

## Poverty alleviation

## Eco-restoration project raises living standards

An environmental cleanup is creating jobs and wealth in one of China's least-developed provinces, as **Yang Wanli** and **Yang Jun** report from Guiyang.

**T**an Wenzhong is a garbage collector, but rather than working on the streets, he spends his days on water.

Every day at 8 am, Tan boards his yellow boat and begins work. He collects garbage floating in the Nanming River, a tributary of the Yangtze River, that flows eastward through Guiyang, capital of Guizhou province.

For the past two decades, the river has been severely polluted by untreated domestic sewage from the homes of the city's population of nearly 5 million.

"My home is near the Nanming. For about 10 years, we almost never opened the windows closest to the river. If we did, the stench that rose from the water smelled like a pit latrine that hadn't been emptied for months," said Zhao Ze, 31, who lives with his parents in an apartment building built in the 1990s.

The water in the river once ran black as a result of pollution. In the early '90s many State-owned enterprises and government departments built or invested in real estate for their employees.

Those assigned apartments near the river were the most unfortunate, according to Tan, who recalled that at the turn of the century the river was full of trash, such as plastic bags, food containers and countless plastic water bottles.

"When I was young, the river was the source of drinking water for the local residents. Fish and egrets could always be seen, but they were quickly swept away by the pollution. In 2000, I cleaned about 1 metric ton of garbage from the river every day. I was astonished by the amount," the 53-year-old said.

## Pollution, purification

The local government began addressing the problem in the early 2000s, and a number of wide-ranging programs were launched in 2012. They included cleaning the riverbed silt and controlling the sources of pollution, while water control gates and a high-tech purification system were put into use.

In the past five years, the quality of the water in the river has improved significantly, according to the Guiyang water affairs bureau. Its data shows that 70 percent of the water in the river last year was judged to be either level III, which means it is suitable for swimming and use in aquaculture, or level IV, suitable for industrial use and other pursuits where the water does not come into contact with the skin, such as angling.

The methods used to control pollution in the river are a microcosm of the city government's project to conserve natural resources and raise living standards through eco-revitalization.

The plan's core theme is "sharing", which emphasizes that all projects should be people-oriented to encourage the participation of residents, who will share its success.

## Parks and plants

The Qingshan Sewage Plant, is hard to find — partly because the entrance is hidden among flowers and trees, but mainly because most of the facility is underground. The plant, which covers 2.1 hectares, is directly below a large park dotted with gym equipment and jogging tracks.

Sun Yun visits the park every day to practice tai chi. "In the past, we made a detour around the riverbank to avoid the smell, but now the riverbank is a popular spot for sports lovers," he said.

Opened in 2012, the sewage plant is one of three under-

ground facilities built in the city in recent years. They all use filtering membranes and biotechnology to purify the water, and each is capable of dealing with 50,000 tons of water a day to serve the needs of the 260,000 people in their catchments areas.

"The park's landscape features use river water that is purified at the plant. The cost of building a plant underground is double that of facilities built above ground, but the money made by saving the land for commercial use will offset the construction costs," said Han Yiqin, the director.

Eco-revitalization will improve people's living circumstances and breathe fresh vitality into real estate projects along the river. According to Zhao, new apartments built near his home are priced between 17,000 yuan and 25,000 yuan (\$2,569 and \$3,778) per square meter, far more than his own residence.

**Partnerships**

To finance the eco-revitalization program, a public-private partnership has been introduced under which the city government purchases services from private companies and organizations that specialize in certain fields.

The partnership significantly improves work efficiency, according to Lan Yitong, committee director of the city's publicity department.

"Guizhou is nestled in a mountainous area, and development has been limited by geography for decades. However, the mountains can also be used as resources to boost eco-industry. Eco-revitalization will not only 'green' the city, but also provide more favorable living conditions and more jobs for local people," she said.

**As the mountains dominate more than half of Guiyang's total area, the city government is hoping to turn them into major attractions by investing more than 40 billion yuan in three major projects: pollution control in the Nanming River; the greening of 100 mountains; and the construction of 1,000 parks within the city boundaries. It aims to complete the projects by 2020.**

Quanhu Park, in Baiyun district, is a model park in the plan. Constructed early last year and covering 72 hectares, it sits next to a large second-hand vehicle market on the site of a village that had been deserted since its inhabitants were relocated.

A lake in the center of the park was once a pond where people dumped domestic waste and sewage. Now, the park is a scenic spot and boasts Guizhou's largest musical fountain, where people can watch free movies projected onto a screen of water at weekends and during holidays.

## New talent

The municipal government has set a goal of raising forestry coverage to 50 percent and the per capita area of green land to 17 square meters by 2020. Moreover, it plans to introduce measures to ensure that the quality of the air is excellent on at least 65 days every year.

The city's eco-revolution is also bringing new opportunities to attract fresh talent and cut unemployment.

According to Lan, some of the new parks have been designed to provide an attractive environment in an area known as University Town with the aim of attracting a high-tech companies and new talent. In Huaxi district, several parks that boast entertainment facilities have already become tourist attractions.

The improved urban envi-

ronment has also resulted in higher values for land and real estate.

Denggaoyunshan Forest Park, between Yunyan and Wudang districts, is one such example; it was once a dump for construction waste, but in the past year it has undergone a massive replanting program and is now covered with trees and flowers.

Sales of real estate projects in the area were poor for many years, but in the past 10 months, prices have soared by 2,000 yuan per sq m on average, according to Gao Xiaowen, deputy director of the Guiyang Ecological Civilization Construction Committee.

