



وزارة البيئة والمياه والزراعة
Ministry of Environment Water & Agriculture
Kingdom of Saudi Arabia المملكة العربية السعودية



Water Energy Food Nexus to Curtail Future Food Uncertainties

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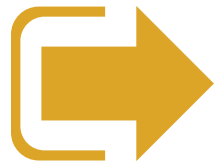
Ninth Meeting of Agricultural Chief Scientists (G20)

18th-19th February 2020, Khobar, Kingdom of Saudi Arabia

Overview



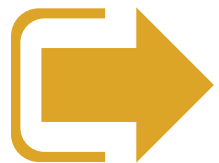
1 in 3 people or 2.2 billion people around the world lack safe drinking water



Over 2 billion people live in countries experiencing high water stress. (UN, 2018)



700 million people worldwide could be displaced by intense water scarcity by 2030. (Global Water Institute, 2013)



About 60 percent more food will be needed by 2050 to meet the food requirements of a growing global population.



Sustainable intensification of food production with efficient resource utilization to reduce the productivity gap



Water Key Facts

Half of the world's population is already experiencing severe water scarcity at least one month a year



785 MILLION PEOPLE REMAIN WITHOUT EVEN **BASIC DRINKING WATER SERVICES** (2017)

1 OUT OF 4

HEALTH-CARE FACILITIES WORLDWIDE LACK BASIC DRINKING WATER SERVICES (2016)



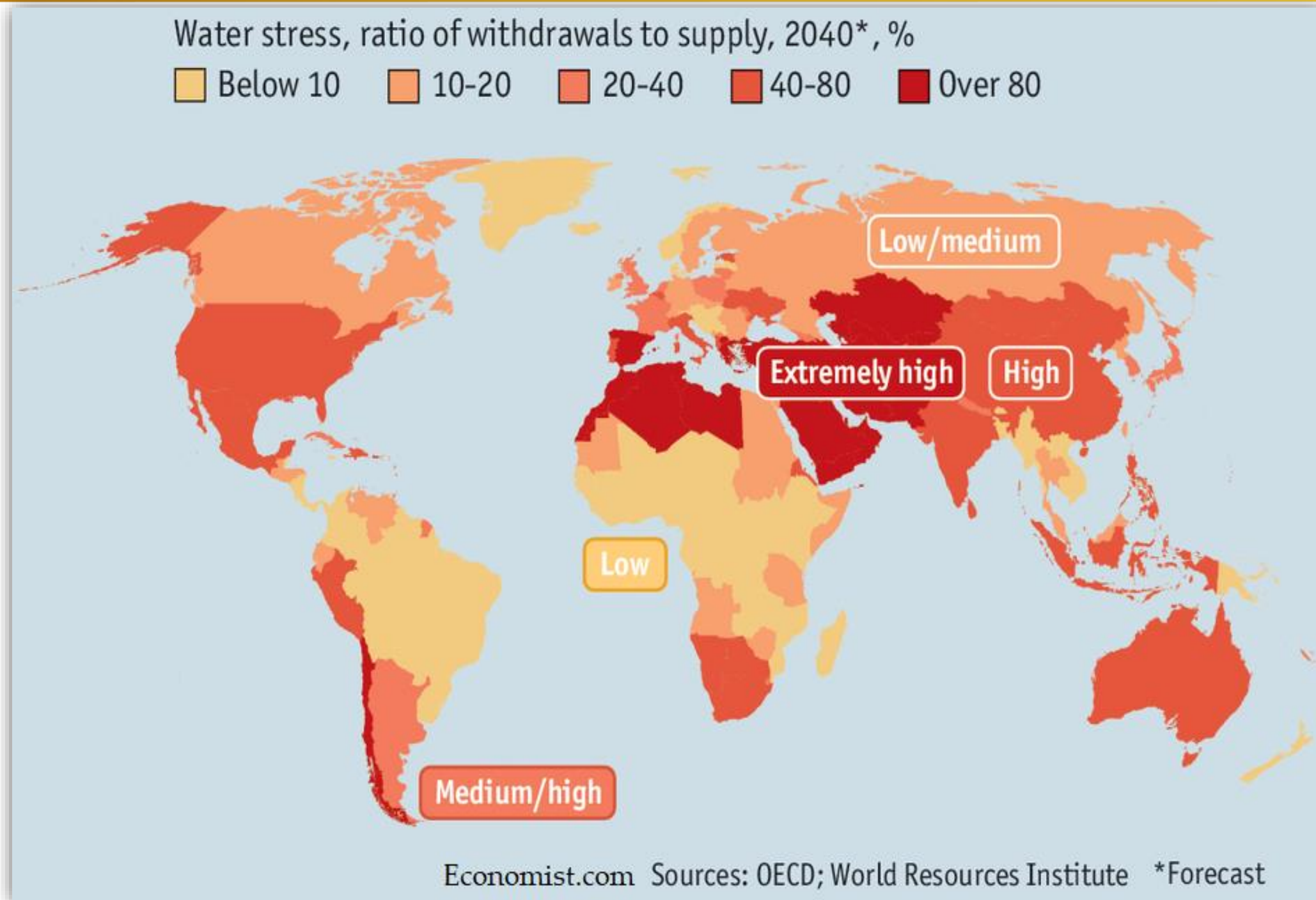
BY 2030, **700 MILLION** PEOPLE COULD BE DISPLACED BY **INTENSE WATER SCARCITY**



