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Remarkable progress made in STI for Social Development in 2017

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2018 National Conference on S&T Held in Beijing

On January 9, the National Conference on Science and Technology was held in Beijing. The Conference reviewed the work in STI since the 18th CPC National Congress, analyzed new progress of innovative development, identified the new requirements of STI, studied the deployment of missions for S&T reform and development in 2018 and decided to accelerate the building of an innovative country. Wan Gang, Minister of Science and Technology, delivered the work report, while Wang Zhigang, Party Secretary and Vice Minister, moderated the Conference.

In the report, Minister Wan Gang pointed out the five years since the 18th CPC National Congress were an extraordinary period in the process of the development of the Party and the country and a time of historic STI achievements and transformation. Thanks to the strong leadership of the CPC Central Committee with Xi Jinping as the core and concerted efforts of the science community and the various social walks of life, we have sustained the efforts in making constant STI development, accelerated to catch up with and surpass the advanced ones, realized historic changes that are of overall importance, brought about constant major innovative achievements, enhanced S&T strengths markedly and become a big country of science and technology with global impact.

First, we have formulated Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and witnessed historic elevation of the strategic role of STI.

Second, STI development has accelerated to join the first rank in the international community, and we have entered a new historical phase of coexistence of leading, parallel development and following and greater parallel development.

Third, STI had underpinned supply-side structural reform, and we have realized historic leap in comprehensively integrating into and proactively leading economic and social development.

Fourth, S&T system reform has been advanced in an in-depth manner, and S&T management pattern has realized historic transformation from R&D management to innovative services.

Fifth, STI force has expanded from covering researchers to the whole society, and we have ushered in a new historic period of mass innovation and entrepreneurship.

Sixth, S&T diplomacy has become an important component of the overall diplomatic strategy, and we have made historic progress in proactively formulating the layout of open innovative cooperation.

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When talking about marked improvement in STI capacity and main indicators joining international top rank, Minister Wan stressed that in 2017 the total social R&D expenditure was estimated to reach 1.76 trillion yuan, a 70.9% increase compared with 2012 and that the proportion of R&D expenditure in GDP to reach 2.15%, greater than the average level of 2.1% of 15 EU countries. The number of total international science paper increased by 70% compared with 2012, ranking No.2 in the world; the international science paper citation has for the first time surpassed Germany and the UK to rank No.2 in the world. The invention patent applications and authorizations both ranked No.1 in the world, and the effective invention patent ownership stood at the third place in the world. The national technology transaction volume stood at 1.3 trillion yuan. In the 136,000 hi-tech enterprises across the country, the R&D expenditure accounted for 50% of the national total and the invention patent authorization 40%. For those enterprises, their tax was estimated to exceed 1.5 trillion yuan and turnover more than 30 trillion yuan, both up by over 10%. They have provided more than 25 million job opportunities. The S&T contribution rate increased from 52.2% in 2012 to 57.5%, and the national innovation capacity from the 20th place in 2012 to 17th place.

When making deployment for the work of science and technology in 2018, Minister Wan Gang stressed efforts in the following ten areas:

I. Facilitate progress in major STI areas and provide strong support for supply-side structural reform.

The specific missions include: 1. Accelerate implementation of national major S&T projects; 2. Comprehensively launch 2030 Major STI Projects; 3. Establish and improve an industrial technology system; 4. Cultivate new growth impetus led by intelligent development; 5. Foster innovation-based enterprises.

II. Strengthen basic research for building a country strong on science and technology and further enhance supply of innovation sources.

The specific missions include: 1. Promulgate implementation of the opinions on comprehensively strengthening basic research in a new era; 2. Enhance forward-looking basic research; 3. Accelerate establishment of innovation bases like national labs; 4. Strengthen open sharing and efficient use of S&T resources.

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III. Facilitate emergence of tech-based start-ups and their transformation of S&T achievements and elevate the level of mass innovation and entrepreneurship.

The missions include: 1. Accelerate establishment of international technology transfer system; 2. Further implementation of actions for transformation of S&T achievements; 3. Promote upgrading of mass innovation and entrepreneurship with tech-based start-ups as the lead; 4. Advance in-depth integration between S&T and financing.

IV. Implement actions on rejuvenating the countryside through science and technology and support precision poverty alleviation.

The missions include: 1. Implement STI plans for rejuvenating the countryside; 2. Implement S&T supporting projects for rejuvenation of the countryside; 3. Develop agricultural hi-tech industries; 4. Advance precision poverty alleviation through science and technology.

V. Develop science and technology for improvement of people's livelihood and offer support to the strategic mission of preventing and controlling pollution.

The missions include: 1. S&T for beautiful China; 2. S&T for healthy China; 3. S&T for safe China; 4. S&T for a marine power.

