What We Can Learn From 'Two Mountains' Concept

China's Green Solution to Modernization

By LONG Yun, BI Weizi, ZHONG Jianli & CHEN Chunyou

As the summer breeze sweeps across the vast forests of Saihanba in Hebei, the green tea- covered hills of Anji in Zhejiang, and the highlands where Tibetan antelopes roam in the Qinghai-Xizang Plateau, a picture of coexistence between humanity and nature unfolds across China. This is not just a seasonal transformation. It represents the tangible fruits of two decades of ecological civilization building, nurtured by the concept that "lucid waters and lush mountains are invaluable assets."

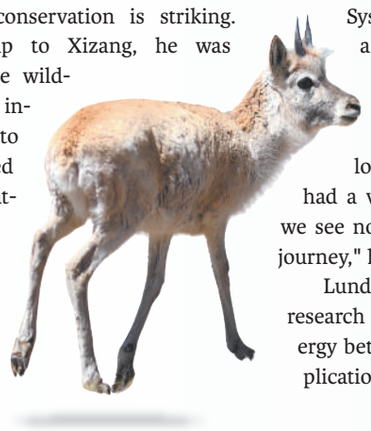
This year marks the 20th anniversary of the concept's introduction. Since its inception in 2005, it has evolved into a cornerstone of China's development philosophy, guiding the nation toward a sustainable future where environmental protection and economic growth are mutually reinforcing.

Today, China's green miracles and green technologies are going global, benefiting the world. On streets from Jakarta to Johannesburg, new energy vehicles (NEVs) from Chinese brands navigate urban landscapes. And above us, the China- Brazil Earth Resources Satellite, jointly developed by the two nations, has become an indispensable tool for environmental monitoring and disaster response.

Development and ecology balance

At the heart of China's ecological philosophy is a simple yet profound principle: "Good ecological environments are the most inclusive benefit to people's wellbeing."

For Michael Crook, a long- time Beijing resident from the UK, the harmony between modern infrastructure and nature conservation is striking. During a trip to Xizang, he was moved by the wildlife corridors integrated into high- speed rail and elevated highways. "You can see yaks and Tibetan antelopes roaming freely underneath, crossing through specially designed passages," he said. "This approach minimizes environmental disruption while improving people's livelihoods."



In cities, the shift is equally visible. Nicholas Mulei Musyoka, associate professor in renewable energy at the University of Nottingham Ningbo China, describes China's NEV industry as "innovative, scalable and impactful." He pointed out that the quiet, zero- emission vehicles are not only reducing pollution but also creating new jobs and driving technological innovation.

"China is setting the trend and becoming a benchmark for other countries to follow," Musyoka said. "More importantly, China's contribution to CO_2 reductions benefits the entire planet."

Meanwhile, American entrepreneur Brian Linden has witnessed China's transformation since the early 2000. Balancing economic progress and environmental protection may be difficult, "but China has done it. We should recognize that China has improved dramatically in per capita terms economically, socially and ecologically," said Linden.

Green innovation and vision

Globally, China now leads in multiple green indicators: the fastest improvement in air quality, the largest deployment of renewable energy, the greatest expansion of forest resources, and the world's highest production and sales of NEVs.

China's environmental achievements are not accidental. They are the result of decades of forward- looking policies, consistent investment, and institutional innovation.

Peter Lund, a Finnish scientist and professor of Advanced Energy Systems at Aalto University, as well as an honorary professor at Southeast University in Nanjing, attributes China's success to its long- term vision. "China has had a very long- term vision, which we see now, and it's been an amazing journey," he said.

Lund highlighted China's stable research funding and its powerful synergy between R&D and industrial application. "China's progress in clean and renewable energy has been just amazing," he added.

Danish chemistry professor Troels Skrydstrup from Aarhus University agreed. "China is probably the most active country in sustainable development today," he said. "It is now a leader in renewable energy technologies, especially solar and wind."

Skrydstrup is particularly impressed by China's ability to scale up technologies rapidly. "Once a decision is made, it is executed swiftly," he observed. "This makes China an ideal partner for innovation and global collaboration."

Green shared future

China's green journey is not walking alone. Recognizing shared global challenges, China has actively shared its experience, technology and vision with other nations.

Within the framework of the Belt and Road Initiative (BRI), China launched the Initiative for Belt and Road Partnership on Green Development together with 31 countries, and formed the Belt and Road Initiative International Green Development Coalition with more than 170 partners from more than 40 countries.

Ahimsa Campos- Arceiz, an elephant conservation expert at the Xishuangbanna Tropical Botanical Garden in Yunnan province, sees China's open stance in action.

"China plays an active role internationally. Through the BRI, China is helping develop infrastructure in other countries. I think this could be used not only for development but also for conservation," he added.

China can also promote protected areas and good ecological management in neighboring countries. For example, Xishuangbanna, which borders both Myanmar and Laos, is developing collaborations with these two countries for joint monitoring and protection. "This is a very good example of transboundary cooperation," Campos-Arceiz pointed out.

Rather than viewing China's green advancements as competition, experts like Musyoka urge global collaboration. "China's progress should be applauded," he said. "We should learn from its strategies. The bigger picture is solving the climate crisis together."

A view of Yucun village in Anji county of Huzhou city, east China's Zhejiang province.

Yundang Lake and its surroundings in Xiamen, southeast China's Fujian province.

The Saihanba National Forest Park in Chengde city, north China's Hebei province.

