CHINA SCIENCE AND TECHNOLOGY NEWSLETTER

Department of International Cooperation *No. 22*
Ministry of Science and Technology(MOST), P.R.China *November 30 2016*

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Chinese Leaders Talk about Innovation

President Xi Jinping: Science, Technology and Innovation

On the morning of May 30th, 2016 at the Great Hall of the People, several important meetings were held: the National Conference on Science, Technology and Innovation, 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. President Xi Jinping delivered an important speech. He pointed out that a nation prospers as science and technology prosper, and a country becomes stronger as science and technology progress. China is standing at a new starting point, the meetings were to place science, technology and innovation at a more important position and launch the mission to make China a technological powerhouse.

He announced a three-step strategy, pledging to build China into an innovative country by 2020, and an

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international leader in innovation by 2030, and eventually an S&T powerhouse by the 100th anniversary of the founding of the People's Republic of China.

Xi Jinping stressed that the history of human development suggests innovation is an important power to drive the development of a country or a nation, and an important power to advance the human society. An innovation-driven development strategy is imperative for China to respond to a changing landscape of development, capture opportunities and improve core competitiveness. It is also necessary for the country to accelerate the transition of growth model, deal with deep-rooted problems and issues that hamper economic development, steer the economy under a new normal and maintain sustainable and healthy economic growth. China must carry forward the new concepts of development, implement the strategy of rejuvenating the country through science and education and the strategy of strengthening the country through human resources, draw up sound plans and coordinate efforts to promote scientific and technological development.

Xi Jinping put forward five requests on the implementation of the innovation-driven development strategy.

The first is to solidify China's scientific and technological basis and enable it to become a world leader in major S&T fields. Developing science and technology is a trend of the times. China must adopt a global vison, develop more original theories and make new discoveries.

The second is to reinforce strategic orientation and eliminate the technological barriers in the push for innovative development. In order to become a technological powerhouse, China must house a significant number of first-class research institutes, research-intensive universities and innovative enterprises, and keep making groundbreaking scientific achievements.

The third is to increase the supply of S&T resources to serve economic and social development. In addition to the pursuit of knowledge and truth, researchers should also try their best to serve economic, social and public interests, so that the people can enjoy better living environment and access to improved healthcare services, safer food and drugs.

The fourth is to further reform and innovation and develop a dynamic mechanism to manage R&D projects. The country needs to develop and deliver favorable policies to encourage technological innovations by the business sector, and strengthen support to small and medium-sized enterprises. China should optimize the distribution of scientific resources at research institutes and research-intensive universities, and solidify the foundation of varied academic disciplines.

The fifth is to promote an innovative spirit and cultivate a talent team for innovative development. China must build a large pool of strategic tech-savvy talent, nurture inspiring leaders, as well as innovation-minded entrepreneurs and highly-skilled professionals.

(Source: Xinhua News Agency,
May 30, 2016)

Li Keqiang: Innovation

Premier Li Keqiang first put forward the initiative of "mass entrepreneurship and innovation" at the 2014 Summer Davos Forum. Afterwards he talked a lot about innovation and entrepreneurship on different occasions.

During an inspection visit to Tsinghua University and Peking University on April 15th of 2016, Li Keqiang talked about higher education reform and the innovation-driven development strategy, saying that he has been closely following college graduates' efforts to seek employment and start up their own businesses.

On the sideline of the 2016 Summer Davos Forum in Tianjin, Li Keqiang inspected the sales outlets of Tianjin Optical Electrical Group, Troila Technology and Flying Pigeon on June 26th. He stressed that large state-owned enterprises must take entrepreneurship and innovation as a "surfboard" to survive and thrive in the market. The business sector should speed up the overhaul of traditional development models, improve institutional mechanisms

