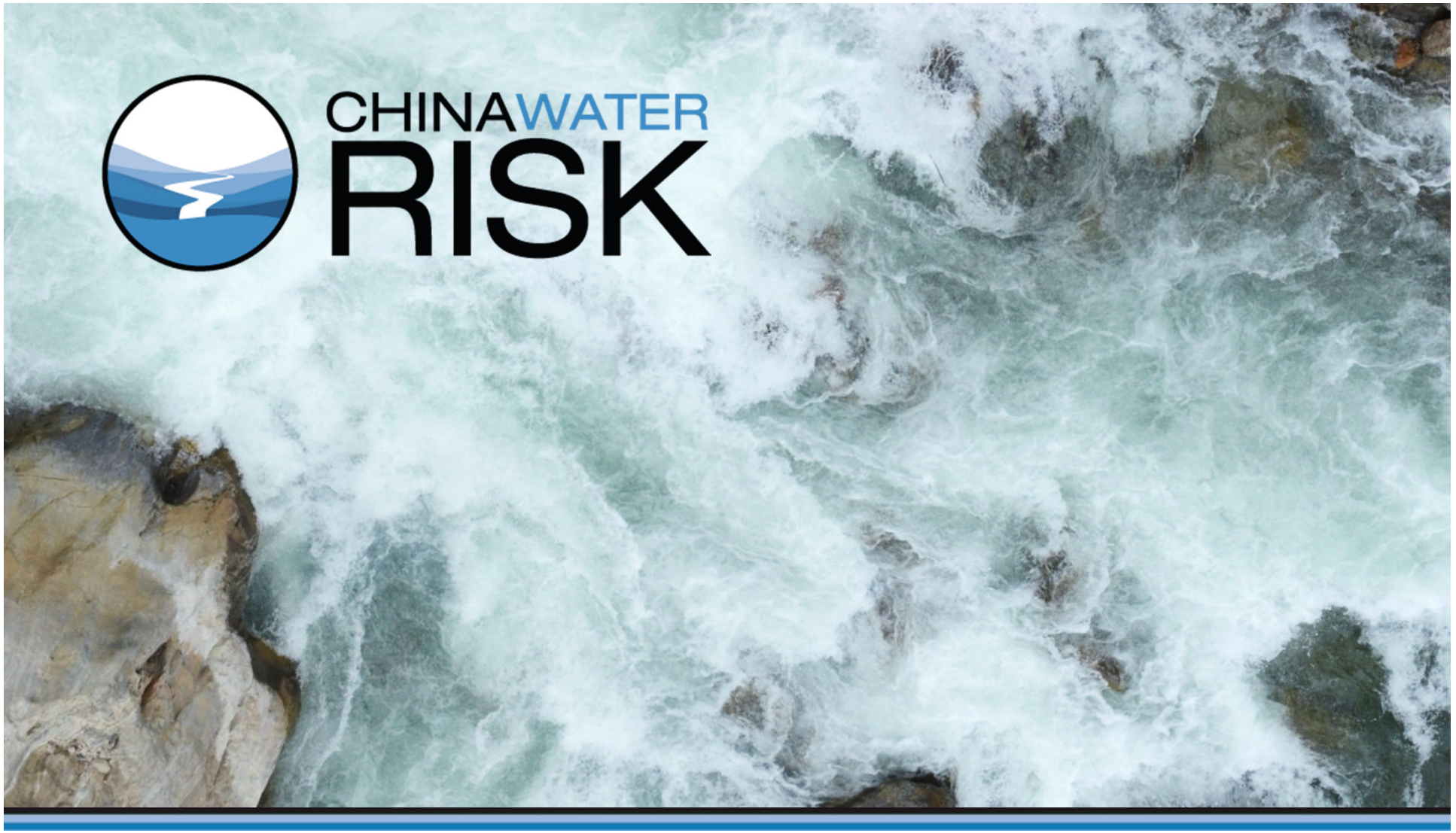

Water-nomics of the Yangtze River Economic Belt

2 June 2017

XVI World Water Congress, Cancun, Mexico

Feng Hu, China Water Risk

chinawaterrisk.org

CHINA WATER RISK

CHINA WATER RISK is a non-profit initiative dedicated to addressing business and environmental risk arising from the country's urgent water crisis.

We aim to foster efficient and responsible use of China's water resources by engaging the global investment and business communities, civil society and individuals in understanding and managing China's water risk.

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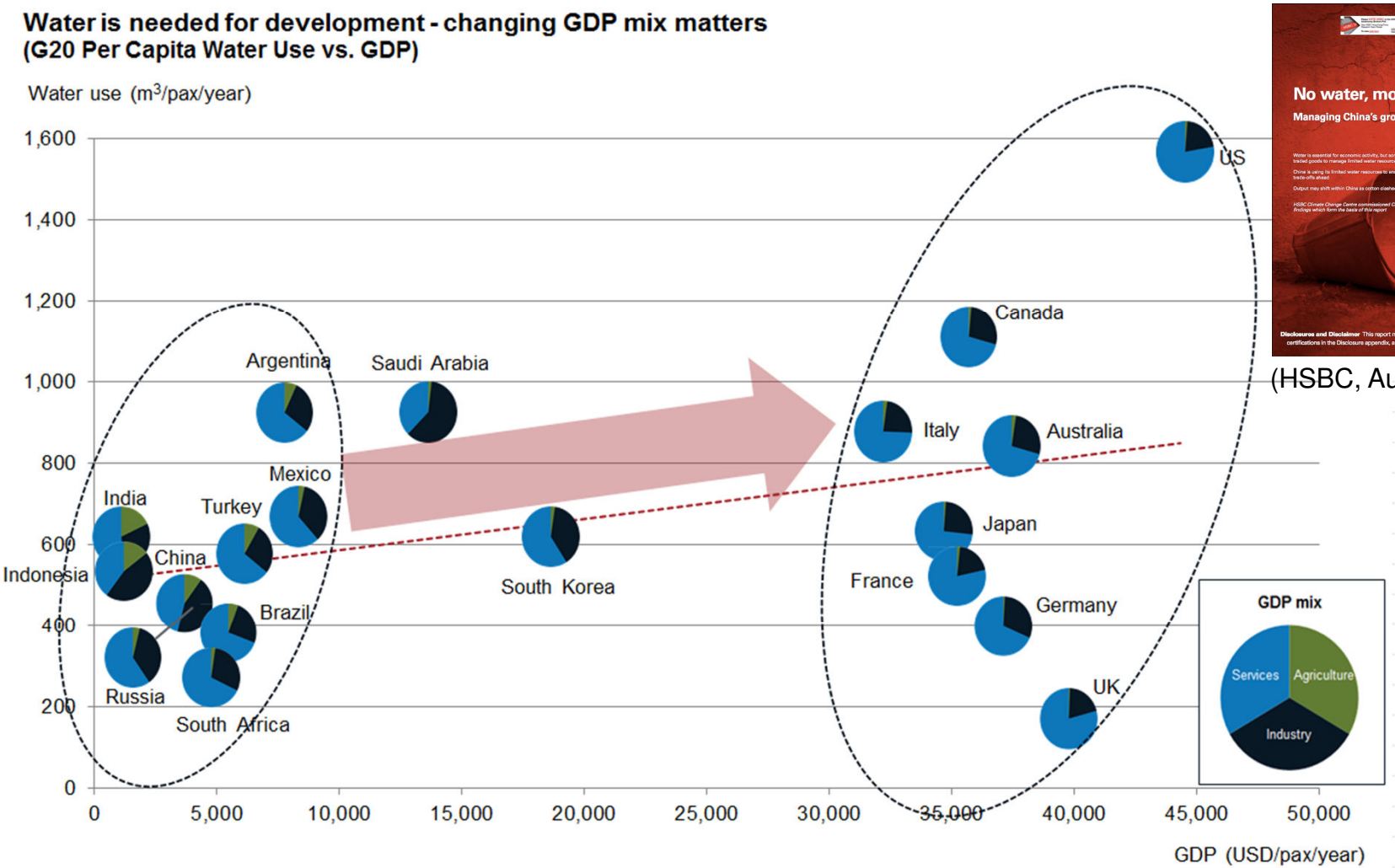
WATER RISK MEASUREMENT TOOLS FOR BUSINESS

