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Project News: A New Green Line

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Mainstreaming Biodiversity Conservation Objective and Practices into China's Water Resources Management

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Lectures on freshwater ecosystem conservation

MWR PMO and The Nature Conservancy (TNC) jointly organized a series of online lectures on concepts and practices of freshwater ecosystem conservation on April 27 and May 11, 2022.

Four TNC experts presented examples and practices of removing abandoned dams, restoring flood plains and river connectivity, and protecting freshwater biodiversity in the United States. About 260 participants attended the lectures from more than 20 institutions at the central and local levels. The lectures broadened their horizons and enriched their knowledge about river and lake ecosystem conservation.

Ba'nan removed small hydropower stations on the Wubu River

In order to protect the biodiversity of the Wubu River, Ba'nan District of Chongqing Municipality removed the barriers at Yangjiadong and Jianqiao hydropower stations in the lower reaches of the Wubu River in November 2022, with a total investment of around 380 000 USD.

Yangjiadong Hydropower Station was removed in Ba'nan in June 2022.

The removal will help restore the connectivity of the Wubu River and habitats with an area of about 35 hectares along the river channel.

Jiangjin built fish passage

Jiangjin District of Chongqing Municipality completed the Xiaojiatan Barrage fish passage project on the Tanghe River in December 2022, with a total investment of around 2 230 000 USD.

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The fish passage is expected to support migration of fish species such as *Procypris rabaudi* and *Spinibarbus sinensis* and increase fish population and biodiversity. This is the first project for biodiversity conservation in Chongqing and in the national sanctuary of rare and unique fish in the upper reaches of the Yangtze River. It will further support biodiversity conservation, scientific research, resource monitoring and environmental protection education in the national sanctuary of rare and unique fish in the upper reaches of the Yangtze River (Jiangjin Section).

A fish passage was built at the Xiaojiatan Barrage in Jiangjin in April 2022.

Yunnan will strengthen biodiversity conservation

A policy document to further strengthen biodiversity conservation was released on August 9, 2022, jointly by the General Office of Yunnan Provincial Committee of the Communist Party of China and the General Office of Yunnan Provincial People's Government. The document specifies 23 measures and 92 tasks covering 9 areas, setting goals on aquatic biodiversity conservation, such as significantly improving the aquatic biodiversity integrity in the Jinsha River.

Joint river patrol in Yunnan

The River/Lake Chief System Office of Yunnan Province and the Provincial Public Security Department jointly organized a five-day river patrol for the World Environment Day in June 2022, focusing on the nine plateau lakes, the Yangtze River basin, four international rivers and public drinking water sources. River patrol targeted problems such as environmental pollution, illegal fishing, illegal mining, and activities which block river courses. The two departments also inspected the management and control of the red and yellow ecological lines, and areas earmarked for conservation, ecological buffering and green growth in the nine plateau lake districts. Civil society organizations were encouraged to participate in various activities such as patrols, inspections, joint law enforcement and public communication. The activities increased public awareness of river and lake protection and supported the initiatives of developing safe, ecologically sound and happy rivers and lakes.

Pu'er held training on aquatic biodiversity monitoring system

Pu'er City organized a seminar on the development of aquatic biodiversity monitoring system and ecosystem conservation and restoration of rivers and lakes on May 29-31, 2022.

A seminar on aquatic biodiversity monitoring system was held in Pu'er, May 29-31, 2022.

A total of 50 people attended the seminar, who were from the municipal leading group, the project management offices and implementing partners of the two pilot counties, river chief system offices and related institutions in the other eight counties/districts. Ten were female, accounting for 20% of the total; 27 were ethnic minorities, accounting for 54%. Professor Huang Xiaoxia from Yunnan University was invited to lecture on biodiversity and Yunnan's aquatic biodiversity survey and conservation practices. Dr. He Kejian from Yunnan University talked about theories and practices on fish habitat conservation. The training improved the participants' understanding of river and lake health assessment.

Jingdong organized training on aquatic ecosystem management

Jingdong County PMO organized a seminar on management and protection of aquatic ecosystems. A total of 50 people attended the seminar, including representatives of township-level river chiefs from the 13 towns of the county, village-level river chiefs, civil river patrollers of Jinping Township where the pilot river was located, the county leading group of river chief system, and the county river chief office. Seven of them were female, accounting for 14% of the total and 21 of them were ethnic minorities, accounting for 42%.

