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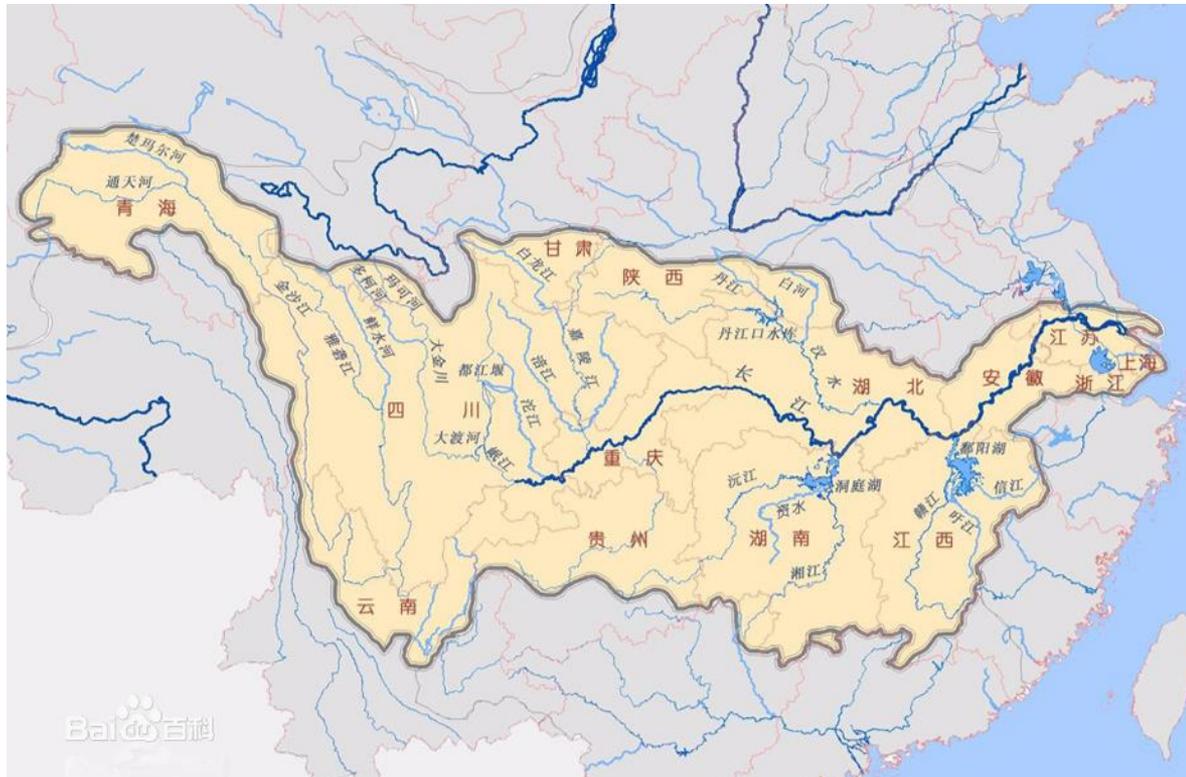
Eco-compensation among Three Provinces of Chishui River Basin

