



Water Investment and Financing in China

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1.1 Development of Water Infrastructure in China

The Chinese government has always assigned strategic importance to water infrastructure in its overall layout of socioeconomic development. Water infrastructure has been developed on a large scale and with remarkable achievements.

Three Gorges Dam on the Yangtze River



1.1 Development of Water Infrastructure in China

Construction Item	Tasks Completed
River dikes	414,000 km
Reservoirs	98,000 reservoirs
Annual water supply capacity of water projects	More than 700 km ³
Development of effective irrigation area	1 billion mu (\approx 66.7million ha)
Reduction of water and soil loss	1.10 million km ²
Installed capacity of hydropower	330 GW

With 6% of the world's freshwater resources and 9% of the world's arable land, China has fed 21% of the world population and safeguarded its own sustained rapid socioeconomic development.



1.2 Major Tasks of Water Infrastructure Development: Present and the Near Future

The goal (by 2020) of reforming and developing the water sector in China is to complete construction of :

- a system for flood control and drought relief;**
- a system for rational allocation and efficient use of water resources;**
- a system for protection of water resources and safeguarding the health of rivers and lakes;**
- an institutional framework for scientific development of the water sector.**



1.2 Major Tasks of Water Infrastructure Development: Present and the Near Future

(1) Reduce the deficiencies in farmland water conservancy:

- Farmland water infrastructure;
- Training of small and medium-sized rivers;
- Consolidation of risky reservoirs;
- Addressing structural water shortage;
- Capacity-building for flood control and draught relief;
- Rural safe drinking water projects.



1.2 Major Tasks of Water Infrastructure Development: Present and the Near Future

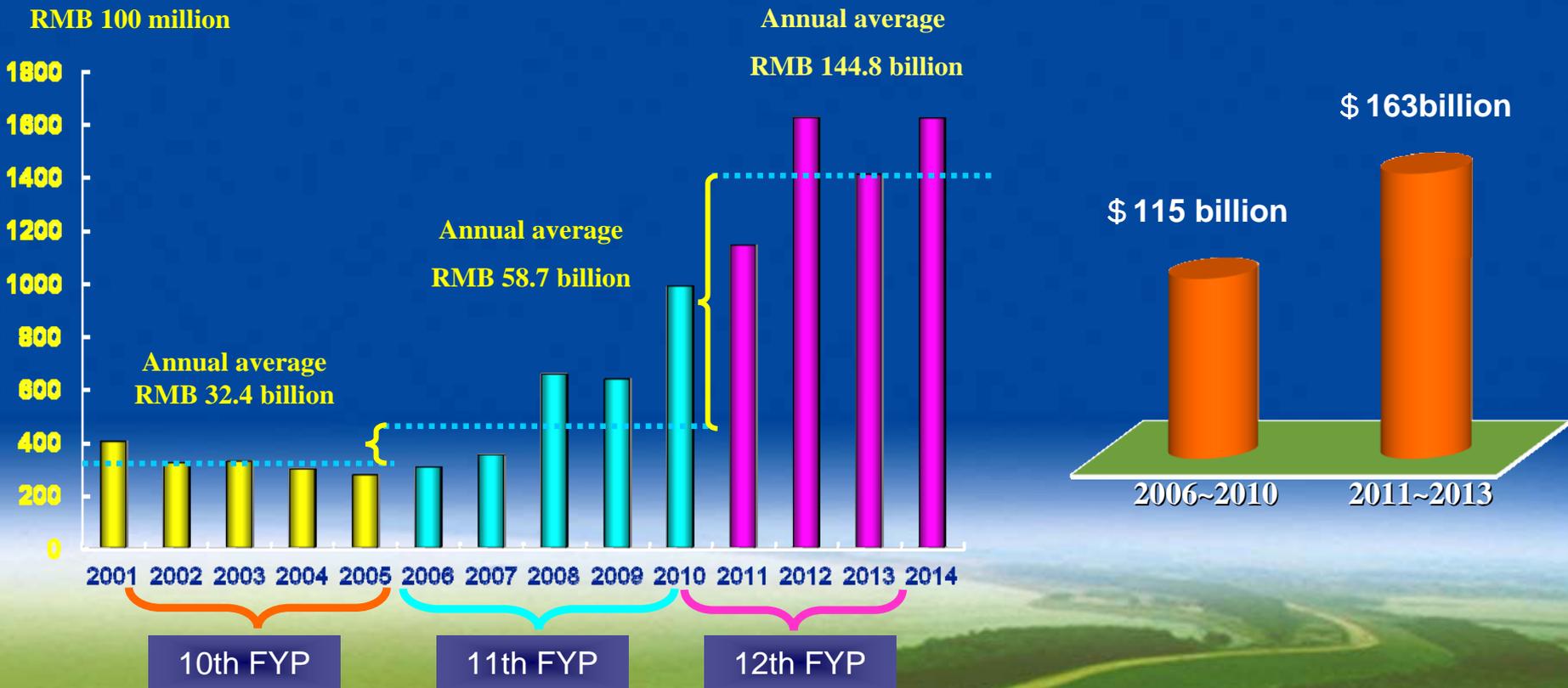
(2) Accelerate the development of water infrastructure:

- Continue to train major rivers;
- Constructing water allocating projects;
- Improve water and soil conservation and protect the water ecology;
- Rationally develop hydropower resources;
- Strengthen support from hydro-meteorology, hydraulic science and technology.



1.3 China's Investment in Water Infrastructure

(1) **Investment in water infrastructure in 2011~2013:** China invested RMB 1.08 trillion (\approx \$ 163 billion) in water projects, exceeding the aggregate of the entire 11th Five-Year-Plan period, which is \$ 115 billion totally.



1.3 China's Investment in Water Infrastructure

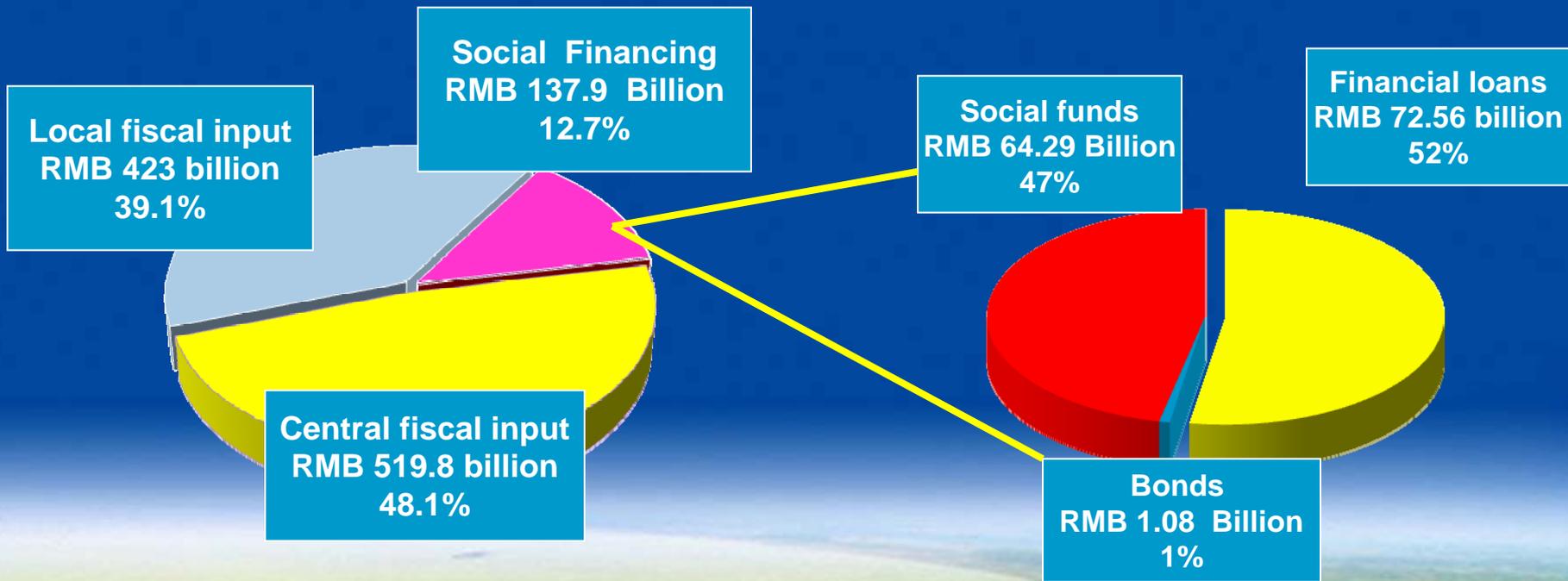
(2) Three sources of water investment:

- **Fiscal fund:** budgetary appropriations, construction funds, water resources fees, and gains from land transfer used for development of farmland water infrastructure;
- **Financing:** domestic and international loans and corporate bonds;
- **Social funds:** investments from enterprises and individuals.



1.3 China's Investment in Water Infrastructure

(3) From 2011 to 2013, the Chinese government input RMB942.86 billion (\approx \$ 153.8 billion dollars) in water infrastructure; and social financing amounted to RMB137.94 billion (\approx \$ 22.5 billion dollars).