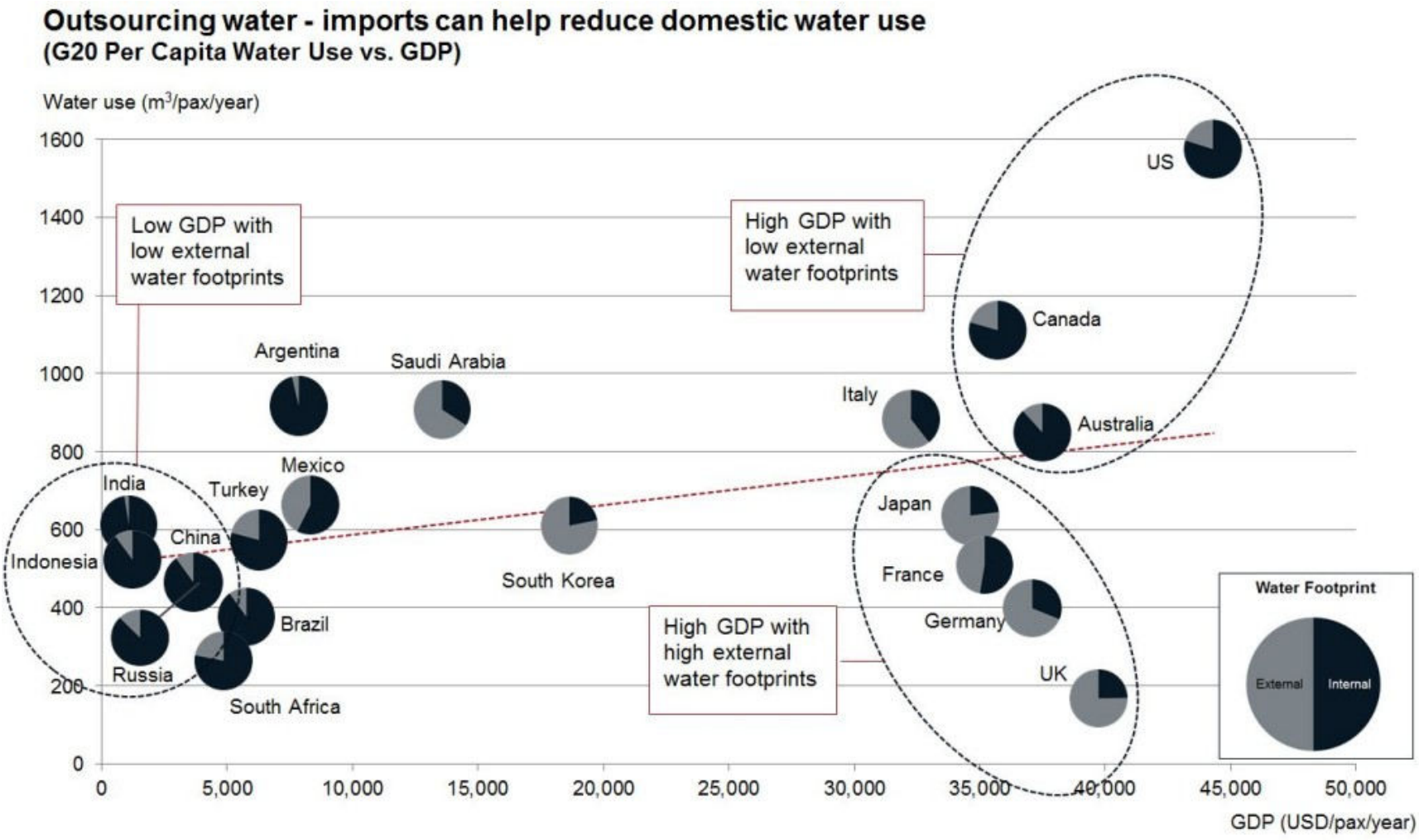
G20 Water-nomics …



(HSBC, August 2015)

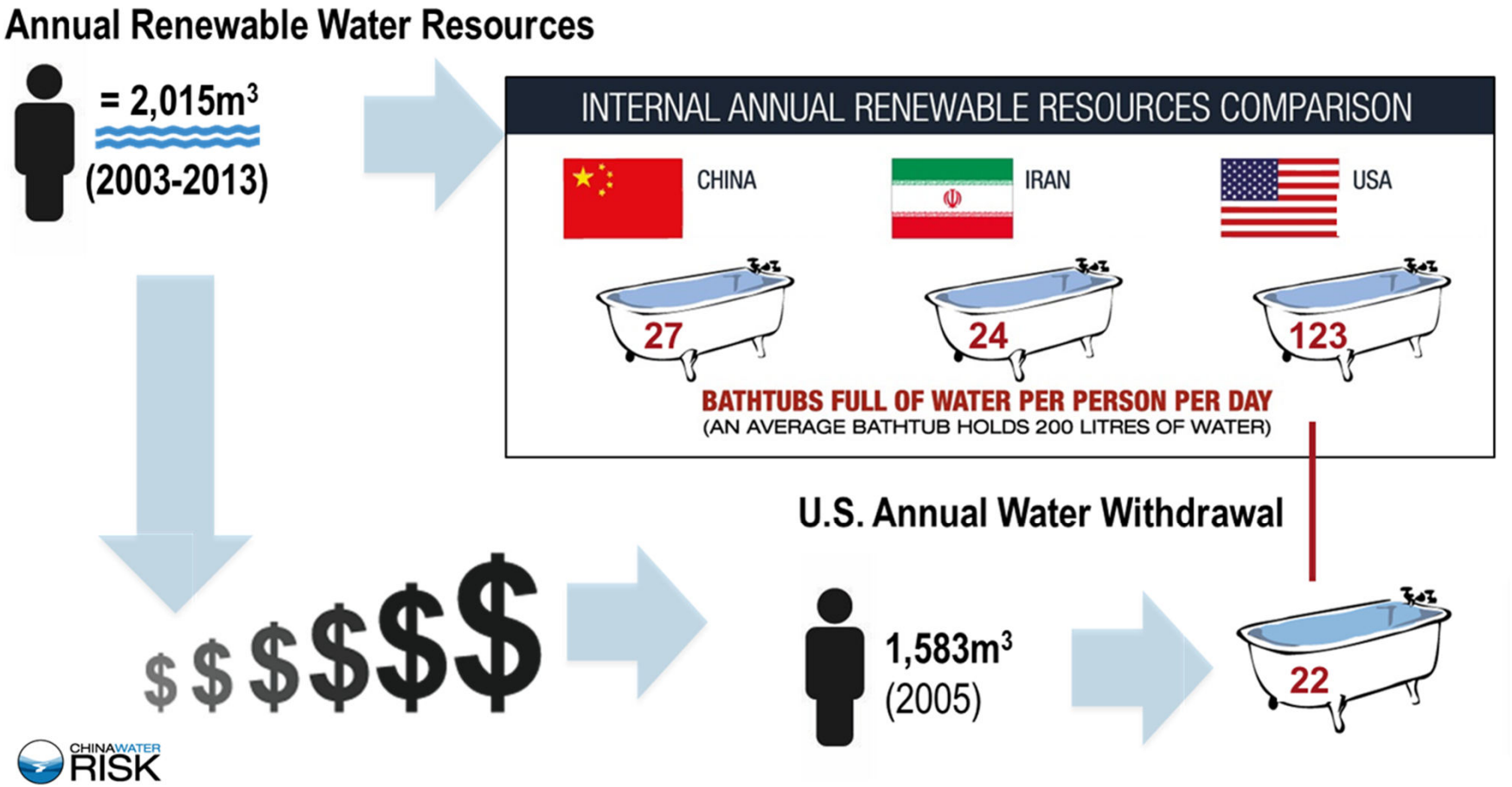
Source: China Water Risk based on FAO Aquastat, World Bank, NBSC
Note: For each country, the latest available data for water use is considered (ranging from 2000 to 2014). GDP at that year is expressed in Constant 2005$