Environmental Protection Department of Guizhou Province

December 2018



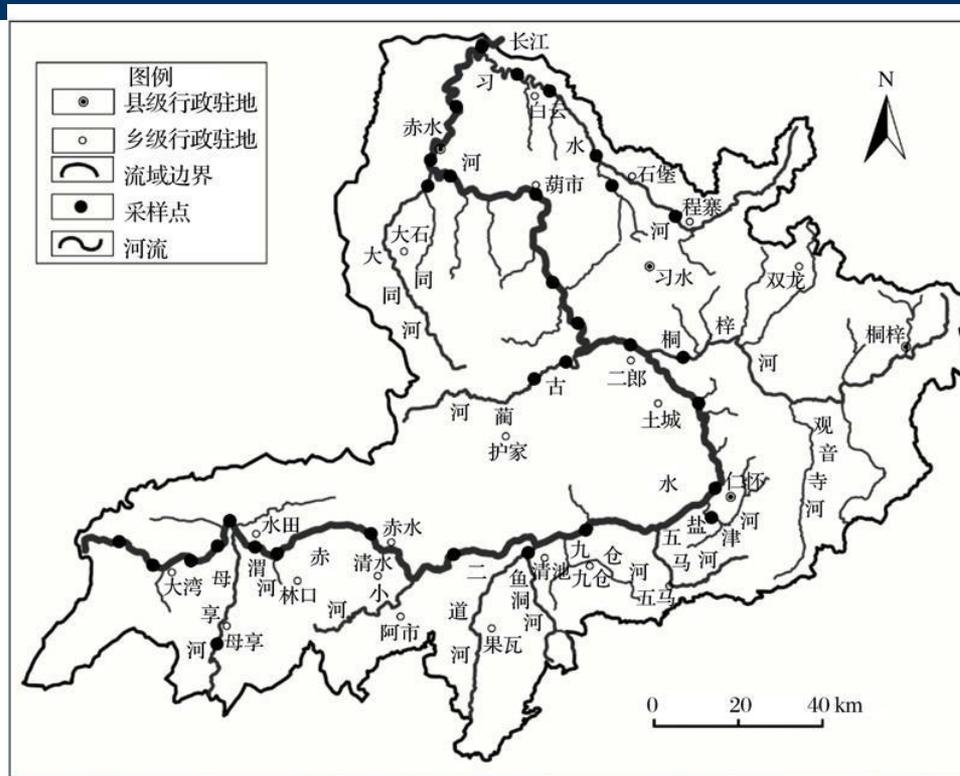
Yangtze River Basin



Yunnan, Guizhou, and Sichuan in Chishui River Basin



Chishui River Basin



Chishui Watershed Overview



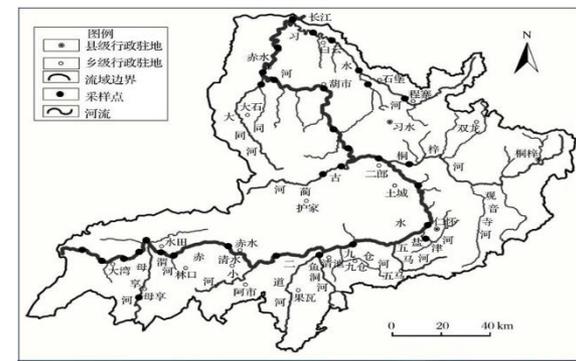
- Chishui River is an important first-class tributary on the right bank of the upper reaches of the Yangtze River. It originates from Chishuiyuan Town, Zhenxiong County, Yunnan Province, and flows through the three provinces of Yunnan, Guizhou and Sichuan, and enters the Yangtze River. The basin covers a total of 13 counties and cities in the three provinces. There are Zhenxiong County and Weixin County in Yunnan Province; in Guizhou Province, it mainly involves Qixing City, Dafang County, Jinsha County, Renhuai City, Chishui City, Xishui County, Zunyi County (Bozhou District), Tonglu County, etc. There are Gulin County, Xuyong County and Hejiang County in Sichuan Province. The total population of the river basin is about 5 million. The population of eight counties and cities in Guizhou Province is about 2.93 million. In 2014, the gross national product in the basin was about 83 billion yuan. Agriculture is the main industry in the basin, Liquor and mining is almost important.

Watershed overview



- The total length of the Chishui River is 436 km, and 268 km in Guizhou Province, accounting for 61.5% of the total length.
- The runoff ranges at 33.2 ~ 9890m³/s. The annual average runoff is 10.1 billion m³.
- The area of the Chishui River Basin is about 20,440 km²; the drainage area of Guizhou Province is 10,700 km², accounting for 56.4% of the total area of the Chishui River Basin.

Main tributaries of the Chishui River Basin



- The southeastern shore of the tributary of the Chishui River Basin is more than the northwestern shore. The southeastern coast has a large tributary, mainly including fourteen, mainly including Longdong River, Baohe River, Erdao River and its tributary Yudong River, Sancha River, Tonglu River and its tributary Gaoqiao River, Mishe River and Guanyin Temple River. And Shaxi River, Wuma River, Yanjin River, Tucheng Xiaohu, Xishui River, etc., all originated from the southeast of Dagu Mountain. There are 7 tributaries on the northwestern coast, including Weixin River, Yanjing River, Guyu River, Fengxi River, Datong River and its tributaries Xiaotong River and Shuiwei River. Tonglu River, Xishui River, Erdao River and Datong River. The Guzhang River Basin has a large area and the drainage area is over 1000 square kilometers.

