



Research and Environment News from China

March 9 - March 2005

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Introduction

In March we learnt about a few interesting Chinese scientific achievements. The prestigious China Science and Technology University in Hefei, Anhui province has developed a unique technology to produce ultra-thin cables. Still in the field of nano-tech, chinese temas have developed non-crystal material and observed superconducting electrons.

The Chinese government is actively promoting scientific research. This month, prizes were delivered to recognise achievements in various strategical fields. It is interesting to note that, again, the prime minister emphasised the need for research in energy resources and environment protection. 5 foreigners were also awarded, including Daniel Vasella, CEO of Novartis.

Talking about environment, the most important news is the projection of the 11th Five-Year period (2006-2010) -the government's economic plan- that China will invest 1,300 billion yuan (around 200 billion CHF) in environment protection. This is around double the 10th Five-Year period (2000-2005).

Besides the fact that the amount of articles on water at least reflect the importance of the problem, there are interesting readings on plans for a law on circular economy and on a recent WWF report on China's timber consumption environmental footprint. [An interview of environment vice-minister Pan Yue is also particularly interesting.](#)

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Activites coming up soon

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
July 13-15, 2005
International Exhibition on Municipal Solid Waste Treatment Technology and Equipments 2005
Venue: Beijing International Convention Center
Contact: Mr. Liu, Ms. Li
Tel: 0086-10-68529180 Fax: 0086-10-68529178
Email: cause@public.bta.net.cn
August 11-13, 2005
The 8th China International Water Technical Equipment Exhibition and Seminar
Venue: China National Agriculture Exhibition Center (Beijing)
Contact: Liu xing
Cell phone: 0086-13522963927 Tel: 0086-10-64462754
Fax: 0086-10-64462264
Email: nkxx@163.com
September 14-16, 2005
Water & Membrane China (Beijing) 2005
Venue: China World Trade Center, Beijing, China
Contact: Ms. Elaine PAN / Mr. Julius ZHU
Tel:86-10-64433465
Fax:86-10-64433465
E-mail: 2000@membranes.com.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
September 26-28, 2005
The 2nd Internatinal Conference and Exposition on the Modernization fo Traditional Chinese Medicine
Venue: Chengdu
Contact : http://www.icetcm.com/en/index.aspx
November 1-4, 2005
INTERNATIONAL CONFERENCE ON CIRCULAR ECONOMY AND REGIONAL SUSTAINABLE DEVELOPMENT
Venue: Hangzhou
Contact : Mr. Bing Zhu International Coordinator Secretariat of 2005CERSD
Tel: 0571-85106941 Fax: 0571-85172009
Email: 2005cersd@163.com http://www.2005cersd.org.cn
June 28-30, 2006
Wind Power Asia 2006- The 3rd Asian Wind Power Exhibition and Conference
Venue: China World Trade Centre
Tel: 86-10-68360959, 68360575
Fax: 86-10-68360949
Email: marcowang@unique-expo.com

Environment-related international tenders and investment opportunities:

211.147.20.16/bizchina/bidding.shtml

english.cepi.com.cn/homepage

Contact

Patrick Freymond
 Counsellor, Head of Environment, Project Financing, Science and Technology Section
 Embassy of Switzerland in the People's Republic of China
 Tel +86 10 6532 2736 ext 311
 Mobile +86 1380 1113577
 eMail patrick.freymond@eda.admin.ch
www.eda.admin.ch/beijing

Science & Technology

Scientists honoured at State awards

(China Daily, 2005-03-28)

Science programmes crucial to the development of the country's medicine, industry, agriculture, and transportation received official recognition yesterday at the State Science and Technology Awards.



President Hu Jintao, Premier Wen Jiabao and other central government leaders turned out to honour 300 cutting edge projects at the ceremony in Beijing's Great Hall of the People.

Among those innovations being celebrated was a new digital positioning system partly developed by the Beijing University of Aeronautics and Astronautics.

The system, which is more accurate than conventional radar, has been adopted by Air China and other major airlines.

Chief scientist on the project Zhang Jun said: "It's such an honour and exciting for me to know that, after 10 years of effort, it has paid off both in terms of the system's commercial application and in recognition from the central government and the general public."