to encourage entrepreneurship and innovation, make good use of technology and talent to drive business growth and create endogenous growth momentum. After learning that the three enterprises are optimizing consumer services, Li Keqiang said that service-oriented platforms play a strong role in pushing traditional manufacturing industries to seek business transformation, and there is huge room for integrated development between the new economy and the traditional sectors. To some extent the integration requires the adoption of new technologies to facilitate the transformation of traditional sectors. He encouraged the development of more service-oriented platforms to integrate government, corporate and social resources and innovation factors, so that capable individuals can become valuable joint creators and optimize their resources to satisfy practical demands. He stressed that old brands like "Flying Pigeon" carry the memories of Chinese generations, and they should continue reform and innovation, speed up business transition, seize opportunities and cater to market demands, advance entrepreneurship and craftsmanship, and introduce characteristic and competitive new products and services to rejuvenate the time-honored brand.

(Source: Xinhua News Agency,
June 26, 2016)

Liu Yunshan: Science Popularization and Innovation

Liu Yunshan, Member of the Political Bureau of the CPC Central Committee and Secretary of the Secretariat of the CPC, visited China Science and Technology Museum in Beijing on the morning of September 18th, 2016 to attend the National Science Popularization Day. He said that we must follow up on an important speech Xi Jinping made at the National Conference on Science, Technology and Innovation, step up efforts to create a favorable climate so that people respect, adore, study and apply science and thus the country would be in a better position to realize its ambition of becoming a technological powerhouse.

After touring an exhibition of aerospace science and technology, Liu Yunshan noted that China has made encouraging achievements in the field of aerospace, and we must vigorously promote the spirit of aerospace researchers who are hardworking, innovative and ready to overcome formidable challenges and shoulder great responsibilities, and eventually translate the spirit into a strong momentum to build China into an innovative country.

During the tour of a science popularization exhibition, Liu stressed that we must deliver the innovation-driven development strategy and let enterprises lead in S&T innovation, so as to fully leverage the role of innovation as a primary driver of development.

At the end of the visit, Liu Yunshan said that S&T innovation and science popularization are two crucial preconditions to realize innovative development, both missions share the same level of importance, and we must redouble efforts to do a better job on science popularization. Guided by the goal of building China into a technological powerhouse, staff of science popularization should identify the right direction and approach to spreading scientific knowledge, promote scientific spirit, advance scientific ideas and scientific approaches. Job priorities should be placed to help teenagers develop an interest in pursuing science and build their confidence of making innovations. We must uphold the principles that science popularization should benefit the public, satisfy public demands and facilitate people's work and life. We should figure out new approaches to science popularization and enable people to have a real experience about the benefits brought by science and innovation. Communist Party committees and governments at all levels should provide greater support to science popularization. Science associations should play a leading role in the campaign, while scientists, researchers, educators and the media should also do their part to help improve Chinese people's scientific literacy.

(Source: Xinhua News Agency,
September 18, 2016)

Li Yuanchao: Innovation

Vice President Li Yuanchao, Member of the Political Bureau of the CPC Central Committee, attended the 18th annual congress of the China Association for Science and Technology (CAST) held in Xi'an on the morning of September 24th, 2016.

In his speech, Li Yuanchao said that in our new journey to realize the China Dream, it has never been so urgent for China to let science, technology and innovation lead the way. Xi Jinping has required all S&T staff to work on the front line to develop our country into a technological powerhouse. He hoped scientists and researchers would make greater scientific accomplishments to satisfy national strategic needs, overcome tough challenges, and improve the public scientific literacy and create a favorable climate for people to respect, adore and study science. We should also develop teenagers' interest in pursuing science and use the Internet to promote scientific knowledge and spirit.

The three-day annual congress was jointly organized by CAST and the Shaanxi Provincial Government. The congress was accompanied by a series of activities, including a national innovation & entrepreneurship contest of S&T staff, an exhibition of technological innovations from civil-military integration, as well as a CAST president's meeting with college students.

