



Research and Environment News from China

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Introduction

The 11th CPPCC National Committee will start its annual full session on Monday, in a year that will see the Olympic Games and the 30th anniversary of the reform and opening up policy. While advisors were urged to contribute more proposals for the country's sound development, the Scientific Outlook on Development, initiated by the CPC to guide the country's development, stresses harmony between man and nature, economic growth and environmental protection. China's economy has been growing rapidly in the past three decades and now ranks as the fourth largest in the world. The country faces problems of yawning wealth gap, high energy consumption and pollution to the environment.

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Science & Technology

China's defense budget to grow 17.6 percent in 2008

(Xinhua, 2008-03-04)

China plans to increase its defense budget by 17.6 percent in 2008, a parliament spokesperson said in Beijing on Tuesday.

The planned defense budget for 2008 is 417.769 billion yuan, a rise of 62.379 billion yuan from the actual military spending last year, Jiang Enzhu, spokesman for the annual session of the National People's Congress (NPC), told a press conference.

The budget equals \$57.229 billion if converted at the exchange rate by the end of last year, Jiang said.

"The ratio it takes against this year's total fiscal expenditures is slightly lower than those of previous years," he said.

Jiang explained that the defense budget is raised to further increase benefits for military personnel and offset the impact of price hikes to allow more input in oil purchase.

More money will be spent on education and training in army, he said.

The increased budget will also be used to upgrade the military equipment "moderately" so as to enhance the troops' capability of combating a defensive war based on information technologies, he said.



Jiang called the defense budget growth a "compensatory" rise, saying it will help reinforce the originally weak basis of military defense, given the rapid and steady growth of China's economy and fiscal revenues in recent years.

From 1979 to 1989, China's defense expenditure actually registered an average annual decrease of 5.83 percent, and its growth in recent years is still far below the increase of fiscal revenues, he said.

China saw an average annual rise of 15.8 percent in military spending from 2003 to 2007, while the fiscal revenues grew 22.1 percent averagely per year during the same period.

Jiang noted that China's military spending remains a low level compared with some other countries, especially the big powers, in both ratios against their GDP (gross domestic product) and total fiscal expenditure.

China sets up fund for national key labs

(Xinhua, 2008-03-03)

The Chinese government has decided to set up a special fund for national key laboratories and the initial 1.4 billion yuan (about 195.8 million U.S. dollars) will be in place this month, sources announced here Monday.

Minister of Science and Technology Wan Gang said at a national conference that the fund would enable the country's 220 national key laboratories to get access to "stable financial support."

A lack of stable financial support has become a bottleneck for the development of state key labs," he said.

The fund will facilitate the building of a research environment that shows tolerance to scientific failures and sinks impetuous attitude," he added.

According to Vice Minister of Finance Zhang Shaochun, the initial 1.4 billion yuan covered by the central budget will be used on the labs' maintenance and scientific research in individually-picked topics. More fund will be allocated in the near future to upgrade scientific research facilities.

China has built 220 national key laboratories, employing more than 10,000 people, since 1984. They serve as key bases for the country's advanced basic research as well as frontier science research.

China's new carrier rocket to debut in 2014

(Xinhua, 2008-03-02)

China's new generation of carrier rocket, the Long March 5, with a maximum payload capacity of 25 tons, will come into use in 2014, said an official with the China Academy of Launch Vehicle Technology on Sunday.

The rockets will be made in Tianjin and launched in Hainan, said Liang Xiaohong, vice president of the academy and a member of the 11th National Committee of the Chinese People's Political Consultative Conference (CPPCC), the top political advisory body.

The 11th CPPCC National Committee will start its annual full session on Monday.

The 25-ton payload capacity, more than double the current limit of 9.2 tons, will greatly improve the country's capability in space exploration, said Liang.

Meanwhile, Liang said the Long March 3C carrier rocket will come out of production later this month and is scheduled to be launched at the Xichang Satellite Launch Center in the southwestern province of Sichuan next month.

