

The background is an abstract, artistic representation of water. It features a large, swirling splash of blue and teal colors, with various shades of blue and green. The water appears to be in motion, with splashes and ripples. The overall effect is dynamic and fresh. The text is overlaid on the left side of the splash.

Chapter 5

River and Lake Management

1 Overview

Rivers and lakes carry water resources, provide storage space during floods, and are an important component of the national ecosystem. These functions provide essential support for economic and social development, and play an irreplaceable role in flood control, water supply, power generation, shipping, fisheries, maintaining biodiversity and regulating climate. China has a large number of rivers and lakes with a long history. A total of 45,203 rivers cover a drainage area of 50 km² or more and their combined total length is 1,508,500 km. 2,865 natural lakes occupy a water surface area of 1 km² or more. The total surface area of all the lakes is 78,000 km². From the south to the north, there are many major rivers, such as Pearl River, Yangtze River, Huaihe River, Yellow River, Haihe River, Liaohe River and Songhuajiang River, and also several major freshwater lakes: Poyang Lake, Dongting Lake, Taihu Lake, Hongze Lake and Chaohu Lake. Among them, the Yangtze River, with a length of 6,296 km is the third longest river in the world and Poyang Lake is China's largest freshwater lake. At present, China's major cities, infrastructure and grain production areas are mainly distributed along the rivers, namely the flood control zones of seven major rivers. Their population accounts for about one-third of the country, while their cultivated land accounts for 22%, and the economic aggregate accounts for about half.

With the focus on economic and social development, the impact of



human activities on rivers and lakes is gradually expanding. China has established competent authorities for rivers and lakes, improved the management of operations and institutions, refined policies, regulations and planning standards, and strengthened protection. Especially since 2016, the system of river chiefs and lake chiefs has been introduced all over the country. With the main tasks of protecting water resources, preventing water pollution, improving water environments and rehabilitating water ecology, we will gradually build a river and lake management & protection mechanism with clear responsibilities, orderly coordination, strict supervision and forceful protection, and therefore maintain the health of rivers and lakes.

2 Major Achievements

2.1 A Complete System of River/lake Chiefs Has Been Established

2.1.1 Improving the Responsibility System of River/lake Chiefs

Local government heads of 31 provinces (autonomous regions or municipalities directly under the Central Government) have been appointed as general river chiefs. More than 300,000 river/lake chiefs have been hired at provincial, city, county and township levels. Besides, there are over 900,000 village-level river chiefs, lake chiefs, river inspectors and



river guards. Dynamic adjustment has been made to the mechanism of river/lake chiefs to ensure that work is kept on file and responsibilities are not disclaimed.

2.1.2 Refining the Working Mechanism of the System of River/lake Chiefs

An inter-ministerial joint meeting system has been established and enriched to comprehensively implement the system of river/lake chiefs. A joint meeting mechanism of provincial river/lake chiefs has been established in seven major river basins across the country. Thus, a coordinated linkage mechanism has come into being that takes the basin as a unit and coordinates the upstream and downstream, left and right banks, trunks and tributaries. According to their respective circumstances, local governments have appointed river sergeants and recruited local river chiefs plus river and lake cleaners. They also developed the role of the volunteer service teams and mobilized the whole society to participate in water management, water control and water conservation.

2.1.3 Strengthening the Performance of Duties and Responsibilities of River/lake Chiefs

All localities have issued orders of the general river chiefs to fortify the performance of their duties. River/lake chiefs at all levels inspect,



investigate and survey rivers and lakes. They keep themselves informed of the basic situation of rivers and lakes, discover any problems of water erosion, and coordinate and supervise the implementation of renovation tasks. According to statistics, since 2018, across the country, river/lake chiefs at provincial, city, county and township levels inspect rivers or lakes for about seven million person-times per year.

2.1.4 Reinforcing the Construction of a System of laws and Regulations

The implementation of the system of river/lake chiefs is stipulated by *The Yangtze River Protection Law of the People's Republic of China* and *The Yellow River Protection Law of the People's Republic of China*. In various regions, the formation of laws and regulations has been strengthened. Nine provinces have promulgated special regional laws and regulations concerning the system of river chiefs and lake chiefs. Many provinces have specified distinctions on the system of river/lake chiefs in local regulations. These regulations are related to water resource management and protection, river management, sand mining management, lake management and protection, environmental protection, and prevention and control of water pollution. In accordance with the unified requirements, the localities have established a series of systems, including the conference system of river chiefs, the information sharing system, the information reporting system, the work supervision system, the assessment accountability and initiative system, the acceptance system, and so on. Combined with the local introduction of river chiefs inspecting rivers, work supervision and other supporting systems, these systems secure the successful practice of the systems of river chiefs and lake chiefs.

