



From left: The riparian ecosystem in Chagan Lake is restored through local environmental protection efforts. ZHANG NAN / FOR CHINA DAILY Tourist boats highlight Chagan Lake's charm as an ecotourism resort. WANG XUELEI / FOR CHINA DAILY The wetland of Chagan Lake is home to scores of plants and wildlife. WANG XUELEI / FOR CHINA DAILY



An overhead view shows the large number of trees surrounding the ring roads of Meihekou city in Northeast China's Jilin province. SUN HONGYU / FOR CHINA DAILY

Jilin province takes advantage of its liquid assets to stop drought

Water management initiative to divert floods into arid land and help return balance to environment

By HU YUYAN
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While the Nenjiang River was flooding, a drought was happening only 2 kilometers away, a water management worker in Northeast China's Jilin province told local media. The floodwaters, so desperately needed elsewhere, were left to waste.

For years floods and droughts had troubled western Jilin, which is flanked by the Nenjiang and Taoer rivers.

Since the 1970s, the region had seen declining precipitation and increasing desertification due to climate change and other factors. More than 2,700 square kilometers of lakes and wetlands had been lost, according to People's Daily.

At the same time, during the annual flood season, more than 30 billion cubic meters of surplus water runs through the region, the Beijing-based newspaper reported.

"A natural solution might be to connect the rivers to the lakes and channel the floodwaters into the lakes and marshlands scattered across deteriorated grasslands and saline and alkali soils," local officials and water management workers proposed, according to Jilin Daily.

In 2013, Jilin launched a water management initiative, dubbed the River-Lake Connection Project, to divert floodwater from rivers into lakes, wetlands and reservoirs in its western areas.

This was the first major water conservancy project by Jilin to restore and improve the local ecosystem.

It is listed as one of the 172 major water projects of the country and an important task in the campaign to revive Northeast China — once the country's industrial heartland, local officials said.

The water project has achieved its goal of connecting rivers with 203 lakes, wetlands and reservoirs



A family of swans swim in a pond on the campus of Jilin University. QU JIAWEI / FOR CHINA DAILY

in western Jilin. Nearly 2.9 billion cu m of water has been channeled through the network, which has helped restore some 3,700 sq km of lakes and wetlands in nature reserves including Xianghai and Momoge.

The local government said that western Jilin has seen a marked increase in precipitation and a measurable decrease in sandy winds thanks to the project.

Local groundwater has gone

up nearly 1 meter on average, which has greatly eased the perennial water shortages in western Jilin.

Almost 4,000 white cranes, or more than 90 percent of the species, stay in the Momoge nature reserve for about 100 days during their migratory flight every year, according to a 2019 report by Chinanews portal.

The rich water resources resulting from the project are also driving the development of local industries. Crop production in western Jilin has grown by 280,000 metric tons thanks to increased irrigation, according to local officials.

The water surface area of fish ponds and crab ponds has increased by more than 560 sq km and over 280 sq km respectively.

The local tourism industry, using resources such as the Xianghai nature reserve, Chagan Lake and Nenjiang Bay National Wetland Park, is also contributing

to the rapid growth of the local economy, according to the Jilin government. To improve the water environment of cities and villages on its path, the River-Lake Connection Project has built a number of scenic lakes. Examples include Heming Lake in Baicheng city, Nanhu Lake in Taonan city and Jiuqu Lake in Qianguo county.

Songyuan city in Jilin is building an ecotown, which will "offer dining, lodging, transport, sightseeing, shopping and entertainment services", said Wang Zilian, Party secretary of Songyuan, reported Songyuan Daily.

Baicheng city in Jilin is reaping the rewards of its improved ecology. It has been selected as a pilot city for a national "sponge city" program and has passed inspection for urban water management conducted by the State, according to the Jilin government.

Han Junhong contributed to this story.



Changes at Chagan Lake bringing benefits for all

By YUAN SHENGGAO

After decades of efforts aimed at reducing pollution and improving the environment, Chagan Lake in Jilin's Qianguo county has become an ecological protection model described as a green ecological shelter and must-see tourist attraction.