Watershed natural environment



- The Chishui River Basin is located in the transition zone from the Yunnan-Guizhou Plateau to the Sichuan Basin. It belongs to the subtropical monsoon humid climate. The average annual temperature is $13.1\sim 17.6^{\circ}\text{C}$, and the annual average precipitation is $749\sim 1286\text{ mm}$. The Chishui River Basin is rich in biodiversity, and there are 9 nature reserves, including 3 at the national level and 6 at the county level. There are national first-class protected plants such as alfalfa, cycad, metase, ginkgo, golden tea and yew, and Darcy National level 1 protected fish such as alfalfa, white peony and roe. The Chishui River Basin is a karst landform. The carbonate rock distribution area accounts for 61% of the total area of the basin. The soil is mainly yellow soil and yellow brown soil. The mineral resources mainly include more than 20 kinds of coal, pyrite, iron ore, copper and zinc. The proportion of cultivated land, forest land and grassland in the Chishui River Basin was 27.1%, 64.9% and 7.5% respectively.

Important watershed function



The Chishui River Basin is rich in natural and culture resources, known as the Ecological River, the Beautiful River, the Liquor River, and the Hero River.

Important watershed function



—— “the Ecological River”

- As early as 1972, Premier Zhou Enlai clearly pointed out that within 100 kilometers upstream of Maotai Factory, industrial and mining construction was limited, and it was not permitted to build a chemical plant.
- Chishui River is an important habitat and spawning ground for rare and endemic fish in the upper reaches of the Yangtze River. At the end of 2011, the country take the upper reaches of the Chishui River to the Baiche Village, the middle reaches of the Wuma River estuary to the Datong Estuary, and the Xishui Estuary to the Chishui Estuary into the core area of the rare and endemic fish national nature reserve in the upper reaches of the Yangtze River.
- The Chishui River is the only tributary that has not been developed and has not been developed in the middle and upper reaches of the Yangtze River.
- The Chishui River Basin preserves the best evergreen broad-leaved forest belts in the same latitudes of the world and is rich in biodiversity.

Important watershed function



—— “ the Beautiful River ”

- The upper reaches of the Chishui River is a typical karst area. The middle and lower reaches are mainly Danxia landforms. The scenery is beautiful and the waterfalls are numerous. In 2017, it was named National Geological Park and World Natural Heritage.
- In 1994, Chishui Scenic Area was approved by the State Council to be included in the list of the third batch of national-level scenic spots. Chishui City enjoys the reputation of “the city of thousand waterfalls”, “the hometown of bamboo”, “the kingdom of spinuose” and “the crown of Danxia” .
- Since 2008, three national nature reserves have been established in the Chishui River Basin.eight city-level nature reserves. There is also a national-level scenic spot and two scenic spots in Maotai and Xishui. There are many forest parks such as Xishui and Yanziyan.

Important watershed function



—— “the Liquor River”

- The brewing industry in Chishui River Basin is developed. It is the origin of Chinese high-quality liquor such as Maotai, Lang Liquor, and Xijiu. Among them, Maotai won the “Gold Medal of Honor” in the Panama International Exposition in 1915 and was named “World Famous Liquor”.
- In September 1952, Zhou Enlai hosted the first national liquor competition. Maotai ranked the first, and was designated as a national banquet liquor to entertain foreign guests. It is the national liquor of New China.
- The production of Chishui River liquor accounts for 62% of the national liquor production.

Important watershed function



—— “the Hero River”

- In the historical process of the Chinese revolution, the Chishui River was known as the "Hero River." After the Zunyi Meeting in 1935, the Red Army fought back and forth between Maotai Town, Renhuai City, Guizhou Province and Tucheng County, Xishui County. The magical use of soldiers, the four crossings of Chishui, reversed the battle, leaving countless heroic stories. This took a crucial step towards the ultimate victory of the Chinese revolution.

