



The Technical Core of Integrated River Basin Management

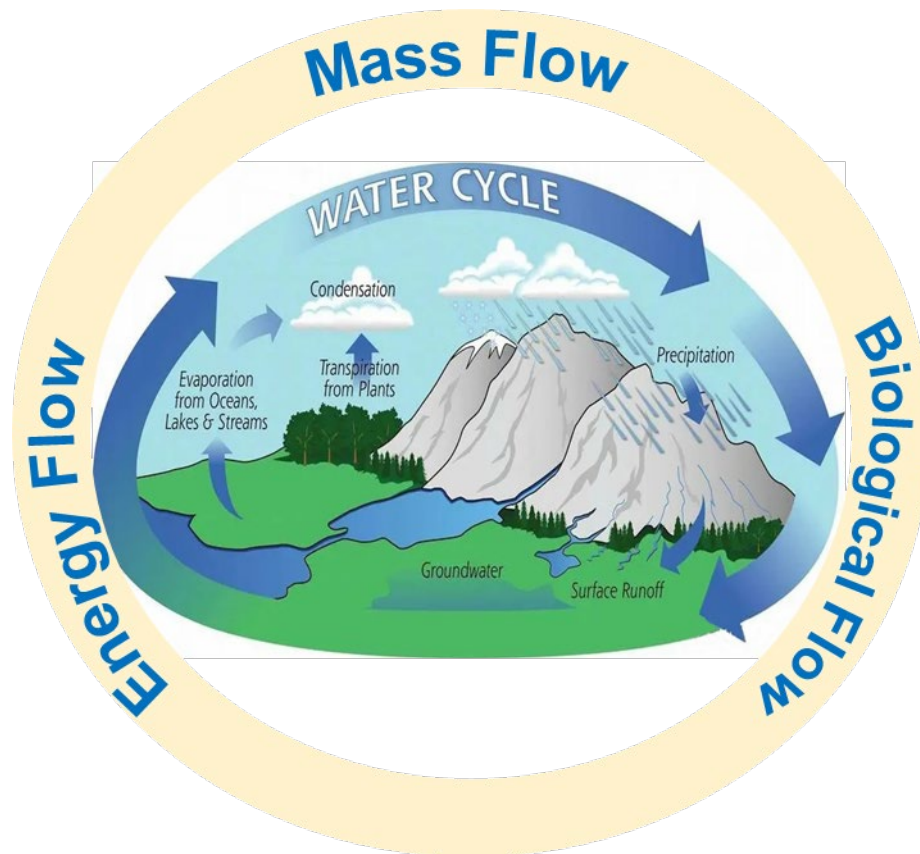
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River basin are independent spatial units naturally formed by flow with watersheds as the boundaries and rivers and lakes as the ties, and the natural, economic, social and cultural elements within the watersheds are closely interrelated, which together constitute a composite basin system.



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1. Define exploitable water amount & regional water rights

To determine water resources bearing capacity in the basin and the amount of water available for use, and to carry out water allocation.

- ✓ Determine the available water resources and exploitable water amount
- ✓ Determine the scale and spatial distribution of cities, land, population and economic production by water bearing capacity
- ✓ Strengthen dual control of total amount and intensity of water consumption
- ✓ Implement water saving policy, increase water efficiency and benefit
- ✓ Ensure water demand of aquatic ecosystem and hydro-ecological process