(Source: Science and Technology Daily, September 24, 2016)

Liu Yandong: Innovation

1. Build an innovative country

During a recent inspection visit in Jiangsu Province, Vice Premier Liu Yandong, Member of the Political Bureau of the CPC Central Committee, stressed that we must act in line with the decisions of the CPC Central Committee and the State Council, stick to the innovation-driven development strategy, expedite the building of a modern education system, further the healthcare reform, and make greater contribution to economic and social development.

She pointed out the National Conference on Science, Technology and Innovation marked the beginning of our efforts to develop the country into an international technological powerhouse. To that end, we must carry forward the spirit of the conference, prioritize science, technology and innovation in our future pursuits, and build China into an innovative country. We should further the structural reform of the supply side, focus on core technologies and key areas, strengthen S&T innovation and institutional innovation, push for integrated development of new technologies, new sectors, new business models and new mechanisms, and speed up the development of modern technological systems. We must make good use of S&T accomplishments and manage benefits generated by these accomplishments, facilitate the flow of innovation & entrepreneurship resources, enable makerspaces to better connect with the real economy and create a favorable environment for innovation and entrepreneurship.

(Source: Xinhua News Agency, June 21, 2016)

2. Innovation and agricultural modernization

Vice Premier Liu Yandong, Member of the Political Bureau of the CPC Central Committee, attended the 8th meeting of the leading group of the Yangling Agricultural Demonstration Zone on July 21st, 2016. She stressed that members of the leading group must carry forward the spirit of the National Conference on Science, Technology and Innovation, thoroughly study a series of important speeches made by Xi Jinping, implement the innovation-driven development strategy, foster S&T innovation to expedite the development of modern agriculture, and enable the zone to lead in the development of modern agriculture in arid and semi-arid regions.

Liu Yandong noted that after 19 years of development, Yangling has made remarkable achievements in agricultural innovation, modern agricultural techniques and services, and has developed a favorable environment for innovation and entrepreneurship. Specifically, she highlighted that Yangling had developed new solutions to promoting collaborative innovation on agricultural science and technology, explored new mechanisms for further application of agricultural technologies, created new approaches to modernizing agriculture with the help of science, technology and innovation, accumulated experience in encouraging agricultural innovation & entrepreneurship, and enhanced external cooperation.

Liu Yandong emphasized that standing at a new historical starting point, Yangling must seize the new opportunities, speed up agricultural innovation, enhance its ability to support and lead modern agricultural development in the arid and semi-arid regions, explore new approaches to poverty alleviation, implement the "Belt and Road" strategy and deepen international cooperation in agricultural science and technology, and strengthen institutional reform and innovation. Liu Yandong required relevant departments and the Shaanxi provincial government to strengthen policy coordination, increase support through policies, projects and grants, and help the demonstration zone to reach a higher level of development.

(Source: Science and Technology Daily, July 21, 2016)

Wan Gang: Research and Innovation

1. Explanations of research and innovation policies

In an exclusive interview with Xinhua News Agency on June 20, 2016, Dr. Wan Gang, Vice Chairman of CPPCC, President of China Association for Science and Technology and Minister of Science and Technology, elaborated on China's research and innovation policies. Key points of his elaborations are listed below:

(1) How to understand "the path of independent innovation with Chinese characteristics"?

At the 2016 National Conference on Science, Technology and Innovation, we set a strategic objective of building China into an international technology powerhouse. To attain that goal, we must stick to the path of independent innovation with Chinese characteristics. The emphasis of independent innovation means that we have to improve independent innovation to address core technology barriers. Only by taking firm control of core technologies can we gain the initiative to safeguard our economic security and national defense security. In addition to staying on the path of independent innovation with Chinese characteristics, we should also capitalize on the socialist market economy system, make good use of our institutional advantage of concentrating resources to do big things, strengthen cooperation and coordination and promote collaborative innovation.

Our emphasis on independent innovation does not mean that we are closing the door to pursue innovation on our own. Against the backdrop of deepening economic globalization, innovation elements are quickly moving across the world, and no country can overcome all innovation challenges without exterior help. We need to deepen international S&T cooperation, take advantage of global innovation resources and participate in international big science plans and projects proposed and headed by Chinese scientists, so that we can stand at a higher starting point to enhance our independent innovation.