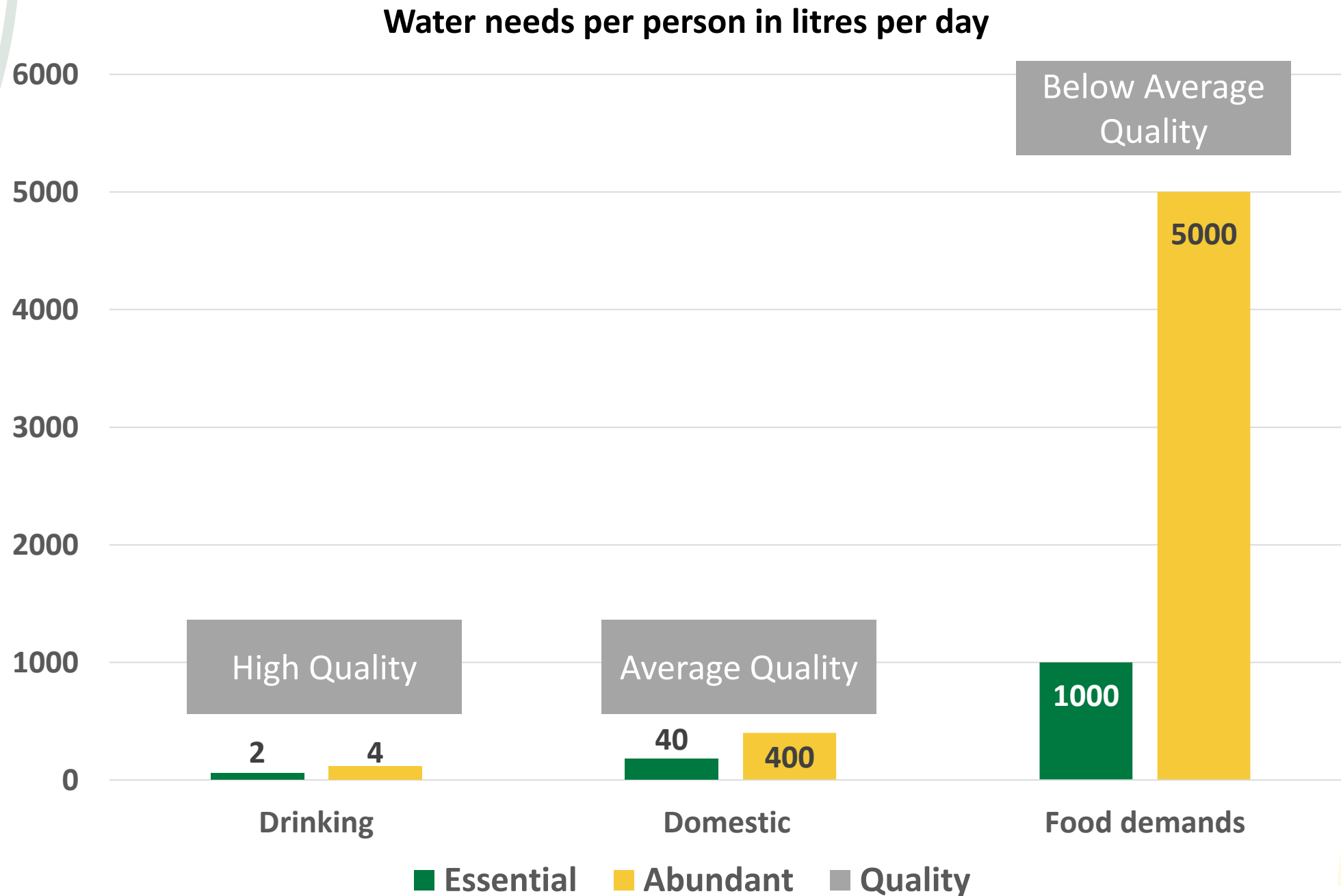
2 BILLION PEOPLE LIVE IN COUNTRIES EXPERIENCING HIGH WATER STRESS



Water stress



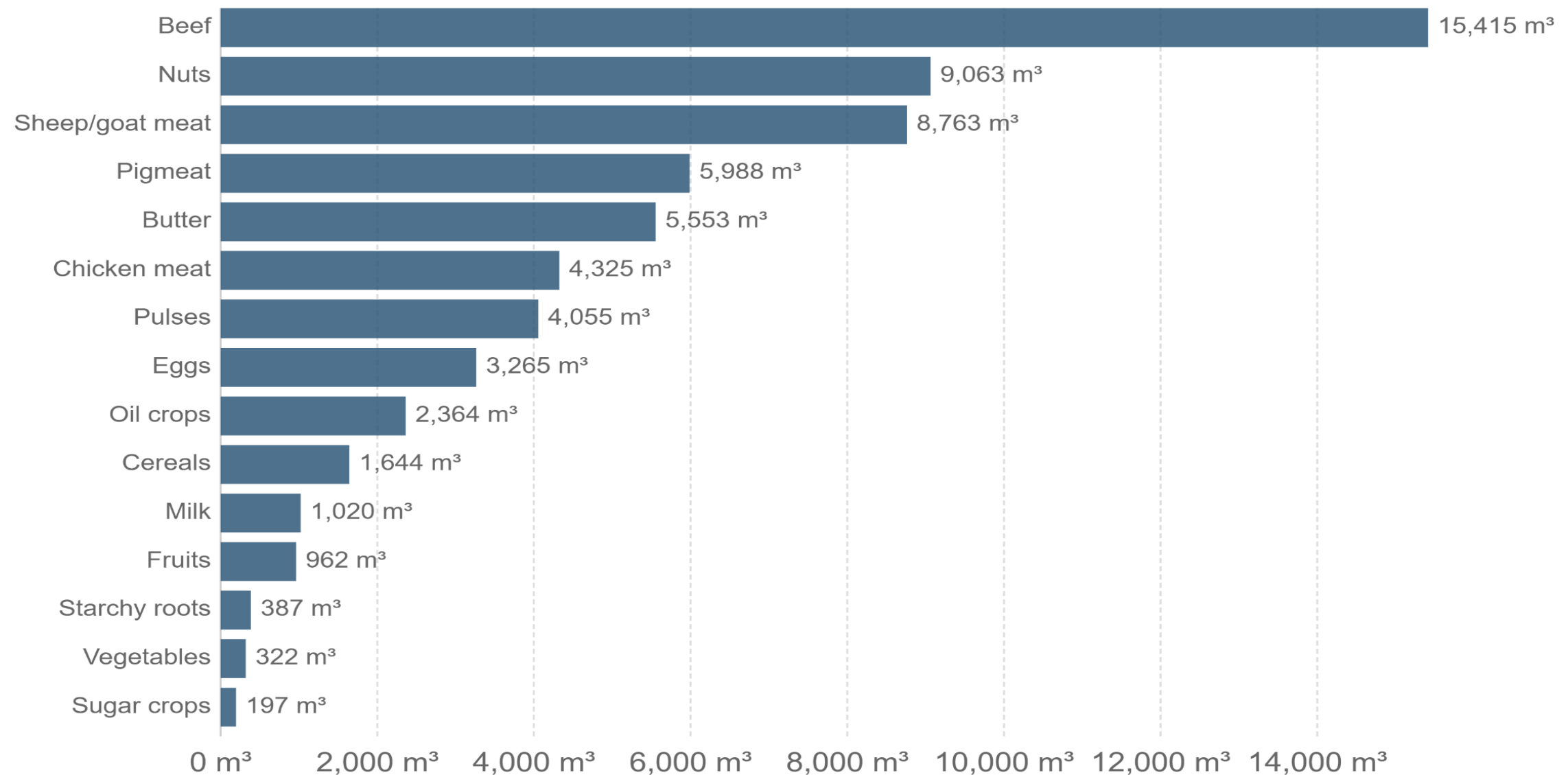
Importance of water for global food security



