

# Seasonal forecast service for the Yangtze River Basin

The Climate Science for Service Partnership (CSSP) China project has developed a prototype service, which delivers forecasts of summer rainfall for the Yangtze River Basin months in advance. Advanced warning of above or below average rainfall and river flow help inform water management organisations in the region to take action to prevent flooding, manage water resources and generate hydroelectric energy.

## WHY IS THE YANGTZE RIVER BASIN IMPORTANT?

**Population**

Home to 1/3 of China's population

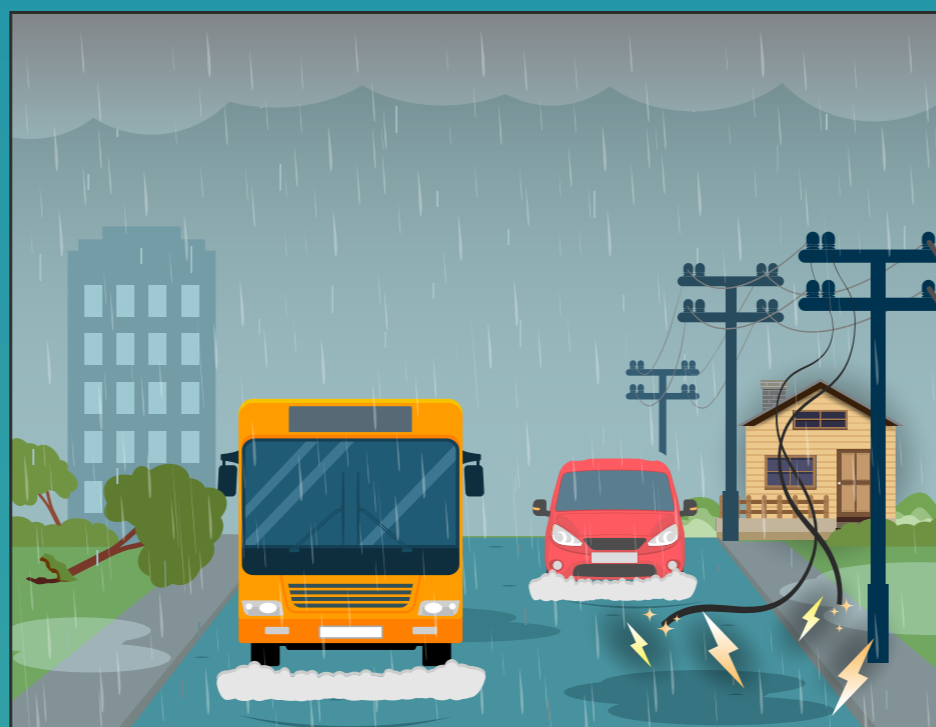
**Urban centres**

Major cities and economic centres located along the river

**Agriculture**

Key agricultural region producing about 70% and 50% of China's rice and grain respectively

## WHAT CHALLENGES DO WEATHER AND CLIMATE BRING TO THE REGION?



Large-scale drivers of weather and climate, such as El Niño, can lead to strong changes in rainfall in the Yangtze River Basin, leading to increased risk of flooding or drought. For example the strong 1998 El Niño event resulted in over 3,000 deaths, over 13 million homeless people and over \$20 billion worth of damage in the region.\*

## HOW DOES THE SEASONAL FORECAST HELP SUPPORT ROBUST DECISION-MAKING?

**Skilful prediction of summer rainfall**

Computer models can predict summer rainfall over the Yangtze River Basin in advance, especially during active El Niño events such as in 2016

**Advance warning of high-impact events**

The prototype forecast service began in summer 2016 and has run each year since, supporting effective management of hydroelectric dams to alleviate flood and drought impacts

**Continual improvement of forecast**

The project is working with users to tailor the forecast further to ensure it meets their evolving needs and makes use of the latest forecast capability



The Climate Science for Services Partnership (CSSP) China project is working to develop climate service prototypes in other sectors that impact people's lives such as food security. CSSP China is delivered under the UK-China Research and Innovation Partnership Fund (funded in the UK by the Newton Fund). \* Source: <ftp://ftp.ncdc.noaa.gov/pub/data/extremeevents/specialreports/China-Flooding-1998.pdf>