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**2023 Pujiang Innovation Forum Bulletin XII**

**Strengthening green technology innovation to promote green  
transformation and development**

**Editor's Note:** The Green and Low-Carbon Innovation Forum of the Pujiang Innovation Forum 2023, with the theme of "Focus on Green Transition, and Share a Low-Carbon Future", renowned experts from various fields made in-depth discussions on the development status, challenges and future prospects of green and low-carbon technologies. This bulletin summarizes views of guests at the Green and Low-Carbon Innovation Forum for your reference.

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### **Strengthening green technology innovation to promote green transformation and development**

Realizing the carbon neutrality goals and the sustainable development of human society is an important topic in current global technological cooperation. Accelerating the green transformation of development patterns, and promoting carbon peaking and carbon neutrality actively and steadily is also an inherent requirement for China to promote high-quality development and realize Chinese-style modernization. The guests present agreed that **promoting the comprehensive green transformation of economic and social development is a broad and profound systemic economic and social change, and that we should give full play to the global influence of the Chinese wisdom and solution to further deepen international scientific and technological cooperation in the green and low carbon field, and jointly promote global green transformation and development.**

**I. Green technology innovation supports the green transformation and development of society strongly.**

**On the one hand, green technology innovation accelerates the realization of the low-carbon development goals.** Erik Solheim, Vice President of the Belt and Road Green Development Coalition, stated that China has made gratifying achievements in green technology innovation, and taken the lead in green energy, low-carbon transportation, nature-based solutions, circular economy and other fields. These

achievements have benefited from the three primary factors of "political leadership, market development and enterprise participation, and the subjective initiative of the people". **Wei Wei, Vice President of the Shanghai Advanced Research Institute, CAS**, proposed that carbon accounting is a fundamental task to realize the dual carbon goal and the most direct quantitative basis for assessing carbon reduction benefits. Accelerating the development of carbon accounting technology can support carbon reduction path planning on different levels, including national, regional and industrial.

**On the other hand, green technology innovation contributes to high-quality social development.** **Professor Keo Vanthoeun**, Ministry of Environment of Cambodia, thought that green technology innovation benefits all aspects of society, such as reducing energy consumption, waste, water consumption, carbon footprint, business costs and pollutant emissions, improving product performance, and promoting eco-friendly agriculture, thereby providing new opportunities for social development. **Gui Xude**, Board Chairman and Secretary of the CPC Committee of Shanghai Investigation, Design & Research Institute Co., Ltd. (SIDRI), pointed out that China Three Gorges Group has achieved fruitful results in marine green energy innovation, such as the localization of integrated control systems for offshore wind turbines, which is accelerating the development of marine green energy. **Wei Wei** suggested that product carbon footprint expresses carbon emissions as a result of interrelated and dynamic carbon flows using products as carbon carriers, which is conducive to promoting the establishment of a low-carbon consumption concept in the whole society.

## **II. Challenges in realizing social green transformation and development**

**One is the shortage of resources.** **Keo Vanthoeun** stated that Cambodia still faces a series of resource shortage problems in promoting green transformation and development, including a low starting point in infrastructure, human resources, etc., and relatively insufficient research resources and infrastructure of universities. He also pointed out that as a developing country, Cambodia still needs to make every effort to develop its economy, but cannot consume future resources for economic development. **Sean Kidney, Co-Founder and CEO of Climate Bonds Initiative**, thought that renewable energy technology is booming globally, new technologies are emerging, and costs are also decreasing. The primary challenge now is resource endowment, including capacity building and production efficiency improvement.

**The second is technological challenges.** **Wei Wei** pointed out that in terms of carbon footprint assessment technology, the existing methodology is still unable to meet the requirements for raw material carbon footprint assessment, and there are still deficiencies in underlying logic and theoretical research, and inconsistencies in target scope definition and inventory analysis principles among different standards. **Gui Xude** said that in the development of offshore new energy, achievements of offshore wind power hydrogen production technology should be extended downstream of the industry chain in the future to promote the extraction of green methanol and green jet fuels around the construction of offshore comprehensive energy islands.

**The third issue is investment. Wichai Narongwanich**, Senior Vice President of Kasikorn Bank, pointed out that climate change has brought great challenges to the whole society. To realize economic decarbonization, and ultimately carbon peak and carbon neutrality successfully, huge investment is needed, which involve all relevant sectors such as transportation, energy and agriculture, as well as emerging economic fields such as the intelligent manufacturing and carbon neutrality industries. A single entity or sector cannot provide such tremendous financial support, and multi-party cooperation is required. **Sean Kidney** suggested that Shanghai must be prepared to cope with the changeful climate risks such as heat waves and typhoons. According to relevant data, the total investment in responding to risks and challenges is estimated to be as high as 650 billion yuan.

### **III. Relevant suggestions**

**First, establish an international cooperation and exchange platform to promote multilateral international scientific and technological cooperation.** Keo Vanthoeun pointed out that to promote green transformation and development, more international cooperation platforms should be established, such as the China-Cambodia Cooperative Platform for Green Technology and Talent Training, which will play an important role in promoting future China-Cambodia cooperation. **Erik Solheim** proposed that China has achieved excellent results in green transformation and development, but global green development cannot be realized in reliance on any single country; instead, countries around the world must be united and make joint efforts to be successful. We call on the international community to stop all so-called

decoupling or trade wars, and work together to realize green development.

**Second, strengthen innovative research and practice, and promote green technology innovation.** **Wei Wei** proposed that to promote the development of raw material carbon footprint, the first step is to carry out methodological innovation and strive for international discourse power. In addition, establish a sound coordinate system of accounting rules and standards, improve data management capabilities, and conduct research on the carbon footprint assessment practices for raw materials in key fields. **Gui Xude** proposed to promote the construction of marine central cities, accelerate research on key technologies for the integration and development of marine new energy, deepen the building of marine think tanks, and strengthen policy research on the construction of marine central cities.

**Third, launch innovative financial models and tools to promote green technology investment.** **Keo Vanthoeun** pointed out that to promote green transformation and development, we should establish a financial support system suited to a country or region based on the green technology development paradigm, strengthen synergistic support from green technology banks, social capital and financial institutions, establish an annual reporting mechanism for green investment, and analyze green investment trends timely. **Wichai Narongwanich** stated that to realize green transformation and development, greater financial support should be provided to promote joint efforts of the government, society, financial institutions and multilateral development banks, innovative financial means should be launched, and green and sustainable development

financial instruments such as loans, bonds, and funds should be fully leveraged to support green technology innovation.

**Compiled by: Fu Cuixiao, Luo Xianfeng**