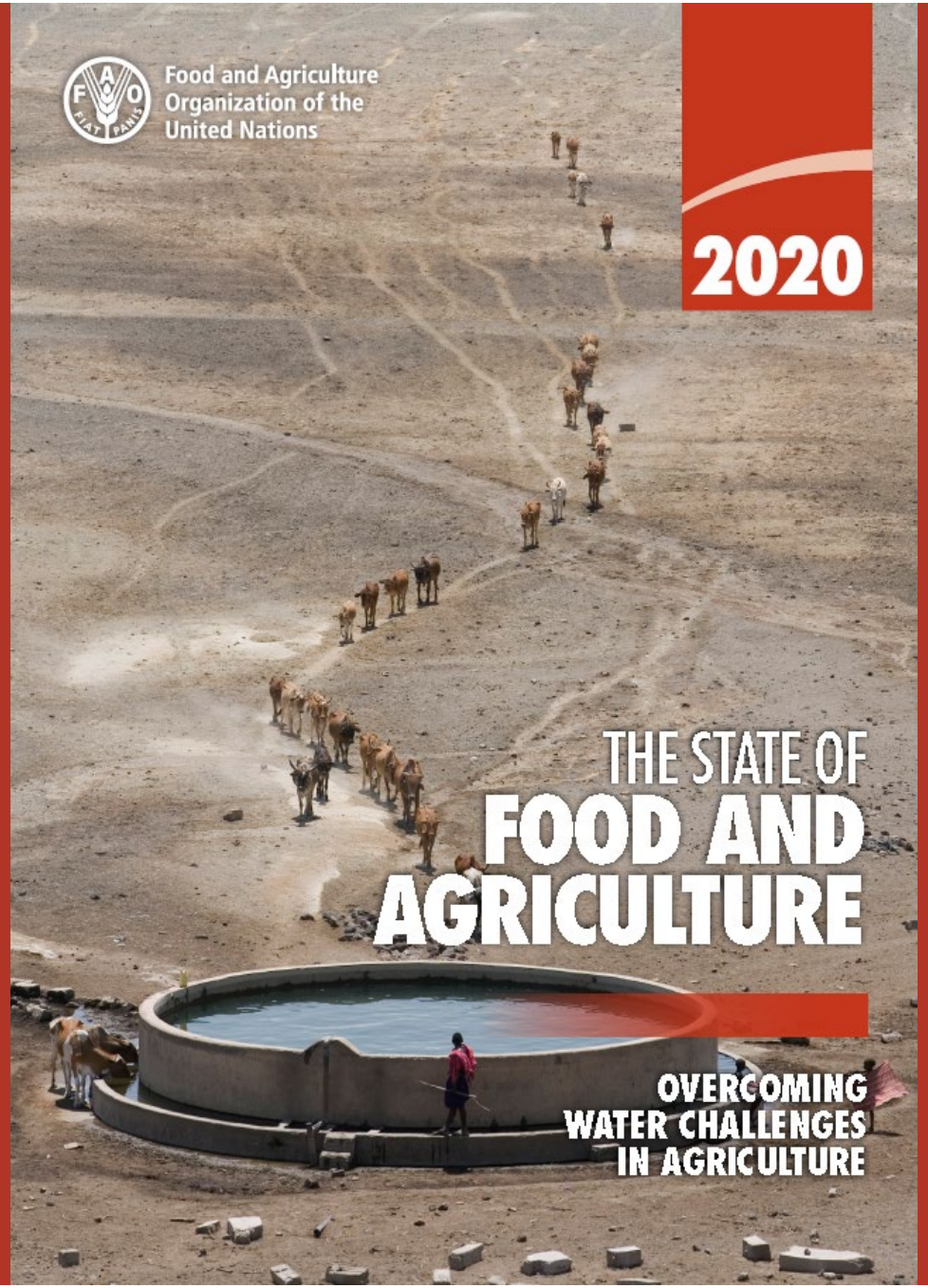


THE STATE OF THE WORLD

2020

THE STATE OF FOOD AND AGRICULTURE

OVERCOMING WATER CHALLENGES IN AGRICULTURE

Rome | 26 November 2020

Water plays a key role in sustainable development

Water is critical to our existence – we need water to drink and to grow food – and its proper management can improve society as a whole

