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WEEKLY EDITION

Xi Calls for Adding Momentum to Cooperation between China, LAC Countries

President Xi Jinping addressed the third Ministers' Meeting of the Forum of China and the Community of Latin American and Caribbean States (China-CELAC Forum) via video link on December 3, calling for adding momentum to cooperation between China and Latin American and Caribbean (LAC) countries.

Xi said over the last seven years since the establishment of the China-CELAC Forum, the two sides have acted on the forum's founding purpose of strengthening unity and cooperation and advancing South-South cooperation, turned it into a major platform for pursuing mutual benefit, and taken China-LAC relations into a new era featuring equality, mutual benefit, innovation, openness, and benefits for the people.

Xi stressed that the world today has entered a new period of volatility and transformation, saying that both China and LAC countries faced the new task of the times, which was to promote post-COVID recovery and deliver happiness

and well-being to the people.

LAC countries are welcome to take an active part in the Global Development Initiative and work together with China to tide over this difficult time, create more opportunities, and build a global community of development with a shared future, Xi said.

"History teaches us that peaceful development, equity and justice, and win-win cooperation represent the right way forward. China and LAC countries are all developing countries. We are comprehensive cooperative partners of equality, mutual benefit and common development, and our shared aspiration for independence, development and rejuvenation has brought us closer together," Xi said.

He called on the two sides to jointly draw up a blueprint for China-LAC relations, add momentum to China-LAC cooperation, and make new contributions to the well-being of their peoples and to the cause of human progress.

Source: XINHUA



An electric multiple unit train of the China-Laos Railway crosses a major bridge over the Yuanjiang River in southwest China's Yunnan province. (PHOTO: XINHUA)

China-Laos Railway: Cross-border Friendship, Green Development Bridge

By WANG Xiaoxia

The China-Laos Railway, which connects Kunming in China's Yunnan province with Lao capital Vientiane, began operating on December 3. It will provide a major boost to the exchanges and cooperation between the two countries and help drive regional sustainable development.

Chinese president Xi Jinping and Lao president Thongloun Sisoulith jointly witnessed the opening of the China-Laos railway via video link.

Xi said the China-Laos Railway is a landmark project of high-quality Belt and Road cooperation. In recent years, with the goals of high standard, sustainability and improvement of people's livelihood, China has continuously improved the level of Belt and Road cooperation, achieved mutual benefits and win-win results for participating countries, and opened up new space for the development of the world economy.

Thongloun said the railway will greatly promote Laos' national economic and social development, expressing gratitude to China for its support.

Bullet trains running at a speed of

160 km per hour slash the travel time between the two cities to about 10 hours, to convert Laos from a landlocked country to a land-linked hub.

With a length of 1,035 km, the electrified passenger and cargo railway is built with the full application of Chinese management and technical standards.

The area along the China-Laos railway is known as a "geological museum". The complex geological structure brought multiple risks such as high ground stress, high geothermal energy and high seismic intensity, making the construction more difficult than expected.

To deal with geological disasters such as slip collapse, surge of water and large deformation, many innovative technologies were applied during the construction process. For example, builders used innovative excavation method to effectively solve the continuous deformation problem, and guaranteed the safety for tunnel construction.

A total of 167 tunnels and 301 bridges were built after builders overcame many technical difficulties.

Data connection of the whole process of electrification is the key to construction, according to engineer Lai Peng from China Railway Electrification Bureau in Wuhan.

Through the use of a digital management platform and the application of intelligent technology, the electrification of the whole line was completed in only two and a half years, and the precision of wire equipment parameters powering the train was controlled within a millimeter, said Lai.

It is also the world's first railway with green scenery along the entire line. The developers attach equal importance to the protection of natural environment and biodiversity. They reduced the carbon footprint of the design during construction as it took place in an environmentally sensitive area. More than 28.6 million shrubs, 40,000 vines and 63,000 trees have been planted along the line. Huang Daiwen, a chief engineer at the China Railway No.2 Engineering Corporation, said after construction of every section, revegetation followed.

All the stations along the railway are installed with water saving devices, and more than 80 percent of them are installed with power saving devices, according to China Railway Group.

Green Olympics

Beijing 2022 Prioritizes Biodiversity Conservation

Edited by TANG Zhexiao

Yanqing district, located in northern Beijing, will be host to the Alpine skiing, bobsleigh and luge competitions during the Beijing 2022 Winter Olympic games. The region, where more than 70 percent are mountainous, has faced challenges of protecting biological diversity on the 2,000 meter-high mountain.

Started in 2015, the ecological restoration in the Yanqing competition area was completed at the end of June this year, covering a total of 2.14 million square meters.

