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2023 Pujiang Innovation Forum Bulletin IV

**Embark on a New Journey to Build the Belt and Road into a Road of
Innovation with Opening-up and Cooperation at a Higher Level**

Editor's Note: The Belt and Road Seminar of the Pujiang Innovation Forum 2023, with the theme of "Create an Open Innovation Ecosystem, and Embark on a New Journey to Build the Belt and Road into a Road of Innovation", the guests from China, Brazil, South Africa and other countries and the Organization for Economic Co-operation and Development conducted discussions on building the Belt and Road into a road of innovation by centering on sharing the development opportunities brought about by the new round of scientific and technological revolution and industrial transformation. This bulletin summarizes views of guests at the Belt and Road Seminar for your reference.

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Embark on a New Journey to Build the Belt and Road into a Road of Innovation with Opening-up and Cooperation at a Higher Level

This year marks the 10th anniversary of the joint pursuit of the Belt and Road Initiative. Over the past ten years, the joint pursuit of the Belt and Road Initiative has been transformed from the aspiration for cooperation into the reality of development and has become a popular international public good. By strengthening scientific and technological innovation cooperation, countries can share the outcomes brought about by the Belt and Road innovation road in science and technology people-to-people exchange, technology transfer, joint laboratory, and science park cooperation. The guests attending the Seminar agreed that **over the past ten years, the Belt and Road scientific and technological innovation has been fruitful. Facing new opportunities and challenges, the Belt and Road scientific and technological innovation cooperation mechanism should be further improved, and a higher level of scientific and technological innovation cooperation should be carried out with firmer convictions, more effective efforts, greater patience and investment, and form an open innovation ecosystem with global competitiveness.**

I. Seize new opportunities brought about by the Belt and Road to scientific and technological innovation

First, the foundation for scientific and technological innovation cooperation is becoming increasingly solid, bringing new opportunities to developing countries. Under the joint efforts of all

parties concerned, positive progress has been made in scientific and technological cooperation among the Belt and Road countries. **Dai Gang, Director General of the International Cooperation Department of the Ministry of Science and Technology of the People's Republic of China,** said that China has made significant progress in the implementation of the Belt and Road Science, Technology and Innovation Cooperation Action Plan, supported more than 5,000 young scientists from other Belt and Road participating countries to carry out scientific research work in China, and trained more than 15,000 scientific and technological personnel from other Belt and Road participating countries; and that China has built nearly 10 multinational technology transfer platforms with ASEAN, South Asia, the Arab countries, Africa, Latin America and other regions; built 53 Belt and Road joint laboratories with 40 countries in the fields of agriculture, health, and environment, etc., and cooperated with 9 countries on science parks. **Adriano Proença, Senior Researcher at the Brazilian Center for International Relations, Professor of Universidade Federal do Rio de Janeiro, Brazil,** said that the joint efforts to develop the Belt and Road have created new opportunities for developing countries; and that taking the development of the Digital Silk Road as an example, driven by infrastructure construction such as 5G, factories and agricultural production are more efficient, bringing opportunities to developing countries like Brazil to apply smart technologies and reduce development inequalities. **Ana Celia Castro, Director of Institute for Advanced Studies, Federal University of Rio de Janeiro, Brazil,** proposed that the Belt and Road Initiative aims to connect China with countries in Asia, Europe, Africa, and the Middle East;

Latin America or Brazil could be the next hub; and building an innovation ecosystem will help Brazil become the next Belt and Road innovation center.

