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Headline news

Premier Wen Jiabao Initiates ASEM Network for Water Resources

Premier Wen Jiabao attended the 9th ASEM Summit held on November 5 and 6, 2012, and addressed the opening ceremony. In his address, the Premier put forward a proposal to establish the ASEM Science and Innovation Network for Water Resources, so as to enhance Asia-Europe cooperation on water resources management and facilitate the social-economic development of Asian and European countries. According to the Chair's Statement approved at the summit, leaders "welcomed the establishment of the ASEM Water Resources Research and Development Centre in Hunan,People's Republic of China in 2011".

The ASEM science and innovation network for water resources was jointly initiated by the Ministry of Science and Technology, the Ministry of Foreign Affairs and the ASEM Water Resources Research and Development Center. It aims at developing and protecting water resources in an effective and efficient manner through the long-term partnership among research institutes, universities and enterprises of ASEM countries, and achieve sustainable use of water resources to ensure social-economic sustainability.

Background information: In October 2010, Premier Wen Jiabao proposed to set up ASEM Water Resources Research and Development Center in Hunan at the 8th Asia-Europe Summit. The proposal was welcomed by ASEM members and was included in Chair's Statement.

The Center, built in Changsha in August 2011, has formed partnership with 18 institutions at home and abroad, launched 3 international cooperation programs and 2 joint field stations, organized two international workshops and 2 seminars on ASEM water resources cooperation, and published the ASEM Water Resources Report (2011-2012). The Center is working on a detailed plan to establish the ASEM water resources network as proposed by Premier Wen.

(Source: MOST, December 3, 2012)

State Councillor Liu Yandong Unveils China-Cambodia Food Industry Joint Lab

On December 7, 2012, State Councillor LIU Yandong and Cambodian Deputy Prime Minister Men Sam On unveiled Cina-Cambodia Food Industry Joint Lab in Phnom Penh. This lab, jointly set up by MOST and the Cambodian Ministry of Industry, Mines and Energy, was the first of its kind under the China-ASEAN Partnership Program. Organized by China National Research Institute of Food and Fermentation Industries and Cambodian Industrial Technology Center, the lab shall facilitate all kinds of collaboration on food testing and standard making so as to promote long-term partnership between the two parties.

In her address, LIU said joint lab is an important way of cooperation within the China-ASEAN Partnership Program. This lab, the first of its kind, is a milestone for China-Cambodia sci-tech cooperation and also a cornerstone for substantive collaboration between China and ASEAN countries. She stressed that the Chinese government put sci-tech cooperation with Cambodia and other ASEAN countries high on its agenda, and wished the new lab could become a flagship of cooperation between the two countries.

The China-ASEAN Partnership Program was launched by MOST in September, 2012 in response to Premier WEN Jiabao's initiative on 2011 China-ASEAN Summit. The Program, based on the principle of equality, mutual benefit, demand-oriented, capacity building and broad participation, aims to strengthen innovation cooperation between China and ASEAN, share experiences, enhance regional capability and drive economic development for common prosperity. Within the framework, MOST and ASEAN sci-tech authorities will carry out a batch of activities,including setting up joint labs, inviting excellent young scientists from ASEAN countries to work in China and building China-ASEAN technology transfer center, etc.

(Source: Department of International Cooperation Ministry of Science and Technoplogy, 2012)

S&T Management Information

Innovative Talent Program Launched by MOST

The report of the 18th National Congress of the Communist Party of China emphasized that

efforts should be made to nurture all types of talents, implement major projects for training and attracting high-caliber personnel, give greater support to the training of innovative and entrepreneurial personnel, accelerate reform of institutions and mechanisms for talent development, adopt innovative policies for this purpose and establish a national system of honors, in order to form an internationally competitive personnel system that is capable of firing the creativity and talent of people, and thus foster a dynamic environment in which everyone can fully tap their potential and put their talent to best use.

To achieve the purpose, MOST launched the Innovative Talent Program. This 10-year program aims to set up 100 labs in areas with comparative advantages, cultivate 3000 young innovative professionals, support 10,000 excellent entrepreneurial personnel who establish their own business using core technology or technology with proprietary intellectual property rights, build 500 innovation teams in priority areas and set up 300 demonstration bases for innovative personnel training.

