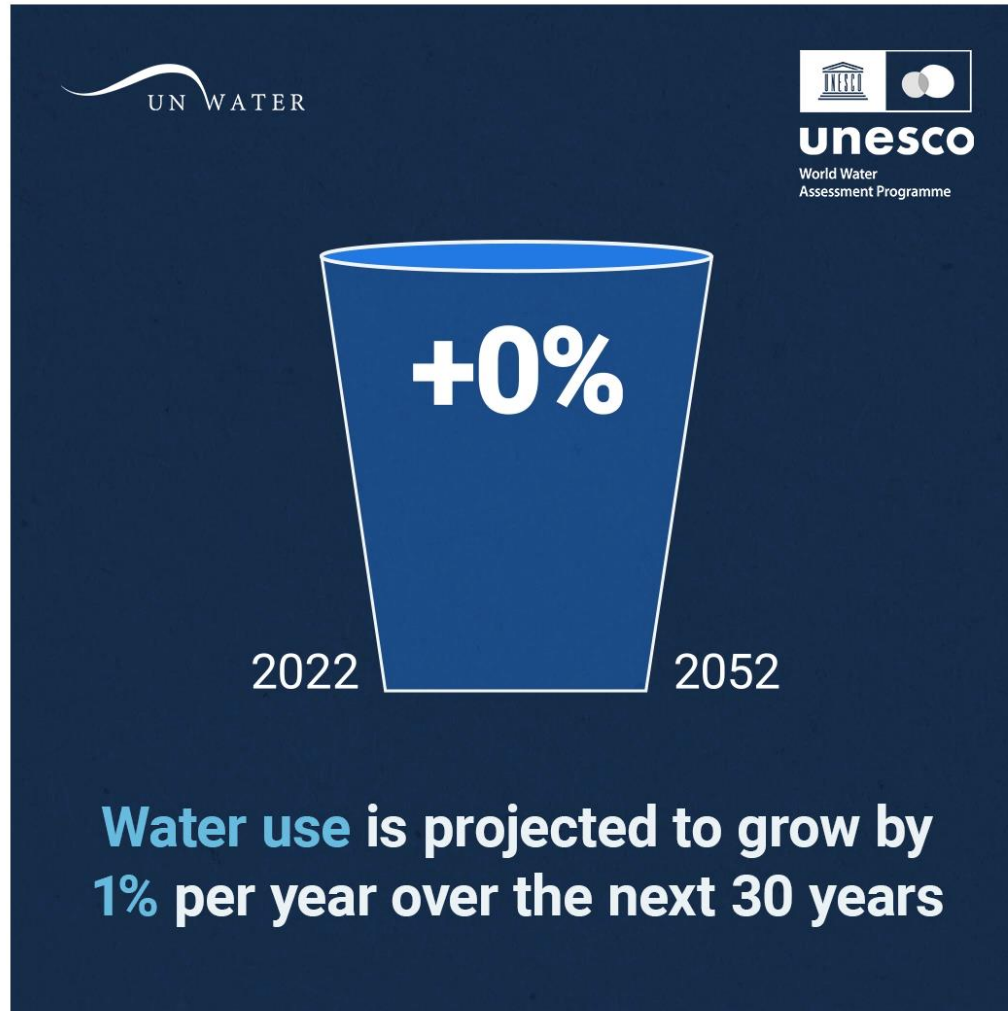
WORLD BANK GROUP



Part I

BASELINE AND CONTEXT

Global Demand for Water

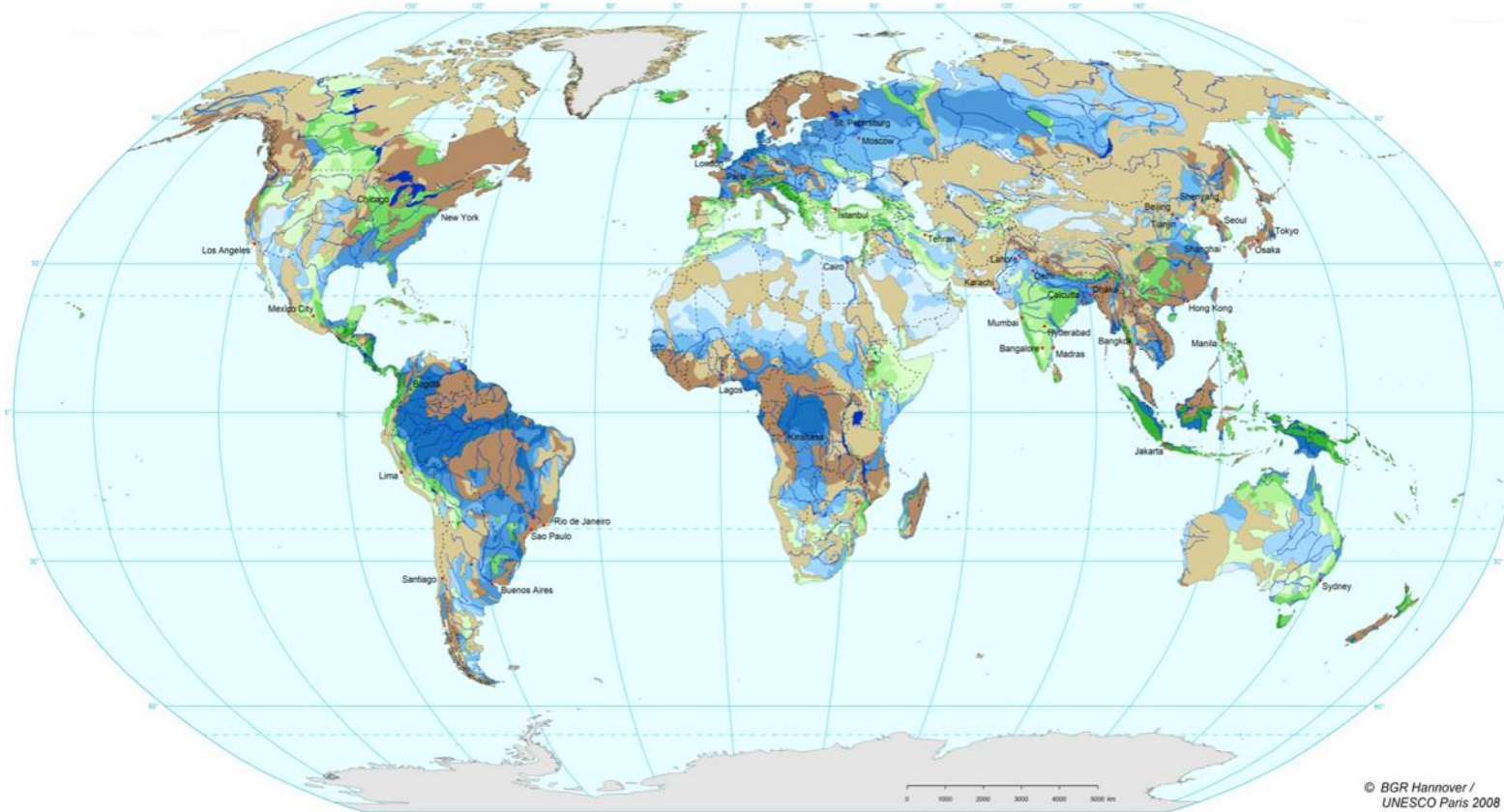


**Water use should
grow annually by 1%
over the next 30 years**

Groundwater Availability



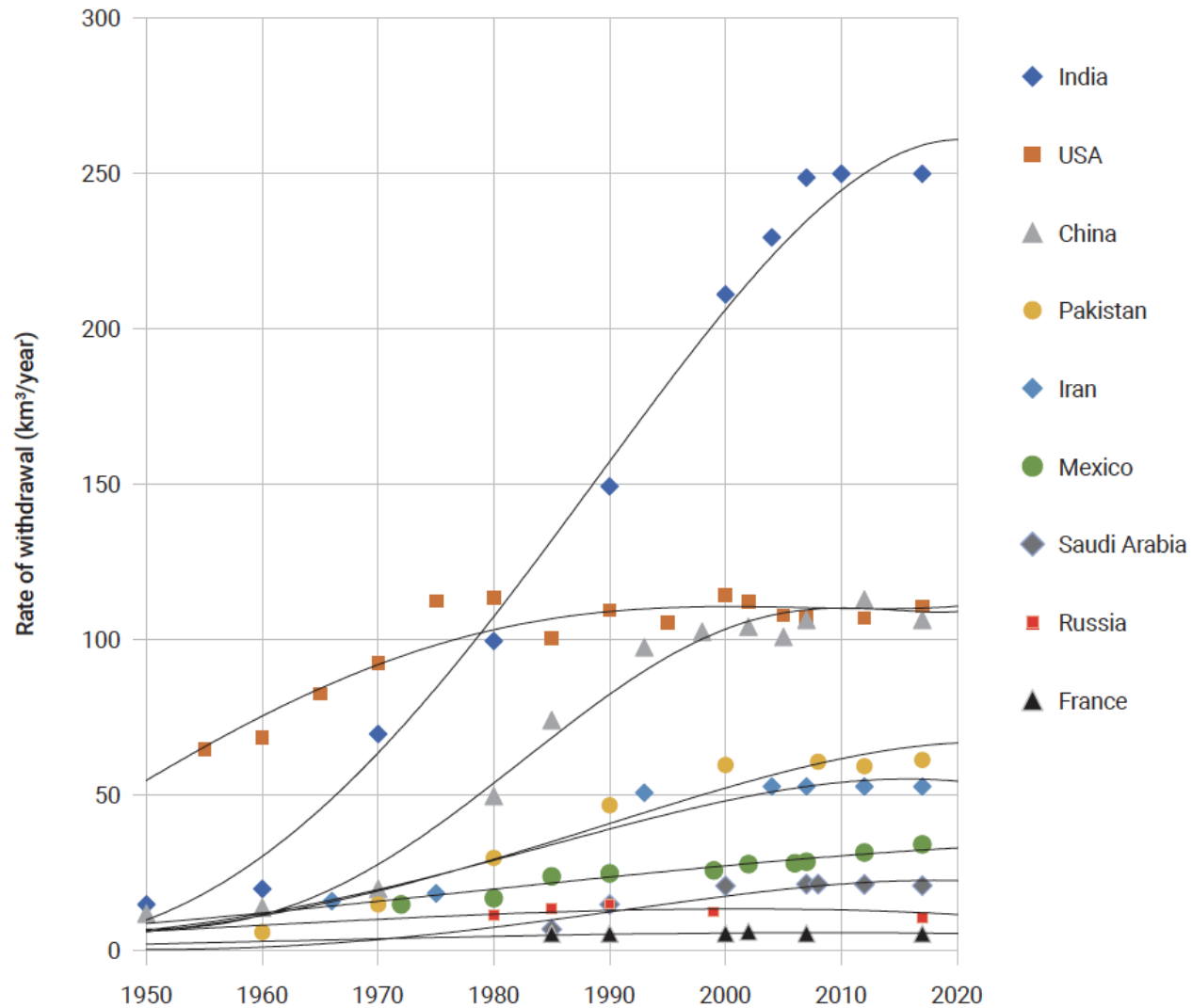
