

Considerations of Water Security in the Formulation of the 13th Five-Plan

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I. Challenges and Opportunities

- 12th five year plan comes to end in one year and the 13th is coming
- 13th five year plan is a key milestone of modernization of China. By 2020, China will build up a well-off society in an overall manner
- Water resources is key backbone for new-type urbanization, industrialization and agricultural modernization
- Expected to play important role in promoting regional development, providing public service, facilitating economy, improving eco-environment, guaranteeing water security, etc

Challenges

- China still faces flooding, water shortage, water pollution and ecological degradation with climate change and rapid social and economic development
- Promising water issues have many contributing factors, including natural and historical reasons, differentiating development stage, institutional, etc

- **Natural conditions. Huge population, less water, uneven distribution, all aggregate complexity of water issues**
- **Extensive development mode. Economic structure, industrial layout mismatch with load capacity of water resources and environment, plus irrational water use patterns, low water use efficiency and effectiveness**
- **Insufficient infrastructure.**
- **Inadequate or inappropriate water managerial system and insitution. Integrated, collaborative, efficient system not in place**

Opportunities

- President Xi Jinping's water management philosophy: water-saving first priority, space balance, systematic treatment, and giving equal roles to market and governmental measures.
- Water listed as outstanding part of ecological processes; water management and water environment protection written as key component of institutional improvement
- Rule of Law provides legislative basis for managing water in line with law
- The near future is the crucial period of speeding up infrastructure construction and deepening water reform

II. Overall Philosophy of Providing Water Security

- Civilian's interests is the first priority. Flooding, wide access to drinking water, and public service
- High efficiency of water use. Water-saving throughout process of social and economic development and livelihood
- Water resources load capacity as inelastic constraining factor. Demand management. Water availability determining demand. Implementing the strictest water management system

- **Systematic treatment of rivers and lakes.**
Integrating water resources, environment, ecosystem, disasters
- **Collaborative role of government and market.**
Market to play decisive role in allocating resources, governments to play a leading role
- **Rule of law and management with science.**

III. Major Tasks of Water Reform and Development

1. Strengthening water-saving society construction

- Striving for agricultural water saving. Modern high-efficient irrigation system
- Speeding up innovation of industrial water conservation. Water recycling
- Water conservation in service and urban domestic water use. Water grid upgrading; use of water-efficient equipments and facilities
- Non-conventional water source use. Wastewater treatment facilities; desalination

2.Flooding defense and drought relief

- Improve disaster resilience capacity
- Urban counter-logging measures
- Emergency management for drought relief
- Regulation and commanding for flood defense and drought relief

3.Speeding up infrastructure construction

Key water structures.

- ☐ Agricultural,
- ☐ diversion,
- ☐ water source,
- ☐ river channeling, etc

Rural infrastructures.

- ☐ Rural water quality improvement
- ☐ small on-farm facilities
- ☐ green small hydropower
- ☐ ponds, etc

4. Water ecological processes

- **Water resources protection.** Reducing total discharged pollutants, protecting key water source area, rehabilitate eco-fragile river and lake, carry out ecological regulation
- **Treatment of groundwater over-exploited area.** Reducing over abstraction scale
- **Water and soil conservation**
- **Water system linkage.** Connecting rivers, reservoirs and lakes into a water grid or system
- **Environmental friendly structure.** Combining construction with environment protection

5. Modernized water management

- **Implement the strictest water management system.**
Total water usage, water use efficiency, pollutant discharge control in water functioning zone.
monitoring
- **Water body management and protection.**
- **Modernization of water structure management system**

6. Deepening reform in key water areas

- **Water rights system.**
 - **Water permits.**
 - **Water rights trading.**
 - **Creating water market**
- **Water price reform.**
 - **Rural water price reform**
 - **Urban water tiered price**
- **Diversified Investment mechanism.**
 - **public revenue**
 - **social capital**

7.Rule of Law

- Water legislation

- Enactment and penalty

- Administration in line with law

- power list

- defining jurisdiction between central and local governments

- information publicity

8.Capacity Building

Science innovation and International Cooperation

➤ climate change, high efficient water saving technology, water environment protection and treatment, water disaster prevention and preparedness, risk management, etc.

Staff training and education

Capacity building in grass level

Hydrological information and network

Thank you for your attention