2.2 Prominent Problems are Tackled by Iron Fists

2.2.1 Launch a Long-term Special Campaign of “Clearing up the Four Disorders” in the Country’s Rivers and Lakes

Aimed at the prominent problems in rivers and lakes such as indiscriminate occupation and abuse, indiscriminate mining and over-exploitation, in 2018, the Ministry of Water Resources deployed a nationwide campaign of “Clearing up the Four Disorders” in the country’s rivers and lakes. Emphasis is put on clearing up and rectifying outstanding problems such

as disorderly occupation, mining, heaping and construction. Since 2019, we have been advancing the normalization and standardization of “Clearing up the Four Disorders” in rivers and lakes.

2.2.2 Continue to Carry out Special Rectification of Illegal Sand Mining in River Channels Nationwide

We have organized and carried out special rectification actions for illegal sand mining in river channels nationwide, having investigated and settled 5,839 illegal sand mining cases. We have improved the joint supervision mechanism of river sand mining in the trans-provincial regions of the Yangtze River, Yellow River, Huaihe River and other major rivers, which has effectively curbed large-scale illegal sand mining.



Special Rectification Action for Protection and Utilization of the Shoreline on the Yangtze River

2.2.3 Start a Special Action to Clean up and Rectify the Yangtze River and the Yellow River

We have successively carried out a series of special actions: cleaning up and disposing solid waste in the Yangtze River Economic Zone, cleaning up and rectifying illegal shoreline utilization projects in the main stream of the Yangtze River, rectifying illegal squatting on the Yangtze River,



Special Rectification Action for the Sand Mining

cleaning up and rectifying of illegal shoreline utilization projects along the Yellow River, “looking back” on the investigation and renovation of shoreline utilization projects along the Yangtze River main streams, and so on.

2.2.4 Carry out Special Actions of River and Lake Cleaning and Renovation in Line with Local Circumstances

Different strategies for rivers and lakes have been devised in different regions, such as organizing and carrying out special campaigns like “limpid rivers” , “lucid waters” , “clear streams” and “ecological rivers and lakes” , promoting the co-governance of water and shore, and implementing systematic management. In some regions, the policy of returning polders and fields to lakes is implemented to restore the ecological space along the shoreline of the river and lake waters. In some regions, rainwater and sewage are separated, water systems are connected, ecological water replenishment and dredging are carried out to eliminate black and smelly water bodies and poor class V water bodies. In some regions, they apply high standards to the construction of “5,000-km green paths” and a safe ecological water system to create clean water and a green bank. In some other regions, river and lake harnessing has even managed to force industrial transformation, the upgrading of the agricultural structure and the transformation of economic development methods, leading to a benign interaction between river and lake management & protection and economic development.

2.3 Supervision and Inspection of Rivers and Lakes is Reinforced

2.3.1 Reinforce the Supervision and Inspection of the Implementation of the System of River/lake Chiefs

The Ministry of Water Resources supervises and inspects the implementation of the system of river/lake chiefs in the counties and districts under the jurisdiction of 31 provinces (regions or municipalities) in the country every year, and adopts the approach of “canceling the number” concerning major issues.

2.3.2 Be Listed to Superintend Major Cases

In response to the prominent problems seriously affecting the health of rivers and lakes, the Ministry of Water Resources, in conjunction with relevant departments, is listed to supervise them. The Ministry will guide and urge the relevant local authorities to seriously investigate and deal with major violations of laws and regulations involving rivers and lakes, which constitutes a powerful deterrent.

2.3.3 Strengthen Social Supervision and Science and Technology Supervision

The Ministry of Water Resources has announced to the public supervision e-mail addresses and informants' hot-line telephone numbers. Many regions have also released their public WeChat accounts, opened 24-hour supervision calls, and created a “hands-on” column to provide complaints and reporting channels for the masses. The public consciously cares for and protects rivers and lakes, and effectively supervises violations of laws and regulations. Remote satellite imaging, unmanned drones and unmanned ships are employed to investigate and verify problems concerning rivers and lakes.