Groundwater Resources of the World



Groundwater is ubiquitous and accounts for 99% of all liquid freshwater on Earth

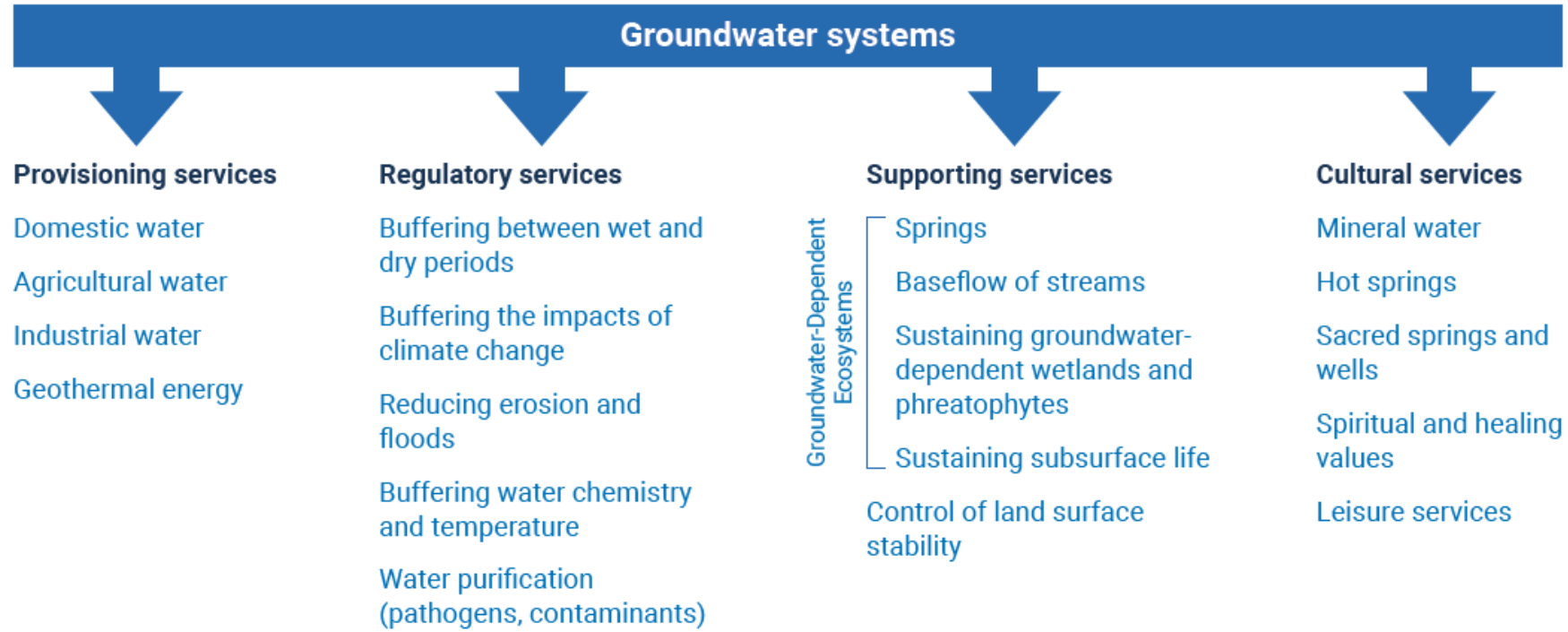
The map shows the global distribution of groundwater under different geological conditions