(Source: MOST, December 21,2012)

R&D Input Expected to Reach 1 Trillion

On December 23, 2012, China Industry-Education-Academia Cooperation Conference was held in Changzhou, Jiangsu Province. Cao Jianlin, Vice Minister of MOST, said during the meeting that the national R&D input is expected to reach 1 trillion this year and its proportion of GDP equals to that of moderately developed countries.

Minister Cao said that China has made great progress in developing its innovation capability and innovation system. The total R&D personnel in China increased from 1.03 million in 2002 to 2.88 million in 2011, with the world's fastest annual growth rate of 12%.

The amount of international thesis ranked second in the world for the last five years, while the patent grants grew from 15.6 thousand in 2002 to 172 thousand in 2011, ranking third in the world. The government budget for research hit RMB490 billion, and the total R&D input was RMB860 billion, or 1.83% of GDP. The 105 national high-tech parks and more than 80 university science parks have been playing a leading role in meeting the needs of social-economic development and national strategies.

However, Cao also pointed out that prominent problems remain in China's innovation system, in particular the integration of sci-tech and economy development, commercialization of scientific achievements and the lack of core technologies in enterprises.

The 12th Five-Year-Plan period is a vital stage for China to enhance innovation capability and build an innovation-oriented nation. To improve the collaboration among enterprises, universities and research institutes, more efforts should be made to highlight the role of enterprises in innovation decision-making, R&D input and commercialization of scientific results. In addition, a resource sharing mechanism should be set up to promote the synergy among industry, academia and research institutions.

(Source: Science and Technology Daily, December 24, 2012)

Science Popularization Fund Exceeds 10 Billion

According to 2011 national science popularization statistics published by MOST, the science popularization fund of the year hit RMB10.53 billion, up by 5.81% compared to the previous year. The central budget for science popularization in 2011 reached RMB3.823 billions, thus 2.84 yuan

per capita, a growth of 0.23RMB than 2010.

There is significant increase of science popularization fund in 2011, and the government budget grew from 68.42% in 2010 to 68.94% of the total fund, and stood at RMB 7.259 billion.

Statistics show that science popularization personnel raised by 10.93% to reach 1.9428 million, among which 224.2 thousand worked as full-time staff and 0.58% or 11,191 were science popularization creators.

170 venues over 500m2 were newly built, leading the number to 1681. The venues received 106 million visitors throughout the year, grew by a large margin than the previous year. In 2011, RMB2.197 billion were invested for the construction and renovation of these venues.

In addition, the year witnessed the publication of 57 million of popular science books, or 0.74% of the national publication; 157 million journals, or 4.79% of the total; 411 million newspapers, or 0.88% of the total. 871 million popular science booklets were handed out during various events, and 163.7 thousand hours of popular science radio programs and 187.6 thousand hours of TV programs were broadcast.

Statistics also show an increase of public participation in popular science events. In 2011, over 830 thousand lectures were organized, attracting 179 million audience, up 6.02% compared to 2010; 130 thousand exhibitions received 224 million visitors, up 11.66%l; 53.4 thousand competitions attracted 140 million participants. Moreover, 421 thousand people participated in 2842 international exchange programs on popular science, and 124 million people attended 935.4 thousand training courses on practical technologies. RMB436 million were allocated for the National Science & Technology Week, an increase of 19.66%. During the week, 112.5 thousand events were held to attract 111 million participants.

(Source: Science and Technology Daily, December 25, 2012)

China Oleaginous Microalgae Survey Launched

China Oleaginous Microalgae Survey, as a key part of Special Basic Science and Technology Funds, was launched on November 15, 2012. This project, led by the Institute of Hydrobiology, Chinese Academy of Sciences, aims to investigate and collect Chinese oleaginous microalgae germplasm, select fine varieties and set up an accessible, real-time database about algae micrographs, molecular sequence, genome data, growth characteristics, oil type, fatty acid, etc. This aims to provide strategic reserves for the development and utilization of China's microalgae for energy.

(Source: Ministry of Science and Technology,December 5, 2012)

Scientific Research Progress and Achievements

China’s First 200-KM-per-Hour CRH6 Intercity Train Rolls off Production Line

On November 30, China’s first CRH6 intercity train with a speed of 200 kilometers per hour rolled off the production line in CSR Qingdao Sifang Locomotive & Rolling Stock Co., Ltd. Wang Zhixue, head of Science and Technology Daily, said that the successful development of CRH6 intercity train marks another big achievement in China's innovation in CRH-series trains, and a landmark event in industry-research-academia-application collaboration. This achievement not only improves China’s transit transport system, but will facilitate sustainable development of city clusters,optimize regional transport structure, and boost economic transition and regional

economic development.

