



Research and Environment News from China

January 7 - January 2005

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Introduction

Of particular interest this month is the selection by the Chinese Academy of Science of what they consider to be China's 10 major R&D achievements in 2004. Achievements cover various areas, including IT, bio-technology, geology, physics, nano-technology, energy, etc. This provides obviously a partial overview only of China's research discoveries. This month for example, interesting discoveries in bio-technology are reported on, as well by the way as the development of the bio-tech industry.

Energy is still the hot topic of environment protection and sustainable development, after a law on green energy was drafted last month. The State Environmental Protection Agency of the Central Government is showing its determination in "an unprecedented move" by closing down 30 large-scale projects across the country. It is to be noted that many of these projects are related to electricity production.

Science & Technology

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11. Pollution worsens in China's sea waters
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KEYWORDS

coal shortfall
major threats of sustainability
water diversion project
environment watchdog suspended large projects
timber demand
natural gas shortage
energy co-operation
sustainable growth
ecological construction
endangered wildlife number increase
marine ecosystem worsening
solid waste pollution prevention
renewable energy
environmental protection
development efficiency
legal use TCM

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7. China considering legislation on nutrition

KEYWORDS

urban medical team, rural residents
outlaw selective abortion
Chinese people's health condition
China health systems, challenges
flu pandemic alarm
eliminate lymphatic filariasis
national nutrition ordinance



Activites coming up soon

Feb. 28 th , 2005
Food Ingredients Asia-China 2005
City and Venue: Shanghai
Contact: Ms. Meng Yining, Tel: 021-52895151ext.128 Fax: 021-52895263
myn@stcec.com
March 1, 2005
The 1st Int'l Conference on Technologies of Intelligent and Green Buildings and the 1st Int'l Expo on Technologies and Products of Intelligent and Green Buildings
City: Beijing
Contact: Mr.Linyong , Tel: 010-68394535 Fax: 101-68394530
March 18, 2005
The 15th International multi-subjects biology material research seminar
City: Shanghai
Contact: Mr.Songyang, Tel: 021-63267373 Fax: 021-63584450
March 22, 2005
China (Shanghai) Int'l Expo for Water Supply Technology and Equipment 2005
City: Shanghai
Contact: Ms. Meng Yining, Tel: 021-52895151ext.128 Fax: 021-52895263
myn@stcec.com
March 23, 2005 - March 25, 2005
the 5th China Int.Electric Power Equipment& Tech Exhibition
City and Venue: Shanghai Exhibition Center, Shanghai, China
Tel: 86-21-54592323*332 Fax: 86-21-54253480
Email: Stanley@zhongmao.com.cn
Website: www.epetee.com
March 29-31,2005
Water & Membrane China (Shanghai) 2005
Venue:Shanghai Exhibition Center, Shanghai, China
Contact: Julius Zhu, Grand Exhibition Services Co., Ltd.
Tel: +86-10-8401-8151 / 6405-9097 Fax: +86-10-8401-2838
Cell: +86-13901048399
Email: julius@grandexh.com / juliuszhu@vip.sina.com
Web: http://www.grandexh.com/
April 5, 2005 - April 7, 2005
The 5th China International Petroleum & Petrochemical Technology & Equipment Exhibition
City & Venue: Beijing Exhibition Center, Beijing, China
Tel: 0086-10-88414751, 68488273 Fax: 0086-10-88414752
Email: zw-sophia@china-zhenwei.com.cn
Website: www.cipe.com.cn
April 20-22, 2005
The 6th China International Water Supply and Drainage and Water Treatment Technology and Equipment Exhibition
Venue: Shanghai Everbright Convention and Exhibition Center
Contact: zmes@zhongmao.com.cn http://www.wsdwtf-sh.com



April 20-22, 2005
The 6th China International Environmental Protection Technology and Equipment Exhibition
Venue: Shanghai Everbright Convention and Exhibition Center
Contact: Zmzl@sh163.net http://www.eptee.com
May 25-27, 2005
The 2nd China International Renewable Energy Equipment and Technology Exhibition and Conference
Venue: Beijing International Convention Center
Contact: qyic@163.net qyic2004@vip.bbn.cn qyic2005@vip.bbn.cn
Tel: 86-10-64290047, 64291832
Fax:86-10-84255706
June 5, 2005
The 9th China Int'l Environmental Protection Exhibition and Conference-CIEPEC 2005
City: Beijing
Contact: Mr.Zhu Qinxue, Tel: 010-68394581, Fax: 010-68393748
Caepi@public3.bta.net.cn
June 2005
2005 China International Nano Science and Technology Seminar
City: Beijing
Contact: Tel: 010-62652123 Fax: 010-62653690 wangqx@iccas.ac.cn
September 25-29, 2005
7th World Congress on 3R (with Exhibition)
Venue: Beijing Friendship Hotel
Contact: Prof.Dr.Huizhou Liu
Tel: 86-10-62554264 Fax : 86-10-62561822
Email : hzliu@home.ipe.ac.cn

Environment-related international tenders and investment opportunities:

211.147.20.16/bizchina/bidding.shtml

english.cepi.com.cn/homepage



Science & Technology

China hopes to build world-class observatory in Tibet

(People's Daily Online, January 11, 2005)

A top astronomer said that China may build a world-class observatory on the "roof of the world" -- in the southwestern Tibet Autonomous Region.

A preliminary survey has found the Sengge Zangbo town in Ngari Prefecture, western Tibet, may be the ideal place to launch the world's largest and most advanced telescope with a caliber up to 100 meters, said Ai Guoxiang, who heads the National Astronomical Observatories.

"The crown of 21st century's ground-based astronomy will be on China if further investigation proves the same," said Ai, also an academican of the Chinese Academy of Sciences.

An alternative location for the new observatory could be Taxkorgan county in the Xinjiang Uygur Autonomous Region, northwest China, he added.

Chinese scientists will carry out astronomical observations from fixed positions in these two places for a year or two before the final decision is made, according to Ai.

"When the location is confirmed, we'd suggest China cooperate with some Southeastern countries in building an optical/infrared telescope with a caliber of 10 meters," he said.

The astronomer said China is also considering building a new generation telescope with a caliber between 30 and 100 meters through international cooperation. "On whose basis we'll build the world-class observatory," he said.

Such a large telescope will enable human eyes to see the farthest parts of the universe and help unravel some of the mysteries about the origins of celestial bodies and the entire universe, said He Jinxin, a researcher with the Chinese Academy of Sciences.

The researcher said the Tibetan town of Sengge Zangbo is an ideal location because it is located on the roof of the world and surrounded by mountains 4,800 meters above sea level. It is quiet, dry and usually has clear night skies.

UK, China unite in hi-tech research

(China Daily 2005-01-17)

Energy, electronics, stem cell studies and space and aviation sciences are major fields for scientific co-operation between China and the United Kingdom.

A series of conferences or workshops will be held soon to deepen co-operation in the four areas, Lord Sainsbury, minister for science and innovation at the Department of Trade and Industry of UK, said Sunday.

Scientists from the two countries will have additional opportunities to conduct extensive exchanges, he told the opening session of the two-day third UK-China High Technology Forum.

He noted China's rapid economic growth and excellent science development are good foundations for the bilateral collaboration.

The UK and China have also started co-operation in space fields, such as air-to-surface observation for environmental-monitoring and other aspects, according to Sainsbury.

He added the UK is actively co-operating with other countries, including China, for studies of technological standards that are important to world trade.

Under the umbrella of China-UK Scientific Park programme which was launched in 2003, some Chinese high-tech firms have entered the UK to develop and commercialize their technologies, according to the Department for International Co-operation of China's Ministry of Science and Technology.



Sources from the department said China and UK have conducted many technological co-operative programmes. For example, the ministry and British Petroleum (BP) have signed a memorandum of co-operation for building hydrogen stations to support the use of fuel cell-powered vehicles -- vehicles powered by hydrogen or other cleaner fuels emitting less pollutants.

Under the memorandum, BP will provide experience for the development of hydrogen energy and fuel cell-powered vehicles to China.

During the plenary session Sunday, Huang Xing, director of the China Science and Technology Exchange Centre and head of China-European Union Science and Technology Co-operation Promotion Centre, said China is willing to further co-operate with the UK in industries of information and communications.

He said enterprise-to-enterprise co-operation should constitute the bulk of bilateral scientific exchange to make high-tech co-operation more substantial.

The policy, adopted by the Chinese Government to encourage independent innovation as well as technology imports from other countries, will remain unchanging.

Besides, the country's positive policies catering to technology globalization will not be ignored in the next few years, according to Liao Xiaohan, an official of the Ministry of Science and Technology.

Tan Tieniu, director of the Institute of Automation of the Chinese Academy of Sciences, said China has made rapid progress in information technology over the past few years, particularly in such fields as high performance computer, advanced servers, desktop operation system and new generation broad-band Internet network.

In view of the large market in China, universities and research institutes from China and the United Kingdom should associate with each other, so as to further tap the market through technological collaboration.

Barry Furr, chief scientist of the Project Evaluation Group of Astra Zeneca (an international pharmaceutical company), said scientists from the UK and China have great co-operative potential in medicinal development, clinical research, genetic studies and in chemistry, because China has good expertise in these fields.

He said his team will soon visit major universities in China and sort out collaborative partners to propel co-operation in the above fields.

China to build PFR nuclear power stations by 2020

(Xinhua News 2005-01-18)

China will complete the construction of prototype fast reactor (PFR) nuclear stations by about 2020, the director with China National Nuclear Corporation (CNNC) announced Sunday in Beijing.

The reactor can lift the utility rate of natural uranium from one percent to 60 to 70 percent with a pressurized water reactor (PWR), said Kang Rixin.

Currently, most of China's nuclear stations, both in operation or under construction, use a PWR and heavy water reactor (HWR), sources with CNNC said.

The development of the new kind of reactor is expected to be finished and put into operation at the beginning of the next "five-year plan" period (2006-2010), CNNC sources said.

China is now speeding up the PFR experiment, which is supported by the 863 Plan, the nation's hi-tech research and development program, sources said. The development research, with a total investment of 1.38 billion yuan (167 million US dollar), is the largest project in the 863 Plan.

Nuclear power should make up four percent of the nation's total generating capacity by 2020, according to plans made by National Development and Reform Commission (NDRC).

"This requires CNNC, in collaboration with other corporations, to make pragmatic plans and schedules to address bottle-neck problems the nuclear industry facing, such as self-researching capability and resources provision," CNNC sources said.



The CNNC sources said working on and implementing these reactors will still be, for a long time, the major product for China's nuclear industry.

Chinese expedition reaches Antarctic icecap peak

(Xinhua News 2005-01-18)

A 12-man Chinese expedition surmounted the highest icecap peak in Antarctica at 3:16 a.m. Tuesday, according to the polar expedition office of the State Oceanic Administration (SOA).

They are the first humans to reach the peak of Dome A Icecap 4,039 meters above sea level, located at 80:22:00 degrees south latitude and 77:21:11 degrees east longitude.

The team planned to establish an interim scientific observation station at the spot to monitor the climatic environment, measure the depth of the icecap and obtain ice sample from a depth 150 meters to 200 meters below the surface, the SOA said.

The team will also look for the right location for the third Chinese scientific research station at Antarctica, which together with the existing Changcheng (Great Wall) and Zhongshan stations will form a regional climatic environment monitoring system, fulfilling China's mission in an international Antarctic research program.

