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Updates of International Science & Technology Cooperation

China, Canada Strengthen Science & Technology Cooperation and Exchange

On June 28, 2016, Wang Zhigang, Secretary of the CPC Leading Group and Vice Minister, MOST, met with a delegation led by Navdeep Bains, Canada's Minister

of Innovation, Science and Economic Development, and Guy Saint-Jacques, Canadian Ambassador to China.

Mr. Wang made a brief introduction of the recently-

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held National Conference on Science, Technology and Innovation, and the release of National Innovation-driven Development Strategy Outlines, saying the Chinese government is placing science, technology and innovation at a more important position. He spoke highly of the Canadian government's firm determination and concrete efforts to advance science, development and innovation, and hailed the sound bilateral partnership established on the basis of China-Canada Joint Committee on Science, Technology and Innovation Cooperation. He said the Chinese side was willing to work with the Canadian counterpart to put into practice the consensus reached by the joint committee, and called for both sides to deepen cooperation in rolling out favorable policies to encourage innovation, develop clean technology, and strengthen personnel exchange, so as to make due contributions to

enrich bilateral friendship and public well-beings.

Mr. Bains praised the significant progress China had made in advancing science, technology and innovation. He introduced measures launched by the Canadian government to encourage technological development and innovation, saying they were willing to increase dialogues about innovation policy, strengthen science & technology cooperation and facilitate personnel exchange with the Chinese side, and hoped the academic and business communities as well as the general public from both countries can take part in the creation of an amicable atmosphere that encourages and respects innovation, push for scientific and technological progress and bring tangible benefits to the people.

(Source: www.cistc.gov.cn, July 6, 2016)

China, Russia Establish Innovation Dialogue Mechanism

On June 27, 2016 the MOU on Innovation Cooperation between the Ministry of Science and Technology of the People's Republic of China and the Ministry of Economic Development of the Russian Federation was signed in Moscow. Yin Hejun, Vice Minister of Science and Technology, and Fomichev, State Secretary and Deputy Minister of Economic Development, signed the MOU on behalf of China and Russia respectively. It marked the official establishment of China-Russia innovation dialogue mechanism.

"Innovation-driven development" was a strategic choice shared by both countries. China and Russia were complementary in the pursuit of innovation and had enormous potential of cooperation. According to the MOU, China and Russia will set up a coordination committee on innovation cooperation led by the

Ministry of Science and Technology and the Ministry of Economic Development and participated by science parks, technology platforms and investment institutions from both countries. The committee aims to coordinate and guide reciprocal cooperation, strengthen dialogue in innovation strategy, innovation trend, establishment of national innovation system, technology transfer and mass innovation and entrepreneurship, support cooperation between business incubators from both countries, encourage young people to start their own businesses, strengthen cooperation between Chinese and Russian science parks and push for the establishment of China-Russia technology industry cooperation platform. According to the work plan, the committee will convene its first meeting in 2017.

(Source: www.cistc.gov.cn, July 8, 2016)

China, Belarus Promote Sub-national Cooperation

The first meeting of the China-Belarus intergovernmental sub-committee of scientific and technological cooperation was held in Minsk, capital of

Belarus on June 24th, 2016. The meeting was presided over by Yin Hejun, Chinese co-chair of the sub-committee and Vice Minister of Science and Technology of China;

and his Belarusian counterpart Alexander Shumilin, Chairman of the State Science and Technology Committee of the Republic of Belarus. Also present was Cui Qiming, Chinese Ambassador to Belarus.

The two sides introduced respective national policies for science, technology and innovation (STI), exchanged views and reached consensus on deepened bilateral cooperation, jointly funded research projects, and the development of China-Belarus industrial park based on STI cooperation. The two sides agreed to promote the

exchanges of R&D personnel, support joint research projects, build joint laboratories, R&D centers and other cooperation platforms through concrete projects. It was also agreed that science parks of the two countries should receive assistance in finding the right partners in the other country, and cooperation at sub-national levels should continue. The meeting identified a list of collaborative projects for the coming two years and confirmed that the next meeting would be held in 2018 in China.