(Source: Ministry of Science and Technology,December 7, 2012)

Wide-angle Digital Cameras for Survey Developed by China

High-accuracy, light, wide-angle digital camera for survey, with independent intellectual property rights, was developed by GeoVision Inc. and Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, with the support of 863 Program.

Wide-angle digital camera for survey is a widely pursued technology for capturing surface topography image data in today's earth observation and navigation. Despite the existence of several products in aerial photograph, none can be as accurate and light as required by integrated aerial remote sensing system.

By adopting external field precision stitching technology, the said camera integrates 4 large array CCD cameras, and can generate 160-million-pixel image through simultaneous exposure, greatly improving reliability and image quality. Its accuracy can reach as high as 1:500, as required by mapping in demonstration.

By providing flight route planning, aerial camera control, and fast geometric image correction and stitching, the camera is very useful for surveying and mapping. Unlike the traditional large-array digital cameras for survey, which are heavy in weight and can only operate on large aircrafts, this camera reduces its weight considerably, and is fully capable of operating in small regions or canyons, light aircrafts, and therefore fully justifies its name as a new-type digital aerial survey instrument.

(Source: Ministry of Science and Technology,September 13, 2012)

China's First Solar Thermal Power Station Runs in Stable Condition

Scientists from the Institute of Electrical Engineering, Chinese Academy of Sciences (IEECAS) and other organizations have established China's first megawatt-level solar thermal power station with complete independent intellectual property rights.

In the power station, there is a 119 meter-high heat collecting tower with a huge heat receiver on top.To the south of the tower, 100 huge mirrors (called heliostats), 100 square meters each, are in fan-shaped distribution. When the sun rises, the computer will automatically control the mirrors to reflect sunlight onto the heat receiver on the tower to obtain 400℃, which will ultimately drive the 1.5 MW steam turbines to generate electricity. The heat can also be stored through the dual oil and saturated steam storage system, and provides 1 MW electricity capacity. This project was approved by MOST in 2006 and was officially launched in January 2007. The scientists conducted research on such key technologies as integration of solar thermal power generation system, full control technology, highly accurate and low-cost heliostat technology, and highly reliable heat absorption-transfer-storage technology, and developed the solar thermal power plant simulator, the heliostats optical performance testing platform, wind tunnel, molten salts thermohydraulics test bed and water/water vapor thermohydraulics test bed.

(Source: Science and Technology Daily, December 14, 2012)

China's Achievement in Earth Observation

The global land surface parameters and land cover products accomplished by nearly 100 Chinese scientists in 3 years were officially released to global users. At the release conference, Mr.

Cao Jianlin, co-chair of GEO (Group on Earth Observations) and Vice Minister of Science and Technology, announced that this set of products that covers the globe includes leaf area index, surface albedo and surface emissivity with the longest timescale so far, two highest-resolution radiation emitting products, and 30 meter-resolution data products of surface water. This is a great achievement of Chinese scientists in this area.

The important parameters reflecting land vegetation and the changes of surface energy balance are supported by the 863 Program and based on earth observation technologies. They will directly serve the study of global land surface changes and help to develop and improve the climate system model. In order to share these products, Chinese scientists have also established a database of global land surface parameters and released products through the online distribution service system.

Cao Jianlin said that China, as a developing country, will provide data, hardware, software, training and counseling, and share the achievements of China in earth observation. But this is just one part of China's contribution to GEO and the sharing of earth observation data. China will also strengthen its international partnership in Global Earth Observation System of Systems (GEOSS), get access to earth observation data more conveniently and rapidly through data sharing service, and upgrade the earth observation capacity, so as to provide support to domestic and global decision making.

(Source: Science and Technology Daily, December 14, 2012)

International Scientific and Technological Cooperation

2012 China–Australia Young Scientists Exchange Program Kicks off

On November 13, 2012, the opening ceremony of 2012 China-Australia Young Scientists Exchange Program was held at MOST. The program was initiated based on the Implementation Agreement on China-Australia Young Scientists Exchange Program, which was signed between MOST and Australian Department of Education, Science and Training in April, 2006 during Premier Wen Jiabao's visit to Australia. Each year, both Chinese and Australian scientists from priority areas are selected to pay research visit to each other's country. Since 2012, the number of exchanged scientists has doubled from 8 to 16 to better facilitate exchanges and cooperation, improve mutual understanding and friendship, and encourage the young scientists to jointly participate in cooperative research programs, which will lay solid foundation for long term collaboration between the two countries.