A Long March 2F carrier rocket will be used for China's third manned space mission this year. Compared with the previous two manned space flights, the upcoming Shenzhou VII space mission, which includes a space walk, is more complex.

China used Long March 3A for its first lunar probe Chang'e-1 in October 2007.



In addition to bigger capacity, the Long March 5 rockets will be designed using pollution-free technologies.

The new series of rockets will lift off from a new space launch center in Wenchang, in the southern island province of Hainan. The new center, the fourth in China, is expected to be completed in 2012 and formally put into use in 2013.

The rockets will be made in a new base located at the Binhai New Area in the northern port city of Tianjin, and construction on the base was started last October.

The first phase of the 200-hectare base will be completed at the end of 2009. A total of 4.5 billion yuan (630 million US dollars) will be invested in the project.

The base will meet the demands of China's space technology development and peaceful use of space for 30 to 50 years, according to Yu Liegui, deputy head of the Commission of Science Technology and Industry for National Defense.

China has launched more than 100 Long March carrier rockets since April 24, 1970, when the Long March 1 successfully sent Dongfanghong-1 satellite into the space.

***Call for Papers - Chinese Science Bulletin
Special Issue on Bio-inspired Science and Technology***

(Science in China Press, 2008-02-21)

Saving energy and resource, protecting the environment and implementing sustainable development are problems to be faced by all humans. The evolution and struggle for existence, over the last 3.5 billion years, of biological systems have made the NATURE obtain the multifunctional surface textures, the high ratio of strength/mass and stiffness/mass by optimizing the topological materials and structures, the sensitive apperception abilities, the simple, effective and redundancy information processing abilities, and the agility and maneuver locomotion modes. Those advantages have become un-exhaustible resources for man to obtain new ideas to solve problems. Biomimetics, or bio-inspired technology, reveals the mystery of biological systems by employing the new methods and tools, which were invented by the fast development of information and control technology, mechanical and electrical engineering. Nature-inspired science and technology has become an interdisciplinary area which integrates life sciences, materials sciences, robot technology, information technology, mechanical engineering, tribology, and other related subjects.

The purpose of this special issue is to bring together researchers and engineers to present and discuss their ideas and recent work related to the various aspects of bio-inspired science and technology.

Submission Deadline: July 30,2008
Acceptance Before: September 1,2008
Publishing Date: October, 2008

China lunar probe serenades Earth for Lantern Festival

(Xinhua, 2008-02-21)

All 30 melodies and songs carried on Chang'e-1, China's first lunar probe, were beamed back to Earth on Thursday to express best wishes for the Lantern Festival, the formal end to the Lunar New Year holiday.

The music was delivered to the media for broadcasting, a source with the lunar exploration project center under the Commission of Science, Technology and Industry for National Defense said on Thursday.

The 30 pieces were chosen on the basis of public voting, and most were traditional Chinese melodies and popular modern songs.

Chang'e-1 also carried some human voices that expressed encouragement and gratitude, Zhang Rongqiao, deputy head of the lunar exploration project center said.



Zhang added that the voices would be sent back to Earth on Women's Day, Children's Day and other major memorable days and holidays.

Chang'e-1, named after a mythical Chinese goddess who, according to legend, flew to the moon, blasted off on a Long March3A carrier rocket on Oct. 24 from the Xichang Satellite Launch Center in the southwestern province of Sichuan.

The satellite traveled nearly 2 million kilometers during its 15-day flight to the moon and reached its final working orbit with a fixed altitude of 200 km on Nov. 7.

The China National Space Administration released the first picture of the moon captured by Chang'e-1 on Nov. 26, marking the full success of the first stage of the country's lunar probe program.

The 2,350-kilogram satellite, carrying eight surveying facilities, aims to make a three-dimensional survey of the moon's surface. It will also analyze the abundance and distribution of elements on the lunar surface, investigate the characteristics of the powdery soil layer on the surface, and explore the environment between the Earth and the moon.