The invention is key in making the increasingly busy skies safer for air traffic, Zhang's colleague, Jiang Zhiqiang, added.

Speaking at the ceremony, Premier Wen Jiabao extended his congratulations to the winning scientists and encouraged all China's inventors, researchers and developers to follow their examples.

He also called on scientists to focus their sights on progressing technologies to solve the problems of development.

This included the need to use energy resources more efficiently, reverse the effects of pollution and protect the existing environment.

Scientific advances could provide the basis for development which caters to the needs of the economy, society and nature, Wen said.

"Talent is the cornerstone of scientific progress... big scientific projects should be a gathering of special talents," he added.

Further improved in the early 1990s to honour the work of scientists who make remarkable contributions to the progress of science and the commercialization of technological findings, the awards are divided into five categories: the Supreme Science and Technology Awards, the Natural Science Awards, the Technological Invention Awards, the Technological Progress Awards, and the International Scientific Co-operation Awards.

Foreign scientists

As well as Chinese scientists, five foreign scientists were also honoured with State International Scientific Co-operation Awards this year for their work promoting scientific co-operation between China and other countries.

Daniel Vasella from Switzerland picked up an award for his work developing medicines for China's medical companies.

Kenneth W. Gentle from the United States received recognition for his contribution to Sino-US co-operation in nuclear fusion.

Italian Corrado Clini was honored for work on environmental development and the exploitation of solar and other energy resources.

Richard Chang from the United States took an award for developing China's information industry.

And Kenji Ekuan from Japan, who has been active in improving China's production of electrical goods, also received an award.

Despite the large number of honours being handed out, none of the programmes was selected to win China's top science award, the Supreme State Science and Technology Award. Referred to by some as "China's Nobel prize."

Insiders said projects recommended for the gong failed to meet the relevant high standards.



World's first national standard for nanotech to be effective in China

(People's Daily on line, 2005-03-03)

China will have its first national standards for nano material in effect from April 1.

There are seven items, including a Glossary, four standards for Nano products, nickel powder, Zinc Oxide, titanium dioxide, and calcium carbonate, as well as two for testing of gas adsorption BET and the granularity of nano powder.

Nano materials have attracted much attention from the public in China. however, some businesses play tricks and consumers get confused.

Li Zhonghai, Director of Standard Administration of China, disclosed that research on 15 nano materials standards were underway and the 7 items released this time was only the first batch.

The standards is expected to lay a good foundation for the establishment of market access and technical standards, regulating the market, proper application of tech-intensive nano materials and the healthy development of the sector.

As this is also the first national standards for nano material in the world, Li expects it would be a draft for an international standard for nanotechnology.

Liu Zhaobin, spokesman for General Administration of Quality Supervision, Inspection and Quarantine, confirmed that preparation for certification of nano materials had begun and personnel training had launched.

The nanotech emerged at the end of 1980s and the beginning of 1990s in the world. China is one of the countries which start the research earliest. It has developed carbon nanotube and other nano materials which is known to the world.

CSTU develops 'nano-cable' as fine as a 4/1,000th hair

(People's daily on line, March 14, 2005)

Recently, the China Science and Technology University (CSTU) in [Anhui's](#) Hefei city has successfully developed a "nano-cable" which is as fine as a 4/1,000th hair. Up to now, only this university possesses this invented technology in the world.

The topic group led by Prof. Yu Shuhong, vice-president of the Chemistry and Material Science School of the China Science and Technology University has successfully produced "nano-cables" with cheap material and by easy operational method, which has provided an effective way for solving the problem related to connection between components of super-high density integrated circuit. This research result was published in the latest issue of J. Am.Chem.Soc, a world-famous chemical periodical.

Sources say, many research institutes worldwide are currently engaged in the research on this nano-cable technology. Previous integrated circuits usually needed extremely harsh terms, such as the term of high temperature, laser and carbothermic reduction, whereas Prof. Yu Shuhong and research fellows acquired nano structural materials with low-priced starch, carbohydrates of saccharides and other carbon sources as raw materials.

In the opinion of the manuscripts reader of the J.Am.Chem.Soc., this research result has really provided a prospective way to get structural material for synthetic nano-cables.