So far, the team has obtained a nearly 100-meter long ice sample from a section some 300 meters below the icecap peak, the first that humans have got at the highest icecap peak in Antarctica and a crucial clue to climatic and environmental changes in this area.

The Chinese scientists have also set up an automatic weather observation system at the peak that may function at minus 90 degree Centigrade. The system, jointly developed by China and Australia, sends out real-time information about local temperature, moisture, solar radiation, wind power and direction, atmospheric pressure and temperature through satellite.

The team is scheduled to withdraw Thursday but leave a commemorative mark formed by 13 empty oil casks and a national flag at the peak.

The Antarctic icecap, the largest continental glacier on the surface of the earth, accounts for 70 percent of the earth's freshwater resources. The icecap has an average thickness of around 2,450 meters and more than 4,000 meters in certain spots.

Climate-induced change in the bulk of the Antarctic glaciers will noticeably affect the sea level. According to scientists worldwide, the Antarctic glaciers can provide high-quality, high fidelity and abundant information for their research into global climatic changes.

3rd UK-China Hi-tech Forum kicks off year-long scientific events

(People's daily, 2005-01-18)

The 3rd UK-China High Technology Forum was opened at Tsinghua University on Monday. It was followed by a series of workshops in fields ranging from energy, stem cell to space and aviation sciences. Both China and Britain sent a large delegation to the conference. Lord Sainsbury, the British Minister for Science and Innovation of the Department of Trade and Industry and competent Chinese officials from relevant departments, also attended the opening ceremony.

Kicked off by a great opening the forum is to lead to year-long activities aimed at promoting scientific and technological collaboration between Britain and China, said Lord Sainsbury later that evening at a reception held at the British Ambassador's Residence.

We have begun to see the fruits of this collaboration - said Minister citing the signing of an agreement with the Chinese Academy of Sciences early that afternoon as one example in his reception speech.



When asked to comment on the event in the broader context of the economic exchange between China and the UK the Minister told People's Daily Online that the government's role is to set up the stage for people in the scientific and technological circles as well as in the economic circles.

The aim is to set the process in motion and see what happens, said the Minister, things are different in the UK where technologies are often taken for granted. I wonder what kind of attitude the Chinese people hold toward science and technology nowadays - the Minister is very curious about the impact of science and technology on the lives of Chinese people.

A cordial atmosphere surrounded the reception that gathered dignitaries from the scientific and technological circles in China and the UK. They would continue to participate in branch meetings to be held the next day.

The UK-China High Technology Forum is co-sponsored by the Ministry of Science and Technology of China and the UK Department of Trade and Industry and is seen as a long-term commitment on the both sides to scientific and technological exchange and collaboration between China and Britain.

China injects more funds into development of technical standards

(People's daily, 2005-01-19)

The Ministry of Science and Technology will inject more funds into research and development of technical standards, an official with the ministry said Tuesday in Beijing.

Xu Jianguo, vice director of the ministry's development and planning department, said that enterprises are encouraged to get involved in making national and international technical standards.

The ministry launched the research and development program in 2002 with a total fund of nearly 200 million yuan (24 million US dollars) and more than 2,100 scientists and experts involved.

The scientists and experts have already completed national standards for environmental protection signs, trace element examination, textile safety and key technologies on broadband local area network and urban public graphics.

Meanwhile, Xu said, they are working on the establishment of 29 international standards.

The research and development program focuses on strategic studies on technical standards, introduction of new national technical standards concerning high technologies, public safety, social benefits and other needed areas, as well as examination methods for those standards.

In 2002, 71 percent of Chinese exporters and 39 percent of their exported goods were faced with technical barriers to trade from foreign countries, causing them to lose 17 billion US dollars in goods value.

Chinese scientists find new HLA allele

(Xinhua news, 2005-01-6)

The World Health Organization has named a new allele identified by Chinese scientists that will hopefully enhance the success rates of bone marrow transplants for leukemia patients.

The allele, HLA-A*110104, was identified recently by immunologists with the Beijing-based No. 307 Hospital of the Chinese People's Liberation Army, while matching hematogenic stem cells for a leukemia patient from the northern Shanxi Province.

The team of experts, headed by Xi Yongzhi, found an unknown gene in the patient's younger brother who was the potential bone marrow donor. Seeing that the gene did not exist in the international gene bank, Xi and his colleagues paid a visit to the patient's hometown to take blood samples from his father, and detected the same gene.



Shortly after their Shanxi tour, the immunologists found the newly discovered gene again in a patient from the eastern Anhui Province. Laboratory work later found the same gene in blood samples from the patient's parents and grandparents, too, said Xi.

WHO's HLA naming committee has named the allele and published the discovery in several academic journals, according to Xi.

The new allele will match more adequate types of bone marrow for leukemia and other fatal blood disease sufferers, for whom the best therapy available so far is bone marrow transplant, said Xi. HLA, or human leucocyte antigen, is a kind of antigen of the white blood cells. There are three types of HLA -- A, B and C.

Doctors rely on HLA antigen system that gauges how well donated tissue matches the patient's immune system. A perfect match, usually from a relative, is best. The more HLA mismatches there are, the greater the risk of rejection.

This has made matching more difficult in China, the land of only child where leukemia patients are increasing by 40,000 a year and more than 4 million patients are waiting for bone marrow transplants. The results of the Chinese scientists' research may also help organ transplant patients find ideal donors and help anthropologists find out more about the migration of different ethnic groups in history, according to Xi.

A*110104 is not the only HLA allele identified by Chinese scientists. A group of researchers in southern boom city of Shenzhen discovered one new allele in 2001 and another two in 2002. In 2003, scientists identified a new allele named HLA-B*5516 in a girl in southwest China's Sichuan Province. In October 2004, transfusion experts in east China's Zhejiang Province identified two new alleles: HLA-B*5614 and HLA-B*5136.

About 80 percent of the 1,013 known alleles of HLA-A, B, DRB1 were discovered by American scientists. Identification of unknown alleles is a hotspot for worldwide scientists and the competition is extremely high.

Overseas capital taps biotech industry

(China daily, 2005-01-20)

Liu Pei has been living with an uneasy feeling in recent days.

His company, Shanghai-based Bio Asia, was acquired on December 8 by California-based biotech reagent giant Invitrogen Corp. The deal has left him of two minds.

"On the one hand, we are losing a company of our own, which we have struggled to build over the past five years," Liu, general manager of Bio Asia, told China Business Weekly.

"On the other hand, the acquisition will improve the technological level and service provision of Chinese biotech companies, such as Bio Asia. It will certainly prompt more international biotech giants to invest in China."

Invitrogen paid US\$8 million to acquire Bio Asia, a research equipment and reagent firm that has 18 sales offices across China. Liu will become Invitrogen China's national manager.

The deal marks the **first major acquisition of a Chinese biotech firm by an international rival**. Analysts and industry insiders suggest the deal proves foreign firms are interested in researching, developing and producing biotech products in China.

"Several leading US biotech companies have been seeking Chinese partners for new business, from outsourcing research to forming joint ventures," Wu Jun, executive vice-president of Shanghai Genomics Co Ltd, told China Business Weekly.

"They have come to China not only for the emerging huge market, but also for the **improving management and innovation** of local firms."

Greg Lucier, Invitrogen's chairman and chief executive officer, said, on the company's website: "The **rapid growth** of China's biotech and medical research industries, and the major WTO (World Trade Organization) change opening the market to international companies, add fuel to Invitrogen's already-robust commercial potential in the country."



Demand in China for biotech equipment and reagents has increased rapidly in recent years.

The Chinese Government **increased its biotech funding 400 per cent** between 2001 and this year, to reach 10 billion yuan (US\$1.2 billion).

Numerous massive projects - including rice gene sequencing and human liver proteomic initiatives - have been launched in the past three years.

Privately owned biotech firms in China are playing a greater role in the process.

For example, Shenzhen SiBiono GeneTech developed Gendicine, the **world's first commercialized gene therapy medicine**.

Post-WTO China, greater innovation, improving technology and high-quality, but less-expensive, workers are attracting both biotech equipment and biopharmaceutical firms to China, said Matthew Chervenak, president of General Biologic Management Consulting.

The report "Pipeline China 2004," published last October by General Biologic, estimates **60 biological drugs** - including 19 antibodies and 11 vaccines - were being developed, independently, by Chinese biotech firms.

Previously, Chinese biopharmaceutical companies only produced generic drugs, such as EPO and Insulin.

China's WTO entry, in December 2001, also resulted in smoother access by foreign firms to China's biotech sector, said Mark Tang, managing partner of New Jersey-based World Technology Ventures.

In its 2002 and 2005 editions of the "Catalogue for the Guidance of Industries for Foreign Investment," China listed biotech research, development and production as **preferred sectors for foreign investment**.

The Chinese Government last October released a policy aimed at simplifying foreign investment procedures.

Last December, three years after it joined the WTO, China allowed foreign firms to sell pharmaceutical and biotech products directly in China.

Since joining the WTO, China has revised its intellectual property rights (IPR) laws, so they are consistent with rules of the Trade-related Aspects of Intellectual Property Rights (TRIPS), and has enhanced enforcement of IPR laws and regulations.

Despite foreign firms' attraction to the Chinese market, most analysts say it is too early to say with any degree of certainty that foreign biotech companies have launched a wave of mergers and acquisitions (M&A) in the country.

Many international biotech firms considering entering China remain concerned about the nation's **poor implementation of IPR-related laws**.

"For biotech firms, IPR may mean everything. They are very cautious about making massive investments in China," said Chervenak.

Foreign biotech companies are also hesitant to invest in China because they have little understanding about the ongoing innovation in the country's biotech sector.

Although China's biotech firms have become significantly more innovative, their ability to ensure their research capabilities are on par with foreign firms remains a challenge, Wu said.

Cheng Guoxiang, president of Shanghai Genon Bio-engineering Co Ltd, said the biodrug development process is lengthy - and risky. Foreign companies cannot easily move their research teams to an unfamiliar country.

Zhang Luyang, a finance professor at Fudan University, said China's investment environment must be improved before there will be a significant number of foreign M&As within the biotech sector.

Currently, access to financing is quite limited and intermediary services are lacking, which indicates foreign and Chinese firms do not sufficiently know each other.

That is a major challenge for foreign firms conducting research in China, Chervenak said.



"Outsourcing research to Chinese firms or launching research programmes with Chinese partners remain rational choices for international biotech firms," Wu of Shanghai Genomics said.

Institut Pasteur of Shanghai hosts its first international seminar

(2005-1-21 Chinese Academy of Science)

On Dec. 21, an International Symposium on Viral Biology was held in Shanghai. This is the first scientific conference held by the CAS Pasteur Institut of Shanghai since its official inauguration. The meeting was under the joint sponsorship of the French Consulate General in Shanghai, CAS and Science & Technology Commission of Shanghai Municipality.

High-ranking officials, including CAS vice president Prof. Chen Zhu, the Consul General of France in Shanghai Mr. Jean-Marín Schuh and director of the Shanghai Institutes for Biological Sciences Prof. Pei Gang, were among its participants.

In his opening remarks, Prof. Chen Zhu says lessons from the 2003 outbreak of the SARS epidemic must be learned. As the viral research is beyond the national boundaries, he predicts, the newly established Institut Pasteur of Shanghai is to grow into a unique platform under the joint auspices of the Shanghai Municipality, French Institut Pasteur and CAS. Its operation will promote the international cooperation, and training of young scholars by summoning more top-ranking virologists from every corner of the world today and make its own distinct contributions to the virology research, Prof. Chen concludes.

