Perspectives on water-energy-land issues

Jiang Tong
National Climate Centre
China Meteorological Administration
Indus Rivers: 4 Riparian Countries
Water- energy-land nexus

- **Nexus approach focus on:**

  Increase of resource use efficiency by maximize the benefits of the scarce resources and produces cross-sector benefits

- **Nexus in a river basin:**

  Can be enhanced via an integrative river basin management platform by taking water resources-land and other related resources into account.
Water resources in China

For the Haihe River basin, water resource per capita is only 305 m³, 1/7 of the national average and 1/24 of the world average.
Energy in China

Changes of energy consumption (unit: quadrillion BTU)

Composition of energy consumption
Landuse pattern in China

Landuse/landcover in 2010

Changes of Landuse pattern
Water-land nexus: case
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Soil salinization

Drip irrigation
Water-energy-land nexus: case

With its huge topographic gradient, Yangtze River basin is rich in hydro-energy.

Up to date, hydro-power generated in the Yangtze is 200 billion kilowatt hour, annually, accounts for nearly 20% of its potential hydro-energy.
Water-energy-land nexus: case

Flood retention areas in the mid-Yangtze
Flood Risk Management and Ecologically Sustainable Hydropower

Water-energy-land nexus: case

Large-scale reservoirs/dams under operation or planned
Water-energy-land nexus: case

- Habitat Protection -- Watershed Restoration – No Dams in Fresh Water ecosystem Protected Areas
- Ecosystem management
- Three Gorges Project
- Enhanced Flood Risk Management in Floodplain

$1B/yr

Flood Risk Management and Ecologically Sustainable Hydropower
Thanks for your attention!