(Source: www.cistc.gov.cn, July 11th, 2016)

China, Ukraine Deepen STI Cooperation

The second meeting of the Chinese-Ukrainian sub-committee of intergovernmental cooperation in science and technology was held in Kiev, capital of Ukraine on June 23rd, 2016. The meeting was presided over by Yin Hejun, Chinese co-chair of the sub-committee and Vice Minister of Science and Technology; and his Ukrainian counterpart Maxim Strikha, Deputy Minister of Education and Science. Also present was Du Wei, Chinese Ambassador to Ukraine.

The two sides introduced respective national policies on and development of science and technology, exchanged views and reached consensus on deepening bilateral cooperation in science, technology and innovation.

They agreed to push for reciprocal cooperation between science parks in technology transfer and translation, and support joint R&D projects in priority areas carried out by research institutes, universities and businesses. They also agreed to share research facilities, exchange personnel and information, and organize joint activities to intensify the communication and connection between the two countries. The meeting finalized the list of projects on cooperation in science and technology for the coming two years and confirmed that the next meeting would be held in 2018 in China.

(Source: www.cistc.gov.cn, July 14th, 2016)

2016 National STI Conference Held

The national conference on science, technology and innovation (STI) was held at the Great Hall of the People on May 30th, 2016 along with the 18th congress of the Chinese Academy of Sciences, the 13th congress of the Chinese Academy of Engineering, and the 9th national congress of the China Association for Science and Technology. Xi Jinping, President of the People's Republic of China, addressed the STI conference. He stressed that China must speed up scientific and technological innovations on all fronts to develop state-of-the-art technologies and serve China's economic interest and strategic needs.

Xi pointed out that China must put the new development philosophies into practice, carry out the strategies of rejuvenating the country through science, education, and talent; pursue innovation-driven development; improve overall planning and coordination; and optimize the general plan of China's scientific and technological advancement.

Xi put forward five requests. First is to consolidate China's scientific and technological (S&T) fundamentals and advance the country into the world's S&T forefront. To this end, it is important to identify future directions for technological breakthroughs to seize opportunities. As China establishes its own development strategy, the country should become more confident of its own innovation, work out more original inventions and aim at making greater strides in key scientific and technological areas.

Second, China is to reinforce strategic orientation and eliminate the technological barriers for innovation-driven development. National demand for science and technology in strategic areas is more pressing than ever. The country must make breakthroughs in core technologies and master key technologies related to long-term development across the board. In order to become a technological powerhouse and a global hub of science, technology and innovation, the country needs to develop

a significant number of world-class research institutes, research-intensive universities and innovative enterprises, and keep on breaking fresh ground in the scientific and technological areas.

Third, it is important to increase the supply of S&T resources to serve socio-economic development. In addition to the pursuit of knowledge and truth, researchers should also try their best to serve economic, social and public interests. In the next stage China should push for sustainable and healthy economic and social development, advance the supply-side structural reform, execute the government plan to slash overcapacity, cut stockpiles, reduce leverage, lower costs of doing business and fix shortcomings. It is necessary to set directions for future development through innovation and groundbreaking accomplishments, substantially increase the supply of public S&T services so that the people could enjoy a more livable environment, better healthcare services, safe food and drugs.

Fourth, the country is to further its reform and develop a robust mechanism to manage S&T projects. S&T innovation and institutional innovation should work together and complement each other. China's biggest advantage lies in its socialist system that pools resources to solve major problems, accordingly new mechanisms should be developed to maximize that advantage. A profound reform of the science & technology system among others would be carried out around the core of innovation. Favorable policies designed to encourage technological innovations by the business sector are to be made and implemented. More support would be granted to small- and medium-sized enterprises in their pursuit of technological innovations. Furthermore, the distribution of scientific resources at research institutes and universities should be improved. Academic foundations should be strengthened and emerging and interdisciplinary subjects should be developed. In line with the rules of clustering, innovative cities and regional innovation hubs should be

established to drive regional development.