(2) How to create conditions to facilitate the fruition of original scientific achievements?

The first is to ramp up efforts to enhance our strategic innovation capability. The Ministry of Science and Technology will work together with relevant departments to support a batch of strategically important projects in the field of energy, information technology, aerospace & aviation, ocean, food, resource, environmental protection and healthcare.

The second is to build a number of national laboratories that have strong R&D strengths and study interdisciplinary subjects, and develop strategic forces

to support our country's S&T innovation. We would encourage the shared use of large research devices and provide effective services to innovation entities.

The third is to deepen reform on the management of national S&T programs (special funds), optimize the distribution of innovation resources, and intensify fundamental research and exploratory research activities.

The fourth is to leverage on policy tools and fiscal incentives to divert more private investments into indigenous innovation, especially into fundamental research, increase application and protection of original intellectual properties, and provide legal and institutional safeguards to protect indigenous innovation.

(3) How to understand the synergy between S&T innovation and institutional innovation?

We need to further overhaul the S&T system, break down the ideological and institutional barriers that constrain S&T innovation, adjust productive relations that are incompatible with the innovation-driven development strategy, and strengthen the connections between S&T and the economy.

We have to deal with the relation between the government and the market, and let the market play a decisive role in distributing innovation resources. We also need to reinforce enterprises' status as the primary innovation entities, and encourage enterprises to lead technological innovation in sectors with clear objectives of industrialization. Government departments must provide effective and efficient public services to expedite S&T innovations, enrich and improve inclusive policies and create favorable conditions to spur innovation.

(4) How to make scientists and researchers more passionate about innovation?

Among the most important missions of the S&T departments are to increase the enthusiasm and creativity of scientists and researchers and to cultivate and consolidate talents during the innovation activities. To accomplish the missions, we would take the following steps:

We will build professional makers' spaces and encourage more scientists and researchers to devote themselves to innovation and entrepreneurship; promote talents, technologies and capital to get interconnected, and accelerate the establishment of an open, efficient and collaborative network of innovation participants; support capable scientists and researchers in taking part-time jobs or leaving their posts to start their own business, encourage technology start-ups to better serve the real economy; commercialize scientific achievements to help transform and upgrade traditional enterprises and bolster their business efficiency.

We will roll out income distribution policies that recognize the value of knowledge, increase the proportion of fixed income for S&T staffers, introduce fair policies about how to distribute the benefits from commercializing scientific achievements so that scientists and researchers can get both fame and wealth from their scientific accomplishments.

We will optimize the talent assessment mechanism, abandon the excessive preference of using academic background, academic title and academic papers to evaluate the performance of talents, and establish a classified talent evaluation system based on the quality and contribution of their innovation efforts to create favorable conditions so that scientists and researchers can be fully dedicated to research and entrepreneurship.

We will overhaul the ways of managing and funding research projects, respect the law of scientific research, and figure out new approaches to the management of project funds so that scientists can be entirely devoted to research.

(Source: Xinhua News Agency,
June 20, 2016)

2. Overhaul S&T innovation system and mechanism

The 2016 Pujiang Innovation Forum was opened on September 23 with the theme of "Double Engines: Technological and Institutional Innovation". Dr. Wan Gang, CPPCC Vice Chairman, Chairman of China Association for Science and Technology, and Minister of Science and Technology, delivered a keynote speech at the opening ceremony, saying innovation-driven development is a crucial and strategic choice China made based on the analysis of internal and external conditions and the country's overall development picture. China is now in a critical stage of struggling to become a moderately prosperous society, and we must capture the historical

opportunities brought by the new round of technology revolution and industry transition, strengthen innovation capability and capitalize on S&T innovations to provide fresh momentum to drive economic growth and replace the traditional growth engines with innovative ones. To ensure successful implementation of the innovation-driven development strategy, the core issue is to reinforce independent innovation, and the most pressing task is to eliminate the institutional barriers and revive both technological innovation and institutional innovation. We must continue to prioritize S&T innovation, let innovation play its primary role in driving growth, and leverage on reforms to reinvigorate innovation and pursue innovation-oriented development.

