

Space Exploration Needs Cooperation, Not Sanctions

Voice of the World

By QI Liming

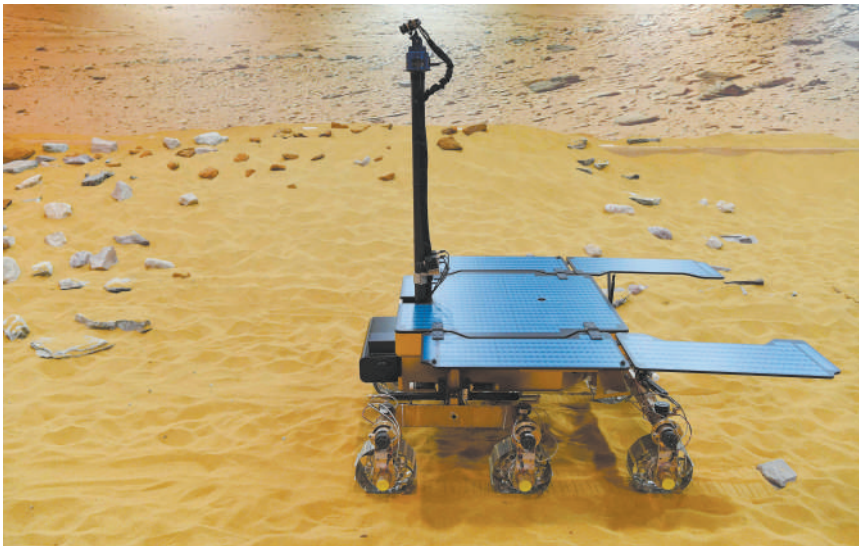
Since Russia launched its military action against Ukraine, the U.S. and the West have imposed unprecedented sanctions on Russia, which include those in the field of science and technology.

In the short term, the impact of sanctions on Russian sci-tech is reflected in the suspension of international co-operation projects between Russia and the West. In the long run, sanctions will affect the development of basic research and innovative technologies around the world. It could be said that the U.S. and the West have lowered the sanctions curtain on Russia, and jeopardized the future of all stakeholders.

Darkest hour for European space exploration

The European Space Agency (ESA) announced in March that the Russian-European mission to land a rover on Mars has been suspended, due to the Kremlin's military action.

The head of Russia's space agency Roscosmos, Dmitry Rogozin said, "This is a very bitter [decision] for all the enthusiasts of space." He said that the project would lose several years in research progress, but Russia would, "Conduct this research expedition on our own."



A working prototype of the ExoMars Rover in 2019. (PHOTO: VCG)

Meanwhile sanctions against Russia's space industry continue. Recently, ESA has decided to halt cooperation on moon missions with Russia. The ESA's decision means a European camera experiment called Pilot D would not fly through Russia's planned Lunar 25 moon lander, which was to launch later this year.

Europe would also pull out of collaboration with Russia's planned Lunar 26 lander and the Lunar 27 moon rover, which were expected to use European-built navigation systems and subsurface drills.

Europe is also looking for ways to replace the Ukrainian-built rocket en-

gines used on its Vega rocket, amid fears that their manufacturer, Yuzhmash in Dnipro, Ukraine, may be unable to continue to supply the engines.

ISS to face serious challenges

Over the past few decades, the International Space Station (ISS) is the biggest joint space project between Russia and the U.S. However, with the outbreak of the Russia-Ukraine conflict, the cooperation between Russia and the U.S. in space has been challenged.

According to Live Science.com, Russia has only committed to the ISS project until 2024, rather than "after 2030," as had been proposed by NASA and oth-

er partners. Russia's withdrawal from the project could mean it will be mainly up to NASA to keep the ISS physically in orbit for almost another 10 years.

"The ISS has been such a successful collaboration for over 20 years, it's a shame if it comes [down] to go their separate ways," said John Logsdon, founder and former director of George Washington University's Space Policy Institute.

Voices from professionals and scientists

Even though Dmitry Rogozin believes the sanctions will affect Europe more than Roscosmos, there's no denying that no one will benefit from sanctions, and it would be a lose-lose situation for both sides.

Jordan Bimm, a historian at the University of Chicago, who focuses on the history of space technology and exploration, said that the reality is that politics has played and continues to play a huge role in space. "Space is not this utopian, transformative place. Space is a place where all of our problems on Earth are reproduced or amplified," said Bimm.

Martin Barstow, an astrophysicist at Leeds University, who chairs a group that oversees British science experiments on the ISS, is optimistic that, "Even during the depths of the Cold War, scientific cooperation has been able to continue, allowing a soft-power backchannel that has enabled scientists to meet to share ideas."

Opinion

Zero-COVID Policy Comes with Guarantee of Right to Life

By Musundali Bhuiyan

Many in the West are seen trying to question China's dynamic zero-COVID policy (DZCP). They seem to be desperate to question China's unparalleled success in protecting the lives of its people by implementing the policy.