Use other people's water …



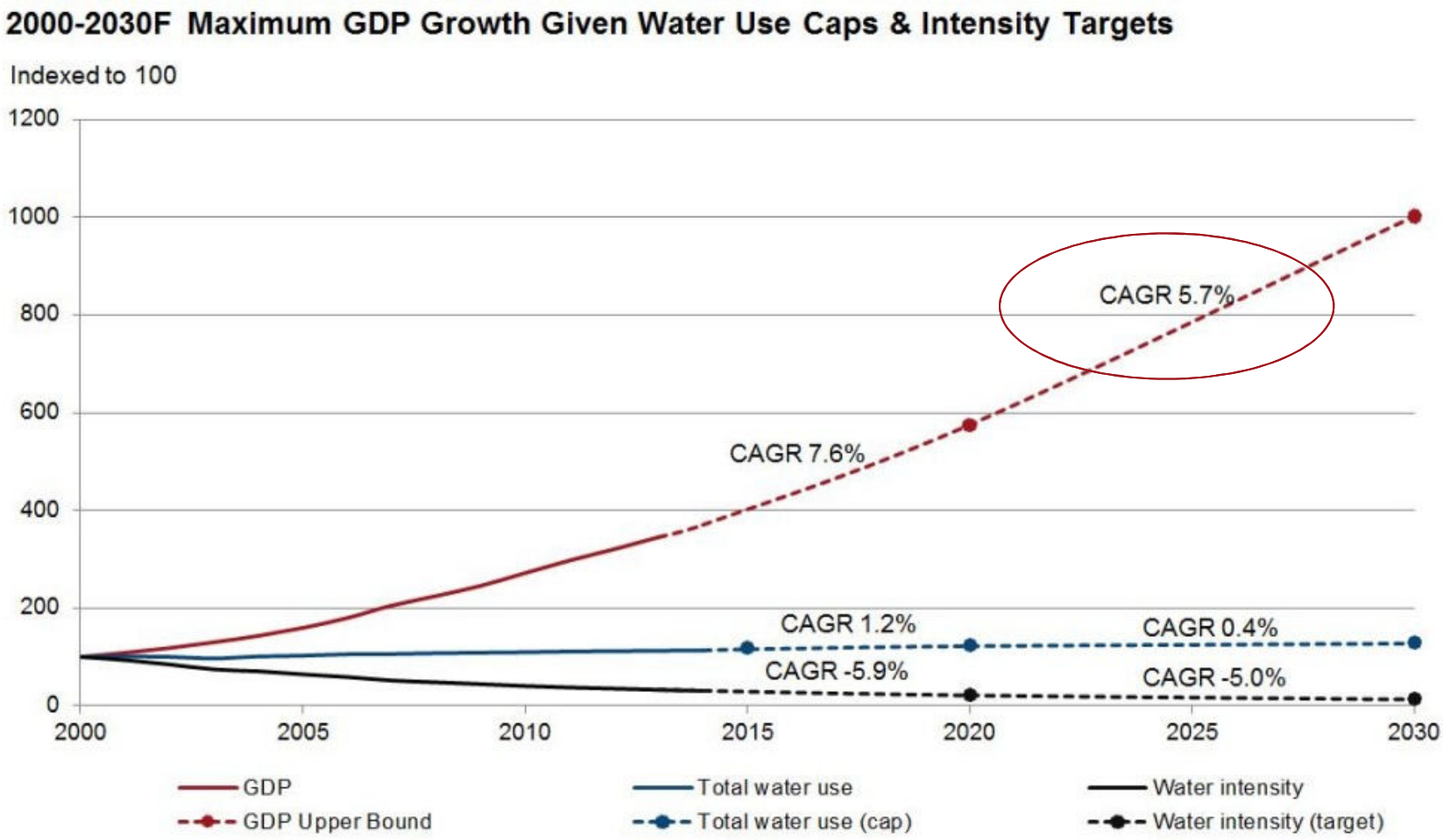
Source: China Water Risk based on FAO Aquastat, World Bank, NBSC, Water Footprint Network
Note: For each country, the latest available data for water use is considered (ranging from 2000 to 2014). GDP at that year is expressed in Constant 2005$

China's real liquidity constraint …



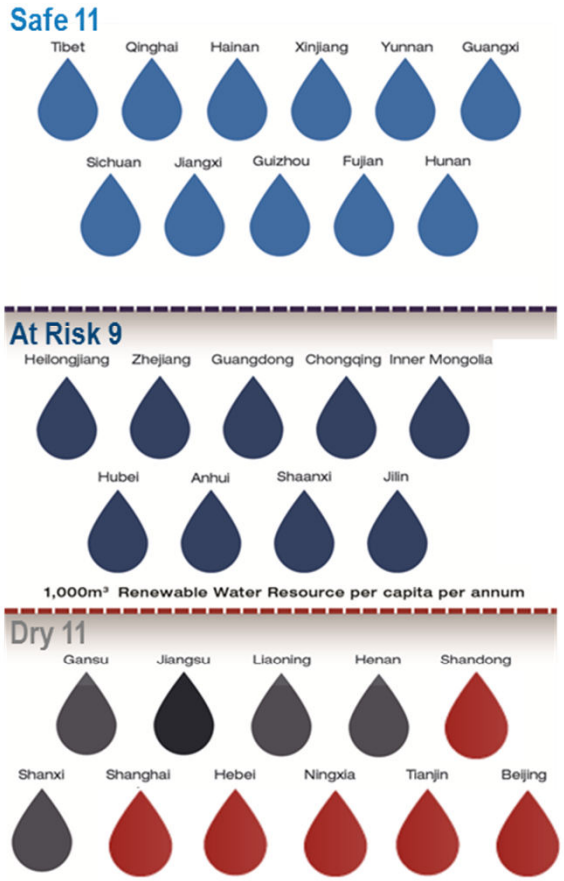
There is no choice but to do "business unusual"

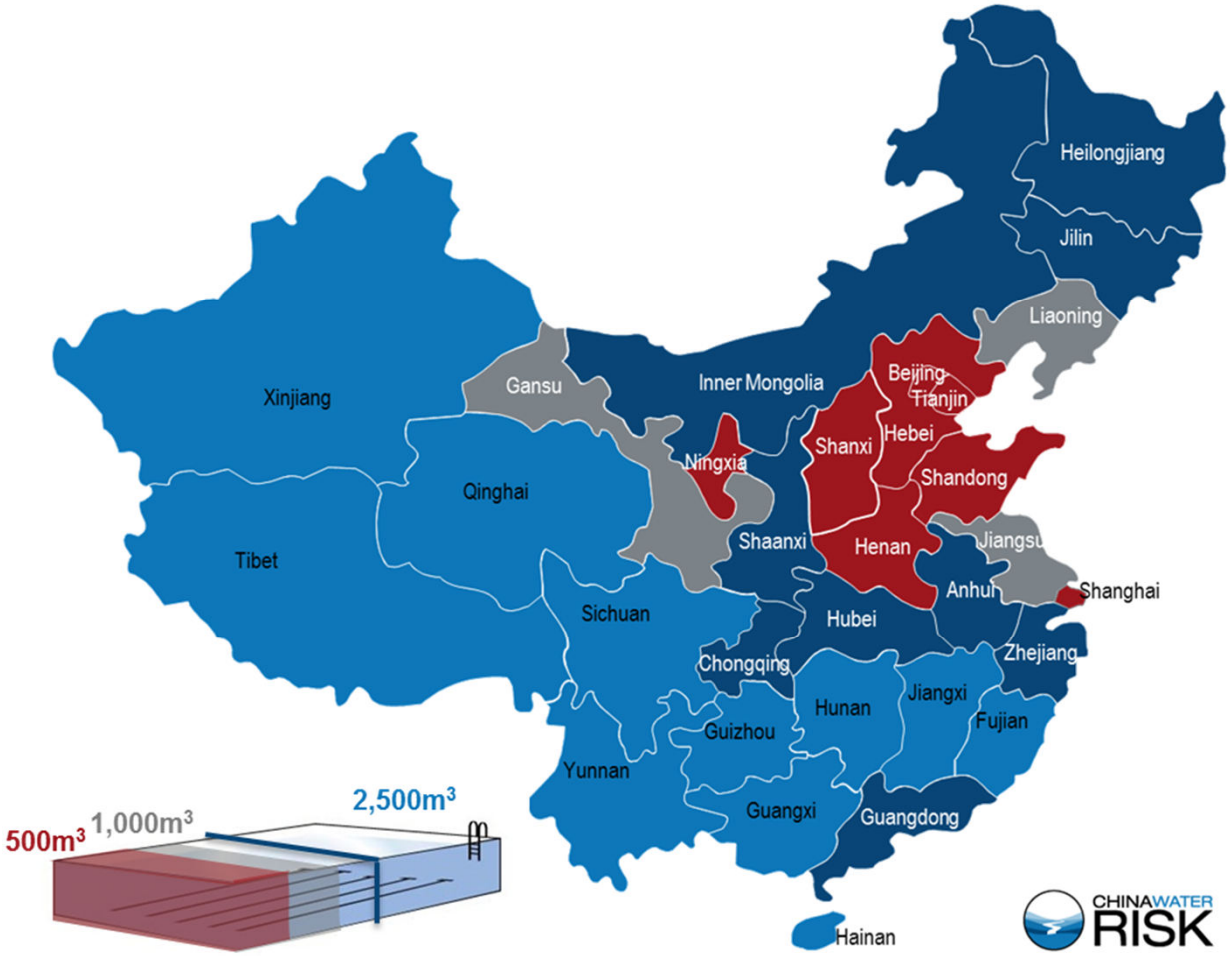
Water Red Lines will affect China's GDP



Source: China Water Risk based on NBSC, MWR, MEP
Note: CAGR values correspond to the periods 2014-2020 and 2020-2030

