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Advancing High-quality Belt and Road Cooperation

By Staff Reporters

On December 2, Chinese President Xi Jinping stressed comprehensively advancing high-quality cooperation under the Belt and Road Initiative.

Xi, also general secretary of the Communist Party of China (CPC) Central Committee and chairman of the Central Military Commission, made the remarks when addressing the fourth symposium on Belt and Road construction work.

During Monday's symposium, Xi pointed out that the Belt and Road cooperation has entered a new stage of high-quality development.

He urged for adhering to the principle of "planning together, building together, and benefiting together," the philosophy of open, green and clean cooperation, and the goal of pursuing high-standard, people-centered and sustainable cooperation.

It is necessary to deepen "hard connectivity" of infrastructure, "soft connectivity" of rules and standards, and "heart connectivity" between peoples among partner countries, Xi said.

Efforts should be made to create new space for win-win development at a higher level and with greater resilience and sustainability.

He emphasized the need to strengthen the mechanisms for high-quality Belt and Road cooperation, and improve the cooperation, planning, coordination and management mechanisms.

Xi called for perseverance to turn blueprints into reality and courage to overcome all kinds of risks and challenges in unswervingly advancing high-quality Belt and Road cooperation to make greater contributions to the development of a human community with a shared future.

Source: Xinhua

WEEKLY REVIEW

China's 1st Overseas Atmospheric Background Station in Antarctica Begins Operation

The Zhongshan National Atmospheric Background Station began operation in Antarctica on December 1. It will conduct continuous and long-term operational observations of concentration changes in Antarctic atmospheric components, and provide a faithful representation of the average state of atmospheric composition and related characteristics in the region.

Largest Drone-testing Airspace in North China Greenlit

A 600-square-kilometer zone, located approximately 300 kilometers southwest of Beijing, has been greenlit as the largest drone-testing airspace in north China, which will boost the growth of the nation's burgeoning low-altitude economy.

New Communication Tech Test Satellite Launched

China sent a new experimental satellite for communication technology into space from the Xichang Satellite Launch Center in southwestern Sichuan province. It will be used for satellite communication, radio and television, data transmission, and related technology tests.

3D Visualization of Cellular Structures

Researchers at Rice University in the U.S. have developed an innovative imaging platform called soTILT3D that could improve our understanding of cellular structures at the nanoscale. This platform offers significant advancements in super-resolution microscopy, enabling fast and precise 3D imaging of multiple cellular structures while the extracellular environment can be controlled and flexibly adjusted.

Customizable & Programmable Nanorobots Developed

A research team at the University of Sydney in Australia has developed a custom designed and programmable nanorobot using DNA origami technology. This innovative achievement demonstrates a wide range of application prospects, such as targeted drug delivery, responsive materials, and energy-saving optical signal processing.



The Chancay Port, located north of Lima, Peru, is an important infrastructure project in Latin America under the China-proposed Belt and Road Initiative, which will help transform Peru into a major trade hub in the region. (PHOTO: XINHUA)

Editor's Pick

Taming Taklimakan Desert, Journey of Hope and Resilience

By LONG Yun

Imagine a desert so vast that its sand dunes seem to rival towering skyscrapers in height and you have an idea about the vastness of the Taklimakan Desert, China's largest desert and the world's second-largest shifting desert.

For centuries, its sand swallowed up ancient towns and threatened livelihoods, but today, a different story has unfolded, a story of human determination to "lock the desert."

In the 1990s, China built its first desert highway across the Taklimakan. To prevent the shifting sand from engulfing the road, a protective forest belt was grown alongside it. Fast forward to today, the Taklimakan Desert is crisscrossed by four major highways.

On November 28, China achieved a significant milestone in its battle against desertification by completing a 3,046-km sand-blocking green belt around the Taklimakan. The green belt is a crucial component of the Three-North Shelterbelt Forest Program, which was launched in 1978 and is scheduled for

completion in 2050.

Accomplishing the "last mile" is no small feat. The desert's size is comparable to the combined areas of Jiangsu, Zhejiang, and Fujian provinces. Moreover, the region's annual rainfall is often less than 10 millimeters. The fine sand particles, easily carried by strong winds, create frequent and intense sandstorms, threatening infrastructure and nearby oases.

Strategies to lock the desert

To adapt to the specific characteristics of the region, a multifaceted approach has been taken to "lock" the desert, employing three key strategies: engineering solutions, solar energy projects, and biological restoration.