However, from all accounts, the Chinese people and many foreigners living in China are ever grateful to the Chinese government for keeping them safe from the deadly coronavirus. Thanks to the stricter implementation of the DZCP, they feel satisfied and fortunate to be inside China during the pandemic.

By looking into the pandemic situations in developed nations, we can easily realize the reasons for their satisfaction with the DZCP in China. In the U.S., from January 3, 2020, to April 14, 2022, there have been 79,716,960 confirmed cases of COVID-19 with 979,321 deaths, reported by the World Health Organization (WHO).

Apart from the epidemiological impacts, the U.S. is still going through economic setbacks as the pandemic continues to take a toll on its economic sectors. In 2020, the U.S. GDP decreased 3.5 percent, the biggest and first contraction since 1946 and 2009, respectively, according to Yahoo Finance.

The U.S. Census Bureau's Household Pulse Survey published weekly statistics on the effects of the pandemic on Americans' lives. For week 12 (July 16 - 21, 2020), 51.1 percent of respondents reported a loss of employment income since March 13, 2020, 12.1 percent reported food scarcity, 40.1 percent delayed getting medical care in the past four weeks, and 26.5 percent reported housing insecurity. From February through June of 2020, the number of persons with jobs was down by 14.6 million. The U.S. also added 3.1 trillion USD to the public debt in just four months in the same year.

On the contrary, if we look back at the conditions of China in corresponding periods, we can see different reali-

ties. In China, from January 3, 2020, to April 14, 2022, there had been 954,346 confirmed cases of COVID-19 with 14,440 deaths, reported by the WHO. The report clearly shows that the number of fatalities in the U.S. exceeds those of confirmed cases in China.

On the economic front, China's economy expanded by 2.2 percent in 2020 and was the only major world economy to grow in a pandemic-ravaged year, according to *The Wall Street Journal*.

In addition, when the entire world was struggling to control the pandemic with its distinctive policies and strategies, China has already been the first country to turn the tide on COVID-19.

Many other major and developed countries were only second to the U.S. in the field of fighting against the pandemic. Nevertheless, many are seen to be desperate to criticize China's DZCP. They are the people who spare no effort to slander China under any circumstances.

These people first tried to establish China as the origin country of the coronavirus. But the world's scientists, including those from the WHO, dismissed their baseless claims. Afterward, they started an all-out smear campaign against China's DZCP. They are trying to tarnish China's image by saying that the policy violates individual freedom, human right of movement, and some social rights.

While blaming China for its DZCP, they hide the truth about how many human lives have been saved by the policy. They forget to mention that the right to life is the most basic human right. Every right is aimed at facilitating the development of our potential and ensuring our survival as human beings. The DZCP is defending the very right to life. China's detractors also know this reality. But they are condemning China's policy only to cover up their failures in saving their own people's lives from the coronavirus.

Musundali Bhuiyan is a Bangladeshi journalist and columnist now based in Beijing.

Truth about U.S. Bio Labs Brings into Question

By QI Liming

A statement was released by the U.S. Department of State in March, saying that "the Kremlin is intentionally spreading outright lies that the U.S. and Ukraine are conducting chemical and biological weapons activities in Ukraine."

But as the military conflict between Russia and Ukraine intensified, the U.S. had failed to provide a proper explanation for the establishment of bio labs in Ukraine. On the contrary, the U.S. has been trying to delude the public, accusing China and Russia of spreading false information. It's not difficult to see that the U.S. is trying to spin the establishment of bio labs as a war of public opinion, thus ignoring the harm of the bio labs themselves.

According to Russian defense ministry, the U.S. has established 336 bio labs worldwide in the last 30 years, and those in Ukraine are just the tip of the iceberg.

The Russian defense ministry has released documents acquired from the staff of a bio lab in Ukraine. The documents expose the U.S. and its NATO allies' research on biological weapons in Ukraine, including research on spreading the highly infectious bird flu virus through migratory birds, and on pathogens such as bacteria and viruses that can be transmitted from bats to humans.

These documents show that a large number of serum samples belonging to

the Slavs, one of the representative peoples of Europe, have been transferred to the bio labs, and that the experiments in Ukraine are similar to those perpetrated by Japan's Unit 731, a secret biological warfare research unit that carried out human medical experiments during World War II.

The documents were uploaded online by Russia for free download. Considering the impact of the above, we need to be cautious about the unchecked, uncontrolled and secretive operations of bio labs across the world.

The world should, "Be very concerned about U.S. bio labs in Ukraine," said Buyile Matiwane, deputy-president of the South African Students Congress.

Konstantin Kosachev, Russian commission's co-chair and deputy speaker of the Federation Council, repeated on Moscow's claims on April 18, that the U.S. is conducting the development of biological weapons, and it's hundreds of laboratories around the world are in question.

Kosachev said, "The parliamentary commission intends to appeal to the national parliaments of the countries where the U.S. bio labs are located."

According to TASS, Russia's parliamentary commission probing into the activities of U.S. bio labs in Ukraine will hold its next meeting on May 16. It will be attended by Russian foreign ministry officials. The commission has also decided to set up its own scientific advisory council.