Chang'e-1 was designed to stay in orbit for one year, but scientists estimated that precise maneuvers may have saved 200 kg of fuel and prolonged its lifespan.

This is the first step in China's three-stage moon mission, which will lead to a landing and launch of a rover vehicle around 2012. In the third phase, another rover will land and return to the Earth with lunar soil and stone samples for scientific research around 2017.

Environment

China's polluted sea area almost doubles

(CRI, 2008-02-23)

China's State Oceanic Administration has issued a report saying the country's offshore sea area suffering from serious pollution now exceeds 160,000 square km, almost doubling in size over the past decade.

The report outlining China's oceanic development strategy issued on Friday reveals that high levels of chemical nutrients in the sea water of some bays and sea areas near cities have led to deterioration in water quality.

Red tides now occur an average of 60 times each year and pose a grave threat to the quality of marine products and can even lead to poisoning and death from eating the contaminated sea food, according to the official Xinhua news agency quote from the report.

Desertification remains a great threat to the country's maritime environment although extensive rehabilitation efforts have been taken. The report notes that the percentage of unsalvageable eco-systems stands at 73 percent for mangroves, 80 percent for coral reefs and 57 percent for wetlands.

Over-fishing and frequent red tides have continually reduced the fish catches since 1999, leaving some areas totally depleted of fish. Oil spills caused by shipping and drilling have also contributed to the deterioration.

Inorganic nitrogen was the main pollutant found in most of the country's offshore sea areas, especially in Shanghai and Zhejiang Province, where the quality of seawater has been below the lowest fourth level for years.

In a related development, Xinhua reports China will spend around 40 billion yuan, or about 5.6 billion U.S. dollars, on ecological rehabilitation projects and on protecting the Bohai Sea which experts have warned could become a "dead sea" if urgent action is not taken.

The State Oceanic Administration report on Friday shows that while the Bohai Sea accounts for only 2.6 percent of China's sovereign sea area, about 40 percent of the country's untreated waste water is emptied into it every year.



The general plan for environmental protection of the Bohai Sea includes new monitoring and emergency response systems, urban water treatment plants and garbage disposal facilities as well as rectification of industrial pollution sources.

Snowy weather damages 18.6-million-hectare forest



(Xinhua, 2008-02-13)

The extreme weather that hit China in recent weeks has damaged 18.6 million hectares of forest in 19 snow-afflicted provincial regions, the State Forestry Administration announced in Beijing Wednesday.

The total included 6.83 million ha of bamboo, 11.62 million ha of woods and 15,333 ha of saplings, according to the administration.

The 19 provincial-level areas plagued by snow and cold weather were Hunan, Hubei, Anhui, Guangxi, Jiangxi, Guizhou, Henan, Yunnan, Sichuan, Chongqing, Qinghai, Shaanxi, Gansu, Xinjiang, Zhejiang, Jiangsu, Fujian, Guangdong and Hainan.

The administration has earmarked 4.3 million yuan (US\$597,200) as a supplement to the 30 million yuan designated by the central government to support forestry sector relief work.

Freaky winter storms have plagued southern China since mid-January, leading to widespread traffic jams, structural collapse, blackouts and crop loss. It also killed at least 80 people and affected about 100 million residents, according to the Ministry of Civil Affairs.

Approximately seven million ha of farmland, mainly located in the mid and downstream areas of the Yangtze River, was hit by the snow. About 753,333 million ha lost all their output, according to Ministry of Agriculture statistics released on Jan. 31.

Experts believed a phenomenon called La Nina aggravated the freak weather.

Zheng Guoguang, head of China Meteorological Administration, said earlier that La Nina was a large pool of unusually cold water in the equatorial Pacific that developed every few years and influenced global weather. It is the climatic opposite of El Nino, a warming of the Pacific.



Energy

China charges full consumption tax on refined oil

(Xinhua, 2008-02-22)

China is levying a full consumption tax on refined fuel oil and three other oil products retroactively from Jan. 1, Xinhua learnt from an official circular on Thursday.

