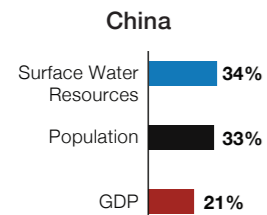


YANGTZE RIVER

NO WATER, NO GROWTH
Does Asia have enough water to develop?

KEY COUNTRY EXPOSURE



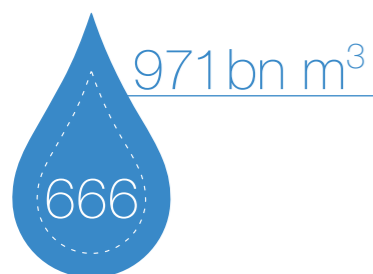
"The YREB [Yangtze River Economic Belt] is the socio-economic powerhouse of China. In 2014, the 11 YREB provinces and municipalities, with 43% of China's population, generated 28 trillion yuan in Gross Regional Product. This represents nearly 42% of the national total GDP. The region is also essential for producing significant amounts of goods that are key to various industries as well as to food and energy security"

- China Water Risk, Water-nomics of the Yangtze River Economic Belt, 2016

Note: the share of surface water resources refers to the ratio of surface water produced internally by the river in the respective country and the country's total renewable surface water.

RIVER FLOW & RUNOFF MIX

Annual flow estimation

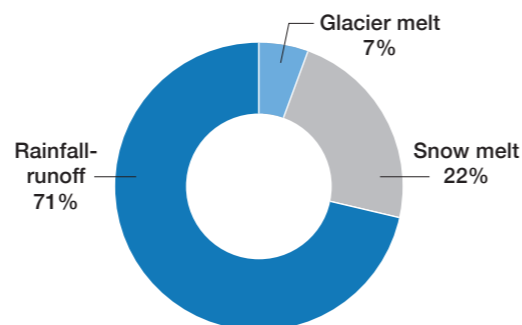


Source: China Water Risk based on calculation by CAS-IGSNRR using MPI-HM, PCRGLOBWB and WaterGAP hydrological models

DEFINITIONS (FAO AQUASTAT):

- River flow/runoffs:** the amount of river water that flows in a given time
- Surface water produced internally:** long-term average annual volume of surface water generated by direct runoff from endogenous precipitation (surface runoff) and groundwater contributions
- Total renewable surface water:** the sum of the internal renewable surface water resources and the total external renewable surface water resources

Runoff mix in the upper Yangtze

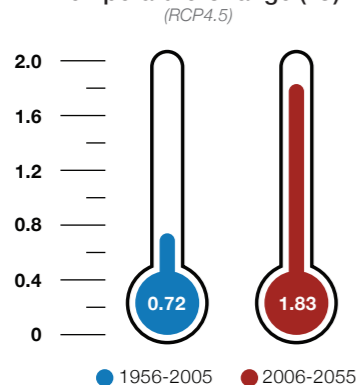


Source: China Water Risk based on Zhang et al (2013)

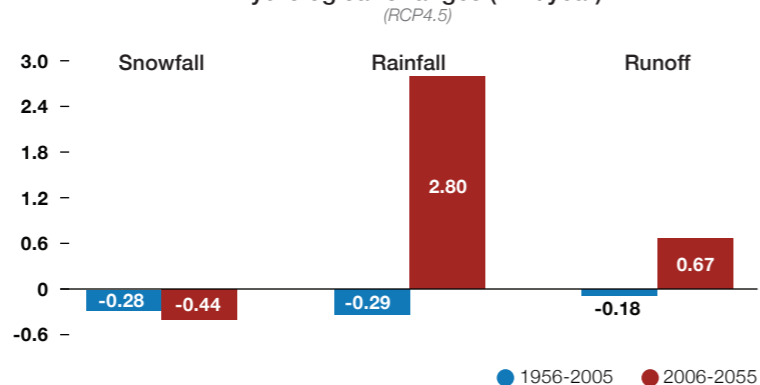
Based on several sources, the contribution of glacier melt and snow melt to the runoffs in the Upper Yangtze could reach 29%

