

Too little water

Towards sustainable water supply

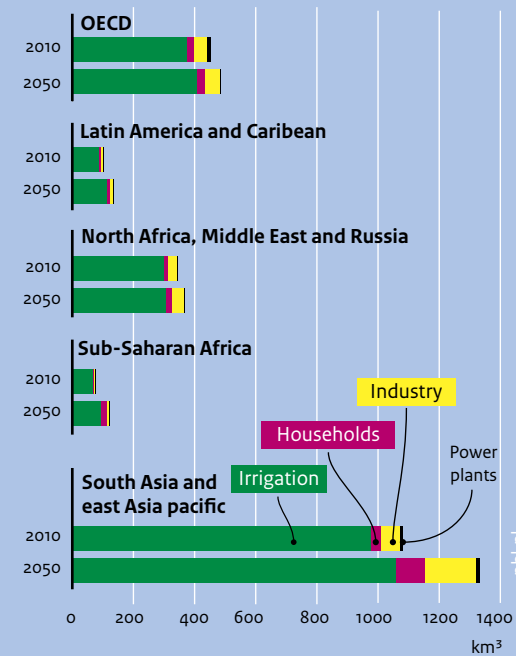
Water is essential for agricultural production, industry, human settlements and natural vegetation. Climate change, which brings higher average temperatures and changing precipitation patterns, combined with increasing competition for water resources, may result in substantial increases in the number of people living under severe water stress. In emerging economies and rapidly urbanising countries, sharp rises in water consumption are expected, mainly due to demands for irrigation and industry. Competition for water between sectors and between countries sharing a river basin may increase.

Expansion of irrigated crop areas and the expected increases in crop yields may not be feasible because of water scarcity. Water is first extracted from

rivers and lakes or stored in reservoirs. When this supply is insufficient, water is extracted from aquifers. In many cases, groundwater depletion is the main driver of land subsidence which causes extensive damage to urban infrastructures and buildings. Land subsidence also increases vulnerability to coastal flooding. In the short term, land subsidence poses a larger threat on coastal and delta cities than rising sea levels.

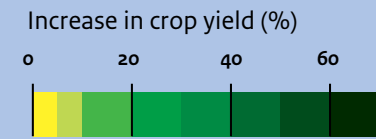
The consequences of water shortages for daily life are unpredictable, and depend greatly on improvements in water management, such as rainwater collection, irrigation efficiency and water storage capacity, and also on changes in crop types and allocation of land and water to agricultural producers.

Water consumption
(Business as usual)

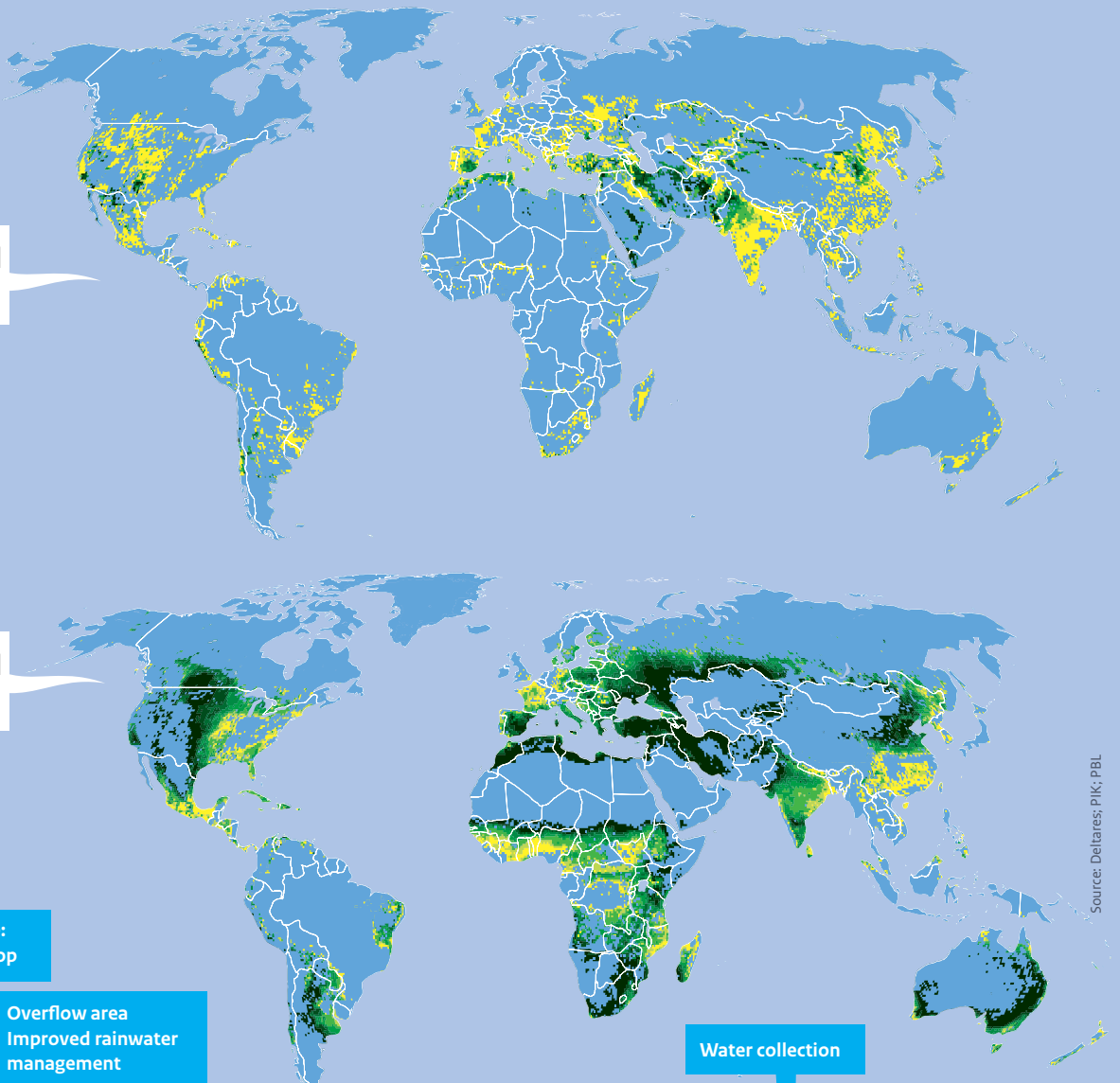


Theoretical yield increases
by 2050 (Business as usual)

Increase through improved irrigation efficiency



Increase through improved rainwater management



Source: Deltares, PIK, PBL