Water requirement per tonnes of food products



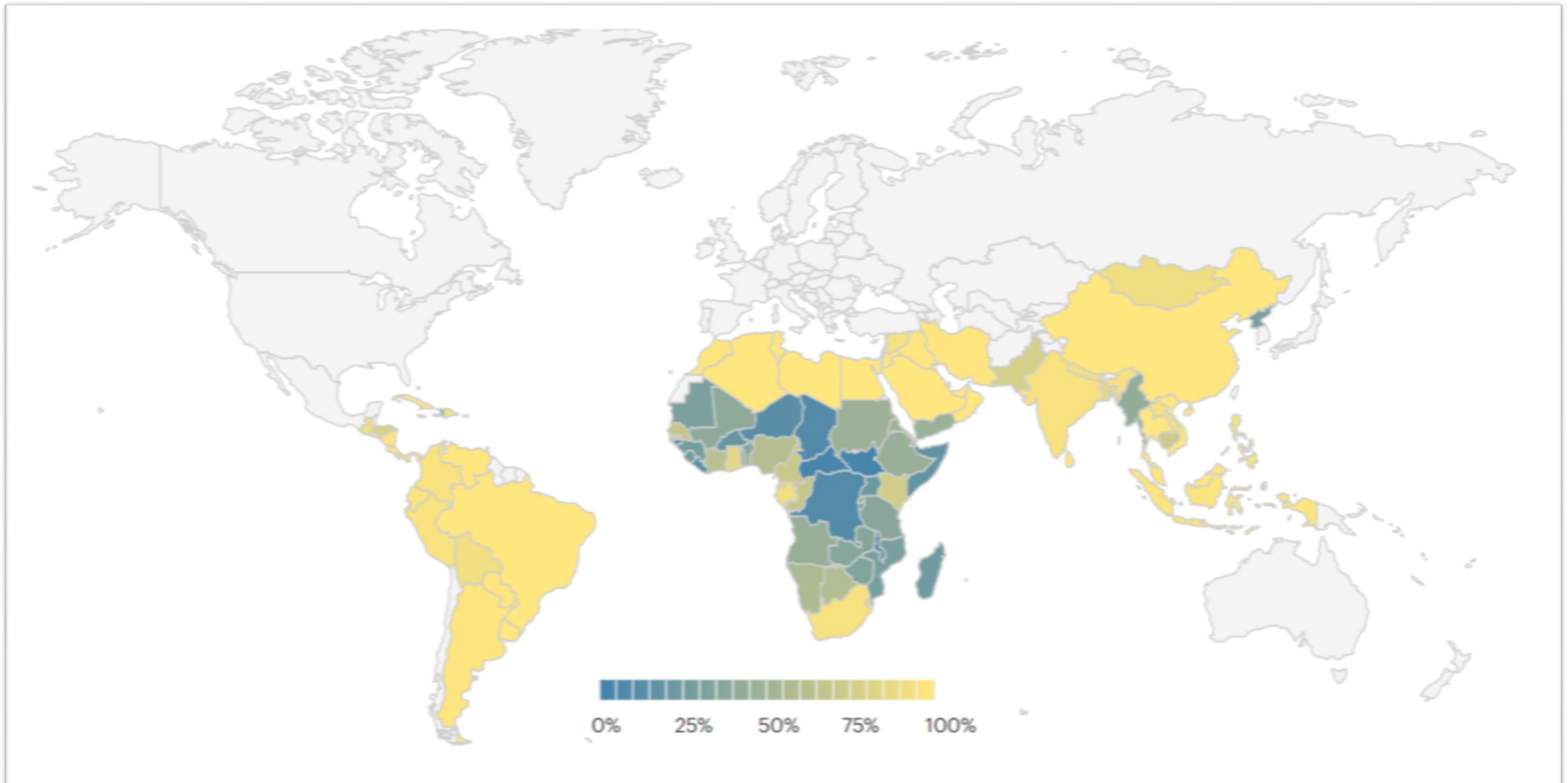
Global average water footprint of food production, which includes water requirements across its full supply chain and the quantity of freshwater pollution as a result of production





Energy Key Facts

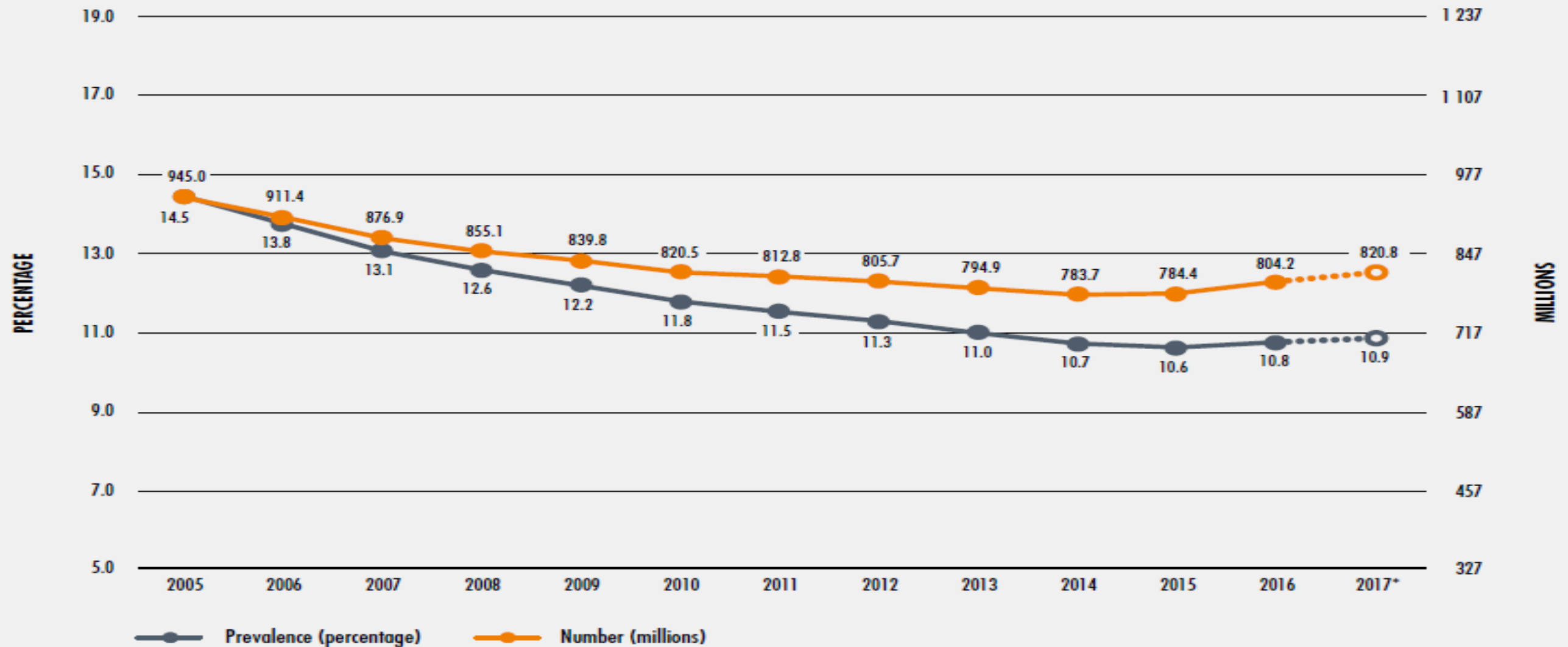
The number of people without electricity access dropped to 860 million in 2018