In areas devoid of water resources, "magic cubes" have been introduced. These are grass grids made using locally sourced materials such as reeds and straw, which are then embedded in the sand. The grids effectively trap sand particles and reduce wind erosion, creating a protective barrier against encroaching sand.

In regions with limited water, the

focus shifted to integrating renewable energy with environmental protection. Giant solar panels have been installed, playing a dual role. They generate clean energy and help to reduce wind speeds, thereby preventing the movement of sand. Also, in the shadow of these panels, drought-resistant plants are grown, further stabilizing the soil.

In areas with more abundant water, the emphasis is on restoring the ecosystem through vegetation such as the red willow and saxaul. These species are particularly effective at securing the soil, protecting water resources, and providing essential habitats for wildlife, thus revitalizing the local environment and promoting biodiversity.

As Lei Jiaqiang, a research fellow from the Xinjiang Institute of Ecology and Geography (XIEG), explained, the goal of "locking" is not to eliminate natural deserts but to restore degraded lands and protect oases.

Going beyond ecology

The green belt's impact extends far beyond environmental restoration.

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China's 1st Commercial Spacecraft Launch Site Debuts Successfully

By CEN Yingjie & WANG Jing

On November 30, a Long March-12 carrier rocket successfully sent two experimental satellites into their planned orbits from Hainan Commercial Spacecraft Launch Site, China's first commercial spacecraft launch site, in Wenchang, a coastal city in southern Hainan province.

The mission marked both the maiden flight of the Long March-12 carrier rocket and the first launch mission of

the commercial spacecraft launch site.

There were several breakthroughs in technological innovation. The No.2 launch pad used for the mission is capable of horizontal assembly, testing and transportation. This improves the efficiency of the equipment and facilities, and reduces costs, making it suitable for high-density launch missions.

The launch site was built by Hainan International Commercial Aerospace Launch Co., Ltd. (HICAL) and is also op-

erated by the company.

Liu Hongjian, general manager of HICAL, said the launch marked the first domestic verification of the rocket hold-down and release technology.

"The success of the maiden launch means that Hainan is not just adding a new launch site for China, but is also exploring a unique new path for the development of the aerospace industry beyond the existing industrial models in China," HICAL chairman Yang Tianliang said.

Tech Makes BRI Megaport Smart, Eco-friendly

International Cooperation

By WANG Xiaoxia

The Chancay Port, a cooperative project between Peru and China under the Belt and Road Initiative (BRI), has gained global attention since its recent inauguration. Connecting Chancay in Peru and Shanghai in China, the port will reduce sea shipping time from Peru to China from around 40 days to 23 days, cutting logistics costs by at least 20 percent.

As Latin America's gateway to Asia, it is not only a deep-water port, but also the first smart port and green port in South America. Technological innovation plays a vital role in both its construction and operation.

The port's designer and builder COSCO Shipping has developed the world's first highly intelligent and ultra large self-propelled pile driving platform, comprising 24 functional components and over 10,000 parts.

The COSCO team has also developed a remote-controlled track pile transport vehicle. Equipped with a customized automotive control system, it can ensure smooth track transportation to lay pile foundations, even in harsh sea conditions.

The green actions are also impressive. The team sedimented and filtered wastewater generated during construction, converting it into water for vibration flushing. Then the backflow during the vibration flushing process was recovered using a water pump. These measures have saved daily water consumption by about 100 tons, an over 25 percent reduction.

To minimize the impact on the wildlife in the wetlands around the port, the Chinese contractor controlled the noise, lights and dust during the construction. They also rescued the wildlife, such as seals, penguins and pelicans, and improved their habitat around the project.

The project uses a smart platform to digitally manage design, construction and operation. The platform has not only greatly improved construction efficiency and port capacity, but also follows the concept of green development by using an intelligent energy consumption control system, environmentally friendly materials, and designing ecological revetments.

After operation, the port will be able to accommodate ultra-large container ships with a capacity of 18,000 twenty-foot equivalent units (TEUs), with a designed annual throughput capacity of 1 million TEUs in the near term and 1.5 million TEUs in the long term. It is expected to bring 4.5 billion USD in annual revenue for Peru and create over 8,000 direct jobs.

New Graphic

(By June 2024)

China's Generative AI Product Users Reach **230 mln**

China has built a relatively comprehensive AI industry ecosystem,

with over **4,500** related companies.

The value of the core sector

nears **600 billion** RMB.

Source: China Internet Network Information Center
Designed by SONG Ziyao / Science and Technology Daily

WECHAT ACCOUNT



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