VI. Build regional innovation growth poles and lead coordinated regional development.

The missions include: 1. Accelerate building of STI centers of Beijing and Shanghai; 2. Strengthen the role of national innovation demonstration zones and hi-tech zones in driving surrounding development; 3. Further development of innovative provinces and municipalities; 4. Strengthen county-level STI capacity; 5. Underpin coordinated innovative development in major areas.

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VII. Strengthen open cooperation on innovation capacity and proactively put in place global innovation network.

The missions include: 1. Deepen inter-governmental STI cooperation; 2. Build a community of coordinated innovation along the Belt and Road; 3. Implement international mega-science programs and mega-science engineering projects; 4. Facilitate global flow and open sharing of innovation resources.

VIII. Improve the environment for talent development and cultivate hi-level innovative talent teams.

The missions include: 1. Cultivate and introduce scientists and engineers who are dedicated to development of high-grade, precision, advanced and rare industrial products; 2. Deepen implementation of special talent projects; 3. Advance international development of talented people.

IX. Coordinate the efforts in advancing S&T system reform and further unleash the vitality for reform.

The missions include: 1. Strengthen coordination of reform; 2. Deepen reform of central-budgeted S&T programs and fund management; 3. Facilitate the consultative system on international major S&T decision-making; 4. Advance reform on project assessment, talent evaluation and institution accreditation; 5. Improve management and running system of research institutes; 6. Set up military-civilian S&T coordinated innovation system; 7. Refine the basic STI system.

X. Sustain the efforts in optimizing policy eco-system and foster an atmosphere of innovative culture.

The missions include: 1. Implement distribution policy oriented to adding knowledge value; 2. Implement and improve universally beneficial policies for corporate innovation; 3. Strengthen science popularization; 4. Foster a culture of honesty and innovation.

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The Conference issued the No.1 document of the Leading Party Group of MOST, which centers on ushering in a new situation of S&T work guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. It was stated that we carry forward the spirit of the 19th National Congress of the CPC and plan for S&T development with the Thought as the guide. It was also identified that for the future period of time to come we should work for S&T development from the following eight areas:

First, uphold the leadership of the Party for S&T work;

Second, adhere to the “three orientations” as the main direction of STI;

Third, advance supply-side structural reform as the main driving force of STI development;

Fourth, develop basic research as the important foundation for building an innovative country;

Fifth, put people first as the ultimate objective of S&T work;

Sixth, further S&T system reform to stimulate the vitality for innovation and entrepreneurship;

Seventh, regard talent as the primary resource for innovation-driven development;

Eighth, enhance S&T management capability as the basics for STI governance system and governance capacity modernization.

(Source: MOST, January 9, 2018)

[International S&T cooperation] >>>

>>> China-Czech S&T Cooperation Meeting Held in Prague

On November 24, 2017, the China-Czech S&T Cooperation Meeting was held in Chinese Embassy in Czech. Vice Minister Li Meng led a delegation to the country and delivered a keynote speech. Vice Minister Li said that China treats Czech as an important partner while strengthening international STI cooperation comprehensively. He proposed three suggestions: first, deepen bilateral STI cooperation by availing of the opportunity of Belt and Road; second, sustain joint R&D cooperation; third, give full play to the potential in technology transfer. In the bilateral meeting between Vice Minister Li and his Czech counterpart, they stressed that they will further advance implementation of personnel exchange projects, expand the scale of joint R&D projects and work to set up long-term cooperation platforms like joint labs and R&D centers by seizing the opportunities of Belt and Road and “16+1” mechanism.

(Source: MOST, December 14, 2017)

>>> 3rd Meeting of China-Ukraine Inter-governmental Cooperation Committee Held in Kiev

On December 5, 2017, the 3rd Meeting of China-Ukraine Inter-governmental Cooperation Committee was held in Kiev. Ma Kai, Vice Premier of the State Council and Chinese Chair of China-Ukraine Inter-governmental Cooperation Committee, and Kubiv, First Vice Prime Minister of the Committee and Ukrainian Chair, held a meeting and co-chaired the meeting. Vice Minister Li Meng attended the meeting as representative of the sub-committee of S&T cooperation and reported to the committee the work of the sub-committee.

Vice Minister Li expressed that under the guidance of the Committee, the two sides have made huge progress in pragmatic cooperation in STI. Built upon the sound cooperation base, the two sides will further the engagement between science and industrial communities, set up platforms for cooperation and develop famous brands. Efforts will also be made to support pragmatic cooperation between top-notch research institutes and scientists, so as to boost S&T progress and economic and social development.

(Source: MOST, December 15, 2017)



[International S&T cooperation] >>>

>>> 8th Session of China-Croatia Inter-governmental S&T Cooperation Committee Held in Beijing

On December 12, 2017, the 8th Session of China-Croatia Inter-governmental S&T Cooperation Committee Held in Beijing. Vice Minister Li Meng and his Croatian counterpart, State Secretary of the Ministry of Science and Education co-chaired the meeting. The Croatian Ambassador attended the session.