Groundwater Use



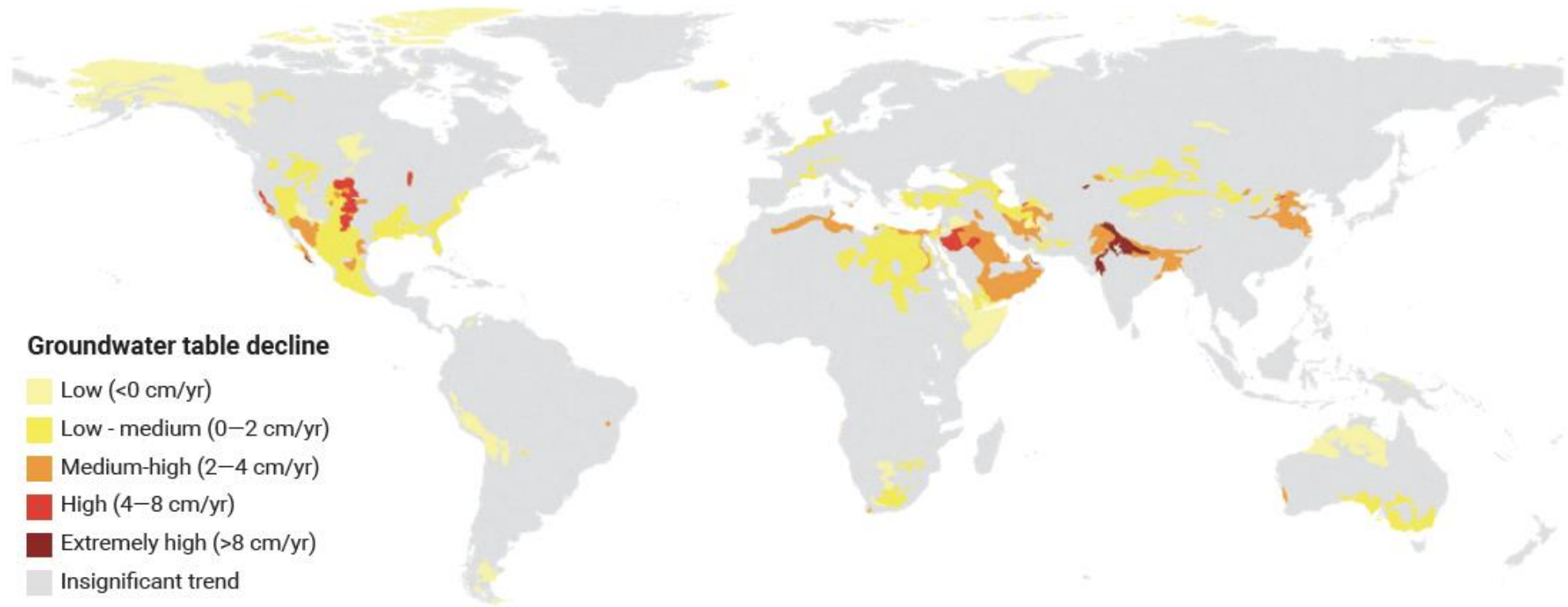
25% of the total freshwater we use comes from groundwater, but its full potential remains largely untapped

Groundwater Services



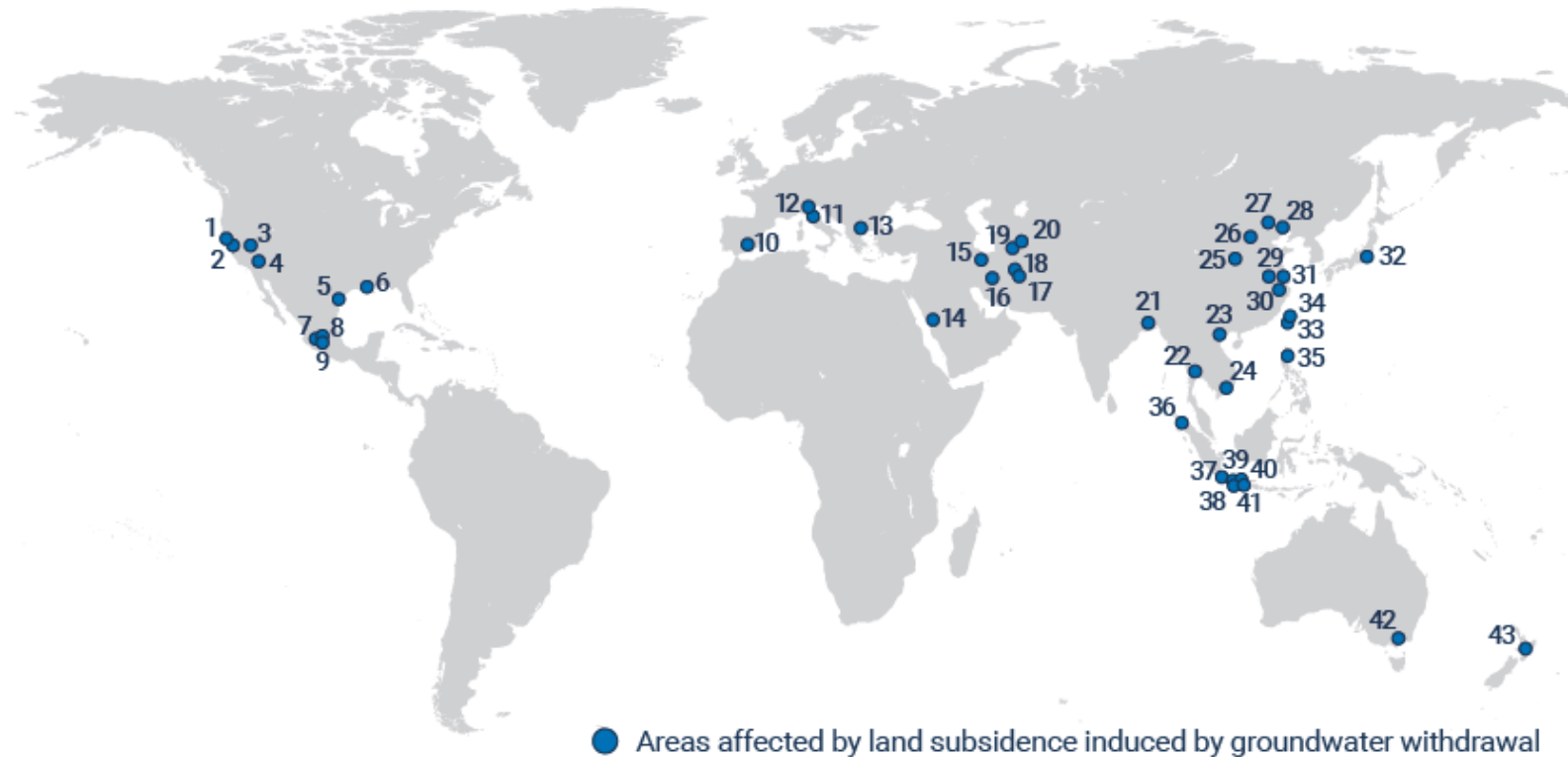
**Groundwater for human uses is very important,
but it offers many more services**

Challenges and Constraints: Groundwater Depletion



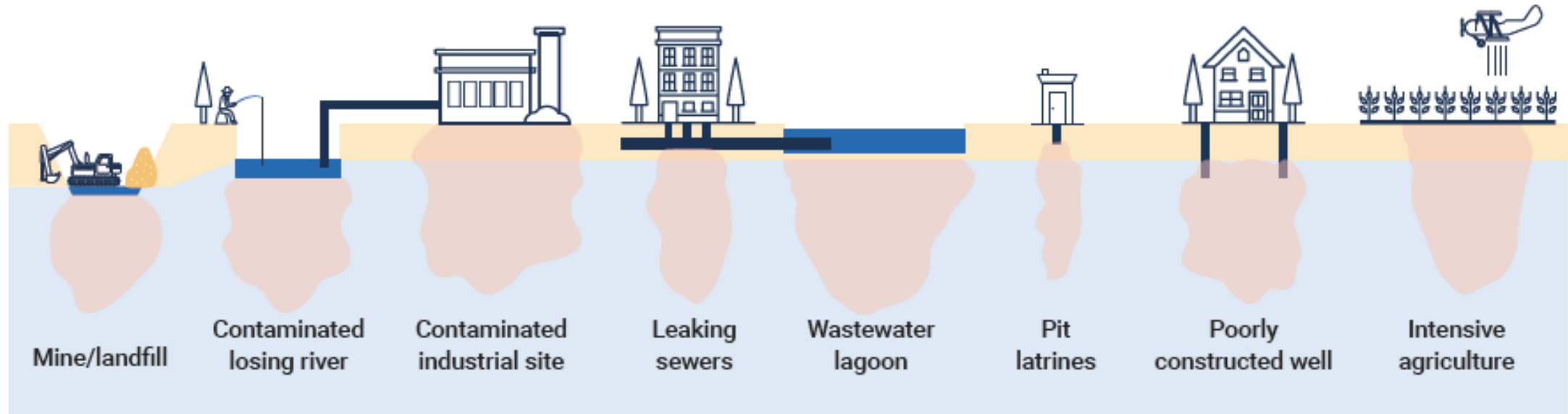
Most cases of long-term groundwater storage depletion result from intensive groundwater abstraction