On behalf of Shanghai Institutes for Biological Sciences (SIBS), Prof. Pei Gang extends his congratulations to the seminar's convention. He wishes that the two new member of SIBS, Institut Pasteur of Shanghai and the Shanghai Institute for Computational Biology would further enhance the interdisciplinary research in the related field. Talent training is the crucial factor in the move, he stresses.

SARS crisis in 2003 may serve as a warning to the public, Mr. Jean-Marín Schuh says in his speech. After the event, governments of various countries started strengthening their cooperation with one another in the field of public sanitation. He praises the newly inaugurated Institut Pasteur of Shanghai to be an exemplary case in the rewarding Sino-French S&T partnership. He personally hopes the two countries would make more substantial contributions to the realm of public hygiene.

Focusing the exploration of the complexity and diversity of contagious diseases, and viral contagion in particular, the symposium consists of three sessions: emerging viruses, immune responses to virus infections, and genomics and proteomics.

A group of celebrated scholars of international renown gave lectures or monographic addresses at the meeting, which was attended by more than 100 experts and students. They included: Prof. Albert Osterhaus from Erasmus Medical University, The Netherlands; Prof. Bing SUN from the Institute of Biochemistry & Cell Biology, SIBS, CAS; Prof Hans D. Klenk from Medical Center, Philipps University Marburg, Germany; Prof Zhao GuoPing from the Chinese National Human Genome Center at Shanghai; Dr Cao WangSen from the Johns Hopkins University School of Medicine, Baltimore, USA; Dr Zheng YongHui from the Department of Rheumatology, University of California, San Francisco, USA; Dr Paul Zhou from the Department of Virology and Immunology, Southwest Foundation for Biomedical Research, USA; Prof. Olivier Schwarts from the Department of Virology, Institut Pasteur, Paris, France; Dr. Ge BaoXue from the Department of Molecular and Cellular Biology, Harvard University, Massachusetts, USA; Dr Bo DING from Dept of Medical Epidemiology and Biostatistics, Karolinska Institutet, Sweden; Pr Ian LIPKIN from the Center for Immunopathogenesis and Infectious Diseases, Columbia University, USA.

One day prior to the seminar, the first academic conference of the Institut Pasteur in Shanghai was convened. The nine-member academic committee consists of scientists from China, France, Germany, the Netherlands and the US, covering such fields as micro-biology, virology, lemmology, immunology and vaccine virology. At the meeting, Prof. Hans Klenk from Marburg University and Prof. Zhao Guoping were elected the president and vice president of the academic committee respectively. At the one-day meeting, the participants held deliberate discussions on the invitation of six directors for its monographic subdivisions. Also, they confirmed the correctness and competitiveness of the research plans to be adopted by the Institute and pinpointed its research orientations for coming years.



Scientists select 2004 top 10 S&T achievements in China

(2005-1-18 Chinese Academy of Science)

China's top 10 events in S&T progress have been chosen by 384 members of the Chinese Academy of Sciences (CAS) and the Chinese Academy of Engineering (CAE). The announcement was made in a news release held on January 13 in Beijing.

1. China's fastest super computer, Dawning-4000A, was put into commercial operation on Nov. 15, 2004 at the Shanghai Supercomputer Center, acting as the largest main node in the national grid.

Running at maximum speeds in excess of 10 trillion operations per second, or 10 Tflops, the computer is jointly developed by CAS Institute of Computing Technology, the Dawning Corporation and the Shanghai Supercomputer Center. It was completed in June and ranked 10th on the list of the world's top high-performance computers released that month.

Its official inauguration signifies that China has become the third country, after the US and Japan, that could build high-performance super-computer with such a high speed in the world.

2. The No.2 reactor of the second-phase project at the Qinshan Nuclear Power Plant officially started commercial operation in May 2004, marking the full-load operation of the China's first nuclear power station independently developed by Chinese engineers. It means a giant stride forward for China from the manufacture of small-sized prototypes of nuclear generators to the successful construction of large-capacity nuclear power plants for commercial use by relying on its own technological strengths.

With a total investment of about 15 billion yuan (or US\$1.8 billion), the phase-2 project consists of two units of China-made 600Mw pressurized water reactors. Its service life would be 40 years.

3. The 4,000-kilometer-long pipeline for the cross-country transmission of natural gas has officially gone into its commercial operation since December 30, 2004.

The main energy artery links the hydrocarbon-rich hinterland of the country with the currently booming coastal regions centered at Shanghai and other power-thirsty big cities in east China. Its chief supplier is the Tarim gas field in Xinjiang Uygur Autonomous Region, whose exploitable reserve is 229 billion cubic meters, the largest natural gas trove in the country.

By pumping a ceaseless flow of natural gas at the west-to-east direction into the booming regional economies in coastal China, the imbalance in the power layout throughout the country is alleviated. The natural gas transmission project is a landmark pipelining work as well as a mammoth engineering feat rarely seen in the world today. A subsidiary program to the current national campaign for promoting the development of the underdeveloped western China, it has a designed capacity of 12 billion cubic meters per year.

4. A state-of-the-art Internet backbone, the Cernet-2, was launched in late December 2004. The successful inauguration of the first backbone network of the latest-generation Internet is expected to dramatically narrow the gap between China and world's leading countries in this aspect.

Connecting 20 cities throughout the country based on a pure Internet Protocol Version 6 (IPv6) technology, the Cernet-2 is the biggest next-generation Internet network in operation in the world. The speed of the backbone network could reach 2.5-10 gigabits per second and it can connect the campuses at a speed up to 1-10 gigabits per second.

5. The second satellite of the Geospace Double Star Program (DSP), the polar spacecraft TC-2, was launched on July 25, 2004, signaling the successful operation of the program.

As being suggested by its name, the DSP involves two satellites. The first one, the equatorial spacecraft TC-1, had blasted off on December 30, 2003. Both of them are designed, developed, launched and operated by Chinese scientists, including those from the CAS Center for Space and Applied Research.



The two DSP satellites orbit in some important and active regions of the magnetosphere, which have been never covered by any geospace satellites in the current international exploration programs.

Together with the four ESA orbiters in the Cluster Program, China's duality mission will be thrusting into six uncharted spaces of the magnetosphere. In this way, the data-sampling activity under the Sino-EC partnership will be expanded to a wider and more panoramic coverage than either side could do ever before.

6. Reversible transition of nano-materials between Super-hydrophobicity and Super-hydrophilicity. A group of researchers from the CAS Institute of Chemistry have been successful in reversible switching between super-hydrophobicity and super-hydrophilicity by changing temperature and light. Their work was published in *Angew. Chem. Int. Ed.* (2004, 43, 357) and *J. Am. Chem. Soc.* (2004, 126, 1, 62). The work has been reported by *Science* and *Nature*.

The CAS chemists show that they can reversibly switch a surface from being superhydrophilic to being superhydrophobic with a very small change in temperature. On its own, poly (N-isopropylacrylamide) will switch from being hydrophilic to being mildly hydrophobic when the temperature is raised from 25 to 40°C. At the lower temperatures, the C=O and N-H groups are partnered by water molecules, and intermolecular hydrogen bonding dominates; when the temperature is raised, intramolecular hydrogen bonding takes over, ejecting the water molecules, and the chains adopt a more compact form. The researchers enhanced this transition by depositing the polymer onto patterned silicon substrates. As the pattern size was decreased (finer grooves), they observed an increase in the range of contact angles achieved on switching. Detailed investigation of the substrate showed a large fraction of irregular nanoparticles produced by sputtering from neighboring regions and thus a very large surface area.

The scientists also prove that remarkable surface wettability transition occurs with an inducement of ultraviolet (UV) for aligned ZnO nanorod films. The inorganic oxide films, which show super-hydrophobicity, become super-hydrophilic when exposed to UV illumination. After the films are placed in the dark, the wettability evolves back to super-hydrophobicity. This reversible effect is ascribed to the cooperation of the surface photosensitivity and the aligned nanostructure. Such special property will greatly extend the applications of ZnO films.

7. Chinese scientists succeed in developing a high-precision underwater global position system (GPS) and its main functions are believed to be up to the advanced level of the world today.

The underwater GPS equipment, apart from performing the conventional functions for subaquatic detection and submarine search, is capable of piloting or positioning underwater objects in real time.

The success signals China's accession to the top-ranking status in contemporary world's underwater GPS technology, only next to the US, France, Germany and a few countries in the mastery of such an advanced technique. Practical tests conducted at an artificial freshwater lake Qiandaohu in Zhejiang Province indicate that, at a depth less than 45m, the gear's horizontal positioning accuracy is within 5cm and its depth precision is 30cm.

The system is composed of four buoys and a GPS detector for collecting sounds and positioning data from a hidden body beneath the water surface.

8. A membrane protein exposed by Chinese scientists as the major light-harvesting complex in the photo-system II (LHC-II), which serves as the principal solar energy collector in the photosynthesis of all green plants.

In collaboration with researchers from the CAS Institute of Botany, a research group at the CAS Institute of Biophysics succeeds in determining the crystalline structure of the complex from spinach by revealing the first X-ray structure of LHC-II in the world in an icosahedral proteoliposome assembly in detail at the atomic level. Their paper was published as a research highlight on the March 18 issue of the journal *Nature*. The work is a key breakthrough in the six-year-long studies into photosynthesis in the capacity of a major achievement scored by the on-going national Knowledge Innovation Program spearheaded by the CAS.

9. CAS scientists at the University of Science and Technology of China in Hefei have been succeeded for the first time in the world in entangling five photons and demonstrating a process called "open-destination teleportation".

As reported in the July 1 issue of *Nature*, the results are spoken highly in the international community of physics as a major breakthrough in efforts to exploit the laws of quantum mechanics in quantum information processing.



With the support from the national knowledge innovation program piloted by CAS, national basic research priority program and National Natural Science Foundation of China, the researchers began their work by producing a high intensity and ultra-stable source of entangled photons. Next they used two entangled pairs of photons to generate a four-photon entangled state, which they then combined with a single-photon state. After three-year hard work, they are finally able to produce a five-photon entangled state by detecting the coincidence of five photons.

The experimental demonstration has profound implications. First, the experiment has demonstrated the ability to manipulate five-particle entanglement, which is the threshold number of qubits required for universal error correction. Second, the realization of open-destination teleportation opens up new possibilities for distributed quantum information processing. Last, the techniques developed in the present experiment enable experimental investigations of a number of quantum protocols.

10. The first discovery of more-than-10 km- thick Mesozoic strata in deep waters of the South China Sea marks a major breakthrough in off-shore investigation of the hydrocarbon trove in China's territorial waters.

In the latest round of the off-shore investigation beneath the marine territories under Chinese jurisdiction, 38 sedimentary basins with estimated 35.1- 40.4 billion tons of oil equivalent have been pinpointed, including 11 seaside oil-bearing structures home to 21.3-24.5 billion tons of oil equivalent in an initial estimate.

In the northern slopes of the continental shelf under the South China Sea, a series of geophysical clues have been detected as evidence to the existence of natural gas hydrate. In the Xisha Sea Trough alone, the prospective reserves are estimated at 4.55 billion tons of oil equivalent. The discovery will play a critical role in China's energy exploitation and sustainable development of its national economy.