Second, the content of scientific and technological innovation cooperation has been enriched, injecting new momentum into the Belt and Road participating countries. The Belt and Road scientific and technological cooperation in various fields has been further pushed forward and has become an important choice for the Belt and Road participating countries to seek economic growth and sustainable development. **Hu Zhijian, Level II Researcher and former President of the Chinese Academy of Science and Technology for Development,** said that currently, the world, especially developing countries, are facing increasing challenges such as economic recession, widening wealth inequality, climate change, energy shortages, and public health emergencies; the ethical and security challenges brought about by new technology development require global collaborative governance; and higher-level and higher-quality Belt and Road scientific and technological innovation cooperation provides a new solution for achieving high-quality global development and building a community with a shared future for mankind. **Mlungisi Cele, Acting Chief Executive Officer of National Innovation Advisory Council, South Africa,** proposed that scientific and technological innovation can help South Africa achieve sustainable development in a changing world; in order to better cope with major challenges such as climate change and sustainable development, adapting to future society, and developing future-oriented education and skills, South Africa will take action in health, energy and other fields,

strengthen international scientific and technological cooperation, and build a local innovation system. He argued that China and South Africa can promote win-win cooperation between the two sides through various forms of cooperation such as technology transfer. **Hui Hwang Goh, Head and Professor of the Department of Electrics, School of Electrical Engineering, Guangxi University,** focusing on scale effects, resources optimization, overall methodology, adaptability and resilience, knowledge and technology transfer, introduced the role of innovation cooperation in solving global challenges, explained the open innovation ecosystem from multiple perspectives, and proposed that there is great potential for scientific and technological innovation cooperation in fields such as the Internet of Things, renewable energy, health care artificial intelligence, blockchain technology, remote learning, and telemedicine.

Third, there are more and more ways to cooperate in scientific and technological innovation, providing countries with new ideas. In order to achieve a higher level of innovation cooperation, the Belt and Road should meet the development needs of all participating countries, and moves towards an open innovation ecosystem. **Hu Zhijian** said that currently, major-country rivalry and competition in scientific and technological innovation is intensifying, geopolitical changes in the countries and regions along the Belt and Road are becoming increasingly complex. The overall level of science and technology and the activity of scientific and technological cooperation in the Belt and Road participating countries are low, and the depth of cooperation is insufficient. The joint pursuit of the Belt and Road Initiative mainly focuses on government promotion, project cooperation, and bilateral

cooperation. However, the market-oriented, rule-based and institutional construction is insufficient; multilateral cooperation mechanisms, policy systematization, interdepartmental coordination, and top-level design need to be further improved; and it is necessary to change the mindset and move from international scientific and technological cooperation to an open innovation ecosystem. **Hui Hwang Goh** pointed out that through innovative practices such as public-private partnerships, international cooperation and diplomacy, cultivating a culture of innovation, and building platforms for knowledge sharing and collaboration, ASEAN has successfully tried using open innovation methods to resolve issues such as the digital divide, which helps expand the channels for scientific and technological cooperation between China and other Belt and Road countries. **Zhao Yang, Researcher and Managing Director of CICC Research Institute**, pointed out that in the current situation where the blocked fields have lost their impetus for technological progress, international scientific and technological cooperation needs to change the innovation cooperation model, to cultivate internal driving force for innovation, and to move from the G-2 model (Sino-US cooperation model) to a market-driven G-N innovation cooperation model (cooperation model between China and multiple countries), for the purpose of providing support for technological progress of China and other Belt and Road countries.

II. Embark on a new journey of scientific and technological cooperation for building the Belt and Road into a road of innovation

The first is to strengthen consensus on the concept of open innovation, and expand international scientific and technological

exchanges and cooperation. **Dai Gang** said that China will deepen and expand the Belt and Road scientific and technological cooperation, further implement the Belt and Road Science, Technology and Innovation Cooperation Action Plan, and comprehensively pursue four major initiatives, namely the Science and Technology People-to-People Exchange Initiative, the Joint Laboratory Initiative, the Science Park Cooperation Initiative, and the Technology Transfer Initiative; launch and implement four new special cooperation programs, including programs on sustainable development technologies, poverty reduction through science and technology, innovation and start-up, and spatial information science and technology, providing stronger scientific and technological impetus to jointly promote high-quality Belt and Road cooperation. **Hu Zhijian** said that we should strengthen the top-level design and overall coordination of the Belt and Road science and technology cooperation, fully consider the characteristics and interests of different countries, and take into account the science and technology development strategies of different countries. We should Jointly discuss and formulate innovation plans and standards, facilitate the cross-border flow of scientific and technological innovation factors, remove various barriers, and create an ecosystem for the flow of factors at low cost. We should uphold the concept of openness and cooperation, explore and expand areas of cooperation with common interests, and welcome other developed countries to join in scientific and technological cooperation and technology transfer with the Belt and Road participating countries.