Compared with traditional cable, nano-cable is operating in a broader area, it can be cut off at will in accordance with usage, has the characteristics of being small in size and having a high technology content, it is widely applied in computer-related hi-tech fields.



China achieved major breakthrough in developing nanometer materials

(People's daily on line, March 25, 2005)

The project of "Research and Industrialization on Non-Crystal and Nanometer Crystal Products", one of Beijing's major sci-tech project, has been examined and approved by the relevant governmental departments on Mar. 24, which put China in the ranks of the top countries that have possessed advanced technology in terms of product system, technological equipment and industrialization of nanometer materials. According to nanometer experts, the technological design of the new material is targeted at "Shenzhou VI" and other key projects, and the new material will be expected to be applied in aerospace navigation in future.

Non-crystal material, a kind of artificial material that employs hi-tech methods, is produced by quickly cooling and condensing the melted regular metals. As the internal atom structure of non-crystal material is different from the other regular materials it possesses an extraordinary physical and chemical property. Based on the technology of non-crystal material, the nanometer crystal material, by using proper techniques and materials to obtain the well-distributed small crystal grains of five to ten nanometers, is a kind of authentic nanometer material. Its special structure and crystal scale leads to a sudden functional change.

Ma Lin, director of Beijing Municipal Science and Technology Commission, said that the project of "Research and Industrialization on Non-Crystal and Nanometer Crystal Products" examined and approved on Mar. 24 was put on file in Beijing in 2002, and was jointly carried out by Advanced Technology and Materials Co., Ltd (AT&M), University of Science and Technology Beijing as well Institute of Physics under Chinese Academy of Science (CAS). Through the implementation of the project, China has developed a series of non-crystal and new nanometer materials, and scored a breakthrough in producing non-crystal and nanometer materials.

So far the project has applied 18 national patents, and realized a great-leap-forward development in product system, technique equipment and industrialization. Meanwhile, with this achievement, China has come to join in with Japan and Germany to take the lead in the research and production of non-crystal and nanometer materials in the world.

Chinese, Japanese scientists observe superconducting electrons

(People's Daily on line, 2005-03-03)

Chinese and Japanese scientists announced separately in Beijing and Tokyo Wednesday that they have successfully observed superconducting electrons by an ultrahigh resolution photoemission spectroscopy they invented.

Their research was described in the latest issue of the Physics Review Letters and aroused close attention from international academic circles.

Chen Chuangtian, academician of the Chinese Academy of Sciences (CAS), Xu Zuyan, academician of the Chinese Academy of Engineering (CAE), and Shuntaro Watanabe and Shik Shi, professors at the University of Tokyo Institute for Solid State Physics, led the joint research.

"We successfully observed the superconducting electrons directly by the photoemission spectroscopy with the highest resolution, or 0.36 meV, of the world," said Chen. "We will be able to solve the exotic superconducting mechanism."

Three American scientists who depicted the superconducting mechanism of metal superconductors won the 1972 Nobel Prize. But it is known by scientists that compound superconductors have different superconducting mechanism with their metal equivalents. They had tried in many ways to observe electrons in compound superconductors but failed.

The Chinese and Japanese began in 2002 to build the spectroscopy with the highest resolution. Chen's team developed the optical special crystal and the prism-nonlinear optical crystal coupling technique while Watanabe's team developed the laser system using this crystal.

"The energy of the superconducting electron of exotic superconductor is below 1 meV, so we need to have a spectroscopy with such photoelectron resolution," Chen said.



"With the new equipment," he said, "we observed the superconducting electrons of a compound directly for the first time and found its superconducting mechanism has not been known."

Scientific innovation and university mission

(People's Daily on line, 2005-03-08)

Whenever the "Silicon Valley phenomenon" and the "Cambridge Miracle" are mentioned, we will naturally link Silicon Valley with Stanford University, and the Cambridge Science Park with Cambridge University, which has confirmed this formulation: "The most dynamic areas of scientific innovation in today's world, without exception, possess high-level universities", this formulation fully annotates the interaction and positive connection between the dynamics of scientific innovation and high-level university.