PHOTO: XINHUA

Practices in Balancing Ecology and Prosperity

By LIN Yuchen, FANG Linlin, ZHANG Jiaxin, XIA Fan & LI He

Two decades ago, the concept that "lucid waters and lush mountains are invaluable assets" was first proposed in Yucun, a village in Zhejiang province, east China. It set in motion a development approach that places ecological preservation at the heart of economic planning. Since then, the province has been pursuing a path where environmental protection and growth advance in parallel.

While Zhejiang accounts for just 1.1 percent of China's land area, it contributes 6.7 percent of national GDP and has become a model for achieving high- quality growth without compromising ecological integrity. A recent field visit by *Science and Technology Daily* found green development deeply embedded in rural governance, industrial upgrading, and social innovation.

In Meilin, one of the villages part of the "Thousand Villages Demonstration and Ten Thousand Villages Renovation" project launched in 2003, environmental clean- up and infrastructure upgrades have transformed once-polluted farmlands into a thriving hub of tourism, homestays and agritainment.

Last year, the village welcomed more than 50,000 visitors. Rooftop solar panels and smart energy systems reflect a new low-carbon rural lifestyle.

Zhejiang has also harnessed green finance to drive industrial transformation. Huzhou, a national pilot zone for green finance reform, has issued 28 local green finance standards and developed more than 150 innovative products. From 2017 to 2024, the share of green credit in total lending in the city rose from 11 percent to over 30 percent — nearly 20 percentage points above the national average. Non-performing loans stood at just 0.07 percent.

Industrial parks such as the Linping Economic and Technological Development Zone are branding themselves as "green ports," attracting clean-tech companies and building zero- carbon demonstration projects. Enterprises like Hangzhou GEnergy Technology are repositioning themselves in wind power and energy-efficient sectors, expanding opportunities in the green economy.

Zhejiang is also investing heavily in human capital and has introduced targeted housing, employment and entrepreneurship incentives to attract young professionals. More than 100,000 graduates have returned or relocated to Anji, the county where Yucun is located and some of these young people came up with the idea of transforming abandoned mines into scenic tourist attractions, illustrating how creativity and sustainability can reinforce each other.

From rural revitalization to industrial upgrading, Zhejiang shows that sustained commitment to ecological priorities can generate both economic vitality and environmental resilience — a model with implications far beyond national borders.

China's Green Governance and Its Global Implications

By Francesco FAIOLA

For two decades, China's environmental governance has been guided by the principle that "lucid waters and lush mountains are invaluable assets." This innovative philosophy has transformed policies, driven technological advancement, and demonstrated how ecological protection and economic growth can reinforce each other. Today, this successful model offers valuable insights for developing nations pursuing sustainable development.

Win-win formula in practice

The principle that "lucid waters and lush mountains are invaluable assets" illustrates that ecological conservation and economic development are not mutually exclusive; instead, they can achieve synergistic, win- win outcomes through systematic innovation.

In this process, ecological value must be converted into economic momentum via policy guidance and market mechanisms. Policymaking must balance long- term ecological security with short- term livelihood safeguards, while technological innovation, combined with traditional wisdom, offers robust support for ecological governance. Public participation enhances social consensus through institutional design and community- led initiatives, and ecological industries must deeply integrate with rural revitalization to form diversified development pathways — ultimately establishing a virtuous cycle of ecological protection, economic growth, and livelihood improvement.

China's experience provides globally transferable systemic insights: Ecological revitalization must aim for a "conservation- development- sharing" closed loop, balancing short- term development pressures with long- term ecological security to avoid the "pollute first, treat later" trap. Its essence lies in organically integrating policy, technology, culture and market mechanisms — addressing contemporary livelihood needs while preserving ecological capital for future generations. This offers actionable pathways for other nations to explore locally adapted sustainable development models, providing particularly valuable references for developing countries in reconciling economic growth with ecological conservation.

Blueprint for Global South partners

China's ecological civilization model, which emphasizes the principle that "lucid waters and lush mountains are invaluable assets," presents a replicable green development framework for Global South nations, especially Belt and Road partners, through legal safeguards, technological solutions, and international cooperation. This internationally recognized model offers practical guidance for addressing the common development-conservation dilemma in developing countries, as demonstrated by its institutional innovations such as the GEP accounting system, which quantifies ecological value, and grassroots public participation incentive mechanisms.

Technologically, China's solutions focus on adaptability and cost- effectiveness, effectively overcoming constraints in resource- limited nations. For example, coastal wetland restoration technologies introduced to Vietnam and Bangladesh have significantly reduced costs while enhancing efficiency. Simultaneously, China's "restoration- as- industry" approach, which integrates ecological rehabilitation with specialty cash crop cultivation, not only restores environments but also generates local employment and economic returns. This endogenous development driver is highly appealing to partner countries.

China actively promotes multilateral mechanism innovation to foster South- South cooperation on ecological civilization. Initiatives include establishing Global South- led specialized platforms like the International Mangrove Center and pioneering financial instruments such as carbon sink finance pilots, which closely link ecological conservation with economic benefits. Youth exchange programs further nurture cross- cultural forces for future green transitions.

Naturally, the dissemination of this model requires localization adaptation and respect for national sovereignty. Technological solutions must be tailored to local ecological and socioeconomic contexts, with cooperation grounded in equal partnership. Despite challenges, China's ecological civilization practice — demonstrating tangible synergies between environmental protection and livelihood improvement — inspires Global South nations to explore pathways beyond conventional development models, offering a promising approach to jointly addressing global environmental challenges.

Francesco Faiola is an Italian researcher at the Research Center for Eco-Environmental Sciences of the Chinese Academy of Sciences and a recipient of the Chinese Government Friendship Award.