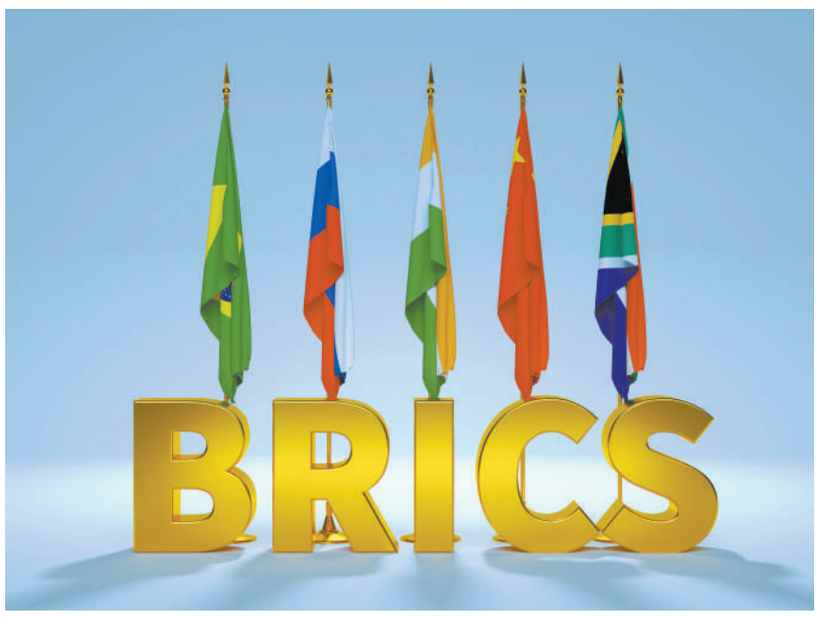
BRICS: Multipolarity in Action

Voice of the World

By Staff Reporters

China is willing to work with all countries, including BRICS countries, to promote common development around the world, Chinese President Xi Jinping said in BRICS Foreign Ministers' Meeting via video on May 19.

More than 130 political party leaders, as well as representatives of think tanks and civil society organizations from 10 countries, participated in the BRICS forum online.



The 2022 BRICS Foreign Ministers' Meeting was held on May 19. (PHOTO: VCG)

BRICS mechanism ensures "no decoupling"

Since the establishment of the BRICS mechanism, cooperation among the five-member countries has been strengthened and expanded. Now, the cooperation covers dozens of fields, such as economy, science and technology, agriculture, culture and health. It has now become a mechanism that prevents decoupling and ensures countries cooperate.

Cooperation among BRICS members within the BRICS framework has created favorable conditions for their own development, said Boris Vyacheslavovich, Chairman of the Supreme Council of United Russia. He also pointed out that as the world undergoes complex changes and the old structure of international relations is being replaced by multipolarity, countries and political parties should adhere to the principles of collaboration, follow the accepted norms of international law, adhere to open-up and mutual trust, take into account the interests of all parties, and work to eliminate the destructive influence of the West on the international community.

The ministers who attended the meeting expressed their support for an open, transparent, fair, inclusive, non-discriminatory and rules-based multilateral trading system, with a view to ensuring a level playing field with special and differential treatment for developing countries, and avoiding the unilateral actions and protectionist measures that run counter to the rules of WTO. They supported a robust Global Financial Safety Net with a quota-based and adequately resourced IMF at its center.

BRICS focuses on development

Every country has the right to development. The BRICS countries should take concrete actions to promote global development and create an environment for mutual benefit and win-win cooperation. Amid the pandemic, China has always adhered to the general policy of "dynamic zero-COVID policy," and acts swiftly to contain the COVID-19 resurgence. China's Foreign Minister Wang Yi said, as a responsible member of the international community, China stands ready to make greater contributions to fighting the global pandemic.

Herman Tiu Laurel, founder of Philippine-BRICS Strategic Studies, said that BRICS cooperation would help guide the world back to the development agenda, at a time when tensions in some regions threaten to drag the world down into a quagmire of recrimination and disintegration. BRICS countries will be an essential force for the recovery of the world economy and the practice of multilateralism in its true sense in the post-epidemic era.

David Monyae, director of the UJ Centre for Africa-China Studies, believes that the concept of "common prosperity" proposed by China advocates the common development of all humankind, in contrast to the profit-oriented ideology of Western capitalism. China's world-renowned achievement in poverty alleviation has encouraged developing countries, including African countries, and is of great significance.

BRICS should expand membership

During the meeting, China proposed to start the process of expanding BRICS, discuss the standards and procedures of this expansion, and gradually form a consensus. This proposal has been widely welcomed by the other four member countries, as it will help expand the influence of BRICS and also maintain peace. Argentina and other countries have expressed their willingness to join BRICS.

Argentina President Alberto Fernández said in the congratulatory letter that the group represents, "An excellent alternative of cooperation in the face of a world order which functions for the benefit of a few."

He added, "The new development bank of BRICS in which my country could participate, is for me the institutionalization of a new world order centered on development and far removed from the financial speculation which has caused so much damage to our countries."