The scientific and technological contingents in China's institutes of higher learning and the overall scientific research strength have developed rapidly. Take 2003 as an example. The institutions of higher learning won half of the state natural science prize, one-third of the state technology invention prize, one-fourth of the state technology progress prize and applications for patent accounted for 20 percent of the country's total. These data indicate that institutions of higher learning are playing an increasingly important role in the development of China's scientific and technological undertakings. However, when we consider China's scientific and technological undertaking from the perspective of an open vision and strategic thinking, another group of data should not be neglected. Incomplete statistic show that the current total number of China's invention patents accounts for only one-30th of that of Japan and the United States and about one-fourth of that of the Republic of Korea (ROK), invention patents in the hi-tech field are mostly owned by transnational corporations; the proportion of typical products from manufacturing industries of developed Western countries, which originate from the technology of the countries concerned, reaches 98 percent, whereas the proportion in China is only 43 percent.

China's science and technology cannot rely only on imported technology to satisfy the needs of its own development, still less count on others to solve the problems concerning core technology and strategic science and technology it is faced with in its own development. Scientific and technological innovation requires that we fully prop up and guide eco-social development, found an innovation-type country, free core technology from others' controls, turn from tracking imitation to independent innovation, enhance core competitive capability and promote the transformation of the mode of economic growth.

Institutions of higher education are one of the most important component parts of China's scientific and technological innovation system. At present, this innovation group of teachers and students are trying to find out the gaps in all fields and from all directions, working hard, taking a concise discipline direction, creating indicative achievements, assembling a contingent of innovation, building bases of disciplines, focusing their efforts on enhancing their abilities to solve major scientific and technological problems concerning China's eco-social development at present and in the future, opening their eyes to the main battlefield of the national economy, aiming at the strategic needs of sophisticated science and technology and, centering on the strategic goal of the country's development and taking major research projects as the drive, strengthening researches on basic, forward-looking and frontier sciences, bringing about autonomous intellectual property of key technology, exerting great efforts to promote the industrialization of high and new technologies, so as to make contribution to the adjustment of the country's industrial structure and the upgrading of industrial technology.

Innovation is the soul of a nation. Scientific and technological innovative activity of originality, high starting-point, high level and high quality is the bounden-duty and mission of China's research-type universities, as well as the inexhaustible motive power for the development of institutions of higher learning.

Translated by People's Daily Online, the author is a standing committee member of the National People's Congress and president of Nanjing University



China's largest astronomical telescope settled in Lijiang

(People's Daily on line, 2005-03-07)

A gigantic astronomical telescope with the diameter of 2.4 meters has been transported to the Gaogumei astronomical observatory in Lijiang city, southwest China's [Yunnan](#) province. This is the largest astronomical telescope currently in China and it is said to go into observation in August this year.

The 30 million yuan worth of telescope is manufactured by British TTL Company. It has the first-rate optical quality and high imagery clarity, and the high precision of its following and pointing functions also meets the top national requirements.

Gaogumei Astronomical Observatory in Lijiang city is the best place for astronomical observation in China. Lijiang city is 3,193 meters above the sea level and the average clear nights total 254 nights there annually. Additionally, without disturbance from artificial light and sand, Lijiang city maintains the excellent atmospheric seeing in consideration to the dark daylight background and good air transparency.

Upon its completion, the astronomical observatory will play a vital role in the research of astronomical physics and on-the-spot observation.

China to put into service new meteorological satellite in 2007

(People's Daily on line, 2005-03-08)

China will put into service a new meteorological satellite in 2007 to gather meteorological information at high altitude around the globe, said a chief engineer with China's meteorological satellite center on Tuesday.

"The Fengyun-3 meteorological satellite is being manufactured by the eighth research institute in [Shanghai](#) under China Aerospace Corp. It will be launched into an 870-kilometer-high orbit to observe how temperature changes with altitude," said Xu Jianmin, who is a deputy to the annual session of the National People's Congress, China's top legislature in [Beijing](#).

He said in an that Fengyun-3 will enable China to observe the atmospheric temperature changes over oceans and gather meteorological information at higher altitude around the globe.

"Through analyzing changes of atmospheric temperature relative to altitude, we'll know the changes of atmospheric pressure relative to altitude, movement of air currents and overall weather information," said Xu.

China has put into service Fengyun-1 and Fengyun-2 satellites to observe clouds and ground situations. From Jan. 1 of this year, China started to provide information collected by Fengyun-2 meteorological satellite to Southeast Asian countries hit by tsunami.

