Opportunities and Challenges of Water Ecology and Environment Protection in the Yangtze River Economic Belt (YREB) of China

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• Background
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◆ Yangtze River, one of the largest and longest rivers in Asia;

◆ The Yangtze River Economic Belt (YREB), 2.1 million km²;

◆ The environmental and ecological conditions of the Yangtze River Basin have been heavily impacted by anthropogenic activities.
The important role of YREB in China

In 2014, the State Council of China developed and implemented a national policy to reinforce its sustainable development.

In 2017, *Ecological and Environmental Protection Plan for Yangtze River Economic Belt has been issued* by Ministry of Ecology and Environment, National Development and Reform Commission and Ministry of Water Resources
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Current status of water environment

Water quality:
Class I-III, 84.5%;
Class IV-V, 13.3%;
Inferior V, 2.2%.

Class I-III indicates water in good condition;
Class IV is mainly applicable to general industrial water areas and recreational water areas where the human body is not in direct contact;
Class V is mainly applicable to agricultural water areas and landscape waters.

Sources: Bulletin of China’s Ecology and Environment, 2017
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Problems ahead of water protection

Ecological environment fragmentation, ecological function degradation
➢ Town area increased by 39%; upstream threatened fish species accounted for 40% of the whole nation.

Large amount of pollutants discharged, high risk of drinking water safety
➢ Total wastewater discharge accounts for >40% of the country;
➢ 48.4% of drinking water source is lack of emergency response capacity.

The contradiction between regional development and protection is outstanding
➢ Phosphate mining development and phosphorus chemical industry lead to total phosphorus as the primary over-standard factor in the Yangtze River;
➢ Unbalanced regional development, polluting enterprises moving upstream;
➢ 8 destitute areas are located in key ecological functional areas.
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Countermeasures

The overall protection goals

Ecological and Environmental Protection Plan for Yangtze River Belt

- the ecological environment be significantly improved;
- the stability of the ecosystem be improved;
- the ecological functions of lakes and wetlands be basically restored;
- the mechanism of ecological environmental protection be further improved.

- the dry tributaries have sufficient ecological water;
- the overall improvement of water quality and ecological quality;
- the function of ecosystem services be significantly enhanced.
Countermeasures

- Key protection aspects

_Ecological and Environmental Protection Plan for Yangtze River Economic Belt_
# Countermeasures for water protection

## Main index

**Ecological and Environmental Protection Plan for Yangtze River Economic Belt**

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<th>2015</th>
<th>2020 Goal</th>
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<tbody>
<tr>
<td>Total water consumption (100 million m3)</td>
<td>2622.70</td>
<td>&lt;2922.19</td>
</tr>
<tr>
<td>per 10,000 yuan of GDP, water consumption decreased</td>
<td>-</td>
<td>27%</td>
</tr>
<tr>
<td>Effective utilization coefficient of farmland irrigation water</td>
<td>0.516</td>
<td>0.529</td>
</tr>
<tr>
<td>New soil erosion control area (10,000 square kilometers)</td>
<td>-</td>
<td>10.00</td>
</tr>
<tr>
<td>Forest cover rate(%)</td>
<td>41.30</td>
<td>43.00</td>
</tr>
<tr>
<td>Wetland area (10,000 hectares)</td>
<td>1154</td>
<td>&gt;1154</td>
</tr>
<tr>
<td>Natural shoreline retention rate of the Yangtze River</td>
<td>-</td>
<td>&gt;64.6%</td>
</tr>
<tr>
<td>Water quality of centralized drinking water sources better than class III</td>
<td>93.2%</td>
<td>&gt;97.0%</td>
</tr>
<tr>
<td>The national control section (point) of surface water meets or exceeds Class III</td>
<td>68.0%</td>
<td>&gt;75.0%</td>
</tr>
<tr>
<td>Inferior V type section (point) ratio</td>
<td>7.0%</td>
<td>&lt;2.5%</td>
</tr>
</tbody>
</table>
Countermeasures for water protection

Six Major Tasks

- to establish the **threshold of water resources use** and properly handle the relationship between rivers, lakes and reservoirs.

- to innovate and protect the ecological environmental protection mechanism policies and promote regional synergy linkage.

- to adhere to the bottom line of environmental quality and promote the rule of water pollution prevention and control in the basin.

- to delineate the **ecological protection red line** and implement ecological protection and restoration.

- to strengthen the prevention and response of sudden environmental incidents and strictly control environmental risks.

- to comprehensively promote environmental pollution control and build a livable urban and rural environment.
Countermeasures for water protection

- Six Major Projects

- Water environment protection and treatment
- Urban and rural environmental improvement
- Environmental risk prevention and control
- Environmental monitoring capacity building
- Water resources optimization
- Ecological protection and restoration

Projects:
1. Water resources optimization
2. Ecological protection and restoration
3. Water environment protection and treatment
4. Environmental risk prevention and control
5. Environmental monitoring capacity building
6. Urban and rural environmental improvement
The Guarantee measures

- Strengthen the organization and leadership of the government
- Improve the implement of environmental rule of law
- Increase capital investment
- Strengthen scientific and technological support
- Strictly assess and evaluate
- Achieve information disclosure
Conclusions

- The Yangtze River Economic Belt (YREB) plays an important role in economical development and ecology and environmental protection of China;

- The ecological function degradation, large amount of pollutants discharge and the contradiction between regional development and protection pose big challenges for the water ecology and environment protection in YREB;

- The issue of *Ecological and Environmental Protection Plan for Yangtze River Economic Belt* with its comprehensive consideration of water resources, water ecology and water environment would ensure a green and sustainable development of YREB.
Welcome questions

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