The freshwater lake ranks among China's top 10 and was

named a provincial nature reserve in 1992. Thanks to the local government's soil and water treatment measures, Chagan Lake is renowned for its good ecological environment with varied wild animals and bird life.

The lake is home to more than 60 different types of fish, as well as various crustaceans and shrimp. It produces 3,000 metric tons of fresh fish annually, such as the bighead carp

that has become an accredited "green food" by the national green food certification center.

Experts say that because the water in Chagan Lake is alkaline with a PH value of 8, it is impossible for bacteria to grow. As a result, the fish in Chagan Lake feast on nutritious microorganisms.

Winter fishing at Chagan Lake is popular with locals and visitors alike, with thousands of people drill-

ing through the ice and fish bursting out of the water onto the lakes frozen surface.

As the core area of Jilin's western ecological economic zone, Chagan Lake plays an important role in regulating the climate and maintaining the ecological environment for the province. In addition to the efforts made at Chagan Lake, Qianguo county has also made efforts to launch environmental improve-

ment projects, including controlling non-point source pollution and improving the reed ponds along the lake.

Non-point source pollution refers to water and air pollution from many different sources that have no obvious discharge point.

Qianguo county is benefiting by integrating the protection of ecology and developing ecotourism, according to local officials.

In the future, the county will accelerate construction on wetlands used for water drainage, sewage treatment plants and sewage pipe

Project makes a splash in nature

By YIN RUOWEI
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In Jilin, a much-anticipated water management project connecting rivers and lakes and major water conservancy works in the west of the province will be completed this year. It will turn previously unutilized natural resources into industrial and economic advantages, local officials said.

The total area of wetlands in the western region of Jilin covers 4,939 square kilometers.

The wetlands and lakes that had dried up have now burst back to life, attracting a great number of migratory birds. And the ecological environment has significantly improved, experts said.

They said the microclimate in western Jilin has improved with water shortages alleviated, which guarantees its use in industrial and agricultural production and daily lives.

The protection and restoration of wetlands not only creates a better harmony between humans and nature, but also plays a key role in the construction of an ecological civilization in Jilin — an important government initiative, local officials said.

Chagan Lake in Songyuan city, is China's seventh-largest lake and the largest freshwater lake in northeastern China. Thanks to the water management project, bogs in the urban area of Songyuan and neighboring counties have had their water supplies replenished with water coming from 72 lakes with Chagan Lake at the core.

The annual amount of water diverted can reach 275 million cubic meters and the maximum water storage can total 1.7 billion cu m. A total of 1,028 sq km of lacustrine wetlands have been restored and improved, local officials said. Last year, Chagan Lake received 4.6 million visits and earned 4.05 billion yuan (\$581.3 million) in revenue.

The project also benefited Baicheng. The city's 124 bogs were connected and its two reservoirs — drained for 12 years — came back to life. Rare waterfowl species like swans and red-crowned cranes also returned.

Official data show the project has helped increase water storage capacity in Baicheng by 250 million cu m, improve and restore 640 sq km of wetlands, and restored 70,000-hectares of grassland and reeds.

The groundwater level in Baicheng rose by an average of 1.02 meters, and 15,000 wells in farmlands regained previously lost irrigation capacity. The amount of irrigation water in farmlands was increased by nearly 550 million cu m.

At the beginning of this year, Baicheng transferred 90 million cu m of water to restore and improve part of the Xianghai wetland. As a result of all these efforts, residents in Baicheng now have more options for enjoying leisure time near the water.

Momoge in Baicheng, which is the largest wetland reserve in Jilin and an important stop on the migratory paths of birds in East Asia, has dedicated itself to developing local tourism centered on its ecological resources, according to local officials.

Han Junhong contributed to this story.

It will also develop its catering, accommodation, travel, shopping and entertainment facilities along the lake, as well as plant 5.67 million trees.

In the next three years, Chagan Lake and its surrounding area of 4,866 hectares will see Chinese medicinal herbs, plums and aquatic plants planted. At the same time, there will be a reduction in the use of 13 tons of pesticide and 2,737 tons of chemical fertilizer.

Han Junhong contributed to this story.