Fifth, it is essential to carry forward the spirit of innovation and cultivate talent. To develop into a technological powerhouse, the key for China is to build a well-structured cohort of innovative professionals. Meanwhile a pro-innovation culture should be developed to identify, cherish, respect and use talent. That means to identify talent in the practice of innovation, cultivate talent in innovation activities; gather talent in the pursuit of innovation; build a large cohort of tech-savvy personnel who are visionaries able to see the big picture and the future directions; train a group of team leaders capable of attracting talent and coordinating efforts from various parties; and foster courageous and innovative entrepreneurs and highly-skilled professionals. Scientific research is characterized by instant inspiration, arbitrary approaches and indefinite solutions; therefore we should give free rein to scientists' imagination and encourage them to make bold assumptions and scrupulous verification. Leading scientists should be granted greater autonomy to determine technology roadmaps, research expenses and resource allocation. The administration of science and technology should focus on strategies, planning, policies and services.

Xi stressed that scientific and technological innovation and science popularization are crucial and equally important to the push for innovation-driven development and we must popularize scientific knowledge, promote

scientific thinking and approaches to develop a sound atmosphere that encourages the learning and using of science and unleashes the power of innovation.

Xi noted that the Chinese Academy of Sciences and the Chinese Academy of Engineering are home to the most capable scientists and researchers in China, and China should take full advantage of the top science think tanks and enable academicians to offer accurate and insightful advice to facilitate decision-making in prominent S&T affairs concerning the long-term development. The country should let the top academic institutions play their leading roles, keep abreast of the world's development trend and get hold of the direction of new S&T revolutions. Xi hoped all academicians could play their pioneering roles and work together with the entire science community, especially young scientists and technological professionals, to accomplish the goal of making China a strong leader in science and technology.

Xi said that the China Association for Science and Technology should be committed to serving science workers, expediting innovation-driven development, improving the public's scientific awareness, and facilitating decision-making by the Party and the government. He called on the association to unite science workers in the pursuit of scientific innovations and science population.

(Source: Science and Technology Daily,
May 31st, 2016)

S&T Innovation Achievements Exhibition for 12th Five Years

The 12th Five-Year Plan S&T Innovation Achievements Exhibition opened on June 1, 2016 at Beijing Exhibition Center. The exhibition was themed on "Driving Development through Innovation, Leading the Future through Science and Technology", displaying an array of significant accomplishments China had made in science, technology and innovation over the past five years.

The exhibition was divided into 10 sections, i.e. General Information, Major Projects, Basic Research, High Technologies, Agricultural Technologies, Livelihood Technologies, Regional Innovation, Mass

Entrepreneurship and Innovation, Innovative Talent and Participation in the Global Innovation Network. An array of advanced and the state-of the-art technologies were showcased in kind, virtual reality and naked-eye 3D display.

The exhibition was highlighted by the public display of remarkable breakthroughs China had produced in basic research and high technology from 2011 to 2015, including quantum communication, Quantum Anomalous Hall Effect, Weyl fermion research, neutrino oscillation, CiPS stem cell, and high-temperature iron-based

superconductor.

According to the exhibition staff, China has captured worldwide attention with remarkable success in manned space flights and lunar exploration missions; Tianhe-2 remained the world's fastest supercomputer for six straight times; China's first jumbo jet C919 rolled off the assembly line; Beidou navigation system has been widely applied; Jiaolong deep-sea submersible set world record by diving 7,062 meters below the sea; independently designed Hualong-1 nuclear reactor began construction; fast neutron reactor began to generate power and integrate itself to the grid.

It could be seen from the exhibition that science, technology and innovation provided robust support

to economic and social development and improving livelihood during the five years. Significant advances were made in integrated circuit manufacturing technology, new-generation high-speed rail and ultra-high-voltage power transmission and transformation. China's wind power capacity and photovoltaic capacity are now more than any other country, and sales of new energy vehicles were estimated to have exceeded 300,000 units in 2015. Science, technology and innovation have proven to be a new engine to drive economic growth and advance the supply side reform.