Beijing Haidian Park developed digital audio-visual advanced coding chip

(People's Daily on line, 2005-03-09)

The Advanced Audio Visual Coding and Decoding Standard Project, one of China's key industrialization projects funded by the management committee of [Beijing](#) Haidian Science Park, has obtained the stage success, with advanced coding successfully developed and appraised.

Co-developed by the Institute of Computer Technology under Chinese Academy of Science and Haidian Park Uni-Xinyuan Digital Audio-Visual Technology (Beijing) Co., Ltd, Xincheng (Beijing) Technology Co., Ltd as well as many other companies concerned, the advanced coding chip can provide China with technological support for international competition in the fields of computer, telecommunication and consumptive electronics, and boost the development of industrialization such as the advanced laser visual system and digital network TV etc.

The 15-member appraisal committee, including nine academicians from Chinese Academy of Science, unanimously held that the research result is based on a higher outset, advanced technology and creativeness in terms of key



algorithm, having conquered the key technologies in the process of developing digital audio-visual coding chip. Additionally, the result's overall quality has met the international advanced level with a fairly complete demonstration function, stable working condition, thereby having met the requirements for mass production.

It is said that the Advanced Audio Visual Coding Standard Project was co-launched by the management committee of Beijing Haidian Park and the Institute of Computer Technology under Chinese Academy of Science, and it has also won support from audio-visual coding standard workgroup.

China's state company obtains contract to develop Galileo technologies

(People's Daily on line, 2005-03-10)



A Chinese state-holding company signed a contract Wednesday to develop satellite-navigating positioning technology for the European Galileo Project.

China Galileo Industries Ltd., a state company owned by China Aerospace Science and Technology Corporation, China Electronics Technology Group Corporation, China Satcom and China Academy of Space Technology, is authorized by the National Remote Sensing Center of China (NRSCC), the European Union-designated Chinese partner on the Galileo Project, to develop Galileo's satellite and remote sensing technologies and application systems.

The Chinese firm consists of four companies, China Aerospace Science and Industry Corporation, China Electronics Technology Group Corporation, China Satcom and the Chinese Academy of Space Technology.

Under the agreement, signed by China Galileo and the National Remote Sensing Centre of China, the four Chinese firms will help promote co-operation with the European Union (EU) in commercializing the civilian use of the Galileo system in China. They will also build an intelligent transport system based on accurate navigation information provided by Galileo, according to Yin Xingliang, manager of China Aerospace Science and Industry Corporation.

"Today's agreement is a further step to the one that was reached late last year between China and the EU," said Zhang Guocheng, director of the National Remote Sensing Centre of China, at yesterday's signing ceremony.

Following the agreement, China Galileo Industries Ltd will mobilize domestic companies specializing in space, electronics and satellite technology to get them to develop the civilian use of the Galileo satellite navigation system in China, said Meng Bo, chairman of the board of the company.

The company is also expected to conduct more collaborations with European Galileo Industries on future programmes, according to Meng.

Meng said, "GPS is mainly for military use as well as for a little portion of civilian use." Still a dual-purpose platform for global positioning, Meng said, the Galileo system will provide data mainly for civilian use in accordance with subscription contracts.

The Galileo Project is a global satellite navigation system developed by the EU, and will affect ordinary people's lives, an EU official said in a recent interview.

"The Galileo Project will change the life of everybody, because everyone will be able to know where they are on earth," said Jurgen Sanders, a project spokesman.



"Imagine you have an accident in your car, the system will give you a signal automatically, telling you your position, your emergency and thus it may help you avoid major problems," said Sanders. The system will also make air traffic control more efficient. These are only parts of the system's functions, according to Sanders.

Although the satellite navigation system is still at the development phase, Sanders said these kind of functions will be "technically possible" in the near future. The system is expected to become operational in 2008.

According to a cooperation agreement signed by the NRSCC and the Galileo Joint Undertaking in last October, China pledged to invest in research and development on space technologies, ground equipment and application systems for the Galileo Project.

The European Union and the European Space Agency kicked off the Galileo Project in March 2002 to develop a satellite-navigation system independent of the US military-monopolized global positioning system (GPS).