Trial operation of a stand-alone wave power system successful

(2005-1-17 Chinese Academy of Science)

A group of scientists from the CAS Guangzhou Institute of Energy Conversion succeeded on January 9 in their first sea trial of a stand-alone wave power system, marking a significant progress in generating stable electricity with wave energy.

As a most unstable source of renewable energy, waves are difficult to harness and convert into electricity. Statistics in real sea conditions shows that the maximal energy produced by wave could be 7-10 times its average in 10 minutes. Although expensive equipment has been introduced in countries like the UK and Portugal, users still could not directly benefit from the energy if no local grids are available. That decreases significantly the practicability of the energy.

The experimental results of the CAS group show that their wave power devices have reached the expected targets in anti-impact, stable operation and normal performance in small waves.

It is a low-power trial of 6 kW output because the system has just been installed and needs a period of grinding-in, says chief scientist of the project You Yage. The experiment shows the system output excels its counterpart powered by a diesel engine in terms of stable performance, and could provide electricity directly to its users for lighting, computers, air-conditioners or making drinkable freshwater.

The research group has been tapped wave power as a source of renewable energy in response to the national demand with support from the national Hi-tech Development Program and CAS. In 2000, the group solved a key problem in the implementation of the wave power system by designing an energy buffer which holds constant pressure in its outlet. Three years later, the researchers developed the first prototype of a stand-alone wave powered system.

In their one-year-long laboratory test, many potential snags have been overcome. By the end of 2004, the stand-alone wave powered system was installed for its sea trial in an OWC (oscillating water column) wave power device situated in Shanwei in south China's Guangdong Province. The sea trial shows that the performance of the system is excellent.



After the testing, the group will arm the system with various fixtures and sub-systems for power storage, seawater desalination, automated protection and artificial manipulation. Their final goal is to build up an independent and practical-use wave-driven facility of power generation, the first of its kind in the world.

CAS scientists make progress in natural drug development

(2005-1-13 Chinese Academy of Science)

A recently concluded CAS project on natural drug development has passed the appraisal and checkup by a panel of experts in Beijing.

A major CAS project for the development of China's West, the research is hosted by Prof. Hao Xiaojiang of the CAS Kunming Institute of Botany with participation of researchers from such CAS affiliations as the Shanghai Institute of Materia Medica, Kunming Institute of Zoology, Chengdu Institute of Biology, Northwest Plateau Institute of Biology, South China Botanic Garden, Institute of Botany in Beijing, Wuhan Botanic Garden and South China Sea Institute of Oceanography.

With an investment of 10 million yuan from CAS, the project aims at promoting the related studies on natural medicines, making contributions to the rational exploitation and sustainable development of the natural resources in China's West as well as the regional economies. The project stresses the construction of China's own pharmaceutical industries and farming bases of medicinal plants in a bid to bolster the modernization of traditional Chinese medicine.

To achieve the objective, the research group has conducted studies into the pre-clinical research of the new drugs, their pharmaceutical and toxicological studies, and research and evaluation of their bio-active components. After five years of work, the researchers have made progress in 18 issues, including the development of an anti-cancer drug GC-51, the preclinical research of carcinoma inhibitor Anouning, an anti-drug SH Compound, a herba erigerontis injection, an intelligence-enhancing drug KMBZ-009, a cobra venom factor CVF, a new hypoglycemic drug FP-215, the bone of a mole rat (*Myospalax baileyi*) synthesis, a new drug from a marine organism (*Placuna placenta*) in treatment of osteoporosis, and a nerve growth factor from snake venom.

Cloned cows with human genes born in Shandong

(Chinabroadcast 2005-01-9)

Two cloned cows containing a human gene, which is an important component in breast milk, were born in east China's Shandong Province.

The cows, which have the lactoferrin gene, were born in an animal research base for gene transfer.

Experts say the cloned cows will be able to yield nourishing milk because of the gene transfer of human milk.

They say cloned cattle with the human gene is valuable for scientific purposes and business. Only a few countries can do this cloning, including Britain and Argentina.

First Chinese Turing Award winner joins CUHK as distinguished professor

(People's daily 2005-01-21)

The first Chinese scientist to receive the prestigious Turing Award Andrew Chi-chih Yao has joined the Chinese University of Hong Kong (CUHK) as distinguished professor-at-Large, announced CUHK Thursday.

The Turing Award, the highest honor in computer science, presented annually by the Association for Computing Machinery to a selected individual whose contributions are of lasting and major technical importance to the computer field and have propelled the information technology industry.



As a winner of the Award, Yao's profound contributions to the advancement of computer science and technology is widely recognized worldwide.

He was awarded the Award in 2000, "in recognition of his fundamental contributions to the theory of computation, including the complexity-based theory of pseudorandom number generation, cryptography, and communication complexity".

Currently three world-class masters have joined CUHK as Distinguished Professor-at-Large. They are Professor Yang Chen Ning, the first Chinese Nobel Laureate, Professor Sir James A Mirrlees, Nobel Laureate in Economics 1996, and Professor Yau Shing Tung, Director of the Institute of Mathematical Sciences of CUHK and the only Chinese Fields Medallist.

China develops single vaccine for hepatitis A and B

(Chinabroadcast 2005-01-13)

China has developed its first single vaccine that prevents both hepatitis A and B. The vaccine to be released into the market costs less than current vaccines for the infectious diseases.

The vaccine to be released into the market costs less than current vaccines for hepatitis A and B.

Research into the vaccine started at the end of 1999. It's hoped the vaccine will narrow China's gap with international hepatitis control and treatment research.

Hepatitis A and B are the major infectious diseases in China and have a negative effect on people's health and social development.

Environment

Shortfall in coal supply to remain

(China Daily 2005-01-05)

China's coal industry is expected to fall short of demand in 2005, with some areas possibly being hit by striking shortfalls, even though coal production will post robust growth.

The prediction was made at the ongoing week-long China 2005 Coal Ordering Conference in Qinhuangdao, which started last Thursday. The conference attributed the supply shortcomings to the country's soaring demand for coal, inadequate coal production capacity and transportation.

Major regions lacking coal will be concentrated in East and South China, said Han Yong, a coal industry analyst with Shanghai-based China Securities. In East China, only a small number of areas, including Anhui and Shandong provinces, produce coal, Han said, while remaining regions like Shanghai, as well as Jiangsu and Zhejiang provinces yield little coal, but are amongst the largest coal consumers nationwide. China is expected to produce 2.05 billion tons of coal in 2005, meeting basic coal needs, yet inadequate transportation will largely bottleneck the country's market balance, said an industry insider from China Coal and Coke Holding Ltd. In an effort to relieve the situation, the government is planning to further expand coal transportation routes from the country's coal-rich regions, including Shanxi and Shaanxi provinces and the western area of Inner Mongolia Autonomous Region in northern China, in 2005, and at the same time, improve coal transportation facilities at ports such as Qinhuangdao, according to official sources.

The country is expected to speed up work on existing large coal mines and fortify coal producers' technical strengths this year, said Han Yong. Large coal mines run more efficiently than small ones, said Han, so the elimination of small coal mine construction projects would not have a major impact on the country's coal supply. Reinforcing supply efficiency "Large coal mines boast 70 per cent to 80 per cent efficiency in coal production, compared with the small



producers' roughly 20 per cent," said Han. The NDRC is also attempting to streamline the coal supply and demand information sharing system, with the purpose of reinforcing the country's coal supply efficiency. Five areas will be given priority in coal supply in 2005, including power generation, fertilizer production, steel production, individual consumers and exports, said an official statement, in order to guarantee China's stable economic development. The week-long coal conference, in addition, stressed the restriction of disordered construction in high energy consuming industries, including steel, cement, and power generation, in order to reduce irrational coal demand.

WB: China's economy faces challenges

(China Daily 2005-01-07)

China's growing reliance on imported oil, pollution and looming water shortages pose the major threats to its economic development, a senior World Bank official said Thursday.

"The sustainability issues in China are the key issues in the next three to five years and the ones that are most likely to jeopardize its economic success," said Yukon Huang, a senior adviser to the bank who formerly headed its office in Beijing.

China is now the world's second largest oil importer, and it suffers from poor efficiency in turning oil into economic output -- just 1/7 that of Japan, Huang said at a seminar organized by Singapore's Institute for Southeast Asian Studies.

If China "cannot improve in terms of its efficiency the cost will be unbearable," Huang said.

Economic growth -- now running at about 9 percent, will likely fall to a more moderate 6 to 7 percent in coming years, Huang said, adding future growth would come less from new investment and more from greater productivity.

While China has cut industrial air pollution, the improvements have been offset by rising private car ownership, Huang said. China is now home to seven of the 10 worst polluted cities in the world, he said, saying that was something the country was "going to have to deal with."

Huang called growing pressure on dwindling water supplies China's "Achilles heel," saying that wouldn't be solved by projects under way to pump water from the relatively wet south and west to the arid north.

The struggle for water will lead to "a fight between rural interests, urban interests and industrial interests on who gets water in China," Huang said, adding some of China's rivers are too polluted to drink, fish in, or even use for irrigation.

Huang said such sustainability issues posed a much greater threat to China's development than political or economic risks such as the mountain of bad loans held by the nation's state-owned banks or the potential of conflict with Taiwan Province.

Yet he added that China had long proved itself able to overcome overwhelming odds in the past, standing alone among nations served by the bank in routinely exceeding development predictions.

"I don't know how or why," Huang said, "but I think that's the success for you for China."

Project starts to send water to dry areas

(China Daily 2005-01-18)

Tianshenqiao Reservoir in Southwest China's Guizhou Province opened a sluice to release water yesterday morning, officially starting the country's largest water diversion project.



An undated file photo shows the Feilaixia Reservoir.

The rich waterway of the southwestern Chinese region in the upper reaches of the Pearl River has begun to snake its way, some 1,336 kilometres, to major cities in the Pearl River Delta that are experiencing severe drought and salt tide disasters.

Yantan Reservoir in the Guangxi Zhuang Autonomous Region, on the Xijiang River, will also begin to discharge water from January 24 through to the end of the month, while the Feilaixia Reservoir on the upper reaches of the Beijiang River, another tributary of the Pearl River, will drain off water to lower reaches of the river from between January 28 and February 3.

The two-week diversion project will help divert more than 750 million cubic metres of fresh water from the southwestern Chinese region to the prosperous region.

The aim is to ensure the cities of Guangzhou, Zhongshan, Foshan, Jiangmen, Zhaoqing, Zhuhai and the neighbouring Macao Special Administrative Region have enough drinking water.

More than 1,600 fishing boats, transport vessels and tourist ships in the upper reaches of the Pearl River will have to stop operating for two weeks, according to chief director of the water diversion project Zhang Dingshu yesterday.

All industrial and infrastructural projects along the river banks which might affect the water diversion project must also stop construction.

In Guizhou alone, more than 50,000 residents are affected by the project, Zhang said yesterday.

An average fisherman is estimated to lose about 100 yuan (US\$12) a day because of the project, Zhang said.

Local governments will have to compensate the fishermen and the farmers who are affected, he said.

Government departments and units in Guizhou and Guangxi are required to take effective measures to prevent any landslides and collapses after the water in the reservoirs has been drained.

But Zhang promised Guizhou would unconditionally release fresh water to help Guangdong fight drought and salt tide.

The Ministry of Water Resources will continue to help co-ordinate efforts to draw off more water to the lower reaches of the Pearl River in the following months if it is necessary, Zhang said.