2.4 The Basis of River and Lake Management is Consolidated

2.4.1 Accomplish the Delineation of the Scope of River and Lake Administration

The clarification of border control for rivers and lakes has been accelerated, and up to now, the management scope of rivers and lakes in the first national water conservancy census list has been fully delineated,

except for unmanned areas. The people's governments at or above the county level shall announce the results of the delineation to the public.

2.4.2 Speed up the Compilation of River and Lake Related Planning

We have completed the protection and utilization planning for the shorelines of major rivers and the planning of river sand mining, strengthened the constraints of river and lake utilization planning, and strictly controlled the ecological space of rivers and lakes.

2.4.3 Promote Systematic Management of Rivers and Lakes

We have promoted health assessment of rivers and lakes on a national scale, and hence, river and lake health archives have been gradually established. We adhere to problem orientation, employ the rolling compiling method, formulate one policy per river/lake, and define the objectives, tasks and specific measures of river and lake management and protection. With the target of ensuring safety through flood prevention and achieving high-quality water resources, healthy water ecology, livable water environment, advanced water culture, we endeavor to implement a systematic management of rivers and lakes, improve the management and protection capacity of rivers and lakes, boost the development of the basins, vitalize rivers and lakes to the satisfaction of our people.

2.4.4 Be Dedicated to Building Smart Rivers and Lakes

We have almost completed the interpretation of remote sensing images of inland rivers and lakes (excluding unmanned areas) in the first national water conservancy census. The remote sensing background database of rivers and lakes has been further supplemented and improved, laying a good foundation for advancing intelligent regulation of rivers and lakes. We have established a national management information platform for the system of river chiefs, developed river/lake supervision apps and supervision information systems, and coordinated information sharing related to river and lake management & protection. Many places have implemented the "Internet + the system of river chiefs" action plan, researched and developed a trinity management information system, for the system of river chiefs, that integrates PCs, Mobile clients and WeChat public accounts. Some places set up a Cloud Operational Command Platform for river chiefs, and others set up palm water control circles.

All these efforts help to bring about the dynamic supervision of the river chiefs, intelligent management of water, and establish a strict network of rivers and lakes management & protection.

3 Specific Measures

We shall earnestly put the “sixteen-character” policy for water conservancy into effect, make full use of the platform of the river/lake chief system, give full play to the advantages of our systems and mechanisms, and adhere to overall planning, coordination and systematic management. Standing at the height of harmonious coexistence between man and nature, we shall promote the management and protection of rivers and lakes to a new level and make contributions to the high-quality development of water conservancy.

- 3.1 We shall pay more attention to the integration of the river basins and integrity of rivers, strengthen the responsibility of river/lake chiefs at the top level to command river/lake chiefs for various sections at different lower levels, make strict assessment on the performance of river/lake chiefs, intensify the application of assessment results, and further fortify the responsibilities of river/lake chiefs at all levels and of relevant departments.
- 3.2 We shall consolidate achievements of delineation to the administration scope of rivers and lakes, take firm control over partition of the functions of the shorelines of major rivers and enforce standardized management of legal sand mining. Focusing on clearing and regulating prominent problems that hinder flood discharge of river channels, we will advance in depth the normalization and standardization of the “Four Disorders” in rivers and lakes, resolutely curbing the increase and clearing up the stock.
- 3.3 We shall carry on severe punishment of illegal sand mining, and consolidate the achievements of the nationwide special rectification

action for illegal sand mining in river courses to maintain the order of sand mining in rivers. We will strengthen on-the-spot supervision of sand mining by means of information technology, and regulate the use of dredged sand, to bring about a win-win situation of river regulation & protection and utilization of sand and stone resources.

3.4 By means of smart rivers and lakes, we shall promote the modernization and intellectualization of river/lake supervision and inspection, facilitate the graphic presentation of information data such as the results of promoting the delineation of rivers and lakes and the functional zoning of shorelines, further enrich the functional modules of the national river/lake chief management information system, and try to realize one-stage filling and multi-level application.

3.5 We will continue to promote river/lake health assessment and establishment of river/lake health archives, strengthen systematic management based on the actual conditions of rivers and lakes, improve management and protection capacity, revitalize the ecological environment of rivers and lakes, boost the green social and economic development of river basins, and build more and more rivers and lakes into “happy” rivers and lakes for the benefit of the people.