Challenges and Constraints: Groundwater Depletion



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Challenges and Constraints: Groundwater Pollution



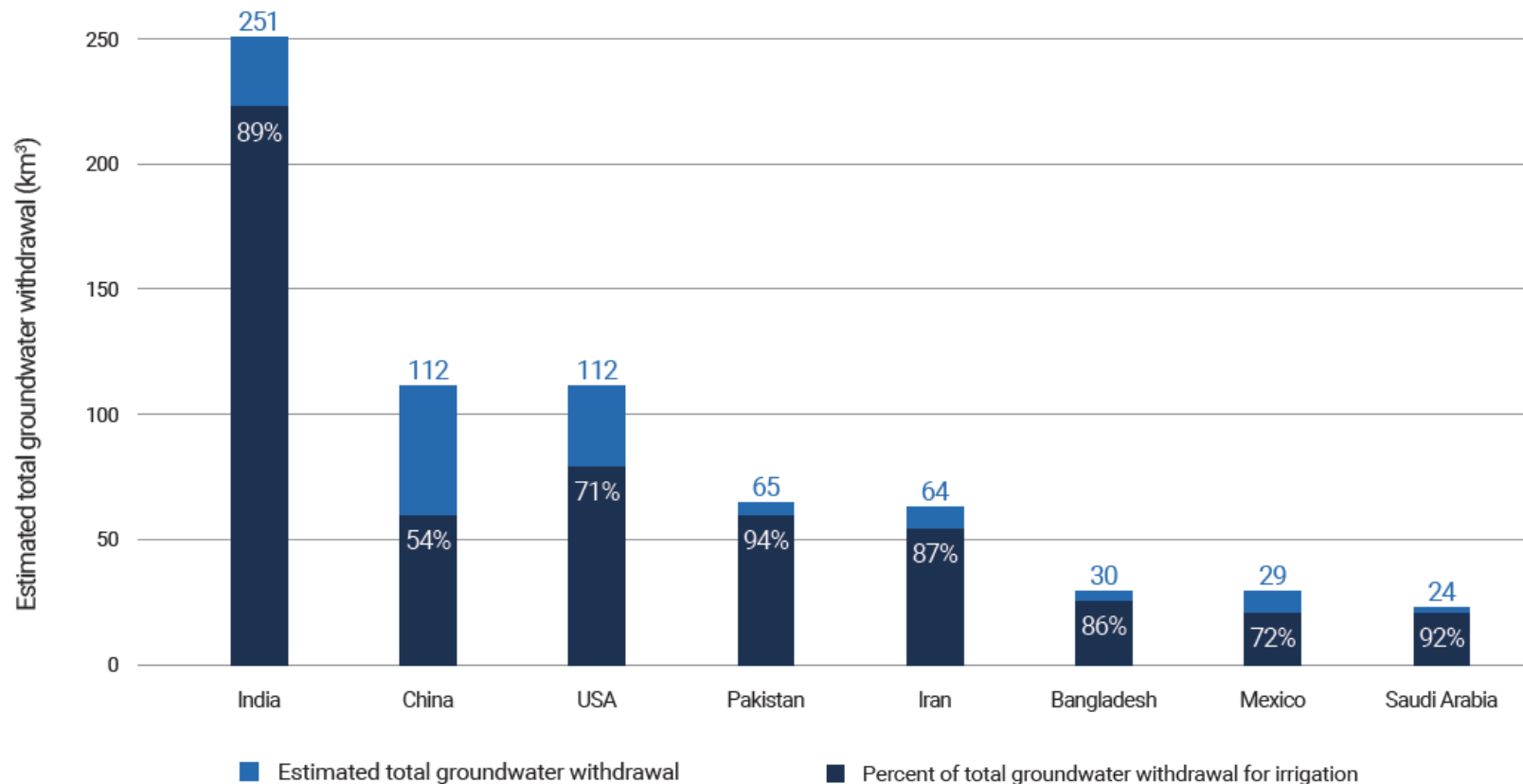
Groundwater pollution is a virtually irreversible process



Part II

THEMATIC FOCUS

Groundwater in Agriculture



Increasing agricultural productivity will rely on the sustainable intensification of groundwater abstraction

Groundwater and Human Settlements



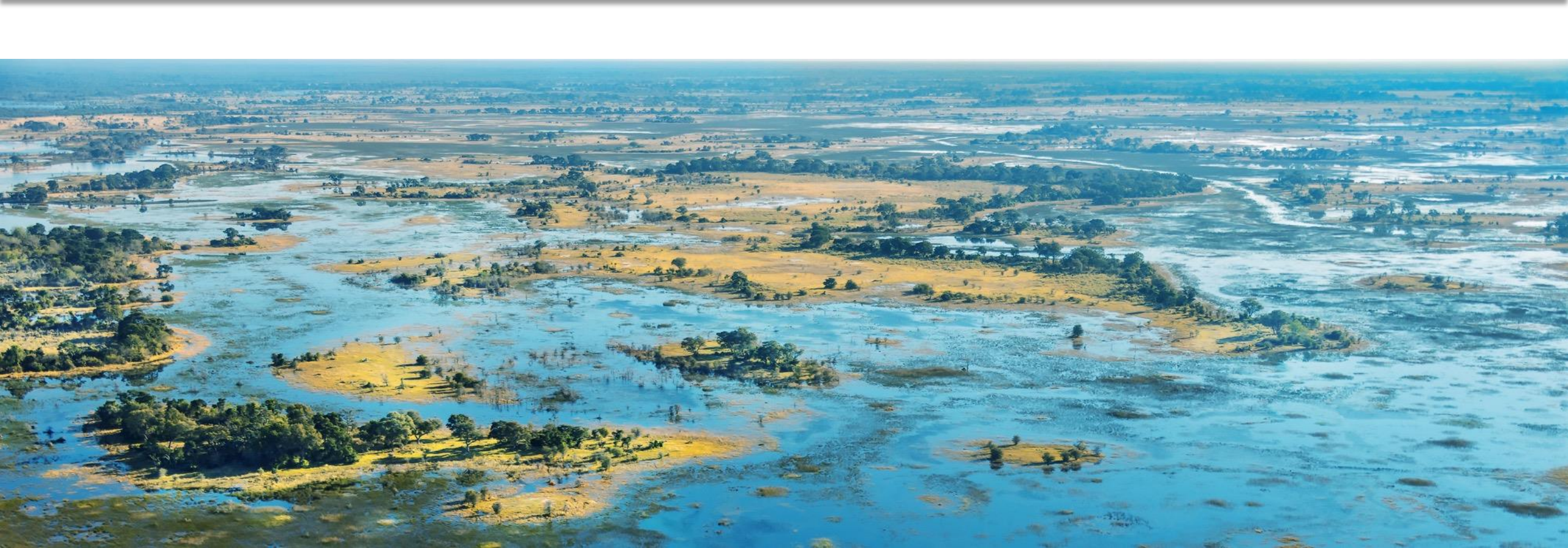
Since the earliest times, humankind has met its need for good quality water from subterranean sources