He Xiajiang, an official from the Guangdong Provincial Observatory, said Guangdong is currently experiencing the worst salt tide in the past two decades and the most severe drought in the last 55 years.

The province, that has had little rainfall since autumn, needs more than 12 billion tons of fresh water to stop the situation from deteriorating, said He.

The drought has affected more than 3.5 million people and 1 million domestic animals in Guangdong, he said.

By the end of December, more than 930,000 hectares of farmland in Guangdong had seriously been affected by the drought.

Up to 320,000 hectares of farmland had dried out.



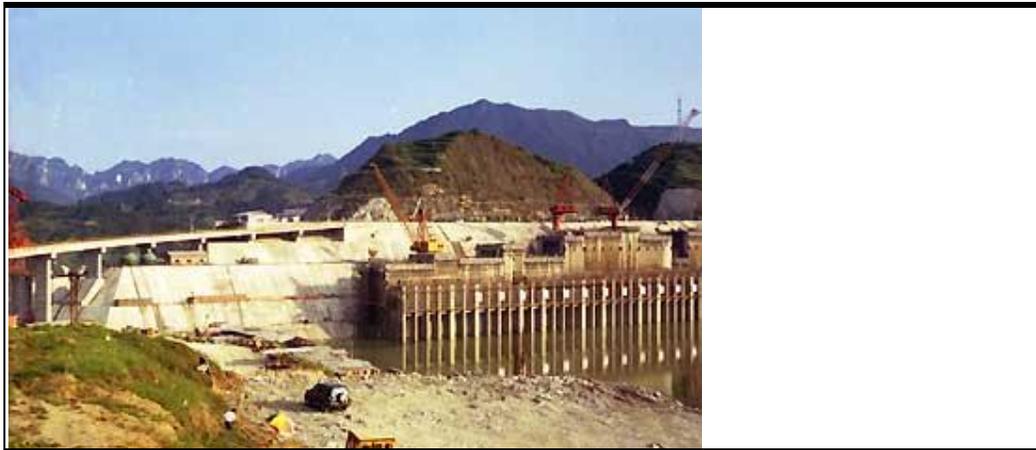
The Guangdong provincial government has, so far, spent more than 170 million yuan (US\$20.65 million) to help alleviate the effects of the drought.

The province seeded clouds to cause rain 200 times in the first 11 months of the year, adding extra rainfall of 2 billion cubic metres to help ease the drought.

Green law suspends US\$billion schemes

(China Daily 2005-01-18)

Projects worth billions of dollars were ordered to cease construction in China Tuesday for violating environmental law.



The Three Gorges underground power plant is among the list of projects which will be banned or halted for violating environmental law. The photo is taken on January 18, 2005. [newsphoto]

China's top environment watchdog Tuesday suspended 30 large projects across the country in an unprecedented move carried out because they had not been approved under the Law on Environmental Impact Assessment, which went in force in 2003.

The State Environmental Protection Administration claims the move demonstrates the central government's determination to stamp out economic growth at the cost of the environment.

The projects, in 13 provinces and municipalities, were mostly involved in generating electricity.

Construction of the projects started before their environmental impact assessment reports were approved, said Vice-Minister Pan yue of the administration.

"We want to warn firms that the environmental impact assessment cannot just be ignored," he said, although many appeared to simply ignore it when designing and building projects.

Zhu Xingxiang, head of the administration's department of environmental impact assessment, said the projects will have to wait until their reports are approved.

Any projects that do not qualify but could be improved will be ordered to before they resume construction.

Those considered beyond improvement will be completely cancelled, Zhu added.

In view of the law, the size of the investments was remarkable, Pan said.

One of the biggest, the Xiluodu hydropower plant in the area bordering Sichuan and Yunnan provinces, along the Jinsha River, a section of the upper reaches of the Yangtze River, involved an investment of more than 44 billion yuan (US\$5 billion).

The administration suggests government bodies punish all responsible for the violations, Pan said.



One expert in environmental impact assessment said the administration's move would implement the law better.

But he said the successful handling of the issue needed concerted efforts from local governments and relevant government bodies.

"Although the environment authorities are authorized by the law to suspend such projects, they don't really have the ability to actually stop them," he said.

Usually, construction must get the nod from local governments or government departments.

Environment authorities simply cannot stop offering loans to law-breaking firms, he added.

Pan said government bodies such as the Ministry of Supervision have promised to intervene if help was needed.

President of the non-government organization Global Village of Beijing Liao Xiaoyi said: "It is encouraging for us that the Chinese Government has taken such concrete action."

She said if companies do not pay attention to the assessment or other environmental duties, society as a whole will bear environmental losses.

To halt the 30 projects may affect the growth of the local economy, but it is beneficial in the long run, she said.

Pan attributed the enthusiastic pursuit of economic growth by local governments to the weak implementation of the law on the environment.

"Small energy-swallowing and polluting projects such as smelting and chemical plants, that are banned, are rampantly expanding in some regions, causing a lot of damage to the daily lives and health of local people," he said.

Some local environment authorities and assessment bodies are still not fulfilling their duties.

Public participation is not sufficient, Pan said. Environmental impact assessment in China is currently government-directed, but the government is unable to supervise so many projects.

"To assess single construction projects is not enough to comprehensively protect the environment and achieve a sustainable use of resources," Pan said.

Meanwhile, efforts will be made to push forward the development of the circular economy, which is considered to be the most energy and resource-efficient model.

Pan said public hearings and forums would be held so the public can participate more in environmental impact assessment.

Nation sees more wood for better use of trees

(China Daily 2005-01-19)

China has finally managed to satisfy its demand for timber as years of tree-planting and commercial logging bans have paid off.



A file photo shows forest in East China's Zhejiang Province covered with snow on December 24, 2004. [newsphoto]



"It's out of the question for the country to satisfy its domestic demands by increasing tree felling from neighbouring countries," said Xiao Xingwei, head of the department of forest resources management under the State Forestry Administration (SFA).

"Although China does still import timber from other countries, this is only a small proportion of its total consumption," he said at a press conference organized by the State Council Information Office.

China's total timber consumption in 2003 reached a record 228.43 million cubic metres and the combined supply of imported and domestic-grown wood stood at 224.13 million cubic metres, he said, quoting the latest SFA inventory of the nation's forestry resources in the 1999-2003 period.

By 2003, China imported 25.46 million cubic metres of timber and exported 21.52 million cubic metres of wood products, according to the survey, which was released yesterday.

Deputy Director of the SFA Lei Jiafu said China's demand and supply of timber was pretty well balanced for the year.

He said that in the following few years, China would be able to maintain the balance with a considerable reserved area of plantations made available for use.

The survey, the sixth national one of its kind by the SFA, China's forest coverage has reached 18.21 per cent and 175 million hectares of its territory.

There are 12.456 billion cubic metres, including 1.585 billion cubic metres of forests available for chopping down and 5.671 billion cubic metres of premature trees with potential quality timber available for the foreseeable future.

Lei was confident China will be able to meet its own demands for timber with its existing reserves of commercial forests, including fast-growing and planted trees.

"By 2010, such reserves will provide nearly 3 billion cubic metres of timber, which is enough to meet the country's future demand," he said.

China's forested area increased by 15.968 million hectares, or 889 million cubic metres in accumulation, or net increase of stock, in the 1999-2003 period, with the forest coverage rate growing by 1.66 percentage points to reach the current 18.21 per cent from the former 16.55 per cent, according to the survey.

Involving more than 20,000 scientists and forestry workers, the survey adopted satellite monitoring technology to complete site surveys to investigate China's forest acreage, accumulation, make-up, distribution, growth and consumption and assess the forests' influence on the environment.

The current figures have not included the acreage of newly- planted trees.

China has, since 1998, launched six key projects to expand forest coverage and rehabilitate forestry resources, including enlarging the protection of natural forests and returning farmland to forest or grassland.

"Years later, the SFA also launched a number of strategic, high-yield forestry production bases to ease the bottleneck between timber supply and demand," said Lei. "Our efforts have started to pay off today."

The Chinese Government has always been firm in cracking down on the illegal trade of timber and has improved its co-operation with neighbouring and other lumber exporting countries by signing pacts on the protection and rational exploitation of forest resources, as well as the fight against illegal logging and timber trading.

"Accordingly, Chinese businesses have strictly observed local laws and regulations in their exploitation of forest resources from overseas," said Xiao.

Beijing feels the pinch of winter gas shortage

(China Daily 2005-01-20)

Officials in power-hungry Beijing are considering ways to get over a natural gas shortage the extent of which has not been seen in 20 years.

Supply has this year been ensured only by reducing industrial and motor vehicle consumption.



"The shortage has given us a lot of food for thought. It is very worrying that much of the city depends on this source of energy and there is only one pipeline," said Mayor Wang Qishan at a financial annual meeting on Tuesday.

An alarm about the energy dearth was sounded on December 31, when the mayor received a report saying that natural gas storage in the neighbouring Tianjin Municipality, which is the major gas reserve for Beijing, had dropped to 470 million cubic metres from the original 1.1 billion cubic metres in early November.

It means that more than half the gas reserves had been used up although there was still more than two-thirds of the heating season to go. Heating in Beijing will be switched off on March 15.

Beijing has used about 22 million cubic metres of natural gas every day this winter, said Li Jianzhong, a researcher with the Petroleum Exploration and Development Research Institute of PetroChina.

But the pipeline from the inland province of Shaanxi in Northwest China can only provide up to 10.3 million cubic metres a day all the year round. More than 95 per cent of the city's natural gas consumption is provided by the pipeline, Li said.

The shortfall of gas supply in winter is filled by gas from Tianjin. In spring and summer, when the city's demand drops dramatically, the surplus will be stored up for winter use, said Li.

Wang Qishan said if consumption remained high, gas supplies would not meet the demands of the coming Spring Festival and the annual sessions of the National People's Congress and the Chinese People's Political Consultative Conference.

These sessions, in March, are among the most important political events in China.

As a result, the city has had to draw up an emergency plan for natural gas supplies, halting or reducing supply for industrial use and replacing more than 1,300 natural gas-powered buses with oil-fuelled ones.

"Actually, the municipal government has set about preparing the energy supply for this winter since August last year," said Wang.

He said the massive gas shortages had happened because the government failed to take into account the new gas-fuelled boilers in the suburbs and in new residential estates.

To reduce air pollution, the capital city has been gradually replacing coal-burning boilers with gas-fuelled ones since the late 1990s.

"A banker once told me that the devil lies in the details. Now I fully understand the saying. The cause of the energy dearth this time lies in the details," said Wang.

"A vice-mayor and I made a 'ridiculous' decision on the night of January 10 that we are to check the gas meters of every boiler in the city's eight urban districts.

"After eight days, we found that real gas consumption as shown by the meters is not close to that reported by district governments. Yet the real figure is critical for decision-making."

China, Canada sign energy agreements

(Xinhua 2005-01-21)

China and Canada agreed yesterday to take on the energy sector -- oil and gas, nuclear energy, energy efficiency and cleaner energy -- as "priority areas" of long-term mutual co-operation.



Premier Wen Jiabao (second right) and visiting Canadian Prime Minister Paul Martin (third right) talk during a signing ceremony at the Great Hall of the People yesterday. The two sides signed a joint statement to improve co-operation in international affairs, and a dozen other agreements and memoranda of understanding.

"China and Canada have decided to work together to promote co-operation in the oil and gas sector, including Canada's oil sands, as well as in the uranium resources sector," a statement issued yesterday during the visit of Canadian Prime Minister Paul Martin to China said.