Opinion

Japan Bypasses Science to Discharge Wastewater

By LI Yang & QI Liming

Japan's Nuclear Regulatory Authority approved Tokyo Electric Power Company's (TEPCO) plan to release the diluted wastewater of Fukushima Daiichi Nuclear Power Plant into the ocean in spring 2023.

The plan decision taken on May 18 will become official after a 30-day public review, a process that is not expected to overturn the approval.

Previously, the Japanese government formulated the basic policy of filtering and diluting the contaminated water into the ocean in April 2021. TEPCO formulated the corresponding specific plan and submitted it to Japan's Nuclear Regulatory Authority for review.

It should be noted that Nuclear Regulatory Authority is mainly focused on "practical feasibility," that is whether the plan and equipment needed for disposing are safe or not. Whether the releasing policy itself is scientific and safe; safety is no longer in the scope of consideration. In short, Japan's nuclear regulators only care about how to do it, instead of whether it can or should be done.

Shigeyoshi Otosaka, a marine geochemist at the University of Tokyo, worries about the accumulation of isotopes in seafloor sediments, where they can get picked up by marine biota.

"It's important to evaluate it appropriately," he said. For one thing, TEPCO's "re-purification" has only been tested on a small volume of water. The company needs to verify "Whether the processing performance can be maintained for a long period of time," said Otosaka.

International environmental groups pointed out in 2021 that TEPCO's water treatment technology of polynuclide removal facility could neither remove tritium or carbon-14, nor completely remove other radioactive isotopes such as strontium-90, iodine-129 and cobalt-16.

There is still concern in the community and neighboring countries about the potential health hazards of the release of the wastewater, which includes tritium, a byproduct of nuclear power production and a possible carcinogen at high levels.

Robert Richmond, director of the University of Hawaii Kewalo Marine Laboratory, said the previous discussions over the safety of Japan's plans emphasized the chemistry of the discharge, but not how it could interact with marine life at a panel discussion this April.

"If the ocean were a sterile glass vessel, that would be one thing," he said, adding that, "But it's not, you know, there's lots of biology involved."

Richmond has been particularly concerned about the potential for tritium, a key compound, being absorbed into the food system because the radioactive isotope can bind to phytoplankton.

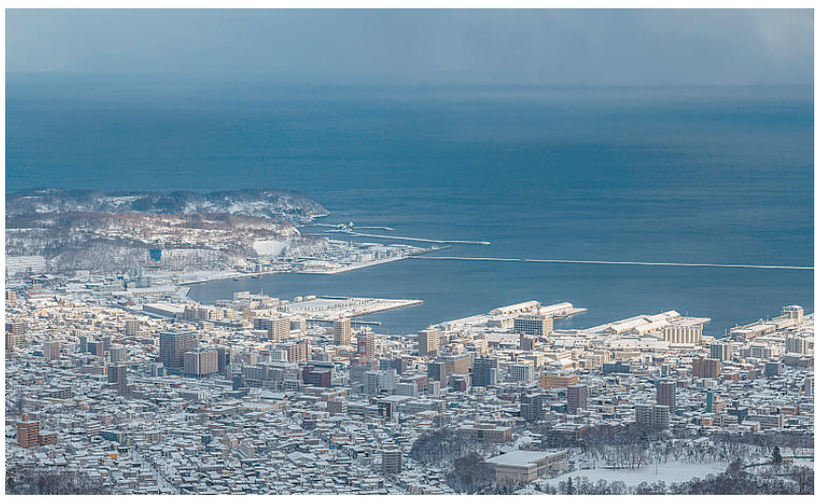
Through phytoplankton, he said, the radioactive element could then find its way into the greater food system, as the microscopic plants are consumed by mollusks and small fish, which are later consumed by other fish and eventually humans.

"Things like mercury in fish are now of an international concern. Radionuclides will be the same," said Richmond.

The situation is dynamic too, as climate change affects the temperature of waters and weather patterns change.

"As temperatures go up, many chemicals become more interactive, they become a little bit different in terms of break down," he said. "So these are all the things we need to consider."

Based on the above scientists' views and concerns, the Japanese government should seriously consider the scientific feasibility of wastewater discharge. It is very irresponsible to evade and ignore the crux of the matter and discharge the wastewater directly.



The discharge of nuclear wastewater into Otaru Port, Hokkaido, Japan. (PHOTO: VCG)

Hi! Tech

AI Virtual Anchor Customized

By WU Changfeng & QI Liming

Live anchors and AI virtual anchors of iFLYTEK made their first appearance on Douyin (Chinese version of TikTok) on May 15.