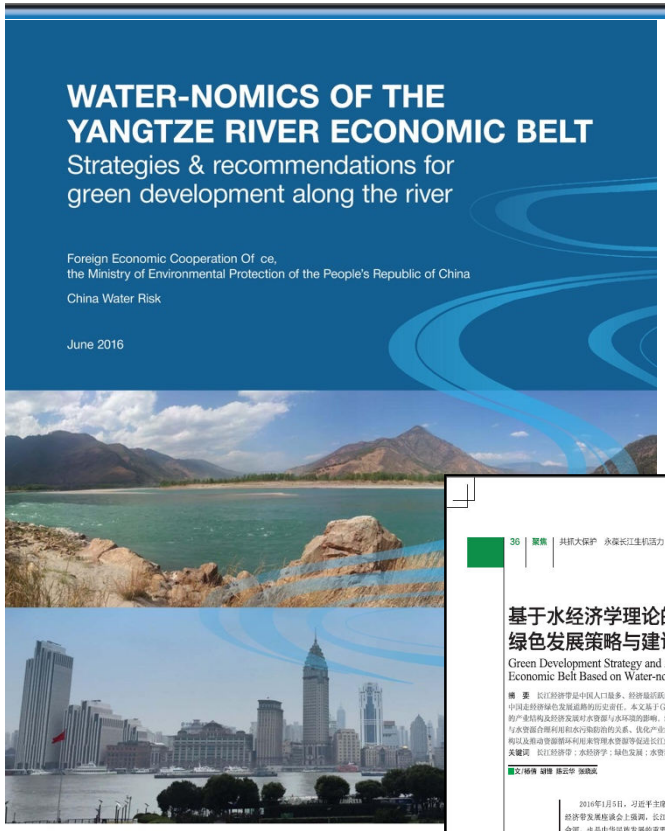
Provincial difference in water pressure

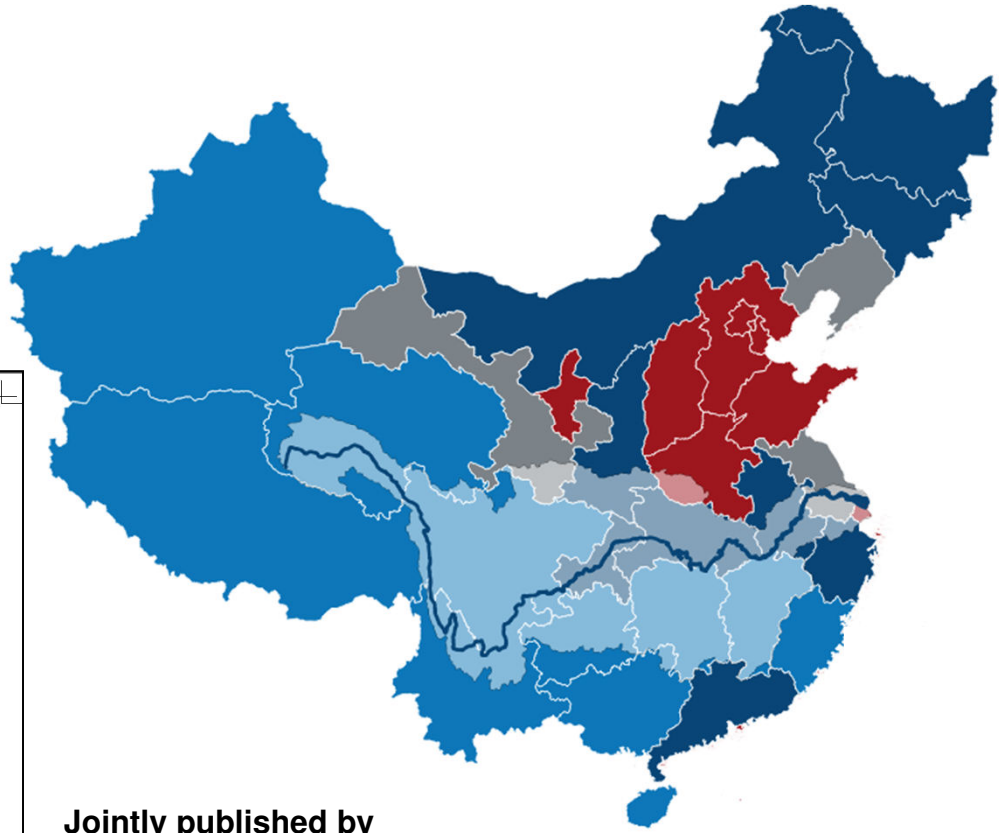




45% of China's GDP from the Dry 11

Case Study: Yangtze River





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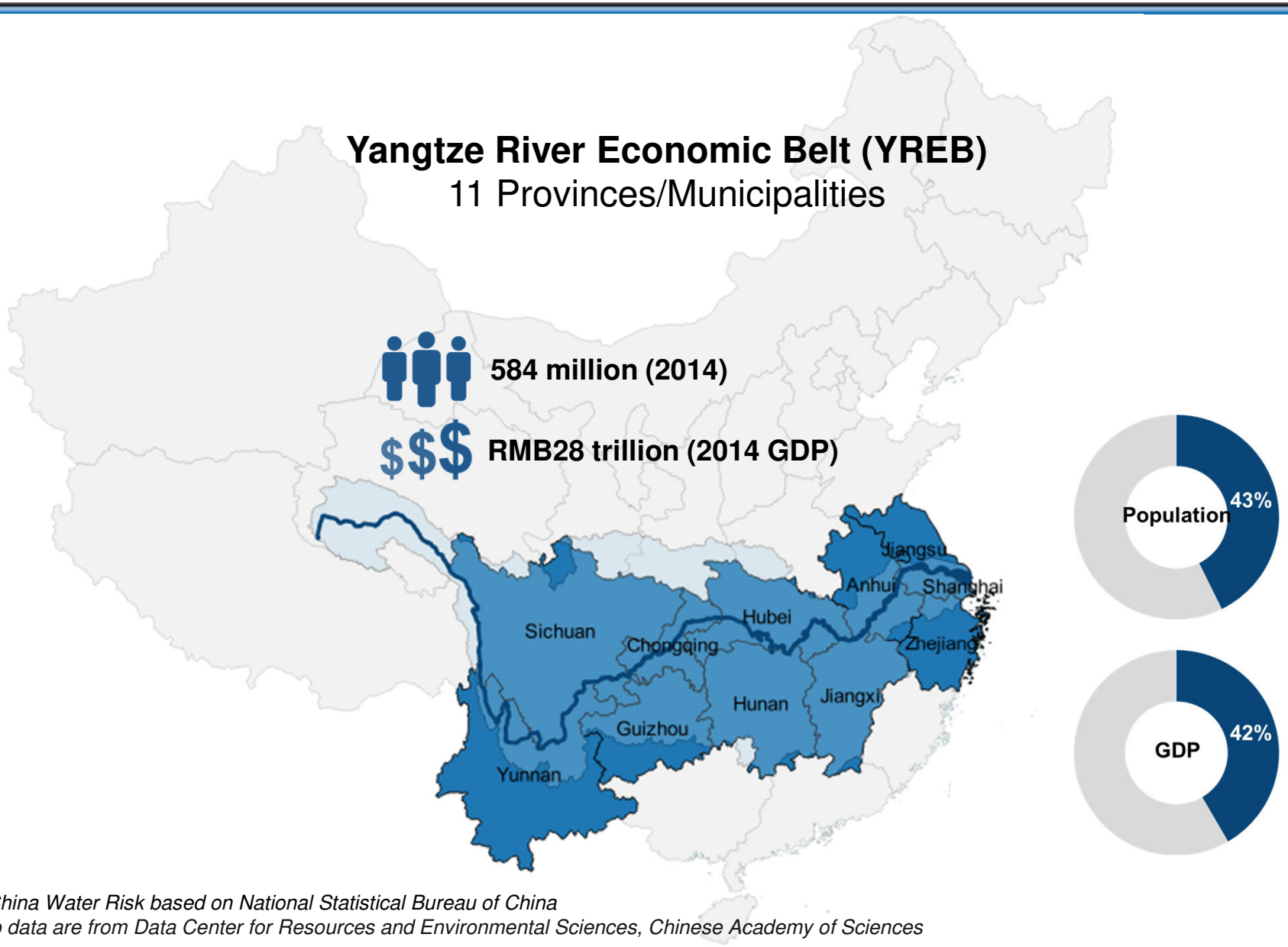
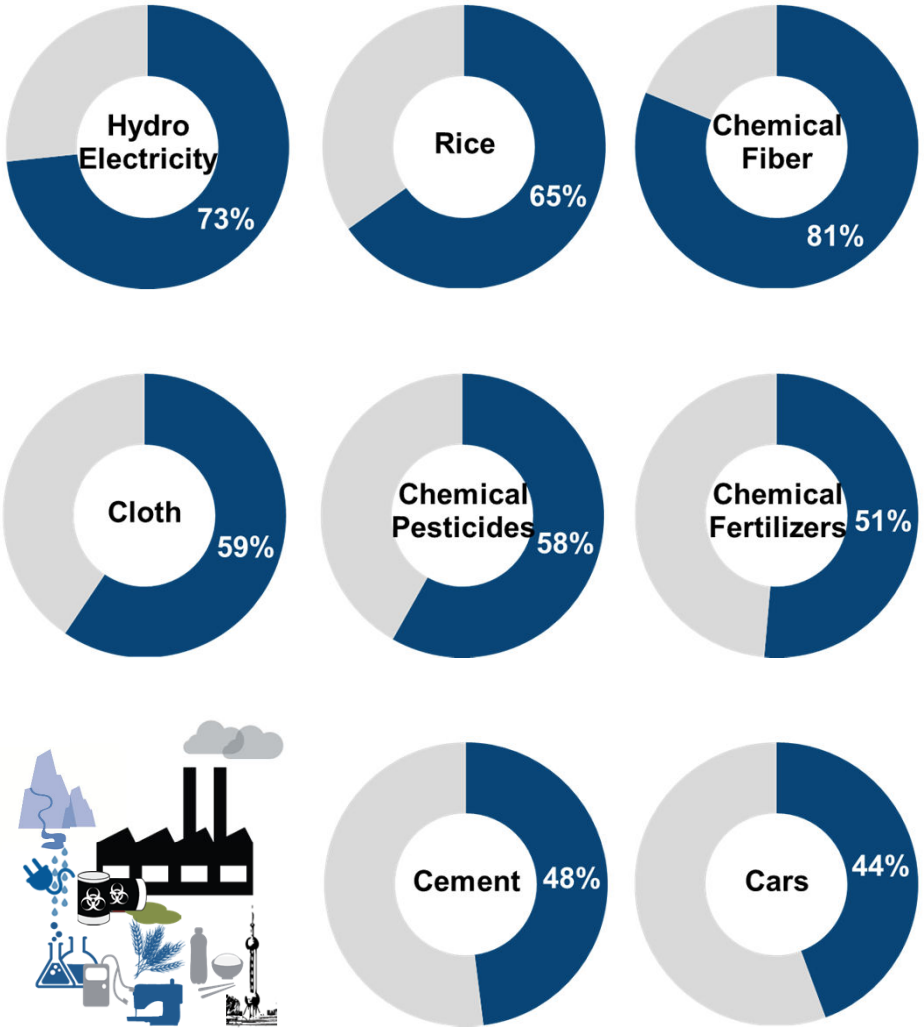