(Source: Science and Technology Daily,
June 2, 2016)

Dynamic Mechanism to Manage and Operate S&T Projects

The national conference on science and technology, the conference of the country's two top think tanks, the Chinese Academy of Sciences and Chinese Academy of Engineering, and the ninth national congress of the China Association for Science and Technology were held on May 30, 2016. Xi Jinping addressed the event and said "China must deepen reform and innovation and establish a dynamic mechanism to manage and operate science & technology projects". How to build a sound mechanism that guides, supports and encourages innovation is vital to science & technology innovation and innovative development.

1. Develop a new mechanism to pool resources to solve major problems

As science and technology advance, market forces cannot conquer some core technologies and key equipment on its own. Therefore, we should establish a new mechanism to pool talent, financial and material resources to solve major problems and lift our science and technology strength to a higher level. Xi Jinping pointed out, "we must strengthen coordination, and overcome the isolation, overlapping and fragmentation of different departments and entities, and expedite the establishment of an interactive, collaborative and efficient national

innovation system". Xi Jinping stressed that "the market should play a decisive role in resource allocation, and the government should play a better role in coordinating innovation activities, pooling resources to address big issues, and form synergy to advance innovation".

2. Reform the existing science & technology mechanism

S&T innovation is a systematic project that involves all aspects of work. The existing science & technology management system and mechanism must be profoundly overhauled to develop a new system and mechanism encouraging and supporting innovation. The most pressing task is to follow the rules of scientific research, quicken the pace of the reform and remove all conventional notions and mechanisms hindering the implementation of the innovation-driven development strategy. Xi Jinping pointed out that "we must promote a profound reform of the science & technology system and other relevant systems so as to expedite our pivotal push for S&T innovation".

Further reform of the science & technology system and make fresh breakthrough in distributing science & technology resources, handling scientific achievements and establishing a new governance system for S&T

innovation. Xi Jinping stressed the need to set up advisory and decision-making mechanism to back administrative decision, strengthen science & technology advisory system and build high-level technology think tanks. We must institutionalize the decision-making process on major science & technology issues, optimize allocation of scientific resources, increase support to basic research, high-tech research and research for social wellbeing to maximize the efficiency of S&T innovation activities. We should also reform and innovate the way of using and managing research grants, overhaul the science & technology appraisal mechanism, and set up a classified appraisal system to measure the quality, contribution and performance of S&T innovation activities.

3. Establish a mechanism that protects business innovation

Enhancing enterprises' innovation capability and strengthening their principal position in the pursuit of technological innovation is one of the core missions to overhaul the science & technology system. We have to establish a sound mechanism that encourages and protects innovation activities conducted by enterprises. The market should play a guiding role in conducting R&D projects, choosing technological routes and allocating innovation resources. We need to adjust the innovation decision-making mechanism and organizational model, and strengthen inclusive policy support to help them become principal participants in determining technological innovation, R&D spending, research organization and transformation of scientific achievements. At the 7th meeting of the Central Leading Group for Financial and Economic Affairs, Xi Jinping pointed out "we need to accelerate the push for profound integration of industry, university and research institute and let enterprises become the principal participants of innovation activities."

We need to step up support to small- and medium-sized enterprises (SMEs) and encourage them to unleash their innovative ideas. Public innovation service platforms should be set up to offer technological innovation services to SMEs. Favorable tax policies should be further implemented to reduce tax bills paid by enterprises for their R&D activities and increase their R&D investment returns. Li Keqiang said we have to vigorously develop mass maker spaces, open more national innovation demonstration zones, well manage the national high-tech zones and play their leading roles in congregating innovation resources. In addition to being backbones of innovation activities in the respective industries, large enterprises can also lead SMEs to build innovation clusters. According to The Plan for Implementing the National Strategy of Innovation-driven Development, China aims to foster world-leading innovative enterprises and encourage industry leaders to establish advanced research facilities, develop full-fledged R&D organizational system and attract high-end innovative talents. Leading enterprises can join hands with SMEs and research institutes to build an innovation chain and provide integrated solutions to innovate industrial technologies. China is seeking to cultivate an array of innovative enterprises with core technologies, strong capabilities in integrated innovation and guiding the development of important sectors, and some are striving to become the world's top 100 innovative enterprises.

(Source: www.ccln.gov.cn, June 2, 2016)