Groundwater and Industry



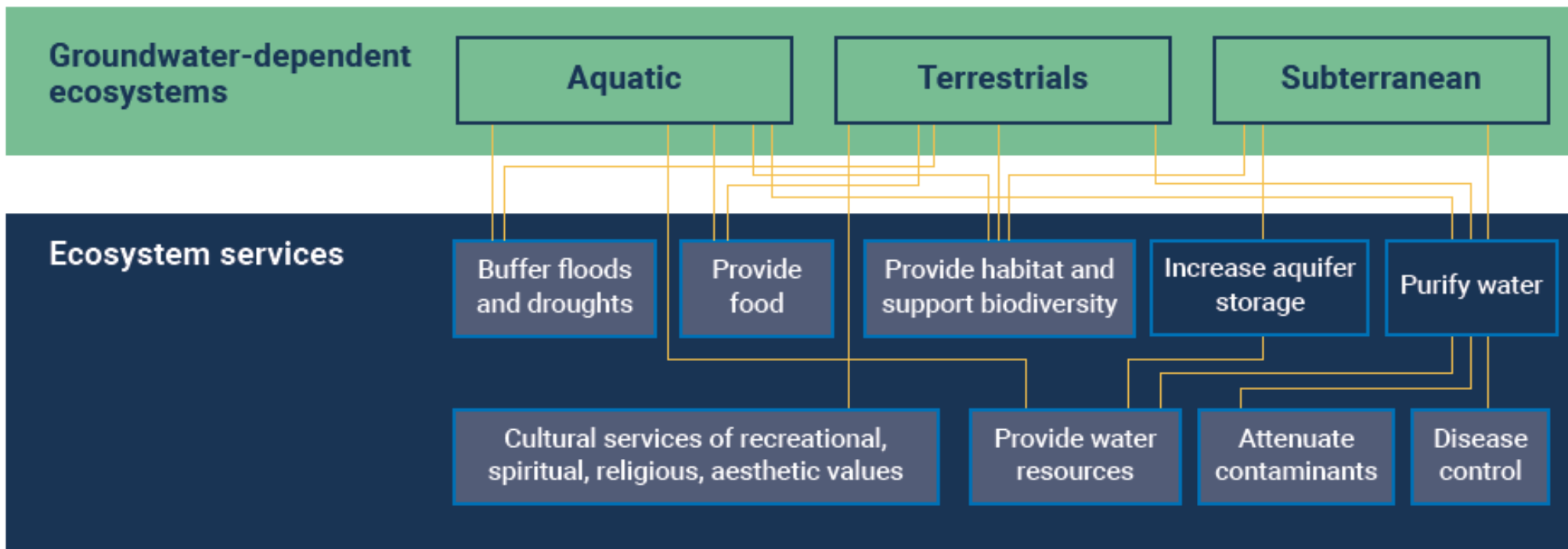
The industrial and mining sectors have a strong potential for increasing water use efficiency, stimulating water recycling and reuse, and limiting water pollution.

Groundwater and Ecosystems



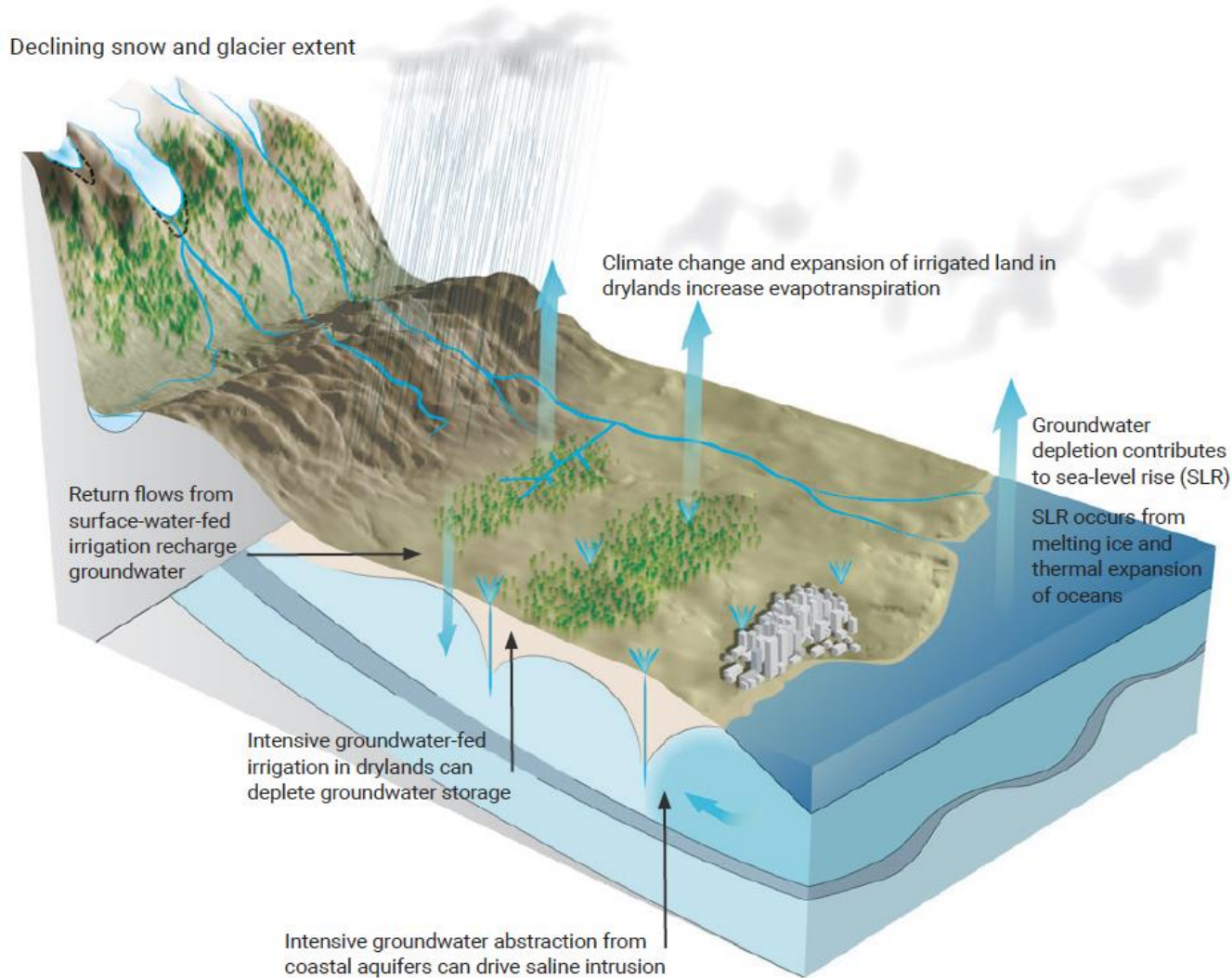
Groundwater-dependent ecosystems can be found across a variety of landscapes, ranging from high mountain valleys to the bottom of the ocean and even in deserts

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Groundwater and Climate Change



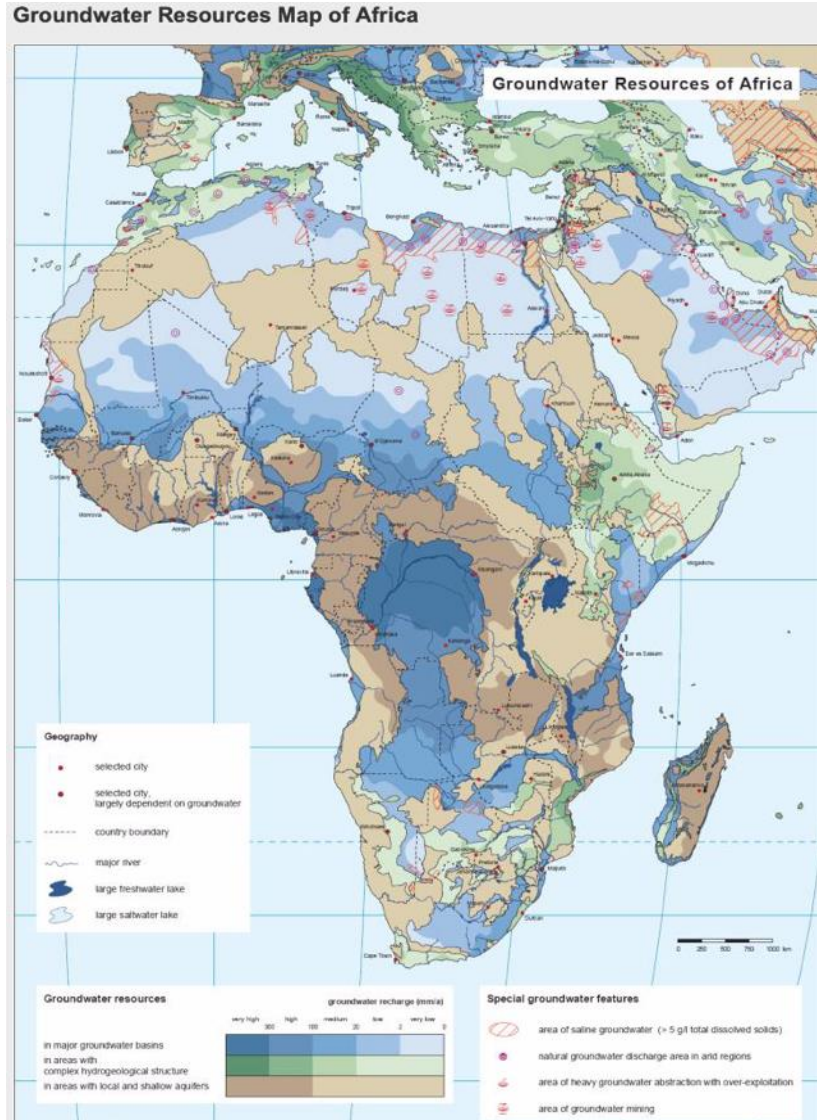
Groundwater has a role to play in both climate change adaptation and mitigation