Base map data are from Data Center for Resources and Environmental Sciences, Chinese Academy of Sciences

Case Study: Water-nomics in YREB

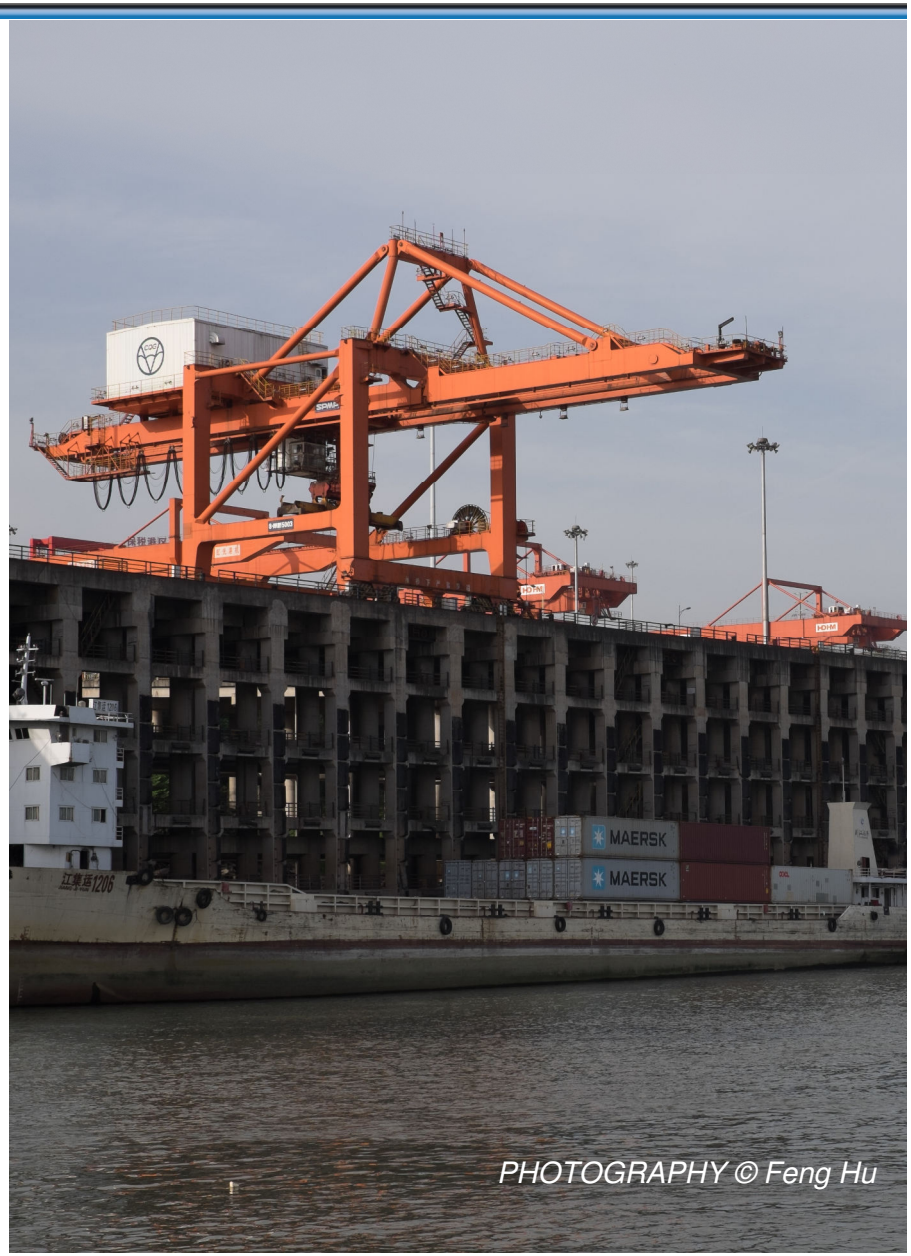


Source: China Water Risk based on National Statistical Bureau of China
Base map data are from Data Center for Resources and Environmental Sciences, Chinese Academy of Sciences