The two nations will encourage respective enterprises to expand commercial partnerships, the Statement on Energy Co-operation in the 21st Century indicated.

The National Development and Reform Commission and Natural Resources Canada will maintain regular dialogue and exchanges of views. Contacts will be conducted through the Canada-China Joint Working Group on Energy Co-operation, under a 2001 memorandum of understanding (MOU) concerning co-operation in energy, the statement said.

The nations are promising to uplift their relationship to a new level by "focusing their efforts strategically in areas of greatest mutual advantage," a joint statement issued after a meeting between Premier Wen Jiabao and his Canadian counterpart Paul Martin said.

The sides have agreed upon a outline for the activities of a strategic working group that will try to identify and develop paths for broadening ties.

"The work of the group will initially focus on enhancing our partnership in the fields of multilateral co-operation, natural resources and energy, and trade and investment," the document said. It will also tackle global security and multilateral co-operation, prosperity and sustainable growth, as well as promote people-to-people ties.

"Significant development has been seen in our relationship in a wide-range of areas during the past few years," said Wen, when speaking to an a trade delegation of more than 300 entrepreneurs.

"There is a need for the two countries to deepen understanding between each other," said Wen, adding that Canada has great advantages in energy and minerals, while China has advantages in the production of electrical appliances, daily necessities and electrical and mechanical products.

The Canadian Prime Minister said Canada wishes to strengthen co-operation in natural resources, investment and other fields.

"The Canadian business committee are here not for short-term prospects... but for a long-term co-operation," said Martin.

A total of 13 statements, agreements and MOUs were signed between China and Canada, on co-operation in energy and minerals, culture, telecommunications and other sectors.

For example, China's Putian Corporation and Canada's Nortel signed a pact to set up a joint venture for research and development, manufacture and sale of 3G mobile telecommunications equipment and products in China.

"It signals a new level of co-operation between Putian and Canada's Nortel," said Xing Wei, president of Putian.

"It will position us to capitalize on the tremendous opportunities presented by China's rapidly growing wireless industry and significantly accelerate the internationalization of our 3G (third generation mobiles) offerings," Xing said.



China, Canada issue joint statement, highlight sustainable growth

(Xinhua 2005-01-21)

China and Canada issued a joint statement in Beijing on January 20, agreeing to join hands in achieving sustainable growth through trade, investment and innovation.

The two highlighted the role of the World Trade Organization (WTO) and agreed to improve cooperation under that framework.

"As WTO members and major trading nations, such a rules-based multilateral trading system is vital for our prosperity," the two said in the statement.

They agreed to cooperate closely in preparation for the WTO Ministerial meeting in Hong Kong later this year to promote the early and successful completion of the Doha Development Agenda, according to the statement.

The statement said China's accession to the WTO has brought unprecedented opportunities for cooperation between enterprises in both countries. "We will also strengthen our cooperation through an ambitious program of technical assistance, to support China's full and active participation in the WTO."

The statement said the bilateral economic relationship between China and Canada is strong. The two agreed to further strengthen that relationship through a series of concrete initiatives designed to support the continued expansion of partnership in trade, investment and innovation.

In addition, the statement said the two are resolved to address the problem of global warming in light of their shared commitment to sustainable development and balanced growth.

The joint statement was issued after Chinese Premier Wen Jiabao and Canadian Prime Minister Paul Martin held their official talks Thursday afternoon.

China's ecological construction enters a new phase

(People's daily 2005-01-21)

According to analysis of the latest survey on forest resources & desertification, soil & water losses and wild animal & plant, China's ecological construction has entered a new phase, said Zhou Shengxian, director of the State Forestry Administration (SFA) at a working conference for heads of forestry administrations on Jan 19.

China has made remarkable achievements in desertification control. Both forest area and forest cumulation have kept on increasing. As the 6th survey on forest resources shows, forest area has seen an increase of 240 million mu on the basis of the previous survey. The forest coverage area has risen from 16.55 percent to 18.21 percent. The area of desertified land has outnumbered that of expansion. Desertified land of 19,000 Sq. kms has been brought under control since 2002. The area of desertified land has been declining in 19 provinces and autonomous regions. The number of species of wild plants and animals has been on rise. Of the animals 55.7 percents are of terrestrial. The number of rare and endangered animals like Chinese Alligator and Ibis has multiplied. The number of panda has increased over 40 percent. Of China's 189 species of rare and extremely endangered wild plants, 71 per cent have been stabilized. The area of lands that suffer from water and soil losses has decreased from 3.67 mln Sq. kms to 3.56 mln Sq. kms.

The ecological situation is still fragile, uncertain in China and the ecological construction work is still arduous. The total amount of forest resources is still insufficient. The forest coverage rate is only 61.25 percent of the world average level. Per capita forest area and cumulation only takes 1/4 and 1/6 of the world average. Loss of land designated for forestry is still serious. Land of 10.1 million hectares designated for forestry has been used for other purposes during the past 5 years. The cutting of forest beyond quota has not stopped. The management of forest needs improvement. Number of wild animals and plants under state's key protection is still small. Area of natural wetlands has reduced greatly. Inning has resulted in disappearance of 900 lakes. China still face arduous task in water and soil conservation. More than 1/3 of the Chinese land is suffering from soil and water losses. 27.9 percent of land is desertified. Therefore China's policies on forestry should remain consistent.



Panda numbers up 40 per cent

(China daily 2005-01-21)

There has been a steady increase in the number of rare and endangered wildlife, including the rare and endangered giant panda because of enlarged habitats and improved ecosystems.

"Shrinkage of habitat caused by worsening local ecosystems has more or less been controlled following China's rehabilitation of forestry resources that kicked off in the 1990s," a leading forestry official said yesterday in Beijing.

Addressing a national conference, Zhou Shengxian, director of the State Forestry Administration (SFA), said "some rare and endangered species of wildlife have multiplied -- including the Chinese alligator and crested ibis."

Quoting the latest survey by SFA on China's wildlife and wetlands resources, he said, of the increased number of wild animals, more than half of them are terrestrial.

He estimated that the number of giant pandas, one of the most popular of all wild animals both at home and abroad, "is up 40 per cent over the number that was recorded before 2000."

"Their number increased from 1,114 before 2000 to the present 1,596" while the number of crested ibis, one of the world's rarest species, known as an "oriental fossil," in Northwest China's Shaanxi Province, jumped from only 7 to 740, said Lei Jiafu, SFA's deputy director.

So far, forestry authorities have brought the distribution areas of China's 130 wild plants and habitats for more than 300 wild animals under effective protection, according to statistics released by SFA yesterday.

Of China's 189 species of rare and extremely endangered species of wild plants, 71 per cent have been stabilized, Zhou said.

Best of all, new distribution areas of arborvitae, an endangered species which has tailed off for more than 100 years according to the International Union for the Conservation of Nature and Natural Resources (IUCN), has been rediscovered in the remote Daba Mountains in Southwest China's Chongqing, as have the white-aril yew and tsong's tree.

Meanwhile, species of wild animals and birds have been found to have enlarged their living spaces.

Years ago, giant pandas only occupied about 1.4 million hectares, fragmented into isolated patches in southwestern China's 11 counties.

"Now, their habitats cover 2.3 million hectares of areas dotted across in 45 southwestern counties and parts of the Northwest provinces. Living space had been enlarged by 65 per cent, Zhou said.

New distribution and breeding areas or overwintering habitats were also reported for some highly protected rare and endangered species of birds including black-faced spoonbills, relic gulls and brown-eared pheasants.

Zhou attributed the improvements to China's efforts to preserve its existing forestry resources through unremitting and massive afforestation and intensified protection of wetlands which were initiated in the late 1990s.

"China is one of the world's countries abundant in the varieties of wetlands. So far, we have put 40 per cent of our total wetlands into effective protection and many of their ecological functions have begun rehabilitating," he said.

Pollution worsens in China's sea waters

(China daily 2005-01-10)

Marine pollution has posed a grave challenge to China over the past year, a spokesman for the State Oceanic Administration said yesterday in Beijing.



"The coastal marine ecosystem is worsening, the quality of ocean water is deteriorating and large amounts of pollutants are infiltrating from land to the sea," said Li Chunxian.

It spells a severe challenge to the country's ocean environment control. Li's remarks came after his administration released a report on the condition of China's seas and marine accidents in 2004.

A total of 169,000 square kilometres failed to reach the standard of clean water, 27,000 square kilometres up on the previous year.

The most heavily polluted areas are concentrated along the coastline, and include Bohai Bay and the mouth of the Yangtze, he said.

Lying off the coast of North China, one of the country's most populous and developed areas, the Bohai Sea has witnessed the highest increase of pollution levels.

An area of 27,000 square kilometres, accounting for 35 per cent of its waters, failed to reach clean water standards.

Discharge of land waste through ocean dumping is the major cause of ocean pollution, said Li.

The report revealed 80 per cent of sea areas near effluent outlets were heavily polluted.

Resulting pollution has caused the closure of beaches and limited the recreational and aesthetic value of the sea.

What is more, most of the seafood harvested from the ocean comes from inshore waters and the pollution has affected aquatic products.

"Pollution has undermined the multiple functions of the sea," he said.

In 2004, major pollutants carried by rivers such as the Yellow River and the Yangtze into the sea weighed 11.45 million tons.

Li said land waste pollution, together with over-exploitation of resources had worsened the eco-system.

He called for more efforts to repair the damage done and prevention measures.

China is one of the countries vulnerable to marine calamities, but 2004 had not been a significant year in terms of marine disasters.

Economic losses suffered by the coastal areas from storms, typhoons, red tides, tidal waves and oil spills reached 5.4 billion yuan (US\$653 million) and claimed the lives of 140 people.

"Typhoons and storms were the major marine catastrophes for China in the past year. They caused 5.2 billion yuan (US\$628) of direct economic loss and killed 49 people," said Li.

Red tides occurred 96 times last year - 19 per cent less than the previous year - and were more often found in the East China Sea and Bohai Sea. More than 20 were toxic.

Fortunately, the toxic red tides did not affect human beings and the aquatic breeding industry thanks to rapid emergency measures taken by marine authorities, said Li.

China has installed a basic marine environment and disaster observation network and an early warning system, covering both offshore areas and distant waters, with the co-operation of several departments.

Law on Solid Waste Pollution Control Amended

(Xinhua 2004-12-30)

The 13th session of the Standing Committee of the 10th National People's Congress (NPC) approved on Wednesday an amendment to the law on solid waste pollution prevention. The country is confronting serious challenges caused by mounting quantities of solid waste.



The Standing Committee considered the first draft of the amendment at its 12th meeting, held from October 22 to 27.

"Encouraging the recycling of solid waste and clarifying the responsibilities of polluters are the major principles of the revision," said Mao Rubai, chairman of the Environment and Resources Protection Committee of the NPC.

The law currently contains relatively clear clauses pertaining to responsibility during the production process, but overlooks after-sale and disposal issues. The amendment adds these clauses, and also defines responsibilities in the event of reorganization or change in status of the waste producer.

Moreover, officials who fail to provide adequate supervision will be subject to penalties, including the possibility of criminal charges.

The increase in imported solid waste, which has caused serious pollution across the country, has drawn widespread concern from citizens. The amendment will require classification of imported waste and allows for criminal prosecution of those who violate the law.