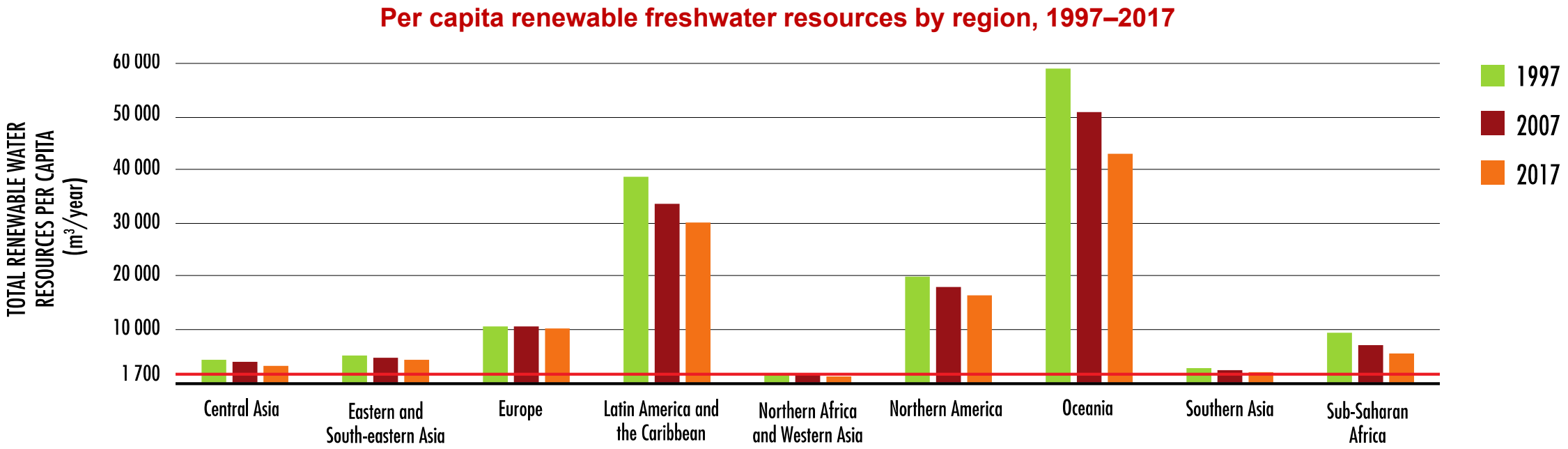
Improved livelihoods, food security and nutrition, health and gender equality

Improved productivity, resource-use efficiency and economic growth

Improved environmental sustainability

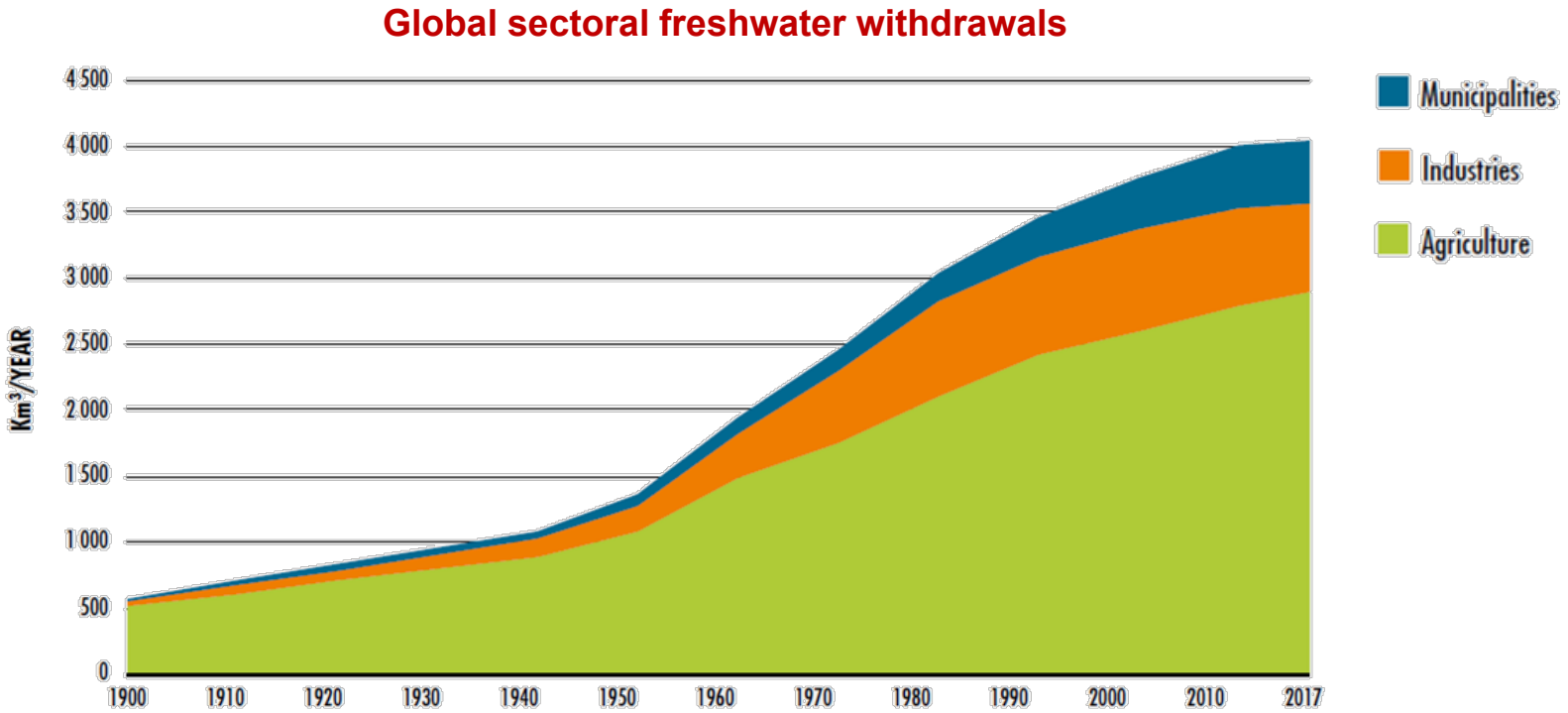
Critical water resources are under increasing pressure