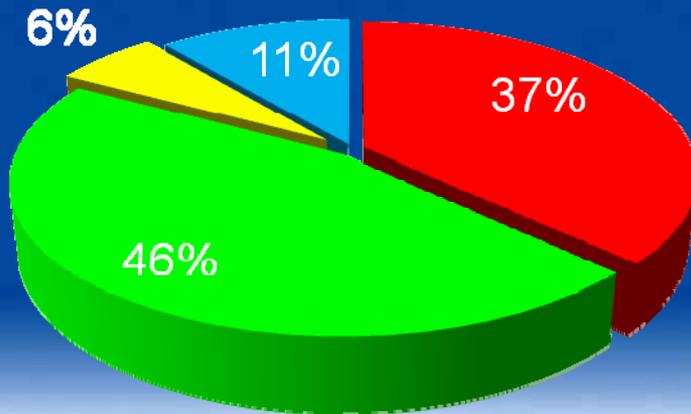
Government input and social financing

Social financing

1.3 China's Investment in Water Infrastructure

(4) Application of water investment in the last 3 years .

- Flood control works
- Allocation of water resources
- Water and soil conservation and small hydropower
- Hydrological monitoring



Small hydropower station in Chaling County, Hunan Province



II. Prospects of Water Investment and Financing in China



2.1 Demand for water investment in the period to come

China faces an arduous task of developing water infrastructure in the future. As per the relevant plans and decisions on pacing up reform and development of the water sector, total national demand for water investment from 2011 to 2020 will exceed RMB 4 trillion (\approx \$ 650 billion).

To meet such an enormous demand requires synergy of the government and the market, the government should go hand in hand with the introduction of market mechanisms into financing, construction and management of water projects.



2.2 Major policy focuses of future water investment and financing

1. Increase fiscal input from government budgets.

- Macro-control, funding and policy guidance from the government;
- A steadily-increasing fiscal input;
- Raising the proportion of water infrastructure funds in public finance.

*Ertan Hydropower Station in
Sichuan Province*



2.2 Major policy focuses of future water investment and financing

2. Increase the amount of loan funds used for water projects.

Refine the policies on providing financial support

- local financing mechanisms;
- fiscal discount for water loans;
- wider scope of collaterals and sources of debt repayment;
- medium and long-term policy-driven concessional loans from financial institutions;
- improved insurance system for floods, logging and droughts.



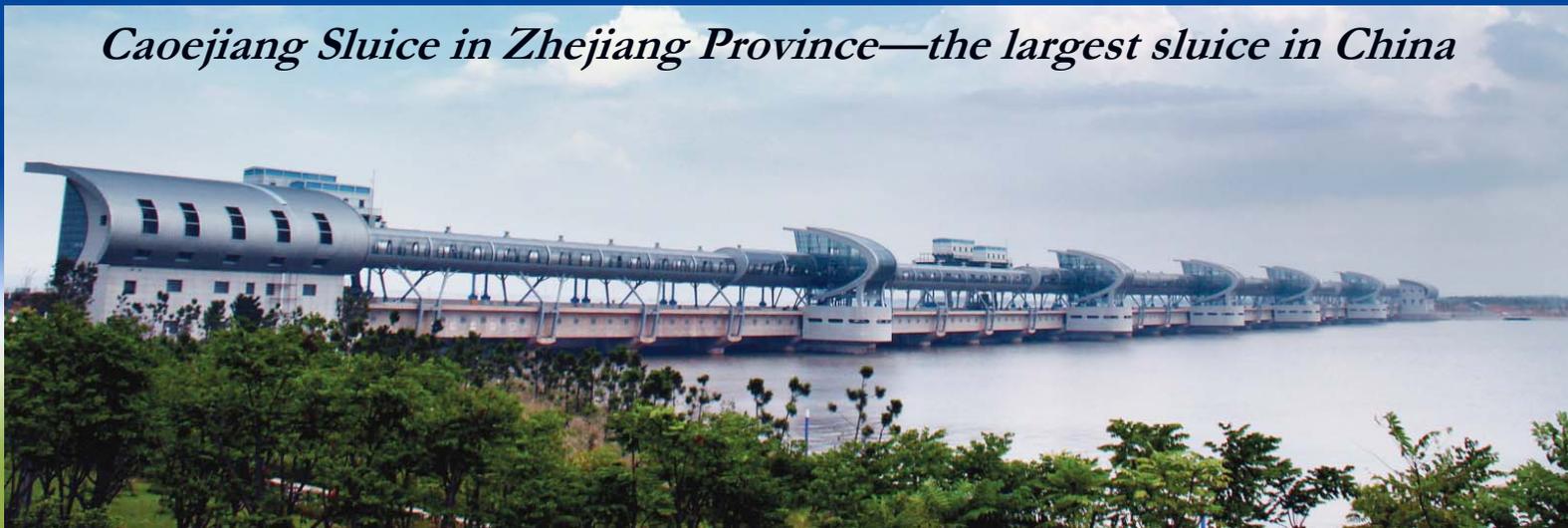
2.2 Major policy focuses of future water investment and financing