Clauses on disposal of dangerous waste, excessive packaging, discarded electronic appliances and domestic animal excretion in rural areas are also included. Other sections will help pollution victims obtain evidence and cut the costs of lawsuits against pollution producers.

Draft Law Promotes Use of Renewable Energy

(China Daily January 11, 2005)

A law has been drafted to boost environmental protection by helping out projects that use renewable energy.

If implemented, the draft code, submitted to the Standing Committee of National People's Congress (NPC) for a first reading, could also make money.

It will offer discount loans to renewable energy projects, value-added tax waivers to energy exploration equipment and products that consume this kind of energy, and other tax preferences for projects.

The draft is clear that renewable energy sources such as wind and solar power are "priorities" of China's energy strategy.

"There is a pragmatic approach in the draft, because without proper incentives you cannot expect many enterprises to have strong motivation to develop renewable energy," said Chang Jiwen, professor of environmental law with the Institute of Law of the Chinese Academy of Social Sciences (CASS).

But it is necessary to have detailed government decrees to execute the law's promise to the letter and punish local authorities should they fail to back new energy businesses financially, he added.

The new statute is proposed amid growing worries of the country's worsening pollution, chronic energy shortages and increased reliance on imported energy. China's per capita possession of oil reserves is only 10 per cent of the world's average.

"Fostering renewable energy sources to replace coal, oil and natural gas is a strategic mission that matters to our future generations," said NPC standing committee member Jiang Shusheng, at a recent group discussion.

The proposed law provides a host of practices to ensure renewable energy can be not only produced but also marketed and used successfully.

It orders power grid operators to purchase "in full amount" from the registered renewable energy producers within their domains. It also encourages oil distribution companies to sell biological liquid fuel on the sidelines.

The government will calculate prices of the power generated from renewable sources, and power grid operators should buy at directed prices. The extra costs of using renewable-source-generated power will be shared out in the



power network's overall price.

This, however, should not raise consumer' power spending too far, said Mao Rubai, director of the NPC Environmental and Resources Protection Committee, at a recent media briefing.

Renewable energy accounts for only a tiny proportion of the country's power consumption -- about 3 percent last year, and the constant technological progress has been driving costs of renewable energy production lower, Mao said. His committee drafted the act.

The draft also requires real property developers to facilitate the use of a solar power system -- be it for heating or light-generation -- in the design and construction of their projects.

Millions of Chinese families use solar water heaters. But some cities forbid solar panels to be fixed on new buildings for aesthetic reasons.

"To try to attain a balance between energy-saving and pleasure to the eye is understandable in some cases," said Chang of CASS.

"But from a wider perspective, new energy sources are by no means something we can easily forgo now that many parts of the country are desperately short of energy," he said.

Official data indicates power is still unavailable in 20,000 or so remote villages housing 30 million people. About 60 percent of China's 768 million rural residents still make open fires to cook on or heat their homes, creating serious pollution and damaging vegetation.

The State should support building independent renewable power systems in areas not covered by a power grid, according to the proposed law.

Environmental Campaign Kicks Off

(CRI January 11, 2005)

A public campaign to increase awareness of environmental protection has just kicked off in China.

A group of environmentalists are driving from Beijing to Hong Kong to bring the environmental message to China.

Deputy Secretary General of China Environmental Protection Foundation, Zhou Guiling, hopes more ordinary Chinese will get involved in protecting the environment as the campaign reaches the big cities in the six provinces on it's route.

"People in big cities tend to accept the idea of environmental protection faster. So we think it is better that we start with the big cities. It takes steps to make all the people realize the importance of environmental protection," said Zhou.

Renowned anchor woman of Hong Kong-based Phoenix TV, Sally Wu, is one of the three ambassadors for the campaign, along with Olympic champion Liu Xiang and the CEO of China's leading web portal Sina.com, Wang Yan.

Wu says environmental protection should be everybody's responsibility. "Only when the environment we live in is healthy and safe, can we human beings be healthy and safe. I think everybody should do a bit in everyday life to protect the environment."

The campaign motorcade left Beijing on Sunday and is expected to return to the city in 14 days.



Shenzhen Focuses on Efficiency over GDP

(China Daily January 20, 2005)

Clearer skies, cleaner water and more efforts to save resources instead of a higher GDP growth rate will top the local government's agenda this year.

This is the message that has been sent out by top officials in Shenzhen.

For decades, Shenzhen, China's first economic zone, has performed one economic miracle after another. The well-known "Shenzhen speed" has inspired many Chinese cities to speed up along their own development path.

Grown out of a fishing village 25 years ago to become one of the richest cities in China, the southern economic engine's GDP in 2004 totaled 342.2 billion yuan (US\$41 billion), a year-on-year growth rate of 17.3 percent, which is more than twice the national average.

But this high speed has been achieved at a high cost, the officials said.

Statistics indicate that by 2010, 90 percent of the land in the city will be used up, leaving only 200 square kilometers. As well as a shortage of land and water, energy consumption will triple.

The young city is hampered by its booming population of more than 10 million, resulting in many social problems including traffic jams and pollution.

In a major departure from their previous idea of development, the city's planners are now setting their sights on greater efficiency.

At a conference last week, Shenzhen Mayor Li Hongzhong vowed to cut the economic growth rate by 4.3 percent.

The mayor promised to bring down the city's water and energy consumption by 4 percent and improve the city's air and water quality this year.

The government's decision has made a big stir among the local people.

Guo Wanda, with the China (Shenzhen) Development Institute, said the leading special economic zone would continue to serve as an experimental platform for reforms in China.

The city's shift in development mode will become an example for other fast-growing cities including Suzhou, Dongguan and Hangzhou, which in five or 10 years' time will be facing the same sort of problems as Shenzhen today, the scholar said.

However, to enterprises which have a high energy demand, it will have a negative impact, he said.

By contrast, high-tech companies with their own intellectual property rights will have a more amiable business environment, he said.

67 countries ratify the use of TCM

(Xinhua 2005-01-21)

Six more countries have ratified the legal use of traditional Chinese herbal medicine, bringing the total number to 67.

The six countries are Italy, Ireland, Mongolia, Croatia, Norway, and Egypt.

The State Administration of Traditional Chinese Medicine and Ministry of Health signed the new contracts, which will enable the legal export of Chinese medicines like any other medicine, and education about traditional medicine to be carried out in these countries.

The services of practitioners of traditional Chinese medicine must also be ratified by local governments in these countries.



Health

Urban doctors to provide rural services

(China Daily 2005-01-10)

Rural residents are to benefit from ever-stronger medical support from urban areas to help narrow their decades-old service gaps.

A 10,000-strong urban medical team will join in medical services and skills training at county level hospitals in three years, said the Ministry of Health (MOH) yesterday at a national health conference.

As part of China's efforts to improve rural medical care, the national project will start this June and cover 600 hospitals in poverty-stricken counties in central and western areas.

Ten per cent of the targeted hospitals will be specialized in traditional Chinese medicine treatment.

The plan is to dispatch five senior doctors from urban hospitals to each targeted hospital, each with at least half a year's service.

"The central government plans to subsidize each doctor 24,000 yuan (US\$2,900) a year," said Vice-Minister of Health Gao Qiang.

The doctors are expected not only to undertake daily treatment but to be responsible for medical staff training and hospital management improvement.

Another pilot project to balance medical service gaps between urban and rural regions will begin this year in Northwest China's Gansu Province.

In Gansu, a number of medical staff from hospitals above county level will go to work for a year in clinics at lower levels.

The ministry will invest 25 million yuan (US\$3 million) in the project.

"The province will also finance the project," said Wang Yancheng, head of the Gansu Health Bureau. "We plan to first launch it in 360 clinics."

"Once it proves successful, we will target the whole nation," said Gao Qiang.

In China, more than 70 per cent medical resources including hospitals, medicines and doctors are enjoyed by urban residents who only make up about 30 per cent of the country's total population.

Additionally, Gao said the ministry will continue to allocate no less than 3.7 billion yuan (US\$4.5 billion) in 2005 to subsidize local medical care services nationwide, with a majority to be invested in rural areas.

This year will also witness the official initiation of the rural medical infrastructure construction programme jointly revised by the MOH and the National Development and Reform Commission.

Local authorities in various regions are prepared to invest in support of the programme.

"With a subsidy of 78 million yuan (US\$9 million) from the central government, we will altogether invest 318 million yuan (US\$38 million) in upgrading medical facilities of 573 local clinics," said Ma Jianzhong, head of the Henan Health Bureau in Central China.

As well a crucial step to establish a rural medical insurance system, the ongoing co-operative medical network project will be carried on steadily in 2005, said Gao Qiang.

Initiated in 2003, the programme has been launched in 333 counties, covering a rural population of 107 million. About 75 per cent of the counties have joined the scheme.

The co-operative medical system is a low-level insurance plan which mainly provides financial support for serious diseases of farmers who had no medical insurance in the past.



Generally, the system pools respectively 10 yuan (US\$1.20) and 15 yuan (US\$1.80) from each farmer and governments at various levels a year.

The network has collected a total of 3.2 billion yuan (US\$387 million) in premiums.

The total number of new co-operatives is set to grow to at least 500 this year, said Zhu Qingsheng, also vice-minister of health, earlier in 2004 at a press briefing.

"No blind and hasty expansion of the network is allowed since it is a new trial and concerns farmers' interests," said Gao.

Gao also accented the reinforcement of prevention and control of the spread of contagious diseases in rural areas.

China to make sex-selective abortions a crime

(China Daily 2005-01-7)

China is to outlaw the selective abortion of female fetuses to correct an imbalance in the ratio of boys to girls that has grown since the one-child policy was introduced more than 20 years ago.

Government figures show 119 boys are born in the world's most populous country for every 100 girls, but [Beijing](#) has set the goal of reversing the imbalance by 2010, state media reported.

China implemented the one-child policy in the early 1980s -- which officially hit 1.3 billion on Thursday -- but the restrictions have bolstered a traditional preference for baby boys.

"The government takes it as an urgent task to correct the gender imbalance of newborns," the official Xinhua news agency quoted Zhang Weiqing, minister in charge of the National Population and Family Planning Commission, as saying in an overnight report.

"As a new measure, the commission will start drafting revisions to the Criminal Law in order to effectively ban fetus gender detection and selective abortion other than legitimate medical purposes," Zhang said.

Sex-selective abortion is already banned but technologies such as ultrasound have made it easier to know a baby's gender in advance, increasing the chances for aborting girls.

Xinhua quoted experts as saying criminalising the ban would be a more effective deterrent, but it gave no details on what possible punishments might be.

Chinese traditionally prefer sons because they are seen as more able to provide for the family, to support elderly parents and to carry on the family line. Daughters become members of their husband's family when they marry.

Despite a desire to curb the sex imbalance and a relaxation in recent years that allows rural families to have two children if the first is a girl, China has shown no sign of abandoning the one-child policy and cracks down on those who advocate against it.

Four trends shown in Chinese people's health condition

(People's Daily 2005-01-07)

A national health service's research shows four trends have emerged in Chinese people's health condition: people's average expected lifespan has increased; health level of children and women has improved; potential dangers exist amongst the middle-aged people; medical insurance for the aged still needs improvement.

From 1990 to 2000 the average expected lifespan of the Chinese people had increased nearly three years; death rate of pregnant and maternity and baby had dropped 3.1 percent. The epidemic situation had remained relatively stable; the health level of residents in large and medium sized cities had improved; Occurrence of chronic disease



had gone up. The average expected lifespan of the Chinese people had increased from 68.55 in 1990 to 71.4 in 2000. The urban resident's expected lifespan is almost 6 years longer than the rural resident's.