The same thing has happened in other areas where the eco-reconstruction project has been carried out. Apartments close to Quanhu Park that once sold for 1,000 yuan per sq m are now priced at 4,000 to 5,000

yuan, and the price of land has soared from 16.6 million yuan per hectare to 50 million yuan.

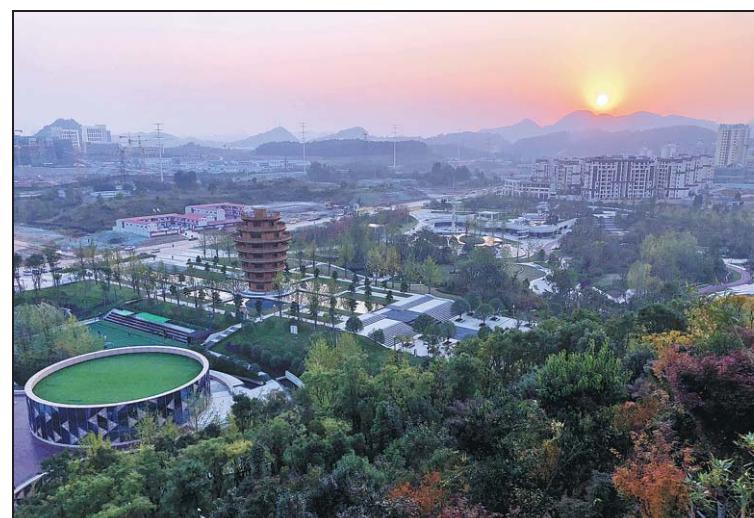
Gao estimated that the park, together with a Buddhist cultural center that is under construction, will add about 2 billion yuan to the price of land nearby and benefit five new residential buildings whose apartments are now estimated to be worth at least 800 million yuan in total.

"A large amount of human resources will be needed, which will mean more job opportunities. Eco-revitalization encourages shared benefits, and soon, the local people will see how they can share in the city's reconstruction plan and also how nature will play a role as one of our leading treasures," he said.

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Residents rehearse for a musical performance in a park near the Nanming River in Guiyang, capital of Guizhou province. PHOTOS BY YANG JUN / CHINA DAILY



Quanhu Park is a model attraction in Guiyang's ecological restoration program.



**For about 10 years, we almost never opened the windows closest to the river.**

**Zhao Ze**, resident of the Nanming River neighbourhood in Guiyang

## Virtual fun boosts real people's incomes

**Erik Nilsson**  
Reporter's log

**R**oar! Whoosh! Bam! I was shooting exploding arrows at the T. rex's gnashing jaws with my crossbow as I teetered atop the rope bridge.

Suddenly, a cloud of giant insects buzzed in, whipping stingers and jabbing jaws at me.

Buzz! Stab! Bite! Bugs are hard to hit with arrows.

An ogre the size of a skyscraper snoozed to my right. Its horns had been sawed off. A chain choked its throat.

I wondered if I'd have to battle this giant creature later. I never found out — because I died.

Not really — but virtually.

In reality, I was atop a wood-plank bridge. And I was actually clutching a crossbow.

But the bridge was a prop in a room. And the weapon was of the video-game variety that shoots signals rather than physical projectiles.

I was visiting the remote Beidou Bay VR Town. It's a truly technological and innovative poverty-relief project in a forested mountainside village in rural Guizhou province.

Later, I was a dynamic warrior saving kidnapped princesses. I was actually riding an animatronic plastic horse.

Next, I drove a car that blasted other vehicles with bursting turtle shells. I was actually steering a real bumper car.

All of these experiences came from a set of virtual reality goggles. And it frankly felt quite real — despite the fantasticality of the worlds into which I was questing.

The park is a tourist attraction that provides employment for former farmers in a place where sheer karst peaks make agricultural production an uphill battle in every sense.

Visitors meet virtual dragons and real androids.

Villagers dressed in costume outfits roam the roads with balloon animals or dance in an outdoor audito-

rium. Androids dance in sync to techno music in such buildings as the Castle of Robots.

The amusement park in Malang village is virtually and literally a technological wonderland that surreally occupies an otherwise rustic and underdeveloped settlement.

The park, which employs 60 villagers as cleaners, security guards and tour guides, has attracted 110,000 visitors since it opened in July.

I've spent much of my 11 years as a journalist in China traveling to remote areas to cover poverty alleviation.

Some projects are more conventional, such as constructing transportation infrastructure, relocating isolated residents to urbanized areas and introducing more advanced agriculture.

Other methods are more pioneering — giving ethnic Mongolian nomads emus to herd, rather than sheep, to prevent desertification and raise incomes; creating solar grids in drought-prone areas, with the profits going to locals; replanting deserts with a shrub that produces a parasite on its roots traditionally believed to boost virility. Consequently, it is very lucrative.

But this was the first time I had witnessed high technology, such as virtual reality, being used to produce prosperity in poor settlements — notably, in a place where villagers previously had little contact with computers.

I pondered this as I watched an elderly farmer, hunched over a cane, cross a street from the park and head toward the foot of the mountains.

She has, perhaps, never used the internet, but she lives next to a virtual world, populated by mythical beings that seem at least virtually real to the tourists who arrive to engage them.

The park will improve her life, since it has become central to the local economy, offering much greater developmental promise than crops.

It's a place where fantasy becomes reality for guests and dreams of a better life come true for the residents.

**Yang Wanli contributed to this story.**