3. Improving the effective role of “market mechanisms”

(1) Introduction of a competition mechanism.

- Diversify providers and introduce non-government sourced providers of water-related public services;
- Tailor-made models such as agent construction and contracting;
- Non-government professional management methods.

Caoejiang Sluice in Zhejiang Province—the largest sluice in China



2.2 Major policy focuses of future water investment and financing

(2) Further expand areas of water infrastructure development for market participation.

- **Attract social capital and encourage private capital to participate in key and large-scale water projects;**
- **Produce policies and measures in this regard;**
- **Actively develop new-style water projects such as BOT (build-operation-transfer), TOT (transfer of operation title), BT (build-transfer) and PPP (public-private partnership).**



2.2 Major policy focuses of future water investment and financing

(3) Transfer of government function.

- Further promote reform of water project review and approval;
- Regulate procedures and delegate power for higher efficiency;
- Clarify divided duties between government and market.



2.2 Major policy focuses of future water investment and financing

(4) Improve mechanisms on subsidies and water tariff.

- Government subsidy mechanism for public-good water works;
- A mechanism for rational water pricing of water projects;
- Various market players into the construction and management.

Xiaolangdi Multipurpose Project on the Yellow River



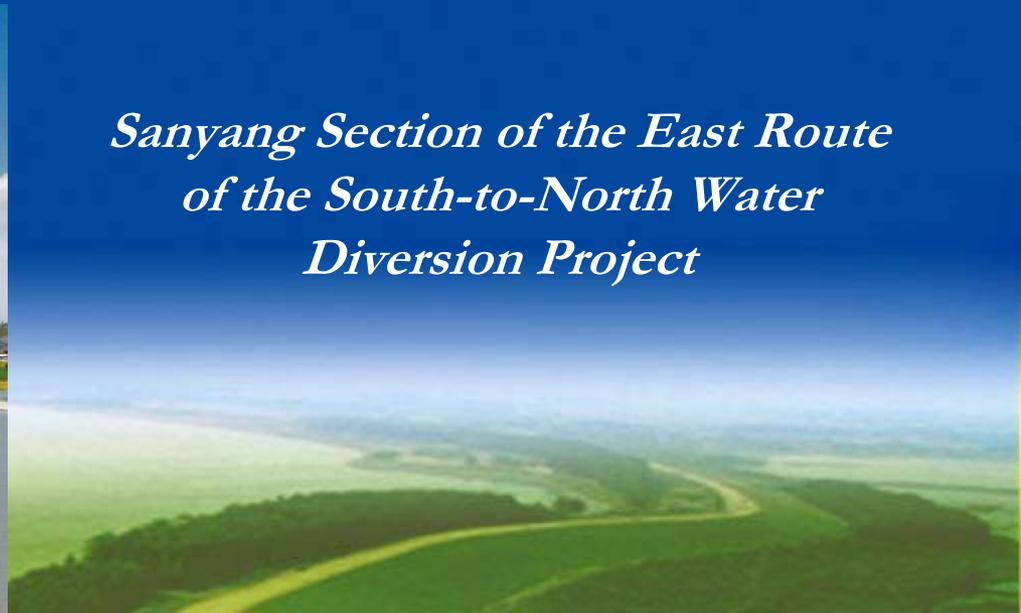
2.2 Major policy focuses of future water investment and financing

4. Make better use of foreign investment.

- Active use of loans from international financial institutions and foreign governments;
- Draw upon advanced foreign management experience;
- Realize the demonstrative effect of foreign-invested projects.



*Sanyang Section of the East Route
of the South-to-North Water
Diversion Project*



2.2 Major policy focuses of future water investment and financing

5. Improve supervision and management of water investment.

- **Intensify supervision over the use of water investment,**
- **Enhance the regulations on supervision, post-evaluation and performance assessment of water projects,**
- **Conduct total-process regulation over investment management,**
- **Upgrade investment management and return on investment,**
- **Expand the right of the general public to information, participation and supervision.**





THANK YOU !

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