High-efficiency water-saving irrigation



Industrial water circulating

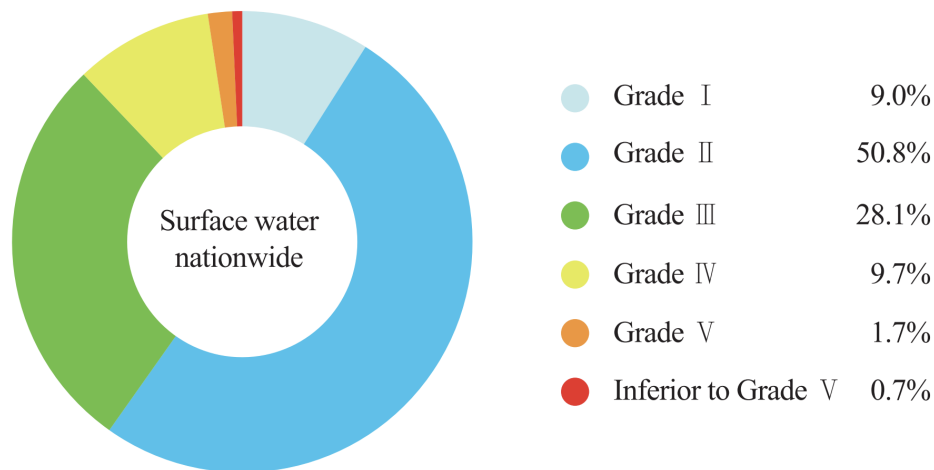


Ecological water replenishment

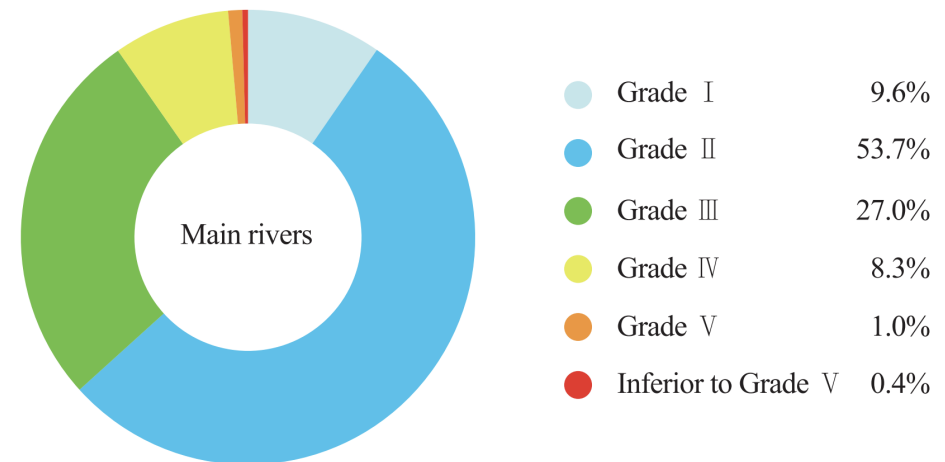
2. Define affordable mass and pollutants process to the river body

The environmental carrying capacity used to control pollutants discharge to the river body.

- Control the total amount of pollutants load, reduce pollutants entering into the river
- Strengthen sewage network, wastewater treatment and non-point pollution control
- Strengthen source management and process monitoring



General surface water quality of China (2022)
Source: MEE



Water quality of main river basins in China (2022)
Source: MEE

3. Define propore aquatic space layout and environment flow

Reserve sufficient aquatic space for ecosystem, reserve enough ecological flow to ensuce ecological function

- Reserve and restore aquatic space and corridors for biodiversity
- Strengthen the protection of headwater area and drinking water sources
- Coordinate water utilization and regulation process with eco-hydrological process



River source monument



Drinking water source protection area

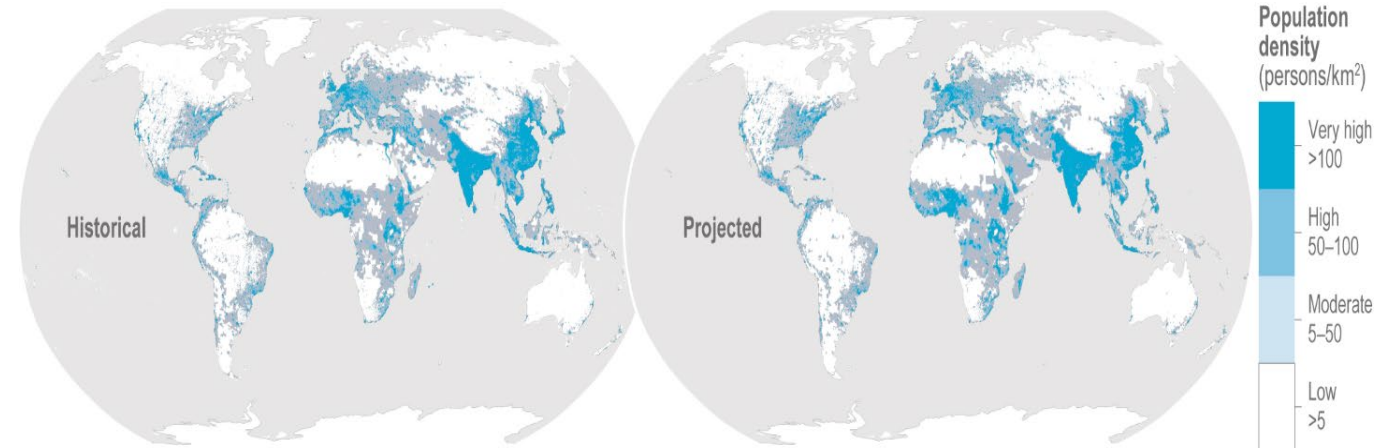


Puyangjiang ecological corridor

4. Define the flood risk control objectives and the flood water deployment

Define the objectives of flood risk prevention and control, and determine the flood water deployment regime, including the storage, detention & discharge

- Strengthen water hazard identification and risk mapping
- Construct the monitoring system and build integrated and smart system of forecast, early warning, preview and plan
- Construct solid flood mitigation system
- Maintain extreme flood storage capacity, flood detention basin and flood spillways



Risk of river flood (1961-2005 vs 2051-2070), IPCC

THANKS!