The circular, jointly announced by Ministry of Finance and the State Administration of Taxation, said the tax for fuel oil will be raised to 0.1 yuan per liter after having collected only 30 percent of the tax since it was first introduced in April 2006.

According to the circular, Naptha, a feedstock for producing high octane gasoline and other petrochemical products, lubricants and solvent oil, would also be charged at a full rate of 0.2 yuan per liter.

Analysts said the new regulation will have little impact on the market.

Consumption tax is one type of tax category China started to levy in 1994. The tax was placed on four oil products in 2006 as part of efforts to encourage energy savings and to curb the development of highly polluting and resource intensive sectors.

Health

China to deal with food safety problems

(Xinhua, 2008-03-04)

The Chinese government will deal with any confirmed food safety cases in a responsible manner and in accordance with laws, a parliament spokesman said in Beijing on Tuesday.

"There are indeed very few companies in China which neglect our country's laws, regulations and standards, dodge quarantine and tests, and have their unqualified products smuggled into foreign markets via illegal channels," said Jiang Enzhu, spokesman for the First Session of the 11th National People's Congress (NPC), at a press conference.

The Chinese government will intensify its efforts to crack down on such illegal activities and prevent any under-quality food from being exported, he pledged.

However, the spokesman said, some of the past food safety disputes were actually caused by differences in the quality and standard systems between China and other countries and regions, adding that some irresponsible and false media reports also added to the woes.

"Enhancing food safety is a common responsibility that should be shared by the international community. China is willing to join hands with other countries to ensure consumer rights by establishing an emergency coordination system and enhancing information transparency," he said.

South China province on high alert after confirmed human bird flu case

(Xinhua, 2008-02-27)

Guangdong has tightened surveillance on poultry and migrant birds after a confirmed human bird flu death case in a county of the south China province.

A 44-year-old woman surnamed Zhang in Haifeng County of Shanwei City died on Monday in hospital after developing symptoms of fever and a cough since Feb. 16, said the Ministry of Health on Tuesday.



Her specimens tested positive for the H5N1 bird flu virus, said the country's Center for Disease Control and Prevention. She was found to have had contact with poultry.

The agricultural and husbandry authorities of Shanwei and Haifeng have carried out emergency vaccination and disinfection on poultry near the residence of the dead patient, the Guangdong Agricultural Department said.

No abnormal situation of poultry has been reported, it said.

Guangdong has allocated 500 boxes of disinfectant to Shanwei to help conduct a thorough disinfection at poultry farms and trading markets.

The provincial forestry bureau of Guangdong on Tuesday also issued an emergency notice demanding a tightened monitoring on migrant birds.

The newly confirmed human bird flu case brought the total number of such cases in China to 30 since 2003. Zhang was also the 20th to be killed by the disease in the country.

On Feb. 18, the Ministry of Health confirmed that a 22-year-old man surnamed Li in the central province of Hunan tested positive for H5N1. He died on Jan. 16 at 5 p.m.

On Feb. 20, a 41-year-old man surnamed Liang, who had tested positive for H5N1, died in Nanning, capital of Guangxi Zhuang Autonomous Region.

Education

AP exam to be held on Chinese mainland

(China Daily, 2008-03-04)

Students planning to study abroad can sit for the U.S. college-level Advanced Placement (AP) exam on the Chinese mainland starting in May.

The U.S. College Board, which also administers the SAT college entrance test, has authorized seven private educational institutions on the mainland to hold the AP test. Mainland students had to go to Hong Kong for the exams before the announcement.

Through the college-level AP exam, Chinese students have more opportunities to earn credits or advanced standing at most U.S. colleges and universities," Huang Donghui, the chief of registration at Beijing-based Siwa International School, one of the authorized institutions, told China Daily yesterday.

With 37 courses and exams across 22 subject areas, AP offers students a head start on college-level work, he said.

It aims to sharpen student's problem-solving ability, broaden their intellectual horizons and help them stand out," Huang said.