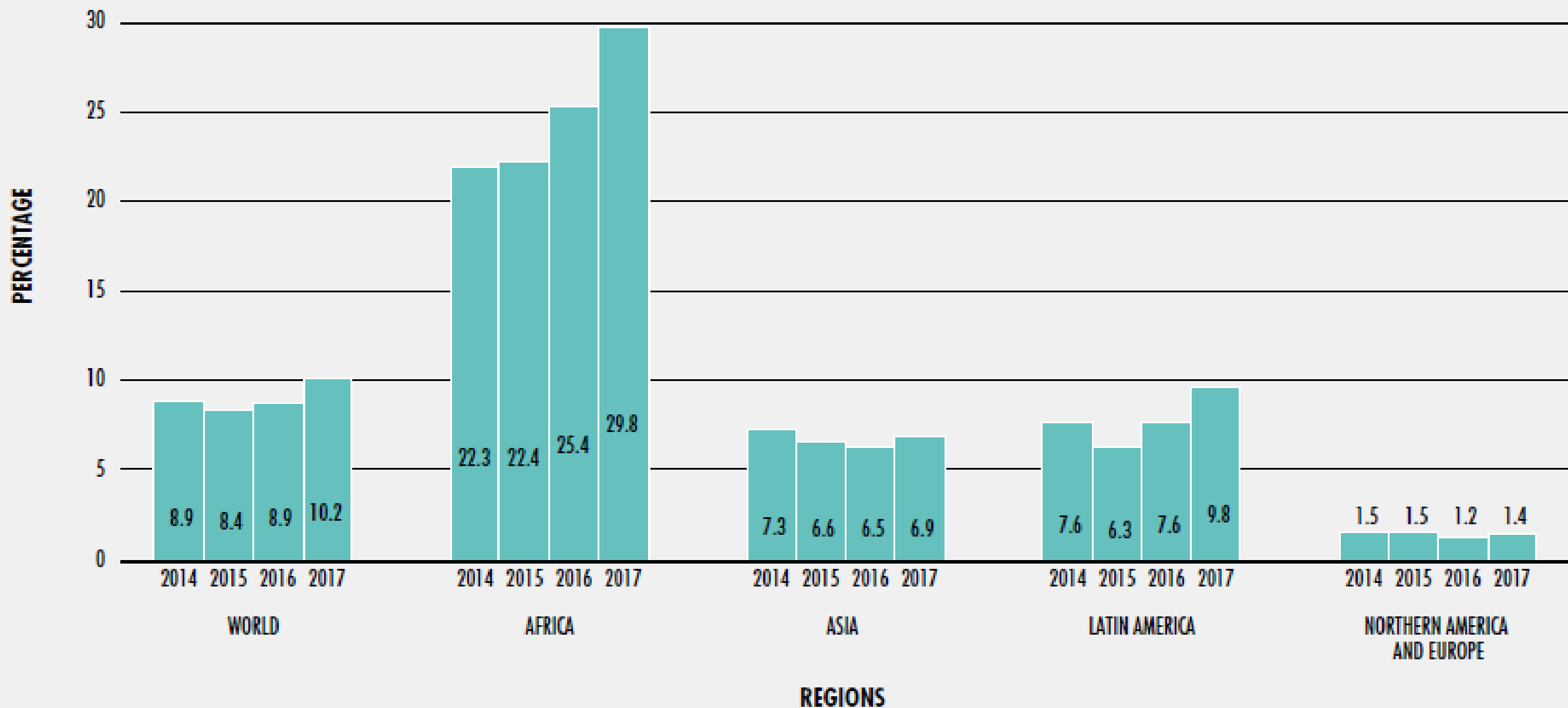
Food Key Facts

Year wise number of undernourished people in the world



* Projected values, illustrated by dotted lines and empty circles.
SOURCE: FAO.