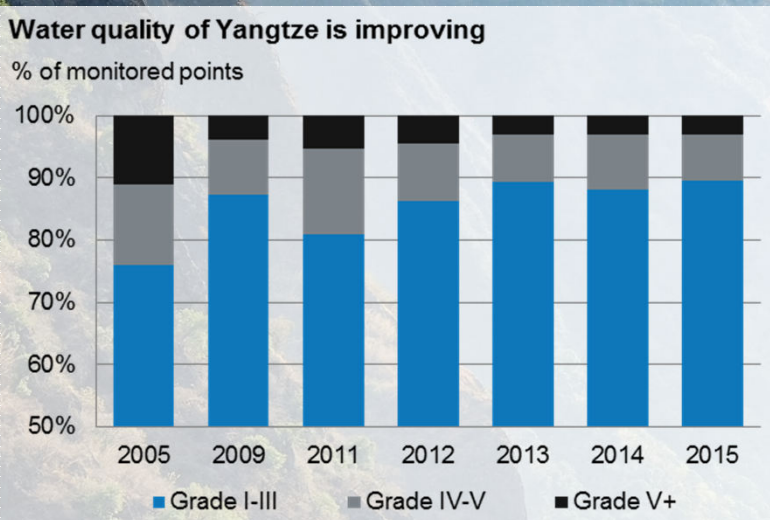
Case Study: Water-nomics in YREB



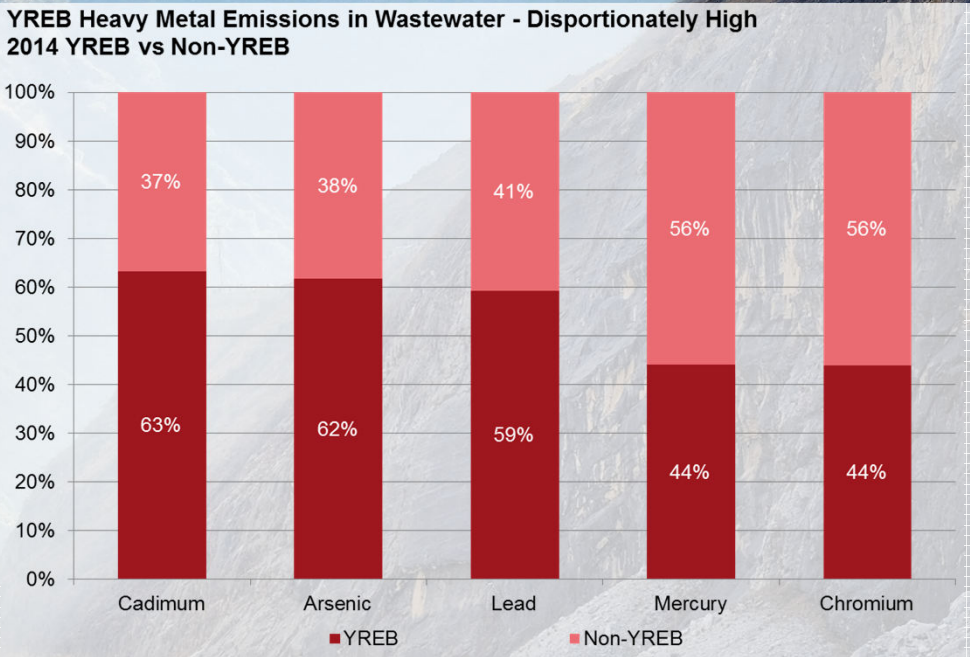
Source: China Water Risk based on National Statistical Bureau of China



Case Study: Water-nomics in YREB



Source: China Water Risk based on MEP's State of Environment annual reports (various years)



Source: China Water Risk based on National Statistical Bureau of China

Overall water quality improving but risk from heavy metal pollution still high

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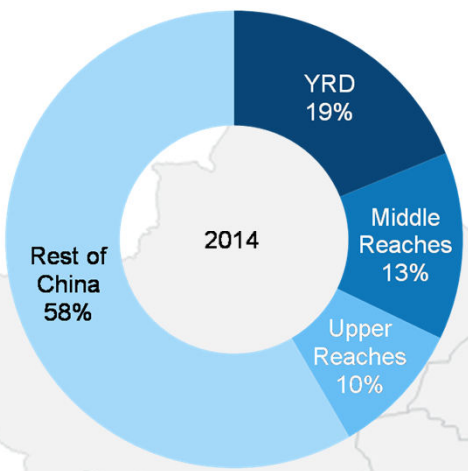
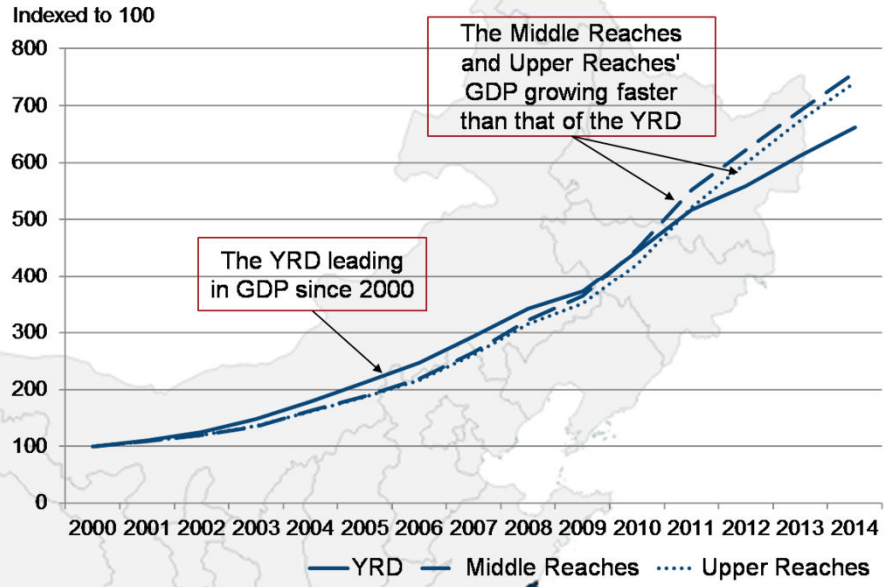
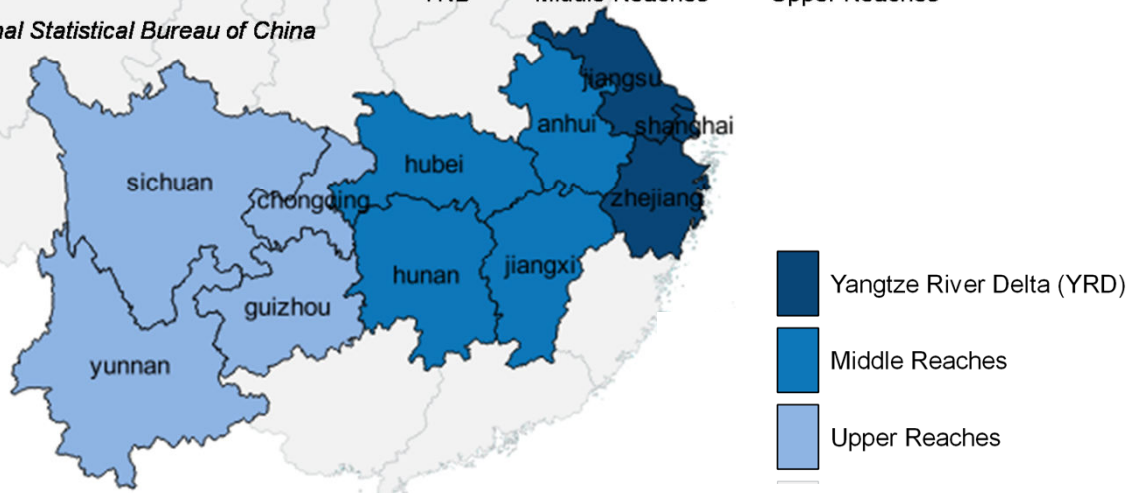
Case Study: Water-nomics in YREB

The YRD leads the YREB in GDP but upstream growth is rising faster than the YRD
YREB regions' GDP share and historical trends