Water resources are under increasing stress owing to population growth and socio-economic development, exacerbated by climate change



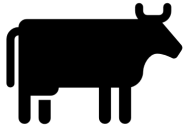
Agriculture is at the centre of these challenges

With almost **3/4 of all withdrawals**, agriculture holds the key for addressing these issues



How much agricultural land is water-constrained?

128 million hectares (11%) of rainfed cropland experience **high to very high** severe drought frequency



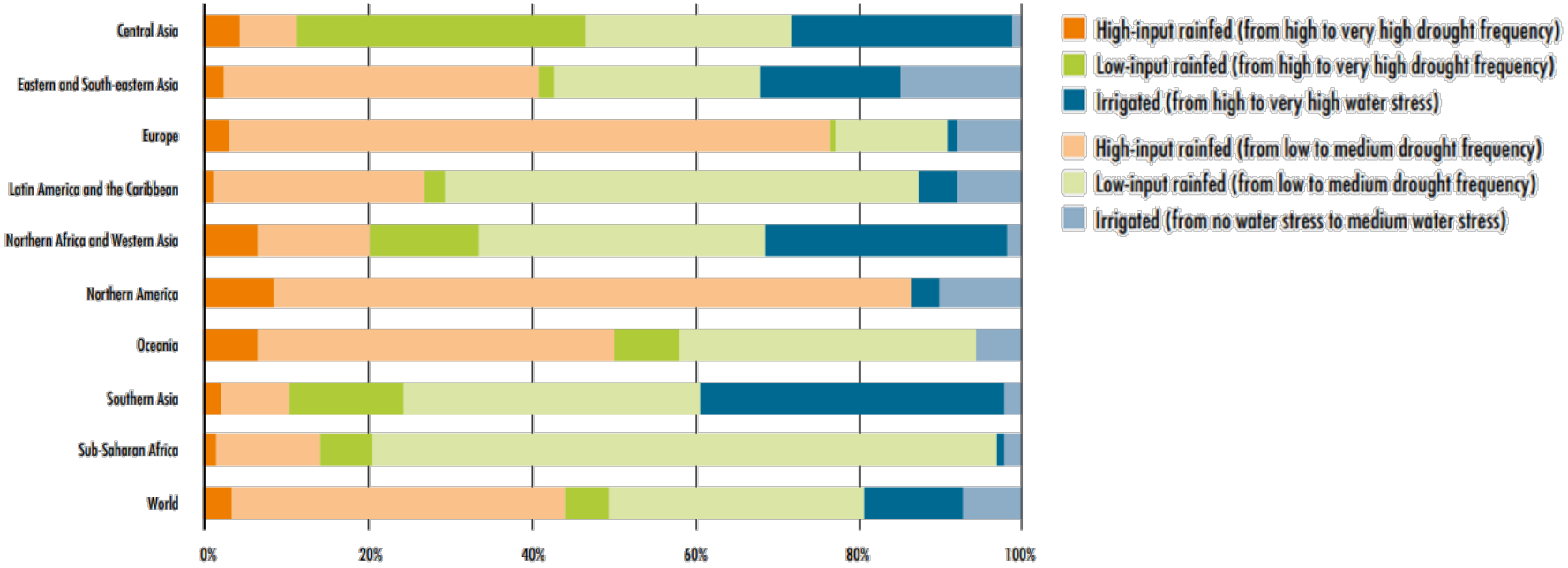
656 million hectares (14%) of pastureland experience **high to very high** severe drought frequency