The second is to deepen the mechanism of scientific and technological innovation cooperation and improve the system of

scientific and technological innovation. **Hu Zhijian** proposed that we should further expand multilateral cooperation mechanisms on the basis of bilateral cooperation, and explore and expand areas of cooperation with common interests. On the basis of technology transfer cooperation, we should expand and enhance cooperation on national scientific research and cutting-edge technological capabilities of the Belt and Road participating countries; on the basis of the supply-side, we should increase policy supply to the supply-side, and giving full play to the roles of the market and the non-governmental organizations such as enterprises; and on the basis of project cooperation, we should expand cooperation in the development of rules, standards and institutions, and promote the construction of an open innovation ecosystem and the scientific and technological innovation governance cooperation. **Zhao Yi, President of Qianxun SI,** pointed out that China's Beidou satellite navigation system can make standard positioning, navigation and timing services available globally. Through cooperation with other Belt and Road participating countries, it provides services in satellite navigation, geographic information surveying and mapping applications in water conservancy, electricity, transportation, and agriculture, as well as smart cities and intelligent transportation. And through innovative infrastructure applications, it provides new ways of technological cooperation. Ana Celia Castro proposed that we should establish an open agricultural innovation ecosystem under the framework of the Belt and Road Initiative through measures such as cross-cultural cooperation, localization, capacity building and knowledge transfer, strengthening investment and financing, and giving better play to the role of country, for

the purpose of providing new ideas for achieving efficient collaborative innovation in the agricultural sector.

The third is to improve the effectiveness of openness and cooperation in science and technology and create an open and globally-competitive innovation ecosystem. **Mario Cervantes, Senior Economist of Science and Technology Policy Sector, Organization for Economic Co-operation and Development (OECD)**, described the OECD countries' attempt to achieve sustainable goals using the blended finance method that transcend traditional mechanisms, attract new partners to mobilize more resources, link financing to results, and redistribute risk. Blended finance can provide diversified financing for global public goods, and contribute new ideas to improving the efficiency of the Belt and Road science and technology innovation cooperation. **Hu Zhijian** proposed that we should coordinate the distribution of resources for Belt and Road scientific and technological innovation cooperation, develop the indicator system for monitoring the scientific and technological innovation cooperation and open innovation ecosystem of the Belt and Road participating countries, establish the think tank network of the Belt and Road participating countries, and negotiate the joint establishment of the Belt and Road scientific and technological innovation cooperation mechanism. **Adriano Proença** said that through the knowledge flow brought about by the Belt and Road scientific and technological cooperation and infrastructure construction, Brazil can learn from China's successful experience in building an open innovation ecosystem, enhance the competitiveness of local enterprises, and better support Brazil's participation in global competition. **Zhao Yang** said that

in order to establish an international innovation ecosystem that matches the Belt and Road innovation cooperation model, it is necessary to strengthen global cooperation and regional cooperation. The path to creating an innovation ecosystem should follow the principles of easy at first but difficult later, that is, starting from regional cooperation that utilizes local resources and targets market segments, and then developing towards global cooperation that utilizes global resources and targets the mass market. In the process, the innovation ecosystem is gradually transformed from a low degree of coupling of "market demand - exchange and interaction - technical improvement" to an innovation ecosystem with a high degree of structural coupling of "knowledge dissemination - market integration - capital flow - standard unification".

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