Regional Food Security challenges

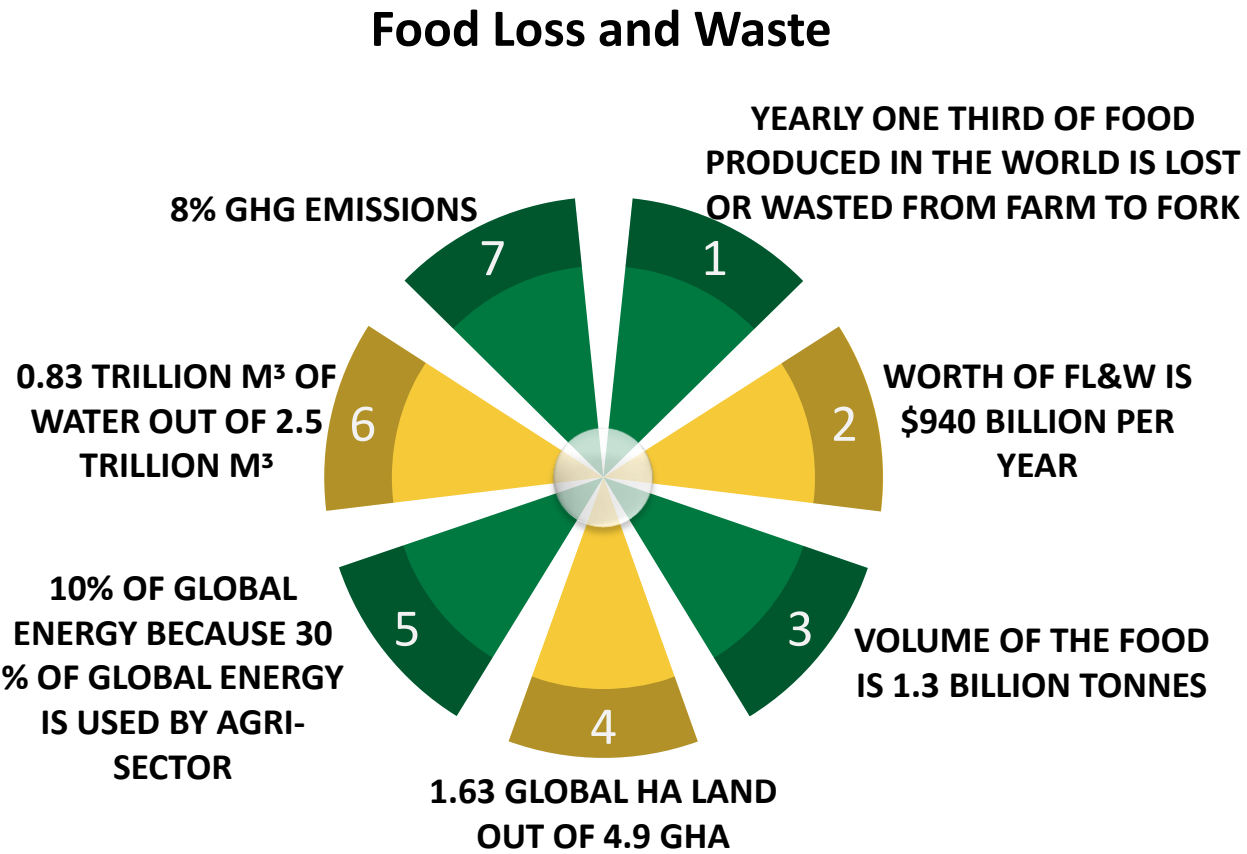
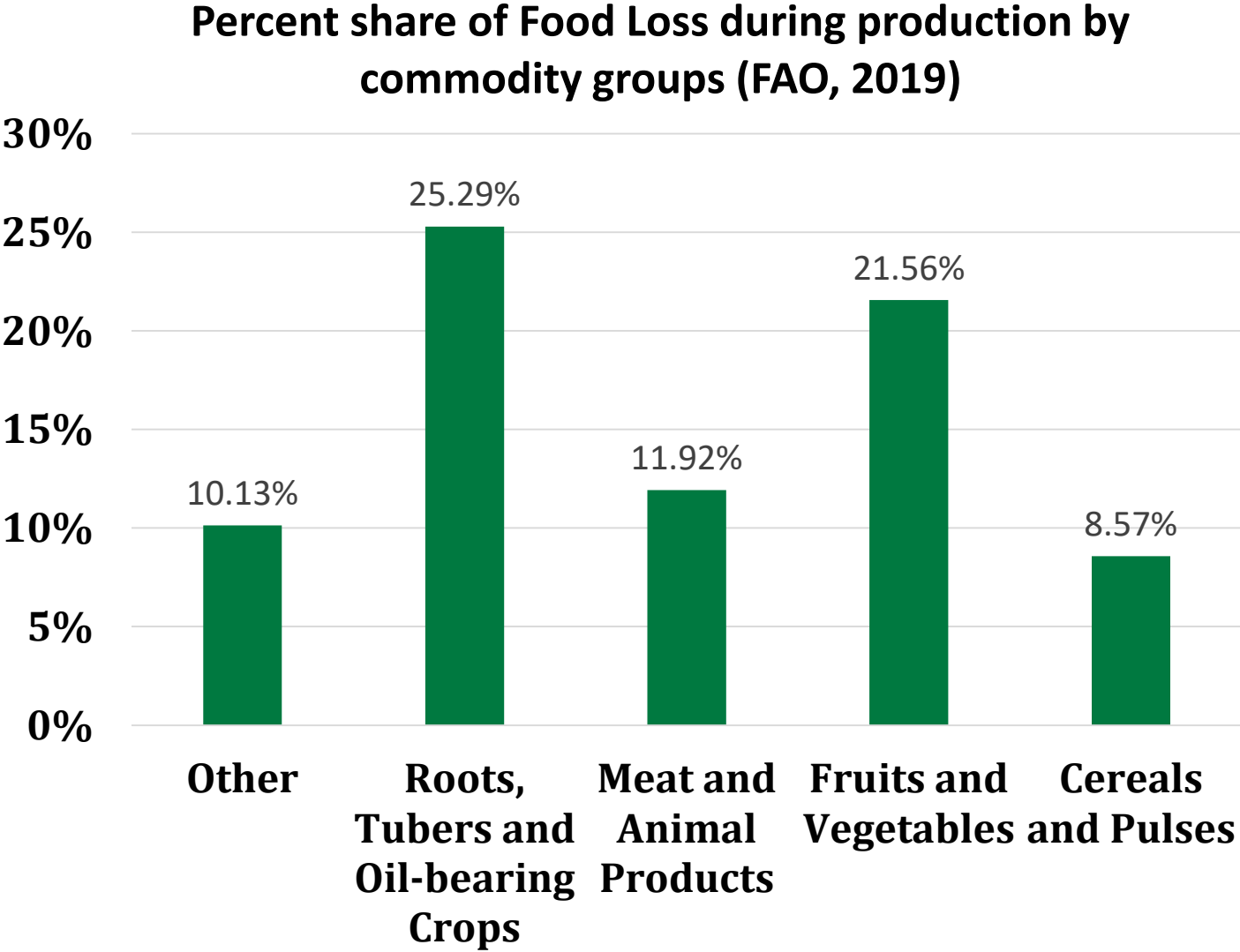


SOURCE: FAO.