Environmental protection status



Promulgation and implementation of the Regulations on Environmental Protection of Chishui River in Guizhou Province

- The regulations stipulate that the following activities are prohibited in the Chishui River Basin: (1) discharging oil, acid, lye or highly toxic waste liquid into the water body; (2) Washing vehicles, containers and packaging materials that have been filled with oil or toxic pollutants in water bodies; (3) Discharging, dumping industrial waste, urban garbage or other wastes into water bodies; (4) dumping, stacking, landfilling and other solid wastes or other pollutants along the river beach and bank slopes in the river basin; (5) Using pesticides prohibited by the State, and discarding pesticide packaging materials and wastes; (6) Producing, selling and using phosphorus-containing detergents; (7) Other acts prohibited by laws and regulations.

Environmental protection status



Preparation and implementation of the Environmental Protection Plan for the Chishui River Basin of Guizhou Province (2013-2020)

- The plan calls for the implementation of 9 major projects including industrial pollution control, urban domestic sewage and garbage treatment facilities, drinking water source environmental protection, livestock and poultry pollution control, small watershed pollution remediation, agricultural non-point source pollution control, and environmental supervision capacity building. And there are a total of 473 projects.
- Planning requirements By 2020, the total investment in the Chishui River Basin environmental protection project is expected to be about 5.6 billion yuan.
- The plan divides the Chishui River Basin into an ecological environment protection zone, an ecological environment restoration zone, and an ecological environment control zone.

Environmental protection status



Eco-compensation for river sections in Guizhou Province

- Two-way eco-compensation for water pollution prevention and control between Bijie and Zunyi
- Eco-compensation method: The water quality of the exit section of Bijie in the upstream is better than the water quality standard of Class II. The Zunyi benefiting from the downstream pays the ecological compensation fund; the water quality of the exit section of Bijie is lower than the water quality standard of Class II, and Bijie City pays the ecological compensation fund.
- There are three ecological compensation accounting factors: permanganate index (1 yuan/ton), ammonia nitrogen (0.7 million/ton), and total phosphorus (1.0 million/ton).

Environmental protection status



Implementing the river chief system in the river section of Guizhou Province

- It is stipulated that the main person in charge of the government of each jurisdiction in the Chishui River Basin is the river chief of the river area under its jurisdiction.
- River chief is responsible for the quality of the water environment within his jurisdiction.
- At the beginning of each year, the task of river chief protection was arranged, and the completion of the river chief was assessed at the end of the year.
- Each year, 10 million yuan will be arranged from the provincial special fund for environmental protection as the reward fund for the river basin system in the Chishui River Basin.

Environmental protection status



Formulate the Measures for the Administration of Provincial-level Special Funds for the Protection of the Chishui River Basin in Guizhou Province

- The provincial budget of 50 million yuan per year is earmarked for watershed environmental protection and ecological construction related projects.
- Guizhou Maotai Liquor Co., Ltd. donated 50 million yuan each year for 10 consecutive years to strengthen the ecological environment protection of the Chishui River Basin.
- The Provincial Department of Finance and the Provincial Environmental Protection Department jointly manage the special funds of the Chishui River Basin in accordance with the “Administrative Measures for the Protection of Provincial Special Funds in the Chishui River Basin” .

Environmental protection status



贵州茅台酒股份有限公司
赤水河流域保护生态环保专项资金

捐赠协议书

2014年12月
贵州·贵阳

Environmental protection status



Guizhou Province carries out environmental protection and judicial linkage

- Establish and improve the river basin environmental justice system. In April 2014, the Zunyi City People's Court established the “Chishui River Environmental Protection Court”. In September, the Zunyi City Public Security Bureau established the Environmental Protection Reconnaissance Brigade.
- In 2014, Renhuai City established the “Renhuai Environmental Protection Court”, as well as the environmental protection law enforcement agencies such as the Public Security Environmental Investigation Brigade and the Environmental Protection Procuratorate, and formed a joint law enforcement mechanism led by the Political and Legal Committee and the relevant departments. Actively promote environmental protection, public security and administrative offices, and increase efforts to crack down on environmental violations.