To better protect the trees, experts conducted an ecological background survey on this area and worked out a protective transplanting plan for animal and plant protection. In the process of construction, workers took the ecological restoration measures to minimize human interference.

The combination of in situ and relocation protection has been adopted to protect trees in core competition areas. Workers have tried their best to leave

the trees where they were when they designed the competition courses. If that was not possible, most of them were moved to nearby sites, or transplanted at the foot of mountain in the Winter Olympic Forest Park.

More than 24,000 trees that consisting of about 30 species have been transplanted from 2017, with a survival rate of 90 percent (As shown below).

A set of management and monitoring system has been set up for every transplanted tree. All trees in the entire Yanqing competition zone (except the Olympic Village) are registered and had their profiles marked with a QR code.

Animals are also protected. The activities of mammals and birds are often monitored by 29 infrared cameras set up in the competition area. Workers have built temporary migration paths and artificial bird's nest for local animals and reduced working hours of construction to ensure animals could migrate freely and safely. Many animals returned as construction progressed.



Over 24,000 trees consisting of about 30 species have been transplanted.

Tree transplantation in Yanqing district, Beijing. (Graphic Design: TANG Zhexiao; PHOTO: XINHUA)

Editor's Pick

Germplasm Bank: 'Noah's Ark' Guards Wild Species

By TANG Zhexiao

Germplasm, also known as living genetic resources, are seeds or tissues that are maintained for animal and plant breeding, preservation and other research uses. They may exist in the form of seed collections stored in seed banks or trees growing in nurseries. Germplasm collection plays an important role in the maintenance of biological diversity and food security.

The Germplasm Bank of Wild Species (GBOWS), located in Kunming, southwest China's Yunnan province, has pre-

served more than 10,000 types of wild plant seeds as of 2020, accounting for 36 percent of the country's plant species.

Known as Asia's largest "Noah's Ark" for wild species, it is a comprehensive national database for the collection and preservation of germplasm resources, including seed banks, in vitro plant banks, DNA banks, microbial banks and animal germplasm banks.

After a decade's development, GBOWS has become a leader in the protection of global biodiversity together with the Millennium Seed Bank in the UK and the Svalbard Global Seed Vault

in Norway.

Preventing the loss of biodiversity and germplasm resources

Seeds are the starting point of a plant's life. The protection and utilization of seed resources are particularly significant when biodiversity is threatened.

Since 1900, nearly three species of seed-bearing plants have disappeared each year, which is 500 times faster than they would naturally. The report, *State of the World's Plants and Fungi 2020*, has shown that 40 percent of the world's plants are at risk of extinction.

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Understanding China Requires Understanding of CPC

President Xi Jinping said on December 2 that to understand China today, one must learn to understand the Communist Party of China (CPC).

Xi made the remarks when delivering a speech via video at the opening ceremony of the 2021 Understanding China Conference (Guangzhou) in Guangzhou, south China's Guangdong province.

The world is experiencing changes unseen in a century which, compounded by the COVID-19 pandemic, have brought the world into a period of fluidity and transformation, Xi said in the speech.

It is all the more important for us to exchange views, have more interactions and cooperation, and contribute our wisdom and strengths to a joint response to global challenges at such a juncture, he noted. "As I have pointed out, 'To understand China today, one must learn to understand the CPC'," Xi said.

Noting this year marks the 100th anniversary of the founding of the CPC, Xi said that the CPC has rallied and led the Chinese people in making unremitting efforts that have fundamentally changed the future and destiny of the Chinese people and exerted a profound impact on the course of world history over the past century. See page 2

WEEKLY REVIEW

Scientists Generate Stable Pig Stem Cells for Gene-editing

Chinese researchers cultivated stem cell lines that can "give birth to" healthy off-spring more than 200 generations, according to a recent study published online in the journal *Cell Research*.

Fendouzhe Completes Deep-ocean Expedition Again

During the 53-day expedition, which started on Oct. 14, the deep-sea manned submersible Fendouzhe (Striver) completed 23 dives, six of which exceeded a depth of 10,000 meters. China has ranked first in the world in the number of 10,000 meter deep dives.

Shenzhou-13 Astronauts to Give Space Lecture

The three Shenzhou-13 crew members aboard China's space station will give a special lecture at 3:40 pm (Beijing Time) today. The astronauts will introduce and display their living and working scenes in the space station and interact with students on the Earth. *China's Grain Output Gets Good Harvest in 2021*

The yield of grain reached nearly 683 billion kg this year, up 2 percent year on year, the National Bureau of Statistics said on December 6.

S&T DAILY WECHAT ACCOUNT (EN)