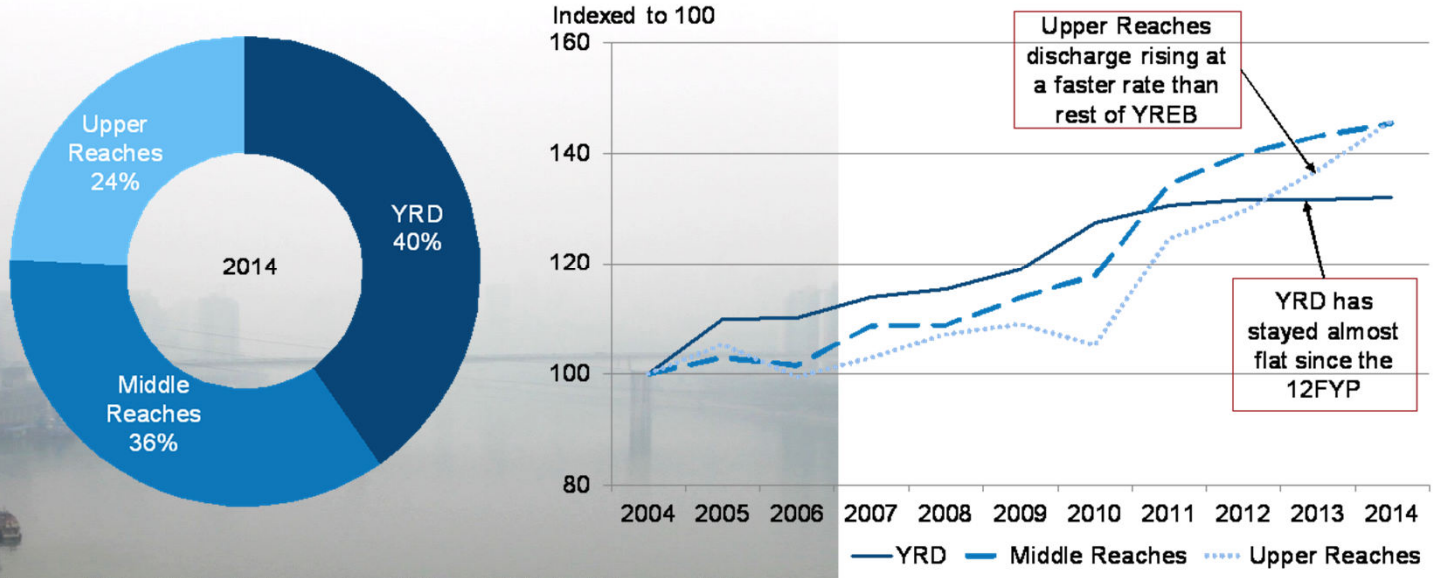
Source: China Water Risk based on National Statistical Bureau of China



Source: China Water Risk based on National Statistical Bureau of China
Base map data are from Data Center for Resources and Environmental Sciences, Chinese Academy of Sciences

Case Study: Water-nomics in YREB

YREB wastewater discharge – Upper Reaches' discharge rising faster than the rest
Regional share and historical trends of wastewater discharge



Source: China Water Risk based on National Statistical Bureau of China

Wastewater from Upper Reaches rising faster than rest of YREB in 12FYP

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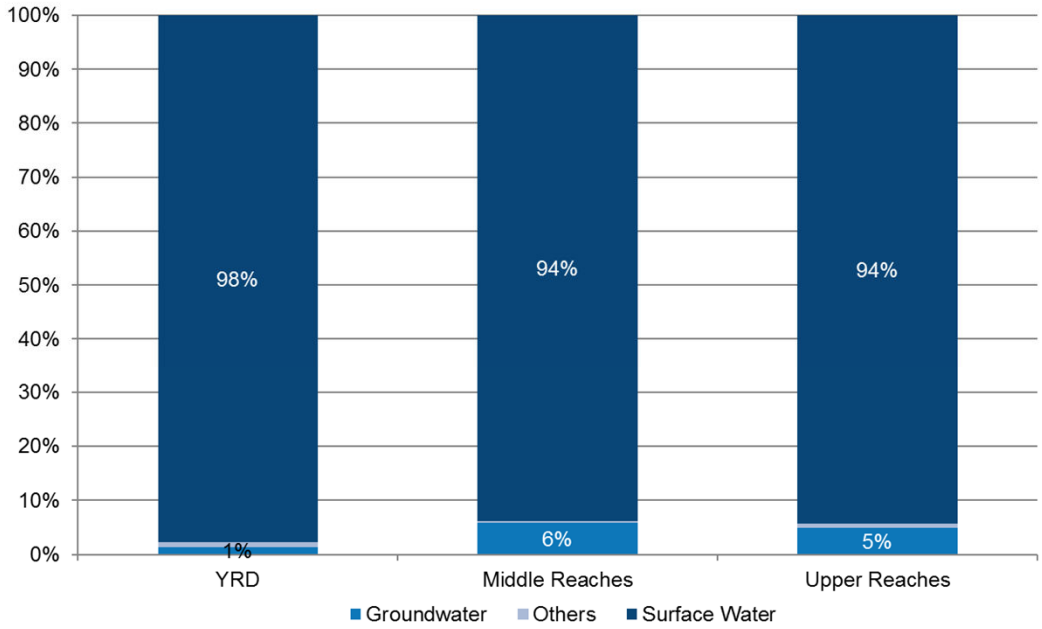
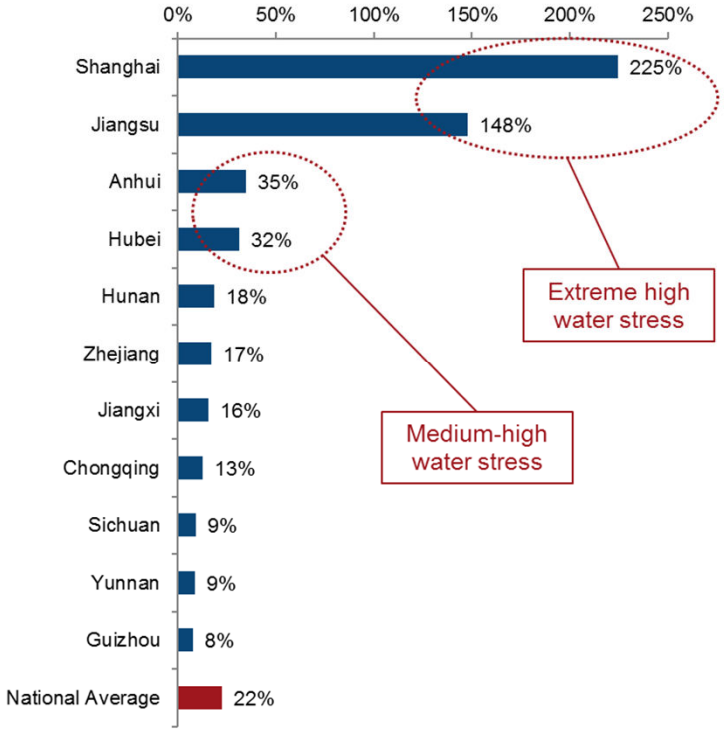
Case Study: Water-nomics in YREB

YREB water supply- heavily reliant on surface water
2014 water supply by type (%)