Nearly 3,400 universities in 40 countries currently accept AP exam grades for admission, including four Chinese universities: Peking University, Tsinghua University, Beijing Foreign Studies University and Beijing Language and Culture University.

At least 1.4 million students around the world sat the exam last year for a fee of \$84.

Though the exam is not mandatory like the Test of English as a Foreign Language (TOEFL), it adds weight to the application," Wang Junjie, a Beijing student, said.

The results are graded 1 to 5, with 5 representing excellent college work.



Most American colleges and universities give credits to students who receive a 3 or better on their AP exams. That means they can start with higher-level college classes than students who did not do as well or did not take the tests.

Chinese driver wins UPS global community service award

(Xinhua, 2008-02-27)

Chinese driver Andy He Jinchang has earned U.S. package-delivery giant UPS's top global community service award, the first time a non-U.S. employee has ever been so honored.

Jinchang was recognized for his personal outreach efforts to rural communities in the Guangdong Province where he is helping school children, mentally-challenged children and the elderly, said a statement released by UPS on Tuesday.

The Jim Casey Community Service Award winner is chosen annually from nominations solicited from UPS's 425,000 employees. The Casey Award was created to recognize outstanding community service, a hallmark of UPS's corporate legacy and commitment to social responsibility.

Jinchang's UPS award follows other local recognition. Andy has been recognized as a local pioneer for voluntary service, receiving a Certificate of Honor from the Guangzhou Youth Education Work Group, and a Letter of Appreciation from the Guangdong province government.

Beginning about 10 years ago, Jinchang, who has lived his entire life in the bustling city of Guangzhou, began his outreach to rural communities. The road, literally, is not an easy one.

It takes nearly five hours to get to the villages where he volunteers. There, Andy founded a literacy project called "One Person, One Dictionary." He collected 1,200 dictionaries so that children, many of whom walk several miles to school, would have this critical reference tool for use at home as well as at school.

Andy also volunteers with mentally-challenged children at the Xin Fu Children's Welfare House by providing training in living skills and organizing entertainment such as showing movies to provide some fun and a connection to modern life.

Most recently, Andy's volunteer efforts have been directed at serving the elderly, collecting and delivering donations, visiting and sharing his time, according to the UPS.

Andy's selfless dedication to those in need truly embodies the spirit of community service that this award recognizes," observed UPS Chairman and CEO Scott Davis. "He has served as a rallying point for others, including his fellow employees, and his efforts inspire us all."

China's education expo attracts record 400 schools from overseas

(Xinhua, 2008-02-22)

The 13th China International Education Exhibition Tour (CIEET), to fall on March 1 to 16, has attracted a record 400 higher educational institutes from nearly 30 countries and regions.

Schools overseas have been competing for Chinese students in recent years," said Fang Maotian, director of the Chinese Service Center for Scholarly Exchange (CSCSE) under the Ministry of Education, here Wednesday.

As Fang noted, this year marked the 30th anniversary of an important speech on expanding scholarly exchange by late Chinese leader Deng Xiaoping. Over the last 30 years, China has seen a rapid progress in scholarly exchange.

Statistics from the Ministry of Education showed that since 2002, China had more than 100,000 people engaging in overseas study each year. In the year 2005, people studying abroad totaled 118,500, of which 106,500 were self-sponsored.



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According to Fang, the expo this year has attracted representatives from countries popular with Chinese students, such as Britain, France, Holland, Ireland, Canada, the United States, Australia, New Zealand, Germany, Spain, Italy, Switzerland, the Republic of Korea, Japan, Singapore, and Malaysia.

China saw a great internal demand for overseas study after it adopted the reform and opening-up policy in 1978. At that time, overseas study meant better job and greater expectation since people with international education background were urgently needed.

In recent years, however, overseas-returned students were no longer rare and found getting a job harder.

The China International Education Exhibition Tour will go to Beijing, Dalian, Xi'an, Chongqing, Shanghai, Changsha and Guangzhou.