Environmental protection status



Guizhou Province carries out contiguous treatment of industrial pollution and implements third-party governance

- Nearly 2,000 liquor-making enterprises in Renhuai City were divided into eight areas, and eight sewage treatment plants were planned to collect and treat the brewing wastewater in each area.
- In accordance with the principle of “government-led, system and governance separation, contiguous governance, superior to national standards”, adopt market investment and financing measures, unify construction and operation management, implement third-party governance, professional operation, and adopt sewage disposal and annual repayment methods. Effectively control industrial pollution.

Environmental protection status



Strengthening environmental protection capacity building

- On the main stream of the Chishui River, 12 new water quality monitoring stations across the county boundaries will be built, and the water quality of the Chishui River will be monitored and monitored 24 hours a day.
- Strengthen the water quality analysis capacity building of county-level environmental monitoring stations in the basin, and promote the standardized management of county-level monitoring capabilities.

Environmental protection status



Strengthen the supervision of the whole river basin

- Establish a water law and environmental protection linkage law enforcement supervision mechanism in the Chishui River Basin of Yunnan, Guizhou and Sichuan, strengthen information exchange, and strengthen efforts to combat environmental violations.
- Establish an annual regular meeting system for the three provinces of Chishui River, discuss and summarize the water environment problems in the basin, and combine them to implement integrated management of water pollution prevention and control in the basin.
- Implement the monthly water quality report system of the Chishui River Basin, strengthen water quality and responsibility supervision, and provide a basic platform for river basin environmental management.

Environmental protection status



Good water quality

—The monitoring data show that the water quality of the main stream in the Chishui River Basin in Guizhou is good, the water quality of the whole basin is stable at Class III and above, and the water quality of the Qingshuipu section (Yunnan-Guizhou) and the Lianyuxi section (Guizhou-Sichuan) is stable at Class II.

Eco-compensation among the three provinces of Chishui River

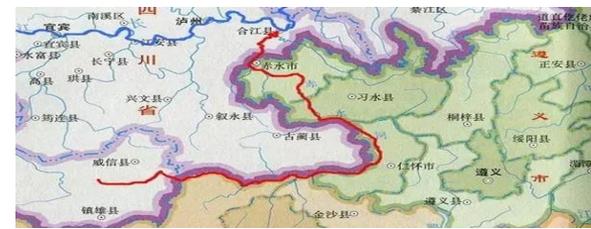


- General requirements: Under the guidance of Xi Jinping's new era of socialism with Chinese characteristics, the implementation of the requirements of the 19th National Congress of the Communist Party of China on "taking a great deal of protection and not promoting development, promoting the development of the Yangtze River Economic Belt" and the "the State Council" Opinions on Improving the Compensation Mechanism for Ecological Protection, promote the three provinces of Yunnan, Guizhou and Sichuan to adhere to the principles of ecological priority, green development, sharing responsibility and sharing benefits in the basin area, implementing unified planning, unified standards, unified environmental assessment, unified monitoring and unified enforcement of watershed environmental protection, and the formation of the Chishui River Basin Great protection pattern.

Eco-compensation among the three provinces of Chishui River



- **Three provinces eco-compensation target**
- Responsibility for the main stream: (1) The environment quality of the Chishui River Basin meets the standards and remains stable, and the water quality does not deteriorate. (2) Qingshuipu (Responsibility of Yunnan Province) and Lianyuxi (Guizhou Province Responsibility) The average annual water quality of the main control section of the main stream has reached Class II standards, and the water quality remains stable. (3) Other water resources and water ecological protection objectives may be included in the compensation target after consultation.
- Responsibility for tributaries: (1) The section of the upper reaches of Maotai Town is increased. The provinces of responsibility are divided into Sichuan and Guizhou, with weights of 50% each. (2) Increasing the Tonglu River and Xishui River (Changsha Section) into the Chishui River section as the assessment section, the responsibility is with Guizhou Province; the cross-provincial monitoring section is added in Datong River and Guzhang River, and the responsibility is with Sichuan Province.