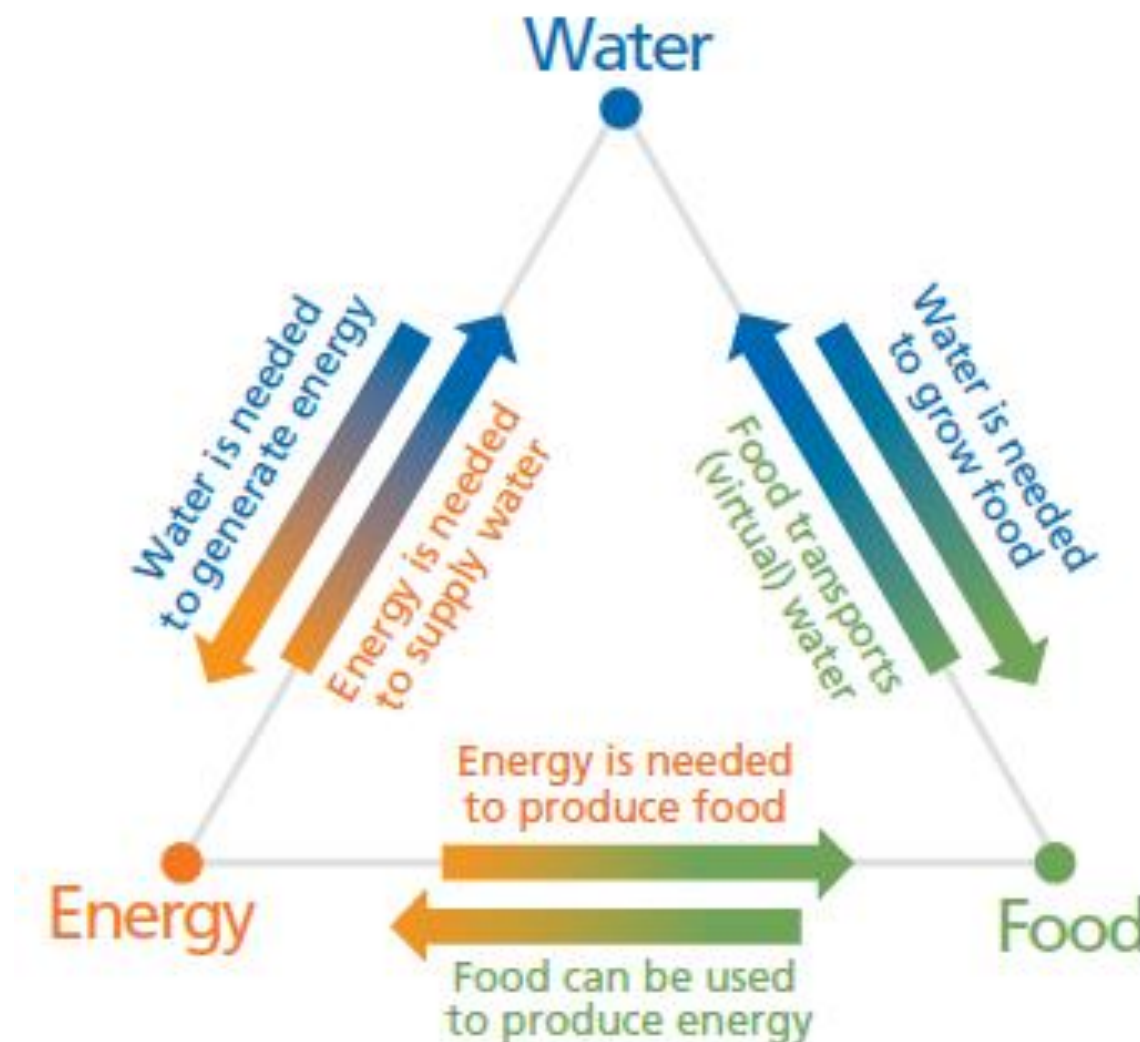
Role of Food Loss and Waste in Global Food Security



✓ Reduce Food Loss and Waste (FL&W)