With an investment of roughly 3.5 billion euros, the project will launch 30 navigation satellites, which will provide remote sensing data with resolution up to one meter. At present, the data resolution of GPS is only ten meters.

Chinese contractors said that the first navigation satellite for the project could be launched later this year.

As the first non-EU partner for the project, China agreed to invest 200 million euros. In the first phase of the Chinese-European cooperation, China will spend 70 million euros. Aside from the five million euros worth of entrance fee, China is allowed to develop technologies and equipment worth of 65 million euros.

The NRSCC, a coordination body under the Ministry of Science and Technology, is mandated to choose domestic research institutes and companies to undertake concerned research and development.

Li Jiahong, an NRSCC official, said, "the cooperation between China and Europe on the project will be helpful to China's independent research on its own satellite-navigating systems."

The EU estimated that by 2020, the Galileo Project will bring Europe tens of billions of euros in revenues and tens of thousands of job opportunities. Chinese experts expected revenues worth 260 billion yuan (23.6 billion euros) in Galileo systems applications by 2020.

New anti-computer virus technology developed

(People's daily on line, March 11, 2005)

Beijing Jiangmin New Science & Technology Company Ltd., China's leading anti-computer virus company, announced on March 8th that it has developed a new technology to block Trojan Horse viruses.

According to computer virus specialists, the technology is a significant breakthrough for the protection of computer users from Trojan Horses viruses. In addition, the technology can monitor most common viruses and provide the user with advance warning.

The software's greatest advance is that it can pick out key values that have been added to the user's operating system registry and set up an independent data resource to record key viral values. While monitoring all registry-modifying behaviors, the software automatically compares the behavior with data resource records and blocks corresponding viral actions. As for behaviors that are not related to the data resource, the software notifies the user. Thus, the user can decide whether or not to prevent the registry modification.

Insiders said that the introduction of this technology has brought China its first anti-virus product based on the technology of blocking viral behaviors. Similar technologies were introduced in the late 1980s. However, due to performance issues, they have not been put to use until now.



Chinese Academy of Sciences achieves "lots" in 7 years: academy president

(People's daily on line, March 21, 2005)

President of the [Chinese Academy of Sciences](#) (CAS) Lu Yongxiang said Sunday that in the seven years since the academy deepened its restructuring, it "has achieved lots of scientific goals which have great bearing on the national security and sustained social development."

At a CAS work meeting, Lu said academy researchers completed scientific research for China's first-ever manned space mission, invented and launched a telecommunication satellite, invented a versatile central processing unit chip, made world-leading high-performance computer servers, invented new drugs and led most countries in genome sequencing and analyses of protein structures and functions.

From 1998 to 2004, CAS scientists conducted 122 key national projects on basic research, accounting for 36 percent of the country's total, 48 big projects funded by the national natural science foundation, accounting for 52 percent, 365 key projects funded by the foundation, accounting for 32 percent, he said.

In 2004, the statistics showed, CAS scientists published a great number of research papers quoted by the Scientific Citation Index, 115 percent more than in 1998 and twice the amount done by the prestigious Max-Planck Society in [Germany](#).

In the past year, CAS scientists published 28 research papers in Nature and Science, both internationally prominent scientific journals, also 115 percent more than in 1998.

Lu said that in the past seven years, CAS "basically completed" restructuring of its research institutes.

[Chinese Academy of Sciences to build "innovation bases"](#)

President of the Chinese Academy of Sciences (CAS) Lu Yongxiang said that the academy will build several "innovation bases" in the coming five years, which could combine research forces of different CAS institutes.

Lu, also a CAS academician, said at a CAS work meeting that the innovation bases would be aimed at the most advanced research projects in the world and would contribute to China's economic and social advancement.

"The innovation bases are new platforms for achieving more significant research breakthroughs," Lu said, adding that the CAS will allocate more funds into big research projects in those bases.

"A vital step is cultivating more outstanding scientists and capable science strategists," Lu said.

In addition to attracting talent from around the world, Lu said, CAS should be focusing on promoting gifted Chinese scientists and research teams "who are dedicated to work for the homeland."

Lu also said CAS will strengthen research cooperation with Chinese universities, organizing partner research teams with some prestigious schools and even building joint labs.

He said CAS will offer its science facilities to researchers from universities or other domestic research institutes.