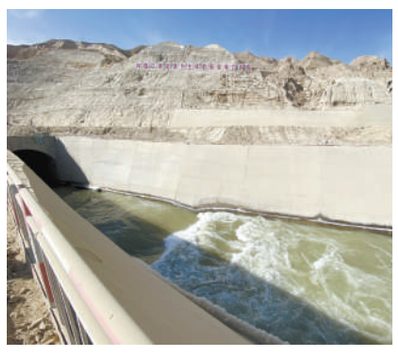
With the help of an "AI virtual human Live Broadcasting System," AI virtual anchors not only copy the appearance of human anchors, but also are equipped with the ability to do live broadcasting.

iFLYTEK's "AI virtual human Live Broadcasting System" can not only select facial features according to audience's preferences and needs, creating a brand new virtual human, but can also utilize the voice of the human anchor or customize voice characteristics, thus realizing the "private customization" of the AI virtual anchor. An AI virtual anchor's personality can be customized from a range of features.

iFLYTEK's AI virtual anchor relies on voice recognition, face modeling, lip prediction, audio drive and other autonomous key technologies. Users can actuate virtual humans for live broadcasts through text or voice input, so as to realize intelligent drive and make virtual live broadcast fast and convenient.

AI virtual anchors can be used in the fields of media, finance, culture and tourism. They are able to provide automatic production of audio and video content, and intelligent interactive AI products and services, realizing the customer value of automation and intelligence.

Get Ready for the Largest 3D-Printed Building



The diversion channel of Yangqu dam. (PHOTO: XINHUA)

By Staff Reporters

A double-story office building of Dubai Municipality Government is now the largest 3D-printed building in the world. At the height of 9.5 meters with a project area of 640 square meters, it is, however, expected that this title won't be held for long. By using AI, China is constructing an even larger 3D-printed building of the Yangqu dam on Qinghai-Tibet plateau.

This dam will be completed in 2024 with the height of 180 meters. It will be assembled layer by layer in a process of additive manufacturing identical to 3D printing. After the hydropower station is finished, it will deliver nearly five billion kilowatt-hours of electricity power annually to more than 100 million residents in Henan, through 1,500 kilometers of high-voltage lines.

The construction site of Yangqu dam is actually a massive 3D-printer. A large batch of unmanned engineering vehicles and equipment will work together seamlessly as different printer components under the core AI planning for the Yangqu project. Under the self-scheduling/control of AI, machines will autonomously deliver all processes, including precise material distribution, 3D printing/construction, and even construction acceptance.

However, not all the construction steps of Yangqu dam will be completed by AI and unmanned machines. According to the Chinese designer, for the time being, the jobs of mountain-cutting and quarrying cannot yet be delivered by unmanned construction vehicles. Therefore, human workers will still excavate stone and earth from the nearby mountains to use in the construction.

CHES: Searching Space for A New Home

By Staff Reporters

Chinese scientists have proposed a new space program named "the Close Habitable Exoplanet Survey" (CHES), which aims to survey the sky through a space telescope designed to identify habitable planets outside the solar system, about 32 light-years from the Earth. Once the program is implemented, it would be the first international space mission dedicated to identifying habitable Earth-like planets in the neighborhood around solar-type stars.

The exploration for habitable planets outside the solar system is one of the important frontiers for fundamental astronomy research. CHES will provide vital clues for questions like "are we alone in the universe?" The discovery of nearby habitable planets would expand the living space for humankind.

Currently, more than 5,000 exoplanets have been discovered and confirmed, including about 50 Earth-like planets in the habitable zone, but most of them are hundreds of light years from the Earth.

For the program, a 1.2-meter aperture high-image-quality and high-stability optical telescope will be placed at the second Lagrange (L2) point of the solar-terrestrial system. The telescope will be used to explore about 100 sun-like stars, and about 50 Earth-like planets or super-earths are expected to be discovered.

The orbit of L2 in a relatively stable thermal radiation environment, where the famous James Webb Space Telescope is located, is less affected by Earth's gravity. Besides the exploration on extraterrestrial life, it may also shed light on the formation and evolution of the Earth.

Based on high precision relative astrometry technology, CHES will precisely measure the change in star spacing with respect to six to eight standard reference stars at the microarcsecond scale, calculate the tiny variances of the target star caused by the gravitational perturbation of the planet by these subtle changes, and detect earth-like planets in the habitable zone around stars with real mass.

China lauches CHES to find new Earth-like planets. (PHOTO: VCG)

Improving Wildlife Protection for Mega-biodiversity

From page 1

The increasing number of species demonstrates China's efforts of reversing species loss and achieving harmony between mankind and nature.

Protection on national wildlife also made progress in recent years. Currently, China's key wildlife protection rate has risen to 74 percent, up from 71 percent last year, according to the National Forestry and Grassland Administration (NFGA).

With implementation of endangered species rescue projects and taking measures such as ex-situ conservation, releasing wild species into nature and artificial insemination, more than 300 kinds of rare and endangered wildlife species including the giant panda, crested ibis, and black-necked crane have steadily increased.

As the China National Botanical Garden was officially inaugurated in this year's April in Beijing, the country has built a new "Noah's Ark" for plant-diversity protection.

China has built 200 botanical gardens to preserve more than 20,000 species of plants, accounting for about 66 percent of the country's flora. Currently, 206 species of rare and endangered plants have returned to the wild, of which 112 are unique to China.

Besides selecting fifty candidate areas to build botanical gardens this year, NFGA said the protection will be further enhanced in order to make the protection rate of wild animals and wild plants on land reach 75 percent and 80 percent respectively by 2025.