Lecturers were from Jingdong Water Resources Bureau; Agriculture, Rural Affairs, Science and Technology Bureau; Forestry and Grassland Bureau; and People's Procuratorate. Topics include water resources and e-flow

monitoring and management; fish restocking; supervision, law enforcement and public interest litigation; wetland protection and restoration.

A seminar on management and protection of aquatic ecosystems was held in Jingdong, April 25-27, 2022.

School education on river protection in Zhenyuan

A joint campaign on river protection was initiated by river/lake chiefs and the school principal at a primary school in Zhenyuan County on September 19, 2022. Various activities were carried out, including sending *A Letter to All Parents*, recruiting volunteers for river stewardship, calling for calligraphy and paintings and developing posters featuring "beautiful rivers and lakes". These activities motivated students to inform their parents about river protection. As such, the river/lake chief system was extended to families and the public.

A joint campaign on river protection was initiated in Zhenyuan on September 19, 2022.

The first online classroom on popular science was organized by the River Chief System Office of Pu'er City and the River Chief System Office of Zhenyuan County on October 19, 2022. Xu Jing, Deputy Director of INTCE, was invited to lecture on water saving and protection for local primary school students. The lecture improved the understanding of ecological civilization and river and lake protection among teachers and students.

Summary and on-site inspection of pilot projects

PMOs of Yunnan Province and Chongqing Municipality have summarized the pilot project implementation and achievements, according to the arrangement of MWR PMO. Their summary covers policies and regulations on aquatic biodiversity conservation, conservation under the river/lake chief system and highlights of pilot work. Self-evaluation reports and brochures on project achievements were submitted in July 2022.

A field visit of pilot rivers in Jiangjin, Chongqing, on September 16, 2022.

In September 2022, Jin Hai, Director of INTCE and a member of the Project Steering Committee, visited the project areas in Chongqing and Yunnan, together with MWR PMO. He was updated with the status of the pilot projects and discussed with local PMOs on the next steps. Mr. Jin was joined by two other members of the Project Steering Committee: Luo Zhihong from Chongqing Municipal Water Resources Bureau and Li Bogen from Yunnan Water Resources Department.


An interview with villagers in Zhenyuan, Yunnan, on September 25, 2022.

The terminal evaluation

MWR PMO completed a self-evaluation report and submitted it to the terminal evaluation team in August 2022. The team interviewed representatives of the Project Steering Committee, PMOs at all levels and key technical service providers in August and September 2022. The national consultant visited pilot areas in Yunnan Province

and conducted document review at MWR PMO. A summary meeting was held online on September 30, attended by the evaluation team, MWR PMO and representatives from FAO.

The evaluator interviewed villagers in Zhenyuan on August 30, 2022.

Reports reviewed by PMOs

Yunnan PMO organized an expert committee to review the technical reports in Kunming on December 2, 2022. The first one was produced by Yunnan University, titled *Aquatic Ecosystem Survey and Piloting in Yunnan Province (2021)*; and the second was developed by Yunnan Institute of Water and Hydropower Engineering Investigation, Design and Research, titled *A Study and Pilot on Policies and Regulations on Aquatic Ecosystem in Yunnan Province (2021)*. Both reports were approved.

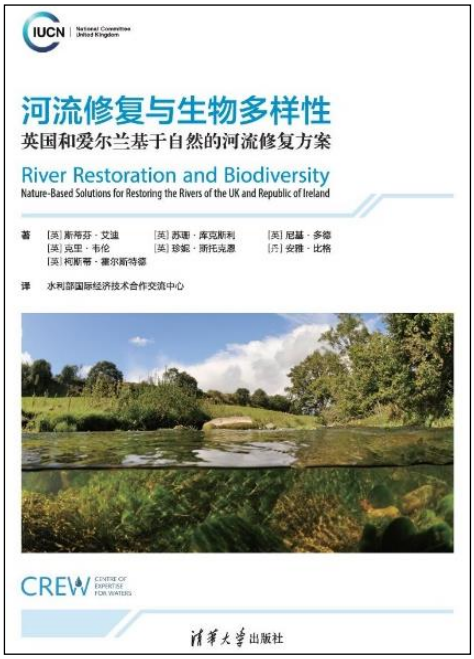
Chongqing PMO organized an expert committee to review two technical reports in December 2022. The first one was produced by Southwest University, titled *A Study of Water Resources Management Techniques to Support Aquatic Biodiversity Conservation in Chongqing (2021)*; and the second was developed by Chongqing Surveying and Design Institute of Water Resources, Electric Power and Architecture Co., Ltd, titled *An Analysis on Water Resources Management Policies for Biodiversity Conservation in Chongqing (2021)*. Both reports were approved by the PMO based on the comments of the expert committee.