Source: China Water Risk based on National Statistical Bureau of China

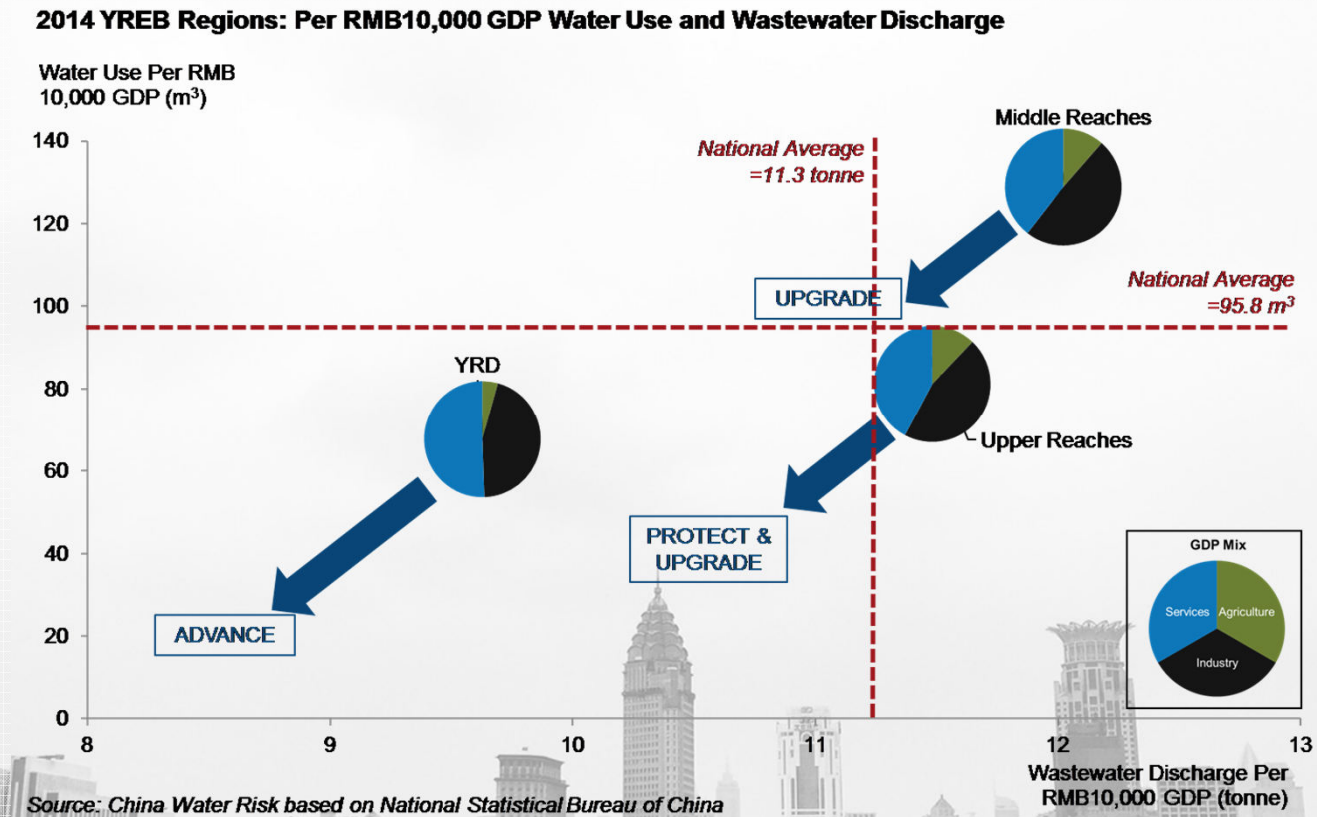
YREB Provinces: Water Use-to-Availability Ratio
2014 Water Use/Available Water Resources



Source: China Water Risk based on National Statistical Bureau of China

Pollution exacerbates scarcity in already highly water stressed YRD

Case Study: Water-nomics in YREB



Embedding water & climate into economic planning & decision making

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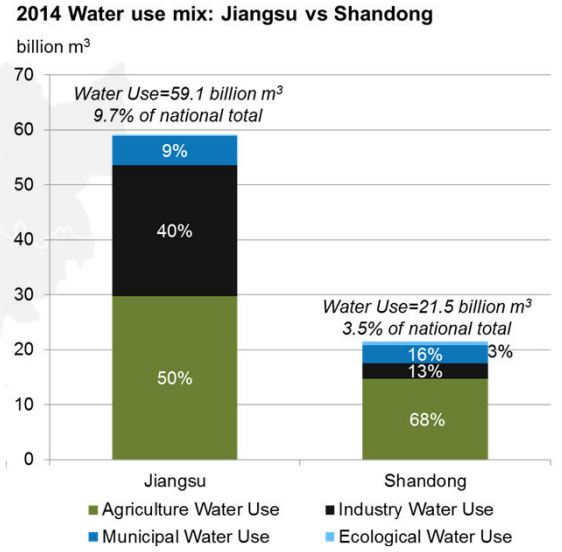
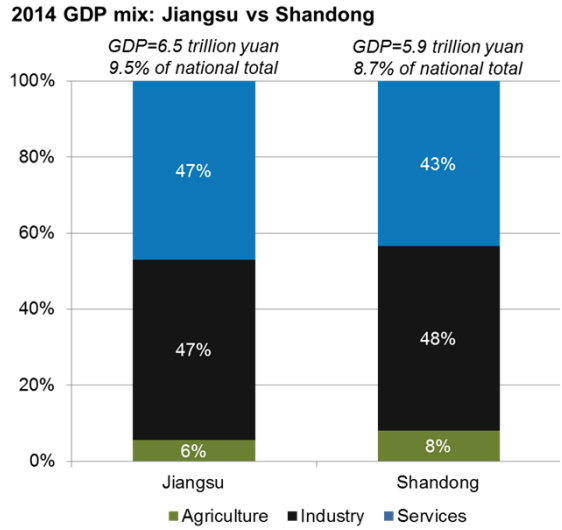
YREB Phase II FECO

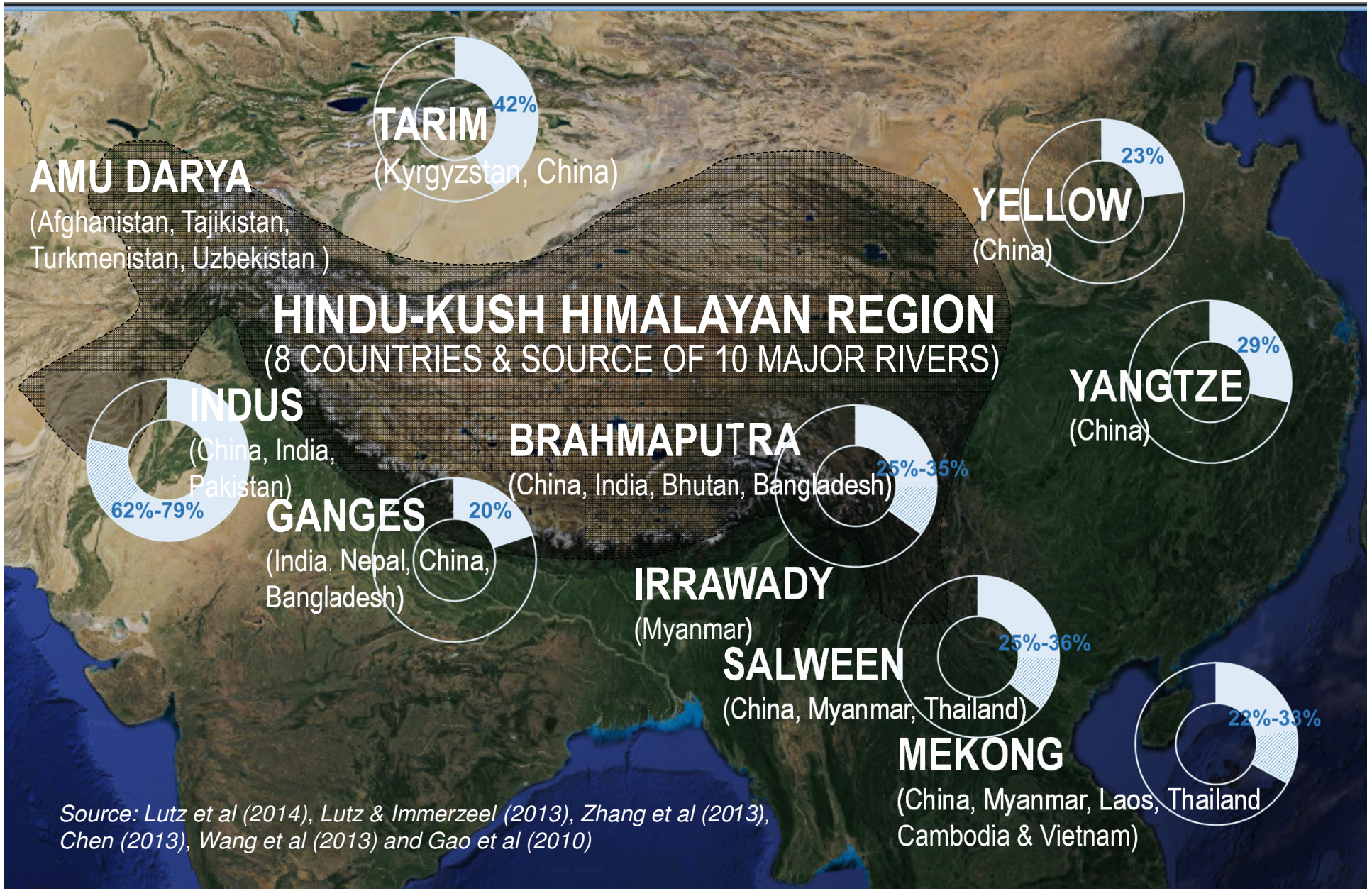




Source: China Water Risk based on National Statistical Bureau of C

Base map data are from Data Center for Resources and Environmental Sciences, Chinese Academy of Sciences

Looking beyond: HKH Rivers for 16 countries …



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