

Haikou in Hainan province has pioneered its efforts to preserve ecosystems. PHOTOS PROVIDED TO CHINA DAILY



NEW WETLANDS HELP TO TRANSFORM TOURIST CAPITAL

Features serve to inspire local population, tourists, while boosting city's core competitiveness

By YUAN SHENGGAO

Haikou, the capital of China's southernmost Hainan province and a renowned tourist city famous for its charming coconut trees and warm sunshine, is transforming itself into a destination that also features rich and lush wetlands, thanks to enviable progress made in the restoration of its local ecosystems.

For locals, it's all been good.

The Meishe River, known as Haikou's "mother river," is now a favorite place for retired worker Lao Zheng and his friends to hang out.

"We rarely came to the river in previous years, because many parts were terribly smelly," he said.

"Now you can see egrets flying overhead. There are lots of people around and the other day we even saw a couple of people taking a nap under the nearby banyan trees," he said.

A number of new wetlands including the Meishe River National Wetland Park and Wuyuan River National Wetland Park emerged to become new attractions for tourists and nearby residential communities last year, as a result of the major ecological restoration drive made by the city government in recent years.

To tackle black odors caused by industrial pollution and the dumping of daily domestic garbage in the city's rivers, lakes and wetlands — and to fully implement the strategy of the authorities to build Hainan into a national demonstration zone for ecological civilization — Haikou has pioneered integrated planning for the restoration of its ecological resources.

It has issued strict guidelines to safeguard ecologically fragile areas, the overall quality of the environment and promote rational use of resources, and has introduced hard-hitting access limits for new industrial projects.

Choosing not to use conventional methods to reinforce the riverbanks, large-leaf oil grass



Clockwise from top: Visitors admire Wuyuanhe National Wetland Park, which boasts rich bio-diversity, with 11 species under second-class national protection.

Blue-tailed bee-eaters (Merops philippinus) at Jinshawan wetland. Rare birds stay in harmony with water buffalo at Dongzhaihang wetland. A corner of a coastal wetland in western Haikou.

and plants were grown on the river banks and mangroves were planted in the rivers, the first successful planting of mangroves in urban rivers in China. The trees and plants will help to naturally filtrate and purify the waters.

"The cost of such a practice isn't very high, but the effect is a lot better," said Yu Kongjian, dean of the College of Architecture and Landscape at Peking University.

The Meishe River National Wetland Park, covering 14,000 square meters, took shape in

nine months on top of a former waste dump last year.

Regarded as the largest functional eight-stage terraced field ever built in China, the wetland can treat 5,000-8,000 metric tons of domestic sewage every day and has become an oasis for water plants and all kinds of waterfowl. It has been awarded the appellation "National Water Conservancy Scenic Area". Yu said Haikou's ecological restoration efforts had created wetlands within city areas.

"They have improved water

quality and enhanced the regenerative abilities of the local ecological systems and played an important role in resisting floods, regulating runoffs and refining the climate," he added.

The professor said that at the same time, the wetlands were playing a key role in the protection of native species diversity, highlighting local landscape features, cultivating a beautiful recreational environment for local residents and upgrading the urban quality of Haikou as a city. To date, Haikou has

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Zhang Qi, a member of Standing Committee of the Hainan Provincial Party Committee and Party secretary of Haikou

cleared more than 7.2 million square meters of black and odorous water areas through ecological restoration. Water quality has improved significantly and beautiful wetlands have been created along the rivers, lakes and seashores.

"Haikou has established a strong leadership headed by senior city officials, supported by professional associations and a growing number of volunteers who are actively involved in promoting public awareness and monitoring management of the wetlands," said Chen Song, director of the Haikou Wetland Protection Center.

He said the city has also issued a number of legal regulations and compiled a master list on wetland protection, to safeguard its ecological resources.

"A good ecological environment is the biggest asset, providing a core competitiveness for Haikou's sustainable development," said Zhang Qi, a member of Standing Committee of the Hainan Provincial Party Committee and Party secretary of Haikou, adding that the city will strive to create more ecological facilities and services for its people.

Eco-measures swing into action to shield and develop resources

By YUAN SHENGGAO

45
protection zones
for wetlands in Haikou are expected to be built between 2017 and 2025

To protect its precious wetland resources, Haikou has taken the lead as the first provincial capital in China to compile and implement a general plan on wetland protection.

The Haikou Wetland Protection and Rehabilitation Master Plan, launched mid last year, divides Haikou's wetland locations into first-class and second-class ecological functional zones, with four under the first-class category and 12 under the second class.

According to the master plan, between 2017 and 2025 the city will build Dongzhaihang National Wetland Nature Reserve, Haikou Bay National Ocean Park and Beigang Island National Ocean Park, four national wetland parks and three provincial wetland parks, as well as 45 wetland protection zones and the Yangshan wetland multi-purpose management zone.

The wetland multi-purpose management zone, which will provide care for both wetland resources and ancient villages located in and around the wetlands, was a brand new concept and model in protecting wetlands in China.

Under the master plan, Haikou will actively expand carefully regulated use of its wetlands, establish efficient wetlands ecological agricultural demonstration areas; develop wetlands tourism; accelerate development of its mangrove industries, and encourage the development of cultural and creative industries linked to the wetlands to safeguard sustainable use of their resources.

Haikou's authorities said the master plan aims for the city's wetlands to cover 29,093.09 hectares or more by 2020, with a wetland protection rate above 50 percent. By 2025, the total area of the wetlands is expected to expand to 31,918.09 hectares, with the wetland protection rate topping 60 percent.