TNC delivered reports

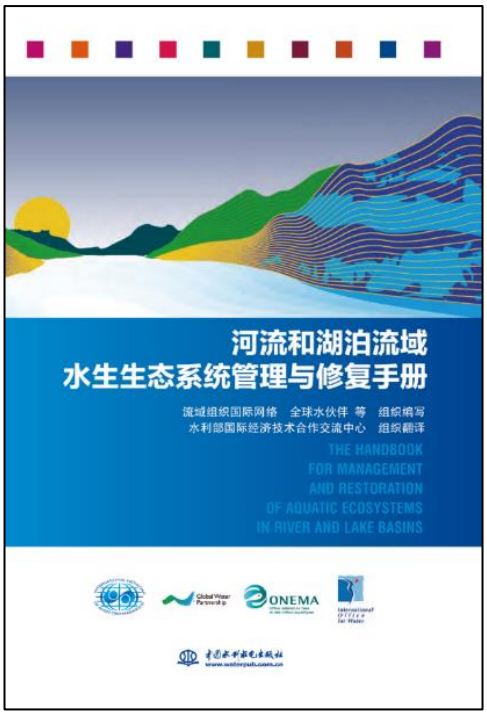
The Nature Conservancy (TNC) produced and delivered several reports in May 2022 to share methods and practices of international freshwater ecosystem conservation, which could serve as reference for the protection and management of rivers and lakes in China. *Durable Freshwater Protection Framework and Case Studies* describes how to achieve a virtuous cycle of conservation goals through better interaction between economic, social and legal factors. *Systematic Conservation Planning for Freshwater Biodiversity* describes the methods and procedures of systematic conservation planning and its application in the planning of priority reserve in the Upper Mississippi River Basin and biodiversity conservation network in the Upper Yangtze River Basin. *E-flow Implementation Process and Steps* describes the application of the ELOHA (ecological limits of hydrological alteration) framework, and uses sustainable water management in Massachusetts as an example to demonstrate how regional e-flow standards can be effectively established in state watersheds and applied to water resources planning and management.

Books on river ecosystem restoration published

INTCE organized the translation and publishing of two books in 2022: *The Handbook for Management and Restoration of Aquatic Ecosystems in River and Lake Basins*; and *River Restoration and Biodiversity: Nature-Based Solutions for Restoring the Rivers of the UK and Republic of Ireland*. The books introduce methods and practices of aquatic ecosystems management, river and lake ecosystem restoration and biodiversity conservation practices abroad. The books were shared with officials of the Ministry of Water Resources, and relevant central and local departments and institution.



River Restoration and Biodiversity (Chinese version) published in October 2022.



The Handbook for Management and Restoration of Aquatic Ecosystems in River and Lake Basins (Chinese version) published in May 2022.

Project documentary film produced

MWR PMO organized the footage collection activities in August and September 2022 and the production team also interviewed representatives of the Project Steering Committee, FAO Representative in China, and representatives of the pilot projects. The bilingual documentary film reviews the project implementation and achievements and shares the project experience.

Project Overview

The New Green Line (NGL) Project aims at catalyzing a profound change in China's approach to river biodiversity conservation. NGL will demonstrate how to implement innovative planning and management practices for improved biodiversity conservation in China's river ecosystems. It will show how trade-offs between development objectives and biodiversity protection can be systematically assessed and an environmentally sustainable balance can be achieved. The project will combine these demonstration activities with a strong effort to mainstream corresponding stipulations into the policy, legal and regulatory frameworks governing water resource management in China at national, provincial, prefecture and county/district levels. The project consists of three major components:

Component 1: "Changing the framework" - Institutional and planning framework for mainstreaming biodiversity into water resources management at national, provincial and local levels.

Component 2: "Enhancing Implementation" - Demonstrate on-the-ground activities for mainstreaming biodiversity in pilot rivers in Chongqing and Yunnan Provinces.

Component 3: "Improving Information" - Creation of improved information systems and capability to use these systems to inform better and continuously improving water management practices serving enhanced conservation of river biodiversity.

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