Eco-compensation among the three provinces of Chishui River (compensation method)

- 1. Sources of compensation funds and distribution and use:(1) The people's governments of the three provinces jointly provide 200 million yuan to set up the horizontal water fund of the Chishui River Basin. The capital contribution ratio of Yunnan, Guizhou and Sichuan is 1:5:4, and the proportion of allocation is 3:4:3.(2) According to the conditions of assessment section setting, the importance of ecological environment function, and the difficulty of protection and management, the three provinces set up compensation weights in stages, and decomposed compensation funds and governance tasks into responsible cities and counties.(3) Compensation funds are mainly used for ecological environmental protection and governance and water pollution prevention and control in river basins, exploring diversified and market-oriented ecological compensation methods, and attracting all parties involved in the ecological environmental protection of Chishui River Basin.



Eco-compensation among the three provinces of Chishui River (compensation method)

- **2. the funds are liquidated one by one river section for liquidation:**(1) Sectional liquidation shall be carried out according to the compensation weights of each section and the water quality compliance of the assessment section determined by the agreement. (2) The area where the water quality meets the requirements of the assessment target shall be fully compensated; (3) Only the area where the water quality meets the target, the amount of the compensation fund shall be discounted according to the water quality and quantity, and the compensation fund shall be deducted appropriately;(4) In areas where the water quality and quantity targets are not met at all, all compensation funds shall be deducted.



Eco-compensation among the three provinces of Chishui River (compensation method)

- **3. Fund deduction method:** The deducted funds are used in principle to compensate the downstream provinces that signed the agreement: (1) If the section of Qingshuipu reached the target partially or failed to meet the standard, the deduction of funds from Yunnan Province was paid to Guizhou Province and Sichuan Province, and the distribution ratios of the two provinces were 50%; (2) If the section of the lianyuxi reached the target partially or not reached the target, the deduction of funds from Guizhou Province will be paid to Sichuan Province; (3) If the section of the Datonghe and Gulinhe reached the target partially or not reached the target, the deduction funds of Sichuan Province will be allocated to Guizhou Province; (4) If the section of the Tongzihehe and Xishuihe reached the target partially or not reached the target, the deduction fund of Guizhou Province will be allocated to Sichuan Province; (5) If the section of the Maotaizhen reached the target partially or not reached the target, Guizhou Province and Sichuan Province deduct the funds according to the proportion of 50% each, and deducted the funds to the downstream districts.



Eco-compensation among the three provinces of Chishui River (compensation method)

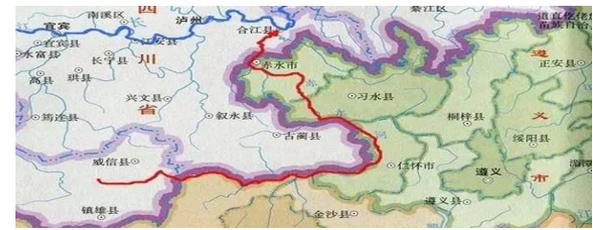
● 4. Implementation and supervision of eco-compensation funds:

The people's governments of Yunnan, Guizhou and Sichuan are responsible for the implementation of their respective compensation funds, organizing and verifying the annual implementation plan for ecological environmental protection and governance of the river basin, and supervising the use of compensation funds and project implementation.



Organization and implementation of eco-compensation among the three provinces of Chishui River (一)

- The people's governments of the three provinces are responsible for strictly implementing the tasks identified in the compensation agreement, and compiling the Implementation Plan for Compensation for Horizontal Ecological Protection in the Chishui River Basin, and implementing them.



Organization and implementation of eco-compensation among the three provinces of Chishui River (二)

- Carry out joint action and control by the three provinces:(1) The three provinces establish a working mechanism for joint action and control, and hold an annual coordination meeting of the Chishui River Basin Ecological Environmental Protection Work;(2) Establishing an environmental information sharing mechanism, jointly investigating and cracking down on cross-provincial environmental regulation violations, implementing upstream and downstream environmental assessment consultations and environmental pollution emergency response, and actively carrying out water resources protection, water pollution prevention and ecological environmental protection. (3) The Ministry of Finance, the Ministry of Ecology and Environment, the National Development and Reform Commission, and the Ministry of Water Resources have strengthened technical guidance on joint action and control by the three provinces.