171 million hectares (62%) of irrigated cropland experience **high to very high** water stress

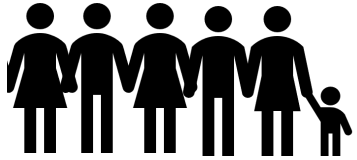
Regions cope with, and are affected by, water constraints differently

About half of global rainfed cropland is still under low-input production, where farmers' capacity to address water challenges is lower

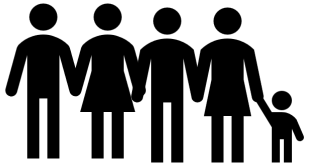
Share of cropland by production system and level of water shortages and scarcity, by region



How many people live in water-constrained areas?

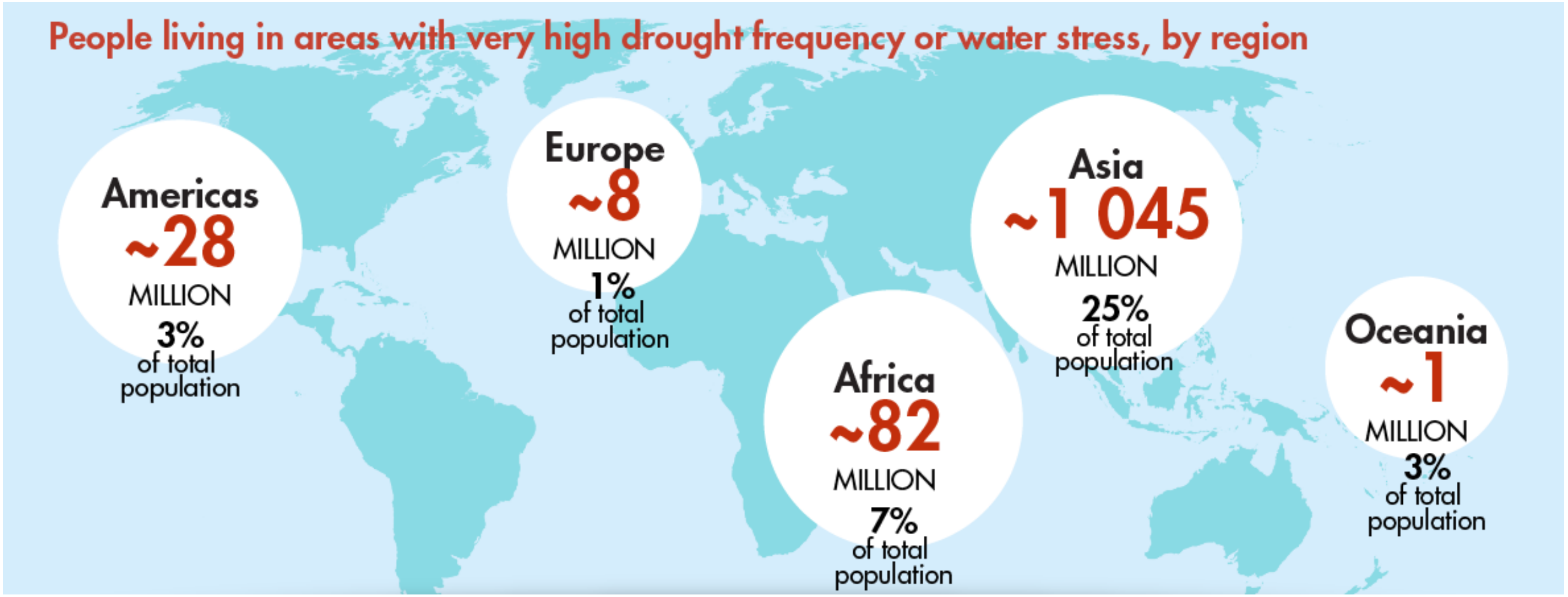


Estimated **3.2 billion** people live in agricultural areas with **high to very high** levels of water shortages or scarcity