To ensure success, the Haikou government has established a special group formed by city leaders, and drafted an implementation plan and a three-year action plan (2017-2019) to guide

wetlands conservation and restoration undertakings.

Haikou was also the first city in Hainan to publicize its list of important wetlands, which includes 10 municipal-level wetlands and 11 district-level ones.

To strengthen technical guidance, the Haikou municipal government has set up a wetland protection expert committee, with academicians from the Chinese Academy of Engineering and well-known specialists from around the country as its members.

This environmental success story is being promoted as a model for other cities to learn from.

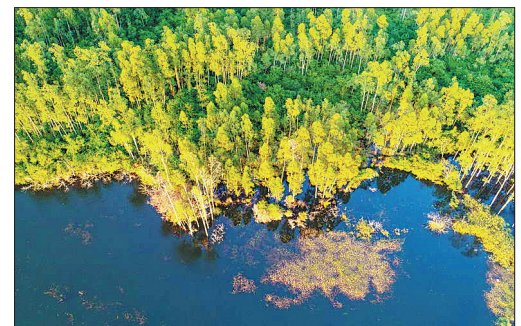
In the meantime, Haikou will strictly implement Hainan's provincial regulations on the protective management of areas within ecological redlines — key ecological zones of sensitive and fragile ecological environment — and tighten control over Haikou's 13,193 hectares of wetlands that are included in provincial redline resources for ecological safeguarding.

Haikou has promulgated an assessment system on the creation of a so-called ecological civilization, which includes such indicators as wetland areas, wetland protection rates and a wetland ecological status as objectives.

Governments at all levels and relevant departments for wetland protection and management in Haikou have been tasked with utilization of wetlands according to strict duties and laws.

Illegal use of wetlands will be severely punished, and units and individuals who fail to protect wetland resources will be prosecuted.

Since 2017, 11 officials have been held accountable for ineffective protection of wetlands within their respective jurisdictions, according to the city government.



Haikou government said its wetlands are expected to cover 29,093 hectares or more by 2020.

Haikou wetland characteristics

Haikou, capital of South China's Hainan province, has 29,093 hectares of wetland across four categories — coastal, river, lake and man-made — according to the second provincial wetland resources survey released in 2014 by provincial authorities.

Wetlands make up 12.7 percent of the land area under Haikou's jurisdiction.

Hainan Dongzhaihang National Nature Reserve, covering more than 4,000 hectares in eastern Haikou, was established in 1980 and recognized as a site of international importance by the Ramsar Convention on Wetlands in 1992.

It is known as China's "mangrove gene bank", with more than 36 species of mangroves growing there.

Traces of Hainan's volcanic past can be seen in the distinctive wetland landscapes found at Yangshan, where an irrigation

system was hewn from the igneous rock hundreds of years ago.

This system has earned comparisons to the Dujiangyan irrigation system in Sichuan province, a UNESCO World Heritage site.

About 22 percent of the wetland animals that can be found in China are in Haikou, with 514 species in total. Haikou's wetlands are also home to 439 species of plants, accounting for 20.31 percent of the country's total.

Six of the species present, including the red jungle fowl and black-winged kite, are under national-level protection.

Haikou has a long tradition of protecting its wetland resources. Starting from ancient times in Haikou's mangrove planting areas, local authorities have paid close attention to the protection of wetlands.

Public awareness of environmental protection takes root

By YUAN SHENGGAO

Fourth-grader Zhang Kexin had no idea there were so many rare birds and plants on South China's tropical island province of Hainan until she visited Fengxiang Wetland Park in early September.

The 10-year-old was among a number of students from Baiju and Dingcun primary schools in Haikou who visited the park for their first class of the autumn semester.

Specialists introduced the children to different kinds of wetlands and described why this type of habitat plays such an important role in maintaining biological diversity, resisting floods and regulating the climate.

Haikou has stepped up efforts to raise awareness of the protection and restoration of wetlands among

citizens from all walks of life, with promotional and educational activities such as those designed to get more children interested in nature.

"Every part of this park is so beautiful and any photo of it can be made into a postcard," said a man surnamed Li who had driven his family to Fengxiang Wetland Park during the National Day holiday.

"We enjoyed visiting such a large wetland and seeing the beautiful rural views."

Special lectures designed to inform key officials about wetlands have been given by Ma Guangren, director of the National Forestry and Grassland Administration's Wetland Conservation and Management Center, and experts

including well-known professors such as Yu Kongjian from Peking University and Zhang Mingxiang from Beijing For-



Local residents enjoy their day at the Meishe River National Wetland Park in Haikou.

estry University. Information about wetlands has been disseminated via radio and TV programs, as well as on new media platforms, in a bid to cultivate social awareness.

A publicity network has also been established to build appreciation of Haikou's wetlands, supported by wetland

protection associations, public welfare organizations and volunteers from schools, communities and enterprises.

Chen Song, director of the Haikou Wetland Protection Center, said the city uses international celebrations such as World Wetlands Day and World Oceans Day to raise

awareness of environmental protection.

According to official figures, Haikou now has more than 9,000 wetland protection volunteers, split into 54 teams. One volunteer has even set up a private institute to research wetland protection.

"The role of volunteers cannot be replaced in the promotion of wetland science," said Wu Shuqiang, a leader of one of the teams. Because of volunteers' efforts, local residents have already begun to change their ways and are now better informed about wetland protection, Wu said.

Zhou Yuan, another volunteer, said residents living near one wetland had agreed to "not hunt birds or net fish in the ponds" and keep a lookout for anyone doing environmental damage.