Part III

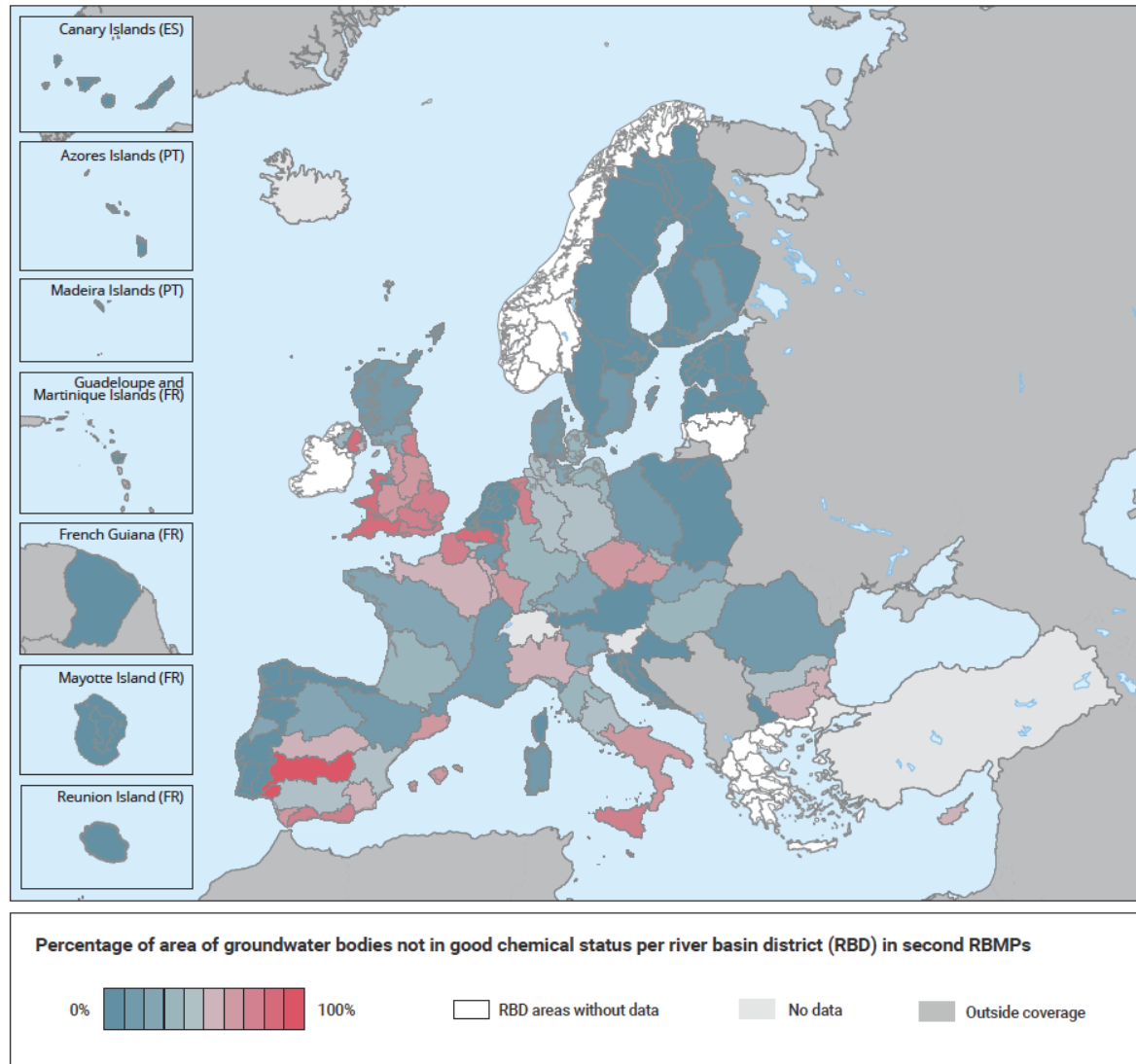
REGIONAL PERSPECTIVES

Africa: a region rich in groundwater



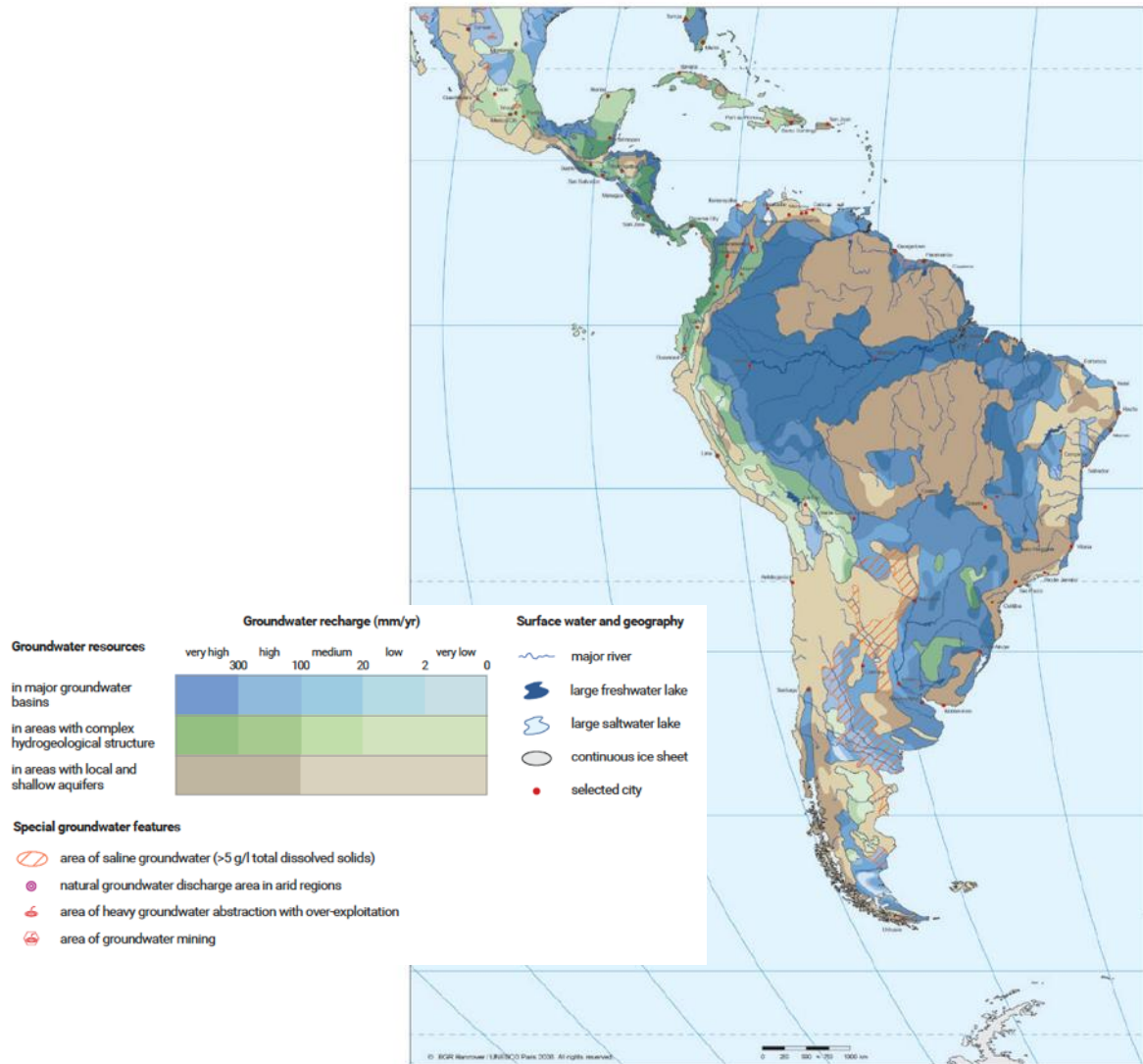
The development of groundwater is needed to satisfy the increasing need for water across Africa