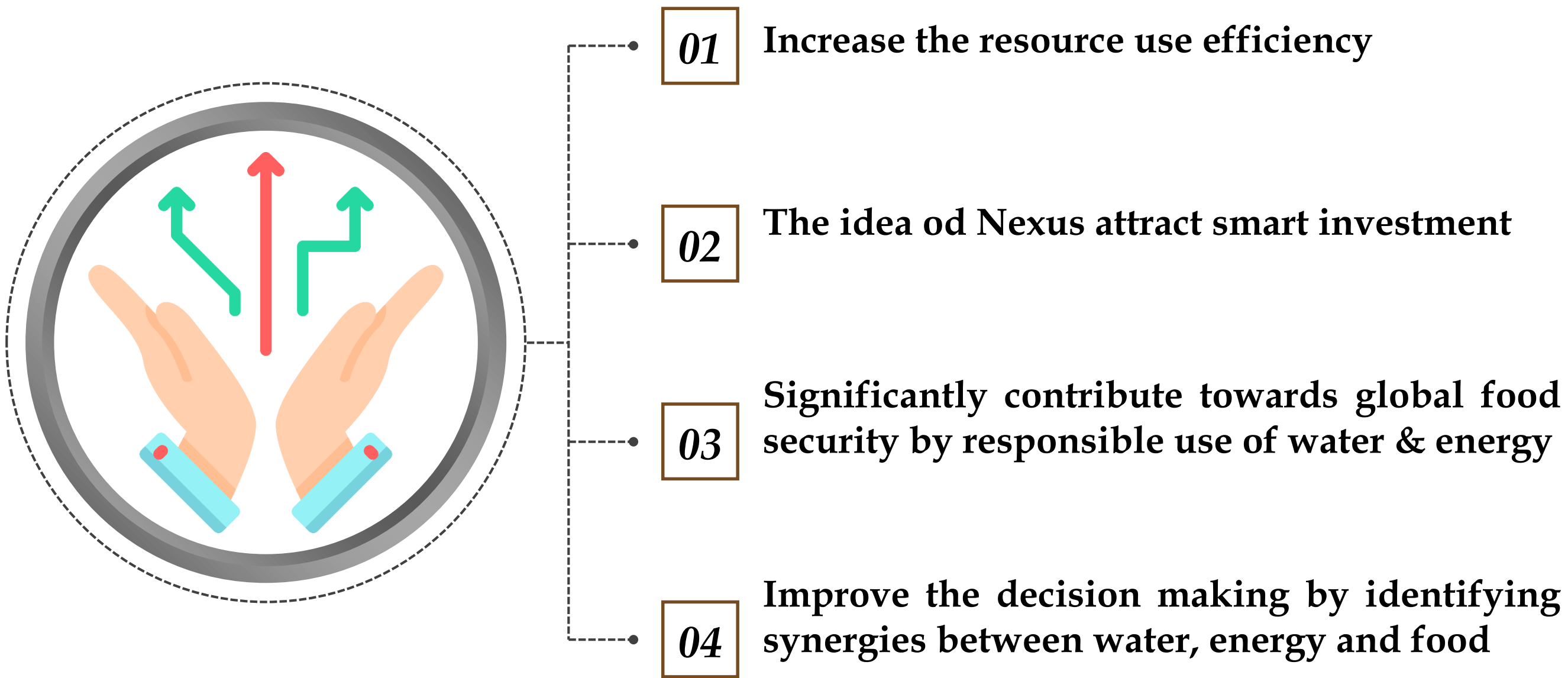


Water Energy Food Nexus

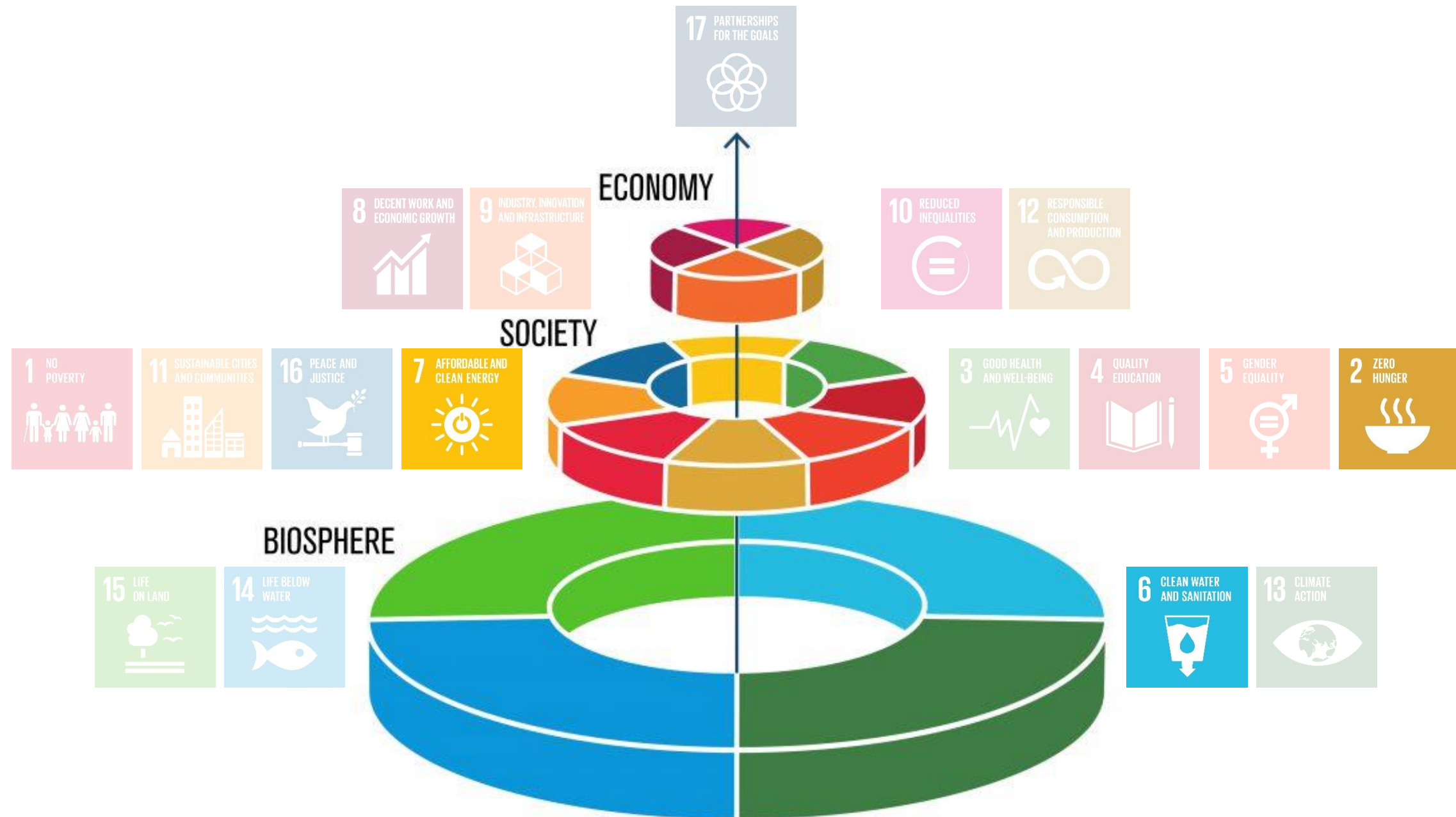


UNU, 2013

Advantages of Water Energy Food Nexus

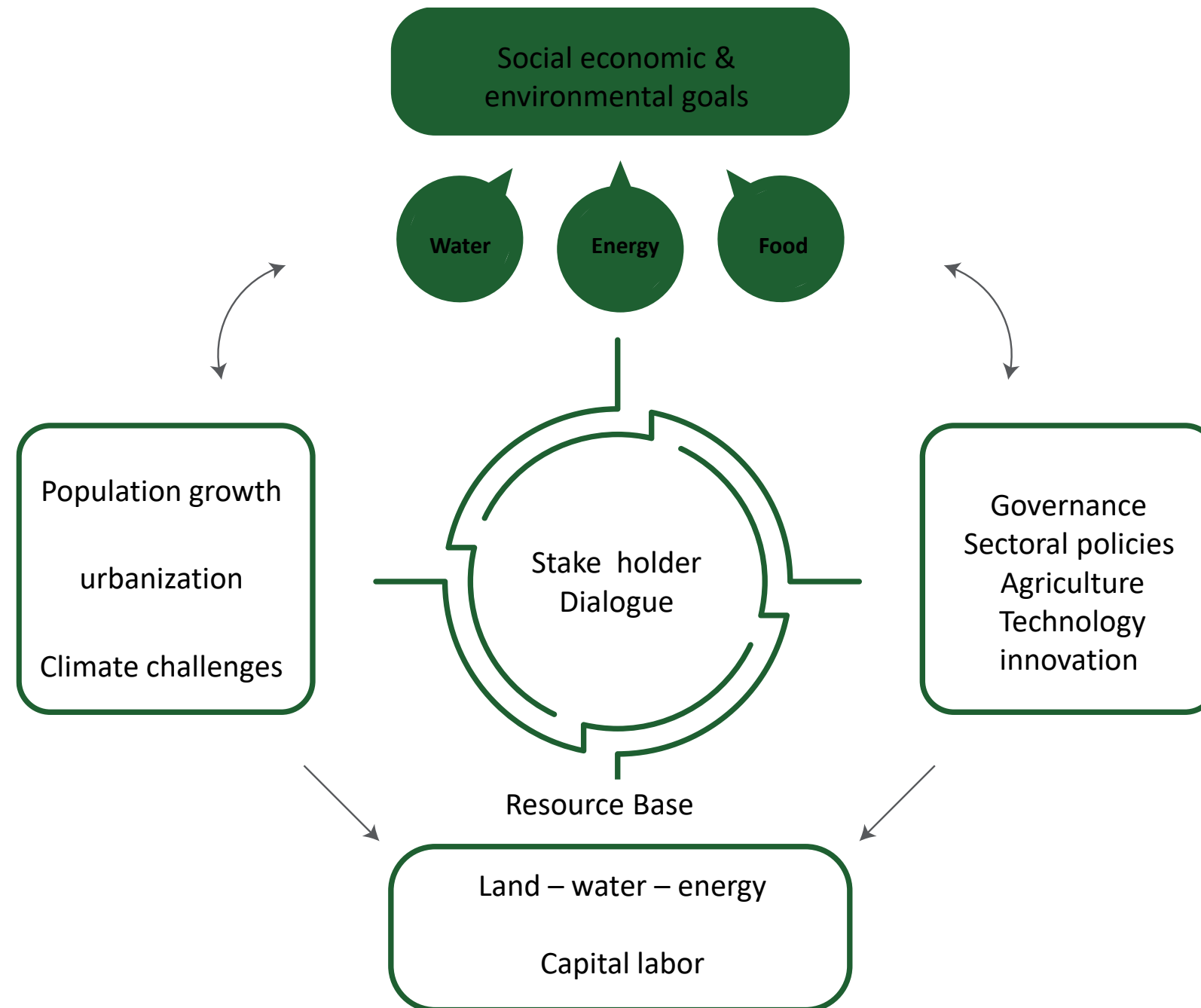


Sustainable Development Goals (SDGs)

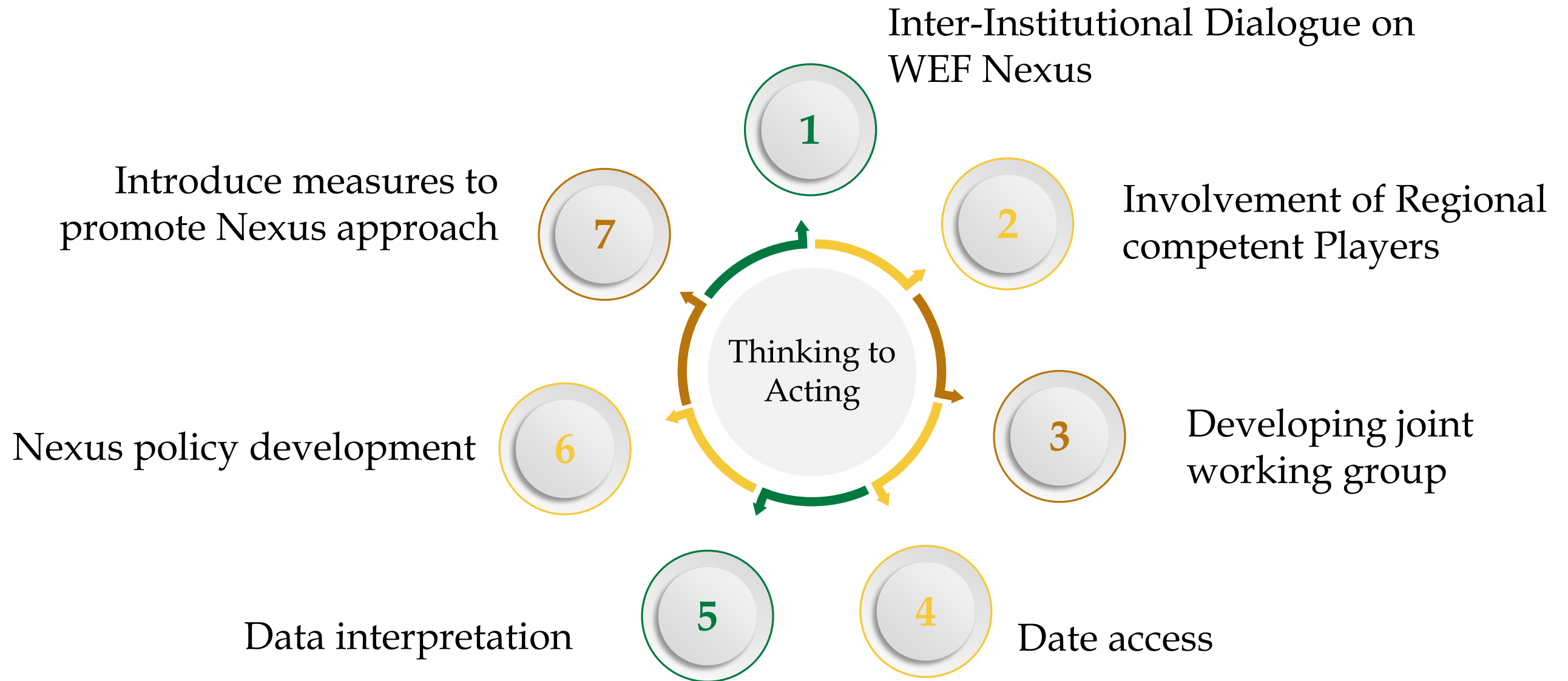




Stakeholder dialogue with respect to resources



WEF Nexus Solution



Proposed Actions at G20 MACS 2020



AIMS

1. Ways to strengthen research cooperation about the novel approaches to be adopted to rationalize the use of valuable finite resources.
2. Promote the idea of WEF Nexus from THINKING to ACTING
3. Exchanging view about good practices, and best experiences for WEF Nexus



Outcomes

- ✓ Sharing valuable knowledge in balancing the use of water and energy for food production
- ✓ Exchange views and best practices for effective and efficient utilization of global resources



Planned Activity (Open event)

- ✓ International Workshop later in the year in collaboration with interested members and Invitees



Thanks...