

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