Vice Minister Li said that China stands ready to give play to the role of the Committee in planning, coordination and promotion. It is convinced that with the implementation of the Belt and Road Initiative, the STI cooperation will enjoy greater prospect.

The State Secretary briefed on the innovation development, implementation of national innovation strategy and intelligent development strategy and involvement in Horizon 2020.

At the session, the two sides discussed and approved new bilateral inter-governmental S&T exchange projects concerning eco-system protection, physics, nano-technology, energy and agriculture. The two sides confirmed that they will conduct closer cooperation in personnel exchange, talk about holding S&T cooperation workshop and promote research project cooperation of greater scale. After the session, the two sides signed *the Protocol of the 8th Session of the Committee*.

(Source: MOST, December 28, 2017)



>>> Remarkable progress made in STI for Social Development in 2017

In the 13th Five-year Plan of STI for Social Development, we have conducted designing according to different tiers and formulated systemic layout for major projects and missions in S&T for social development.

First, we have comprehensively launched 17 major R&D projects concerning resource and environment, bio-medicine and social undertaking in line with the layout of whole chain and integrated development from basic, frontier and common generic technologies to their application and demonstration. The guidelines of the projects have already been issued.

Second, we get involved in four major project teams on large-scale oil & gas field, CBM development, water pollution control and governance, major new medicine preparation, AIDS and viral hepatitis and strive to reach the goals.

Third, we work with relevant departments in accelerating formulation of the implementation plan for 2030 Major STI Projects and strengthen forward-looking layout of future S&T competition in social areas. Four major projects are involved, namely deep-sea station, Beijing-Tianjin-Hebei overall governance, health guarantee and deep earth exploration.

The priorities in 2017 are manifested in the following fields:

1. Build national sustainable development agenda innovation demonstration zones. We have implemented the *Plan for Building 2030 Sustainable Development Agenda Innovation Demonstration Zones*, accomplished the missions for building the first batch of such zones, elevated the level of building national sustainable development experimental zones, promoted local S&T management departments in working with relevant local departments for setting up innovation demonstration zones based on those experimental zones.

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- ▶ 2. Build national clinical medicine research centers. We have made comprehensive deployment for the construction and management of clinical centers and launched the fourth batch of national clinical medical research centers.
- ▶ 3. Manage the green technology bank. We have explored on the comprehensive solution of “green tech plus financing”, studied on innovation management mechanism, given full play to the initiative of various stakeholders and improved overall coordination.
- ▶ 4. Implement national S&T programs. We have organized the implementation of major special projects, set up projects concerning S&T Winter Olympics and S&T against Terrorism and facilitated the formulation and implementation of 2030 Major STI Projects.
- ▶ 5. Cultivate strategic emerging industries. We have boosted strategic emerging industries concerning biology, health, environmental protection and ocean development, conducted strategic research on relevant industry growth, and guided relevant industries in marching toward the medium and high end of the value chain.
- ▶ 6. Organize implementation of major and emergency projects concerning air pollution. We have implemented the 2030 Major STI Project for Beijing-Tianjin-Hebei Comprehensive Environmental Governance, strengthened technology R&D and comprehensive integrated demonstration and formulated systemic solutions on regional eco-protection and green development.
- ▶ 7. Safeguard security of the people. In biological security, we have compiled the *Guideline for Building High-grade Pathogenic Microorganisms Lab during 13th Five-year Plan*, promulgated *Human Genetic Resource Management Regulations and Bio-tech R&D Management Method*, accelerated the efforts for breakthrough, demonstration and application of key technologies concerning public security and social governance, advanced development of emergency industries and made systemic layout for AI research on smart court.
- ▶ 8. Give play to the supporting role of S&T for international treaty fulfillment and international cooperation. We have implemented the *2030 Sustainable Development Agenda*, participated in the UNFCCC negotiation, get deeply involved in the negotiation for fulfillment of the *Biological Weapons Convention*, set up the coordination mechanism of North Pole S&T departments, advanced international ocean discovery program, facilitated international S&T cooperation concerning major epidemic disease control between China and the US, AMR cooperation between China and the UK and TCM cooperation along Belt and Road, and facilitated modernization of TCM.

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STI for social development is a systemic undertaking which requires innovation from enterprises, social players and international agencies for a pattern featuring diversified participation. In the new year, the country will strengthen S&T for social development, give play to the leading innovation role and social responsibility of enterprises and enhance output efficiency of STI development. In the meantime, we will draw upon international experience, work to meet common problems and strategic demand of social development, strengthen international S&T cooperation and technology transfer and facilitate two-way flow and open sharing of innovation resources.

(Source: Science & Technology Daily, May 31, 2017)