In October, the 16 Chinese young scholars had a successful visit to Australia. The 16 Australian young scientists, coming from the Commonwealth Scientific and Industrial Research Organization, Australian National University, University of Melbourne, University of Adelaide, University of New South Wales, University of Queensland, Monash University, etc and studying physics, medicine, environmental sciences and bioengineering, are in China for two weeks and will visit such institutes as Peking University, Tsinghua University, Wuhan University, Shanghai Jiao Tong University and institutes of Chinese Academy of Sciences.

(Source: Ministry of Science and Technology, November 29, 2012)

Zhangjiang Speeds up Biomedical Innovation and Development

Following the national innovation strategy, Shanghai Zhangjiang Hi-Tech Park has attracted

over 210 well-known pharmaceutical companies home and abroad, as well as dozens of national medical R&D organizations and global R&D centers of multinationals. As a National Biomedical Industrial Base, Zhangjiang will continue to speed up biomedical innovation and development in Shanghai.

On November 22, 2012, Fosun Pharma announced to set up an innovation and R&D base in Zhangjiang, and make full use of the resources of the world-class pharmaceutical valley so as to go global from Shanghai and create world-class innovative pharmaceutical companies.

It is said that the total fixed assets investment of the project is around RMB3.5 billion, with a construction period of 8 years, and the project will generate RMB10 billion of industrial output after its completion.

It is reported that in the central and southern district of Zhangjiang , a place with a planning area of 11.8 km² where Fosun Pharma is located, a complex of buildings totaling 7.25 million m² will be constructed, including 3.9 million m² of land for education and research and 0.54 million m² of land for commercial and residential use. Green area accounts for 19% of the total planning area while water area takes up 10%. This place will gather high-end research and education institutions, such as CAS Shanghai Pudong Science and Technology Park, Commercial Aircraft R&D Center and University of California, Berkeley, as well as prestigious companies including Fosun Pharma, Novartis and HP. It will become a center of commerce and residence area featuring high level, high quality and high grade.

Consistent with the globalization and innovation strategy of Zhangjiang, Fosun Pharma Zhangjiang Innovation and R&D Base will rely on Zhangjiang world class pharmaceutical valley, and explore new paradigm for biomedical innovation and strategy of international development. It will commit itself to building a vibrant innovation and R&D center, thus realizing Fosun's strategic target of becoming a top notch pharmaceutical enterprise.

(Source: Shanghai Zhangjiang Hi-Tech Park, November 22, 2012)

Cooperation Projects and Channels

First Shanghai International Fair on Technology Import and Export to be Held in 2013

China (Shanghai) International Fair on Technology Import and Export (Shanghai Fair), jointly sponsored by Ministry of Commerce, Ministry of Science and Technology, State Intellectual Property Office and the Shanghai Municipal People's Government, will be held annually in Shanghai since 2013.

As required by the 18th National Congress of the Communist Party of China, "we should increase our capacity for making original innovation and integrated innovation and for making further innovation on the basis of absorbing advances in overseas science and technology, and place greater emphasis on making innovation through collaboration." Holding Shanghai Fair is conducive to the efficient allocation of innovation resources, the reduction of technology development and transaction costs, the application of scientific achievements and the development of technology trade, thus speeding up the shift of economic development pattern.

The first Shanghai Fair will be held in Shanghai on May 8 to 12 in 2013, with the theme of "Innovation-Driven Development, IPR Protection and Technology Trade Promotion". It strives to make innovation and breakthroughs in its positioning, target, exhibition content, form, service

recipient, performance evaluation, etc. It will organize both physical and virtual fairs, with the physical one once a year and the virtual every day. The Shanghai Fair will also build a service industry chain of technology import and export and improve the whole-chain service including trade, finance, talents, counseling and laws. Moreover, the Fair will explore a new paradigm to enhance IPR protection during the technology import and export process.

The Shanghai Fair aims to build itself into a national platform for international technology exhibition and trade, for the promotion and application of international high technologies, for enterprises to gain international support, and for the commercialization of scientific achievements.

(Source: Ministry of Science and Technology, December 25, 2012)

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