Wan Gang said talents are paramount to the successful execution of the innovation-driven development strategy. We must strengthen indigenous innovation, protect curiosity-driven creative ideas and free up scientists' visionary mind; step up research into advanced technologies and strategically important areas; let the market and entrepreneurs drive and lead the innovation push; encourage youngsters to pursue innovation and start up their own businesses, and make them future scientists and entrepreneurs. Building an innovative country requires greater openness. The Chinese government is firmly committed to international cooperation, and ready to work together with the international S&T community to deal with the challenges faced by the whole world.

(Source: Science and Technology Daily, September 24, 2016)

3. Science popularization

In a speech at the opening ceremony of the 18th annual conference of China Association for Science and Technology on September 24, 2016, Dr. Wan Gang, Vice Chairman of CPPCC, Chairman of China Association for Science and Technology and Minister of Science and Technology, stressed the importance of science popularization, which, he said, makes the complicated innovation achievements more comprehensible to the general public and catalyzes efforts that finally turn innovative ideas into useful products on the market.

Wan Gang pointed out communications between scientists, engineers and entrepreneurs and the public, and the rapid application of new technologies and new products are offering huge potential for entrepreneurs to expand the market, while evolving social ideas and values could create enormous market demand. For many drivers, electric vehicle is more than a new means of transportation, but a symbol of their pursuit of an environment-friendly and fashionable lifestyle.

Wan Gang stressed that government departments should take into consideration science popularization and communication when they work out scientific research plans, and performance in science popularization should be among the indicators to appraise research institutes. When the government considers launching an S&T project, it should solicit public opinions, and that is essential to make sure the decision-making process is rational and democratic.

(Source: Science and Technology Daily, September 25, 2016)

4. Major tasks of S&T innovation in the 13th five-year period

A workshop on "studying and implementing the spirit of the National Conference on Science, Technology and Innovation and accelerating execution of the innovation-driven development strategy" was held on October 19, 2016. Dr. Wan Gang, Vice Chairman of CPPCC, Chairman of China Association for Science and Technology and Minister of Science and Technology, made a presentation about the major tasks to be fulfilled in the next five years.

According to Dr. Wan Gang, the upcoming five years is a critical period for China to realize the objective of becoming an innovative country by 2020. We must implement the Outline of the Innovation-driven Development Strategy, fulfill the tasks laid out at the National Conference on Science, Technology and Innovation, improve our indigenous innovation capabilities, optimize the national innovation system and develop innovation-oriented growth momentum to lay a solid foundation for achieving the ultimate goal of building an international S&T powerhouse.

We set two key indicators for science, technology and innovation for the next five years. The share of economic growth contributed by scientific and technological

progress would increase from 55.3% in 2015 to 60% in 2020; research spending as a share of GDP would rise from 2.1% in 2015 to 2.5% in 2020.

During the five years, the central government should ramp up fiscal spending and introduce generally favorable policies to push private sectors to increase research expenditures.

Dr. Wan laid out the major tasks of S&T innovation in the following five years - execute innovation-driven development strategy to support the supply side structural reform, deepen reform of the S&T system, advance all-round innovation, especially innovation in the science & technology sector, adopt differentiated strategy and asymmetric path to strengthen our core economic competitiveness, satisfy the urgent social development needs and overcome significant challenges to national security. The government will strengthen systematic planning and deployment of S&T innovation from six aspects - build preemptive edges, reinforce indigenous innovation capability, expand the space of innovative development, advance mass entrepreneurship and innovation, deepen overhaul of the S&T system, and strengthen efforts in popularizing science and building innovation culture.

(Source: Science and Technology Daily,
October 21, 2016)