

WATER-SAVING IRRIGATION DEVELOPMENT STRATEGIES IN CHANGING SITUATION IN CHINA



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ORDER TO TALK

1. The changing situation
2. Brief of Irrigation in China
3. Irrigation development strategies

1. The changing situation

1. Climate change

- Climate change resulted in more extreme weather conditions, like droughts and floods, causing yield losses
- Land with Irrigation and drainage facilities making agriculture more climate-resilience for food security



1. The changing situation

2. Increasing sector competition for water

- % of water used for agriculture sector: 83% in 1995 to 62% in 2019, 71% in the world
- The largest potential of water-saving, while maintaining food security.

Water Use by Sector



1. The changing situation

3. Increasing water demand for ecological service

- Control groundwater exploitation to keep its balance
- Maintain the ecological and environmental quality of surface water bodies
- Either reduce water intake (from rivers) or supply more water for ecological service (to lakes and wetlands)

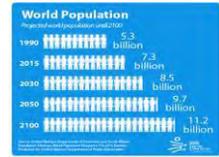
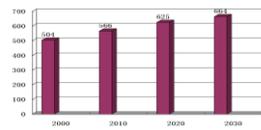


1. The changing situation

4. Increased demand for food

- Grain demand increased with population increasing
- Demand increased for high water-consumption agricultural products

Grain Demand Increased with Population Increasing (million T)



2. Brief of Irrigation in China

1. 68 Mha of irrigation area, about 50% of the total cropland, produces 75% and 90% of total grain and cash crop production, respectively
2. Total micro-irrigation area: 11.3 Mha in 2019.
3. Irrigation water per ha is 5475 m³ in 2019
4. Irrigation water use efficiency: 0.55 in 2018
5. Irrigation water productivity: 1.6 kg/m³ in 2019



3. Irrigation development strategies

Water-saving irrigation development strategies:

- Strategy 1:** Put more effects to adopt sprinkler and drip irrigation, and the irrigation area with pipelines for water conveyance;
- Strategy 2:** Each year, aiming at 1.3 mha is to be transformed into efficient irrigation area;
- Strategy 3:** To launch a new program of 2021-2035 for the modernization of large scale irrigation schemes, focusing on water-saving, ICT use and smart irrigation for irrigation management, and improving ecological service of the schemes, etc.;

3. Irrigation development strategies

Strategy 4: In any given region, the irrigated area and the agricultural/crop production must be determined by water, which is available for agriculture;

Strategy 5: “Total quantity control, quota management” ---The total water amount for agricultural sector in a given area must be strictly controlled and irrigation norm should be managed precisely; and

Strategy 6: More effects will be input on the R&D of water-saving irrigation technologies, and on the dissemination of practical technologies and equipment in irrigation practice.

Thank you