Nutritious condition for children has been further improved. The height and weight of children has approached that of their counterparts in developed countries. The rate of low-weight children has dropped year after year. The weight difference between children in rural area and urban area has been reduced too. Thanks to a project to lower death rate of pregnant women and eliminate tetanus in newborns, pregnant women's death rate in 378 poverty-stricken counties in western China has decreased 28.79 percent; and the newborn's rate of tetanus has dropped 55 percent.

The diet and nutritious condition for the rural and urban residents have been improved markedly. Rate of malnutrition and nutrition deficiency has kept on decreasing. However, the improved life and quickened life rhythm have brought about potential dangers to some middle-aged residents in cities. The occurrence rate of high blood pressure in rural areas has gone up too. Urban residents above 20-year-old who suffer from diabetes have risen from 4.6 percent to 6.4 percent in big cities. About 160 million people in China has abnormal blood lipid level.

Great changes have taken place in the age structure of population. People above 65 years old have risen 1.39 percent to 6.96 in the whole population. By 2020 the ratio of the aged people will increase from 7 percent to 11.8 percent. Aged people over 65-year-old will amount to 23 percent in whole population, and thus pose a grave challenge to the medical and social assurance system.

Senior official explains China's major health challenges

(People's Daily 2005-01-12)

China now faces three major challenges in building its health systems, Gao Qiang, executive vice health minister, said Monday at an annual meeting of the Ministry of Public Health. "Its response network to possible health emergencies is still not very tight," Gao acknowledged China is frequented by epidemic outbreaks, mass food poisoning incidents and serious traffic and natural disasters on vast territory with a huge population.

Noting that the second challenge lies in the threat of the spread of killer diseases, Gao said "HIV/AIDS, tuberculosis, schistosomiasis and hepatitis are far from being contained in his country with high prevalent rate and huge number of patients." Meanwhile, he said chronic non-communicable diseases including sarcomata, hypertension, cardiovascular diseases and diabetes are posing risks to the health of people. The Chinese vice health minister referred the third challenge to lower accessibility to health services. "Nearly 48.9 percent of Chinese people cannot afford to see doctors when they fall ill and 29.6 percent are not hospitalized whenever they should be," Gao said, quoting a survey outcome released last month by the Ministry of Health. He ascribed the problems to five reasons, including China's lack of medical resources, imbalance distribution of the resources, low coverage of Medicare system, fast rise of medical costs, and inadequate government input.

In addition, Gao said approximately 44.8 percent of the urban population and nearly 80 percent of rural population in China don't have any type of medical insurance. "Most of them are paying medical bills by themselves, bearing from physical, mental and economic burdens." To make the situation even worse, China's medical fees has risen drastically over recent years.

To improve the situation, Gao promised his ministry will target at the rural areas in 2005 and expand Medicare system to cover more rural residents. Meanwhile, he said, the ministry will reform the present medical services in cities and explore for an appropriate service and management system in line with the country's socialist market economy, so as to "provide quality, convenient basic medical services at reasonable prices".

China rings alarm over possible flu pandemic

(Xinhua news 2005-01-12)

BEIJING, Jan. 4 -- China has increased measures to guard against a possible flu pandemic this winter-spring period in response to the World Health Organization (WHO) warning that an outbreak is long overdue.



The Ministry of Public Health has recently discussed an emergency program to guard against flu and experts reiterated that the world should prepare for a flu pandemic.

Dr. David Ho, a prestigious Chinese-American expert on AIDS and epidemics, warned that a new round of flu triggered by a new virus strain is expected to break out from southeast Asia or China.

China should fully prepare since the epidemic might do the most damage there, Ho said at China's annual meeting of scientists in November.

Large cities have stepped up surveillance measures on flu.

Guangzhou, capital of south China's Guangdong Province neighboring Hong Kong, has built up 19 surveillance sites at hospitals. In fact, Guangzhou suffers from more than ten small flu outbreaks each year and it's especially important to detect flu in the most dangerous season from winter to spring, according to Guangzhou Municipal Health Bureau.

Local health department will keep close watch on patients suffering from fever, cough and sore throat for three days.

Hong Kong Special Administrative Region (SAR) has drafted a plan outlining a clear command and response coordination structure for any influenza outbreak, catering for three different response levels, "alert," "serious" and "emergency."

The Hong Kong SAR government proposed to the Legislative Council Panel on Health Services ordering 1.1 million antiviral doses in advance of the peak winter influenza season.

Shanghai has set up 43 surveillance sites to monitor flu cases. Nine municipal surveillance sites will collect typical flu samples for Shanghai Municipal Disease Control and Prevention Center.

Shanghai generally watches for flu outbreaks from November 15 to April 1, said Wang Panshi, director of the Shanghai Health Bureau disease control center, and the municipality has laid out new programs to guard against SARS, flu and other infectious diseases until April 2005.

Zhong Nanshan, of the Chinese Academy of Engineering, recently urged the public to receive flu vaccinations. So far, however, less than one percent of Chinese have received flu vaccination, far fewer than the 27 percent in the United States and the 7.8 to 17.7 percent in European countries.

A recent survey of 1,100 residents of Chinese cities show more than half of them think influenza is about the same as a cold, and 80 percent believe there is no necessity to take any precautionary measures.

During a department store promotion in Beijing, customers were allowed to choose various gifts including a medical card for influenza vaccine worth about 100 yuan (12 US dollars) and other small commodities less than 20 yuan (2.4 US dollars) each. Most customers preferred the commodities to the vaccine.

In China, each domestically produced vaccine is priced at about 70 yuan (8.43 US dollars) and each imported one is priced at about 100 yuan (12.05 US dollars).

Analysis shows flu virus mutates dramatically about every 39 to 40 years and the mutation can trigger a global pandemic.

The WHO says the flu virus has not mutated significantly for 36 years, indicating a major outbreak is probably impending.

Fears of a new global outbreak have also been spurred by last year's epidemic of severe acute respiratory syndrome (SARS), which struck hardest in Asia. The flu-like disease killed nearly 800 people worldwide.

Worries also have been stoked by the H5N1 bird flu virus, which decimated poultry stocks in Asia and spread to people. But there was no evidence it had acquired human-flu characteristics it would need to be passed easily among people.

If that were to happen, the resulting pandemic could cause as many as 7 million deaths, the WHO has warned.



"It is most worrying that bird flu could mix with human flu virus, giving rise to a mutated strain that would become transmissible among people," said Xu Ruiheng, deputy director of the Guangdong Provincial Disease Prevention and Control Center.

"Compared with SARS, the outbreak of a flu pandemic is more hazardous," Xu said.

China leads world in lymphatic filariasis control

(Xinhua news 2005-01-17)

NANCHANG, Jan. 7 (Xinhuanet) -- By the end of 2005, China is expected to be the first country in the world to completely eliminate lymphatic filariasis, a mosquito-borne disease, said an expert with Chinese Center for Disease Control and Prevention.

Sun Dejian, head of the national leading group on control of lymphatic filariasis with the Chinese Center for Disease Control and Prevention, said here Friday that the provinces of Jiangxi, Anhui and Hainan will receive inspection over lymphatic filariasis control this year. If they all pass the inspection, China will lead the world in controlling the disease, he said.

Sun is now heading a team of specialists for a week-long lymphatic filariasis inspection in east China's Jiangxi Province. The inspections of Anhui and Hainan will be followed this year.

Lymphatic filariasis, or LF, can result in the enlargement and disfigurement of the arms, legs and genitals, a complication known as elephantiasis.

The World Health Organization (WHO) estimates that some 120 million people in 80 tropical and subtropical countries worldwide carry the infection, which is spread by a microscopic parasitic worm, carried by mosquitoes, that invades the human lymphatic system.

The WHO adopted a resolution at its 50th world health conference in 1997 to wipe out LF globally by 2020.

LF used to run rampant in 16 Chinese provinces, autonomous regions and municipalities, with about 31 million people infected, acknowledged Sun. In Jiangxi Province, 2.1 million people from its 75 counties are suffering from LF, with the youngest patient only 11 months old.

Sun noted that by adopting a method in 1956 of destroying the source of infection, China has been successful in spreading the use of oral hetrazan salt among people who have already had LF infection.

More than 900 counties in 13 provinces have eliminated lymphatic filariasis and passed the state-level inspection, said Sun, while pledging that greater efforts would be made to wipe out LF in the remaining provinces by late 2005.

After 2005, there will be only 300,000 chronic LF patients in China, and the country had decided to accept assessment by WHO specialists in 2007, said Sun. Enditem

China considering legislation on nutrition

(People's daily 2005-01-19)

"The group discussion and planning for working out national nutrition ordinance put forward by the National Institute of Nutrition and Food Safety are under way. It is estimated that the draft ordinance with reference data will be handed over to the Ministry of Health in May this year. By the end of this year, the ministry will submit the related documents to the State Council for final award. The ordinance will become an important reference frame for making "China Nutrition Improvement Law", said Zhai Fengying, secretary general of the China Nutrition Society and deputy director with the National Institute of Nutrition and Food Safety affiliated with the Chinese Center for Disease Control and Prevention in a recent interview with a People's Daily reporter.



For a long period of time, China has paid more "attention to clinical diagnosis than disease prevention". "Now it is the best time for China to prevent nutrition-related diseases. If without paying enough attention to the prevention in 10 or 20 years there will be a large amount of chronic diseases, which will have a strong impact on the development of national economy. That is not just to scare people", said Zhai Fengying.

Practice from home and abroad shows it is a critical time for the fast changes of residents' diet and nutrition structure during the period when the average per capita GDP increases to 3,000 US dollars from 1,000. In 2003, the average per-capita GDP of China exceeded 1,000 US dollars. It is high time to have nutrition meddled.

The motion to have nutrition legislation was suggested in early 1980s, which has not aroused concerns from the relevant departments. Just before the opening of the two Conferences (i.e. the National People's Congress and the Chinese Political Consultative Conference) in 2004, 46 well-known experts and scholars wrote a joint letter to Chinese Premier Wen Jiabao, appealing to have nutrition legislation for improving national standard of living. In the end Premier Wen Jiabao agreed to this and ordered the Legislative Affairs Office of the State Council to make research on this matter. The Ministry of Health held a seminar on "China Nutrition Improvement Law" legislative work on March 23 2004, in which officials from the Legislative Affairs Office of the State Council attended. The feasible legislation has come into consideration.

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Appendix: background

This newsletter is motivated by the growing cooperation between Switzerland and China in the areas of Environment, Science and Technology, and Health.

At the end of 2003, both countries have signed a Memorandum of Understanding to strengthen scientific and technological cooperation in varied areas including medicine, biotechnology, nanomaterial, fuel cell, microsystems, environment protection, communication and information technologies, fine machinery. Implementation of this MOU requires increased contacts between Swiss and Chinese research teams, and ultimately joint research activities.

At the beginning of 2004, Switzerland has become a full participant in the European Union's FP6 large-scale research platform. On the other hand, China has an agreement with FP6 allowing its researchers to take part and contribute to research programmes. In practice, this also facilitates joint research between Swiss and Chinese researchers.

In the area of environment protection and sustainable development, Switzerland and China are actively cooperating with generous support of the Swiss government. In June, Switzerland has granted China a new mixed credit line allowing import of Swiss technology with a positive impact on the environment with a grant of the Swiss government.