CLIMATE CHANGE: PAST & FUTURE TREND

Temperature Change (°C)



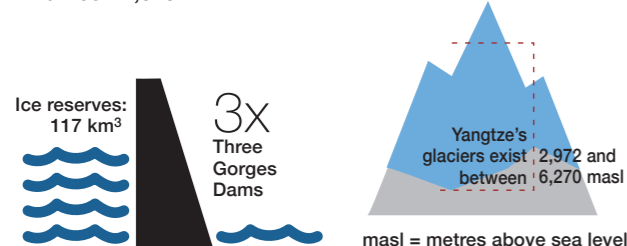
Hydrological Changes (mm/year)



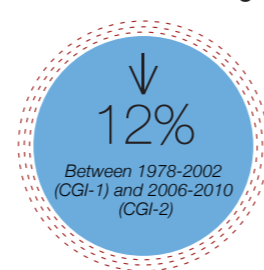
Source: China Water Risk based on data from Center for Water Resources Research, Chinese Academy of Sciences. Rainfall, snowfall and runoff change are expressed in equivalent water height. All data are calculated from five ensemble model (BCC-CSM1.1, CanESM2, CCSM4, MIROC5, MPI-ESM-LR) in IPCC AR5.

ICE RESERVES & GLACIER MELT

Glaciers in the Yangtze:
Number: 1,528



Glacier area shrinkage:



1.5x
Size of Hong Kong
Glacier area: 1,675 km²



NO WATER, NO GROWTH
Does Asia have enough water to develop?

YANGTZE RIVER

Yangtze River is the longest river in China and the third longest in the world. Originating from Tanggula Mountain Pass on top of the Qinghai Tibetan Plateau, it is a natural dividing line between the North and the South, and runs over 6,300km before reaching the East China Sea near Shanghai.

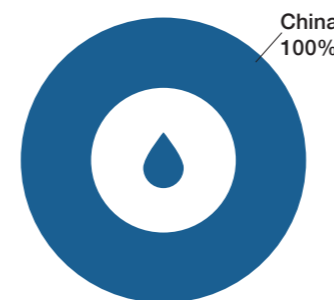
THE YANGTZE RIVER BASIN

Length	6,300 km
Basin Area	1.72-2.07 million km ²
Annual flow	666-971 billion m ³
Flow through	China
Share of ice & snow melt in upper reach	29% of runoff
Average surface water resources	937 billion m ³
Basin population	458 million
Basin GDP in 2015	US\$1,981 billion (constant 2010 price)
Transboundary	No

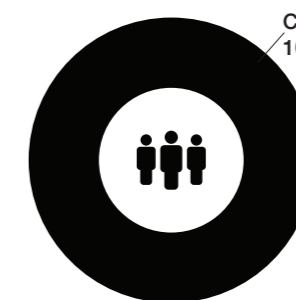


THE YANGTZE MATTERS FOR COUNTRIES, PEOPLE & THE ECONOMY

Total surface water resources = 937 billion m³



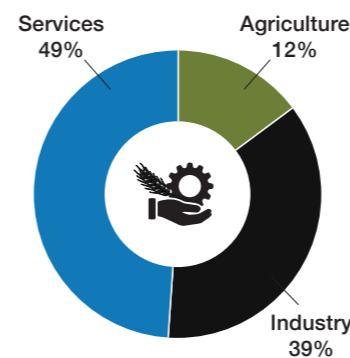
Total population = 458 million



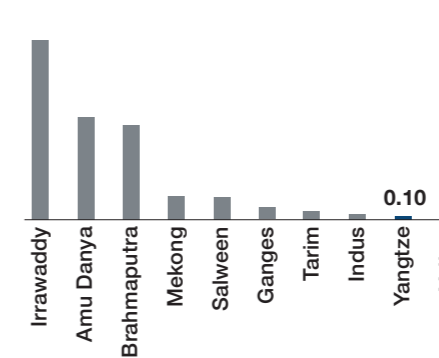
Total 2015 GDP (constant 2010 price) = US\$1,981 billion



GDP mix



Water Use Per Unit GDP (m³/USD)



Water use mix