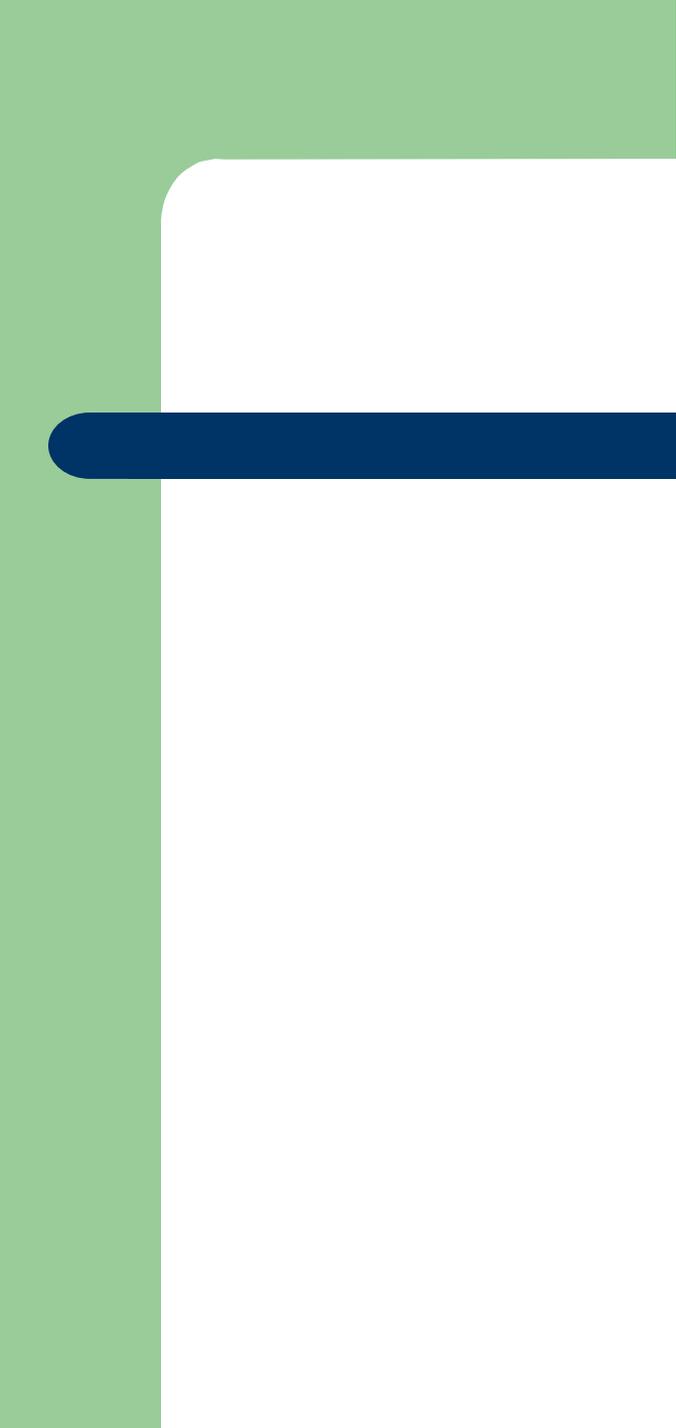
Organization and implementation of eco-compensation among the three provinces of Chishui River (三)

- Monitoring methods for eco-compensation assessment indicators in the three provinces:(1) The assessment and monitoring indicators are the three indicators of permanganate index, ammonia nitrogen and total phosphorus in Table 1 of Surface Water Environmental Quality Standard (GB3838-2002). (2) The data of the monitoring by the China Environmental Monitoring Station, the automatic monitoring station or the relevant provinces jointly is the basis for assessment.



Organization and implementation of eco-compensation among the three provinces of Chishui River (四)

- The scope and duration of eco-compensation among the three provinces:(1) The compensation scope is the Chishui River Basin of the three provinces. The compensation base is 2017, and the implementation period is from 2018 to 2020. (2) The three provinces shall submit the relevant information to the Ministry of Finance, the Ministry of Ecology and Environment, the National Development and Reform Commission and the Ministry of Water Resources in the first quarter of each year.



Thank you!