Europe and North America



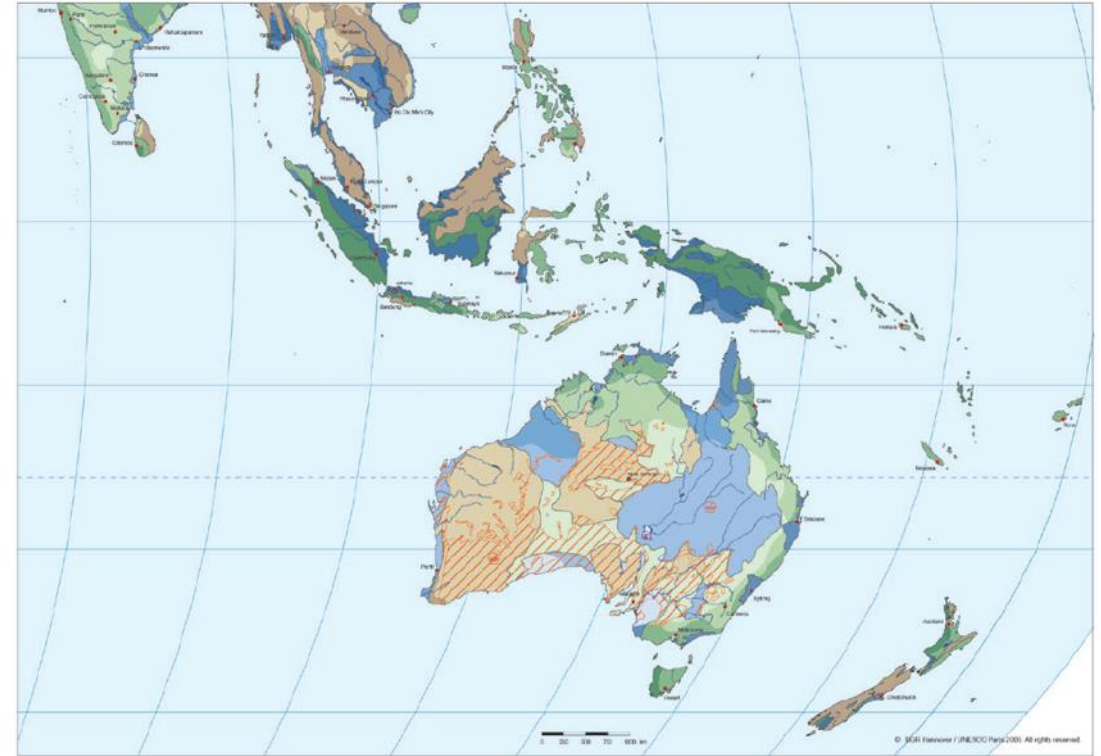
In many countries of Europe, groundwater is principally used for drinking water

Latin American and the Caribbean



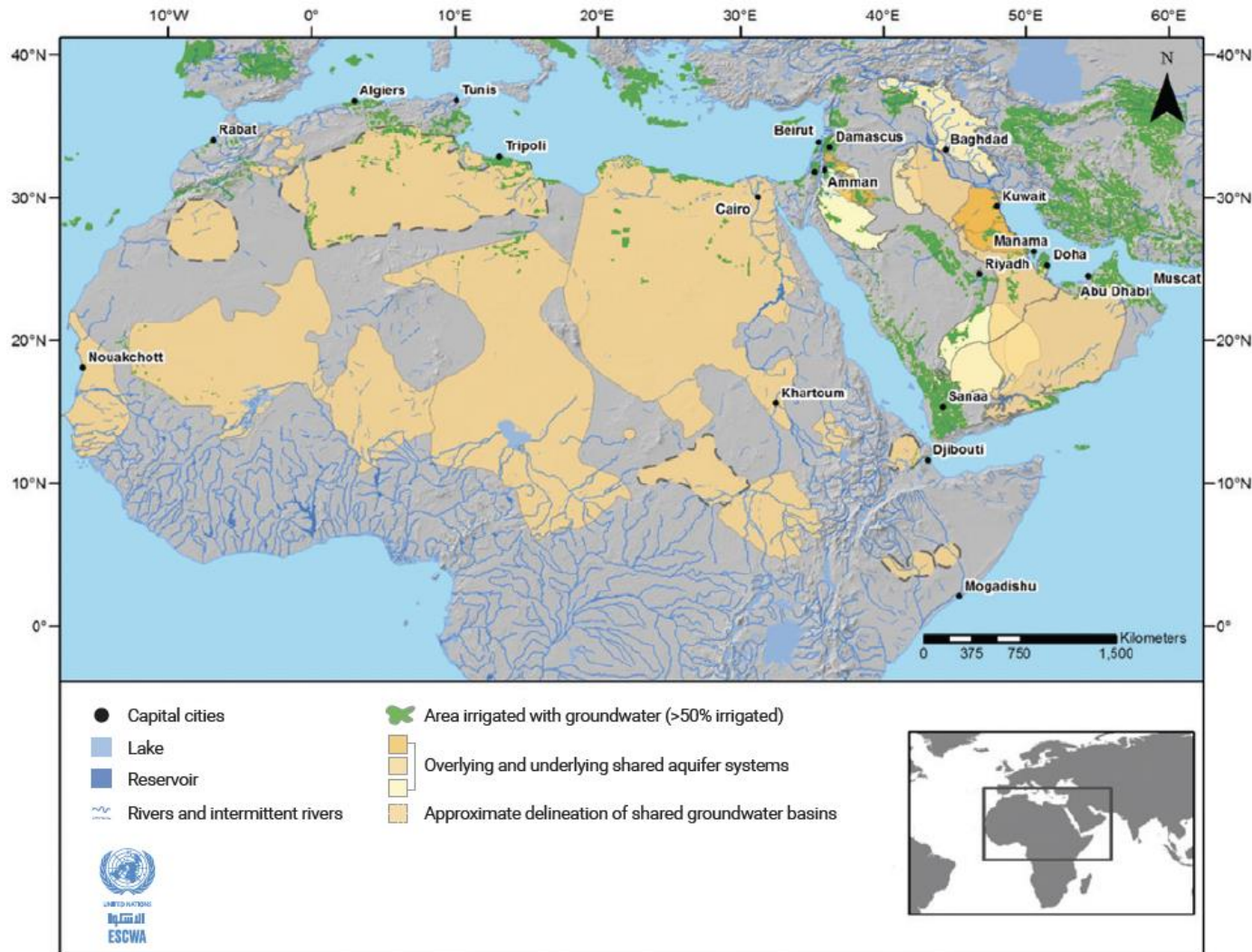
Groundwater plays an important role in the water supply systems of most Latin American cities