Hi! Tech

Little Bee: A Breakthrough for Marginal Oil Field Exploitation

By Staff Reporters

Nicked named "Little Bee," Ocean Oil 163, China's first independently designed and built offshore wellhead platform, which is mobile and self-elevated, began production at the Weizhou12-8E oil field in the Beibu Gulf of the South China Sea on April 8, according to the China National Offshore Oil Corporation (CNOOC).

The operation of the Little Bee marked China's breakthrough in its capability of exploring marginal oil fields in the sea.

Marginal oil fields usually refer to small or medium sized oil fields of thin storage layers, with complicated structures or in remote locations. These fields can hardly be explored via normal approaches, and the evaluation of their economic benefits is relatively low or they cannot produce the expected profit.

"Sticking to the key element of exploration and economy, we proposed the 'mobile + integrated' idea for exploring marginal oil fields in the sea. Based on this, we designed and built the Little Bee, realizing the economic and effective exploration in the eastern district of Weizhou12-8E oil field," said Fan Caiwei, manager of exploration and development at CNOOC Zhanjiang Branch.

Different from traditional fixed jacket wellhead platforms, the Little Bee can be lifted up and down, moved and used repeatedly. "After finishing the current production task, the platform can be lowered to the sea surface and dragged by a tug boat to the next workplace to continue the exploration work. This could enhance the utilization rate of equipment to the maximum, and greatly cut the cost of oil field exploration," said Huang Peng, leader of the platform.

The eastern district of Weizhou12-

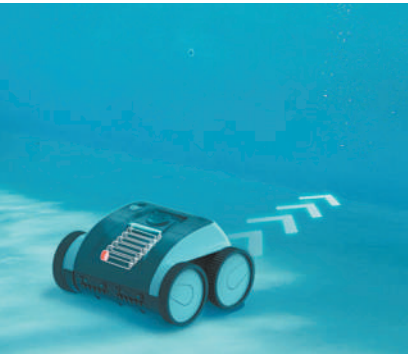


The Ocean Oil 163. (PHOTO: CNOOC)

8E oil field, where the platform is located, can produce crude oil of around 1,300 tons per day at its peak, with an accumulated yield increase of over 800,000 tons. The successful exploration of

the oil field signified that the bee-like oil exploration technologies are becoming more established, laying a solid foundation for China's ability in the exploration of marginal oil fields in the ocean.

Let A Robot Help You Clean the Pool



Aiper Robot. (PHOTO: IN-LINK)

By Staff Reporters

Swimming pool cleaning and maintenance relies mainly on manual labor and handheld cleaning tools, which is a hard work for most people. To make the process more convenient and less strenuous, pool cleaning robots were invented, and are now proving a big hit in one of the most lucrative markets in the world.

For an emerging product to stand out from its many competitors, technology is the key to making an impact and driving the market. The technical difficulties of

pool robots include environmental awareness, underwater communication, underwater power supply, energy consumption and other aspects. As pool robots need to work underwater, the requirements for signals, vision, navigation, being waterproof and anti-leakage are also higher. A Chinese company has developed Aiper, a pool-cleaning robot that is cordless and uses state-of-the-art technology.

The Aiper pool robot is capable of underwater automatic path planning, setting key cleaning areas and making appointments for cleaning thanks to al-

gorithms and APP interaction. When working, the robot's three-axis motor technology enables it to clean the bottom and side walls of the pool through a roller brush and filtration system, absorbing obvious impurities in the water and floor drains. In this way, it achieves a higher degree of cleanliness and greater energy efficiency.

In addition, the robot has been designed with modular battery pack technology. The battery pack is versatile and detachable, and can be adapted to other company products.

scale of 30 billion RMB, focusing on the highly sophisticated tech fields that meet Beijing's strategic development.

Jiang Xingquan, chairman of BSIF, said that BSIF will investigate the inadequate support of domestic long-term capital to sci-tech innovation, learn from overseas successful cases, and offer suggestions to corresponding ministries, thus contributing to the establishment of the international sci-tech innovation center in Beijing.

Beijing Accelerates Global Innovation Center Establishment

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Cai Qi, Secretary of the CPC Beijing Municipal Committee, stressed that Beijing should prepare diligently for the 2022 Zhongguancun Forum in order to gain more practical achievements, as the forum is a national platform for international sci-tech exchange and cooperation.

He also emphasized that the city will support enterprises to jointly establish distinctive research institutes and interdisciplinary laboratories with universities and venture capitals in Beijing.

A fund for disruptive technology innovation was jointly set up by MOST, the Beijing municipality and Xinxin Foundation in 2020, which is the first of its

kind. With a scale of 100 million RMB for the first phase, the fund aims to invest in revolutionary and disruptive technological innovation projects in the stage of applied basic research and commercialization in Beijing.

Prior to this, Beijing initiated the Beijing Science & Technology Innovation Fund (BSIF) in 2018, with a total