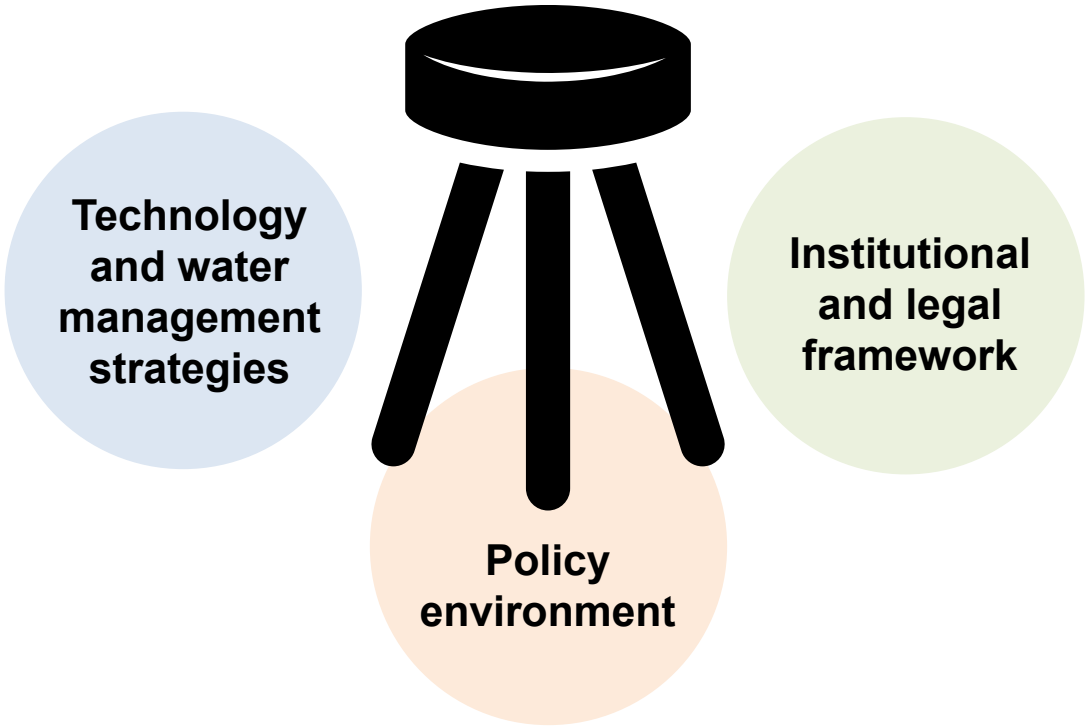
Out of which **1.2 billion** – a sixth of the world's population – live in agricultural areas with **very high** water constraints

Where in the world do these people live?



Placing responses within a broader policy context

Innovative options for addressing water constraints exist, but adoption is widely influenced by the overall governance and policy environment



Policy and institutional priorities depend on production system

Upgrading **rainfed cropland** may involve water-harvesting and conserving techniques, combined with best agronomic practices

In **pasturelands**, better use of feed and drinking water, and improved animal health can save water, while early warning systems help prepare for drought

Rehabilitating and modernizing **irrigation** can reduce water consumption if preceded by water accounting and auditing, along with effective and equitable water allocation

Protecting **inland fisheries & aquaculture** requires regulating environmental flows and water quality and integrated solutions (e.g. aquaculture–crop systems)

Making improved water management work for all

Policy coordination and coherence will be key to effective policymaking.

Achieving them will require:

- Strengthened trust between actors to ensure effective coordination and prevent conflict
- Common and trusted data for transparent and robust decisions
- Coherent strategies across agricultural subsectors (e.g. fish–crop integrated systems)
- Targeted subsidies and investments (e.g. payments for environmental services)
- Effective regulations to protect environmental flows and water-related ecosystems

Thank you

To consult the SOFA series from 1947

www.fao.org/publications/sofa