Asia and the Pacific



**Groundwater has played a key role
in the region's socio-economic development**

Arab Region



Groundwater is the most relied-upon water source in at least 11 of the 22 Arab states



Part IV

RESPONSE OPTIONS

Building the Knowledge Base



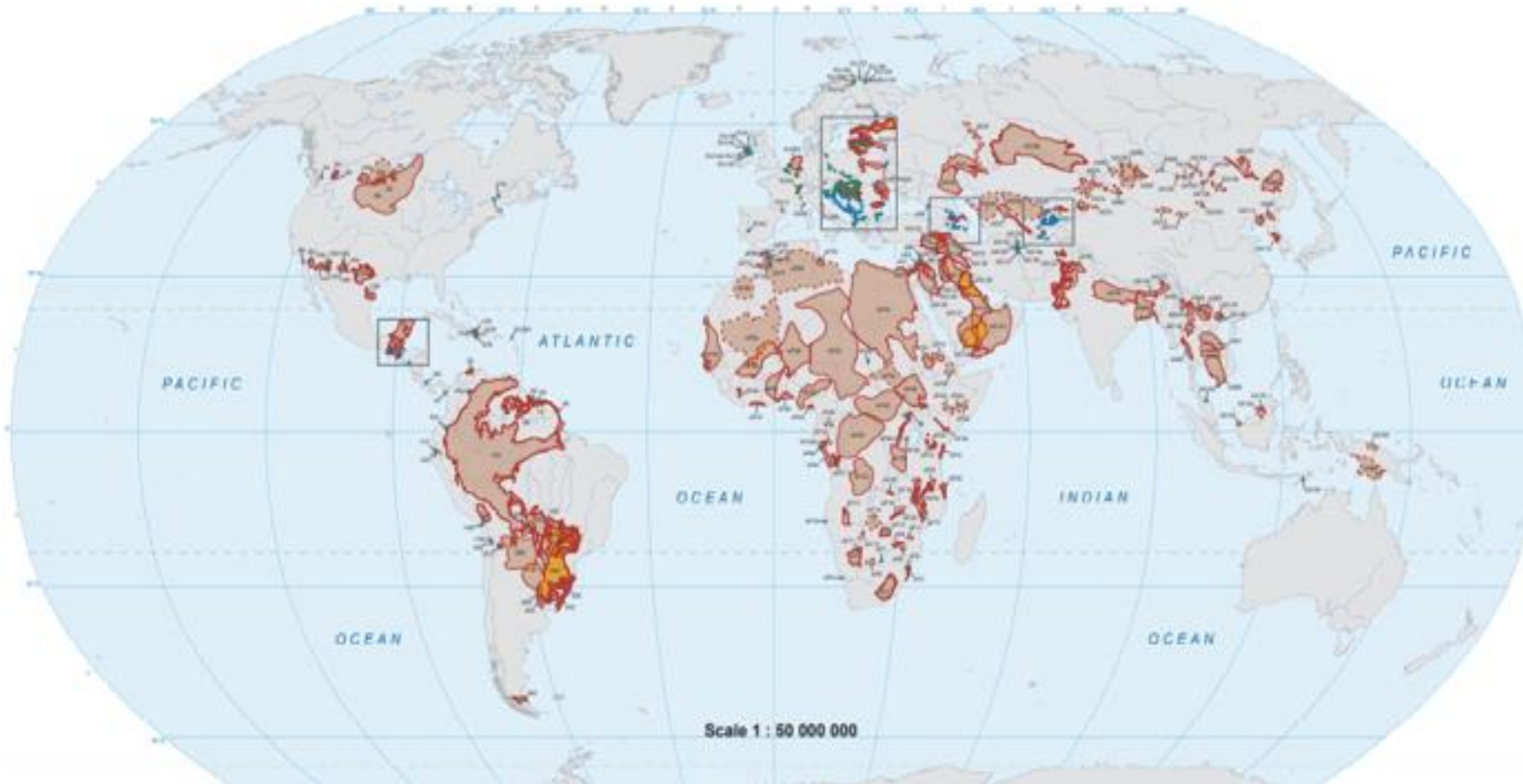
The UN Summary Progress Update 2021 on SDG 6 emphasizes that groundwater is a ‘neglected area’

Groundwater Management



Groundwater management aims to control withdrawals and avoid contamination

Transboundary Aquifers



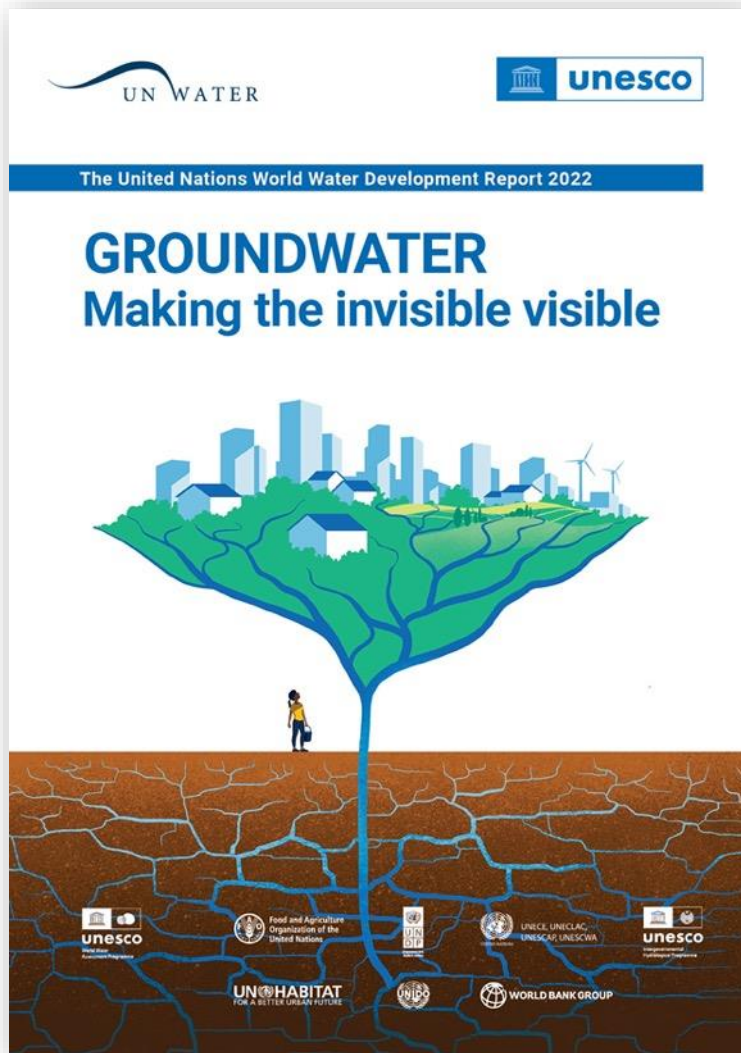
As of today, 366 transboundary aquifers with a surface expression larger than 5,000 km² have been identified

The sustainable exploitation of these huge resources requires coordinated actions and information exchanges among the countries sharing them



There is an opportunity to better integrate sustainable groundwater development and management as part of other water sector projects and initiatives

Take Away Messages



The abundance of groundwater resources will prove essential in meeting increasing global demands for water, especially during periods of severe water stress

Improved groundwater management and governance are needed in order to avoid overexploitation and contamination

Groundwater systems support valuable ecosystem services and can play a critical role in climate change adaptation and mitigation

The development of under-exploited groundwater resources in places like Sub-Saharan Africa offers opportunities for food security and economic growth

Given its common-pool nature, all data and information about aquifer systems should be made available to groundwater managers

Unlocking the full potential of groundwater for ourselves and for future generations will require strong and concerted efforts to manage and use it sustainably

And it all starts by making the invisible

visible

Thank you

Any additional acknowledgements



Name surname
Affiliation
email