[Chinese Academy of Sciences cooperates with companies](#)

President of the Chinese Academy of Sciences (CAS) Lu Yongxiang said that the CAS will speed up strategic cooperation with big Chinese companies, featuring joint research and development centers and research training programs for company experts.

At a CAS work meeting, Lu said the academy needs to pay "much more attention" to potentially profit-gaining technologies, which are mostly welcomed by companies striving to sharpen their global competitiveness.

"CAS should always be an important base incubating high technologies," he said.

CAS has already set up a bureau for coordinating cooperation between it and companies as well as localities.

In addition to cooperation with companies, Lu said, CAS will better cooperate with local areas where scientific know-how and high technologies are urgently needed for economic and social advancement.



In 2004, CAS technology helped local areas earn 35.9 billion yuan (4.34 billion US dollars) in sales, with 6.8 billion yuan worth of revenues. Companies working with CAS and CAS institutes made 56.76 billion yuan in sales and created roughly 58,000 jobs.

Chinese Academy of Sciences to build research networks

(People's daily on line, March 22, 2005)

Vice President of the Chinese Academy of Sciences (CAS) Shi Erwei said Tuesday that in the coming five years the academy will focus on building research networks to combine academic resources of different CAS institutes for strategic scientific projects.

The new networks will be aimed at the research frontiers of information technology, modern agriculture, life sciences, advanced manufacturing and new materials, Shi said in an interview with Xinhua.

Though the CAS will still respect the autonomy of subordinate institutes in deciding their primary research orientations, Shi said, the networks should help enhance the capacity of individual institutes to coordinate and cooperate.

"We are not to copy existing research entities, and we are scheming flexible and virtual networks which might collect strength from sources both inside and outside of the CAS," Shi said.

The networks will organize researchers to work toward special goals, after the completion of which researchers will go back to their home institutes, Shi said. Interim network leaders will set up strategies and implement management for specific research projects.

In addition to the emphasis on networks, Shi said, the CAS will strive to strengthen cooperative ties with universities as well as big companies. The CAS intends to provide research facilities for joint programs.

By 2010, Shi said, the CAS will establish a handful of joint labs or other research organs together with universities and companies.

He also said the CAS is considering stimulating research talent by restructuring existing human resource systems.

"With more and more tough jobs we are faced," Shi said, "the CAS needs more and more science strategists and leading scientists.

China builds scientific innovation base in SW city

(People's daily on line, March 26, 2005)

Chinese State Councilor Chen Zhili ordered increased efforts to build Mianyang Scientific and Technological City in southwest China's Sichuan province into a major innovation base.

Chen issued the instructions Thursday at a meeting in Sichuan on the construction of the base.

The State Council approved the program on the development of the Mianyang Scientific and Technological City and established an inter-ministerial coordination group to support construction of the city in July 2001.

So far, 939 businesses have settled in the city, including 118 large and medium-sized ones. Annual GDP of the city has reached 21.3 billion yuan (approximately 2.57 billion US dollars).

Mianyang is a major scientific research base for national defense and a major electronic industrial base in China. China's major TV maker Changhong is based in the city.

China's largest computer manufacturer, Lenovo, said it had acquired a five-year syndicated bank loan totaling 600 million US dollars Thursday for its purchase of IBM personal computer business.



The main banks granting the loan are the Industrial and Commercial Bank of China (Asia) Limited, the BNP Bank, the ABN AMRO Bank and the Standard Chartered Bank. Other participating banks include 16 banks from the Chinese mainland, Hong Kong and other parts of Asia, America and Europe.

Lenovo's recent purchase of IBM's PC division won the United States' government approval following a review by the Committee on

Foreign Investment. The deal is due to be finalized by mid-year.

Environment

Renewable energy law creates new opportunity

(People's daily on line)

The Standing Committee of the National People's Congress of China endorsed on Feb 28 the Renewable Energy Law, four months earlier than expected. To have a better understanding of significance of the law and the way to boost development of the renewable energy in China, the PD journalist interviewed Feng Zhijun, vice director of the Environment and Resources Commission of the National People's Congress of China.

[Huge potentials for development of renewable energy in China](#)

According to Feng, renewable energy refers to non-mineral fuels that can be maintained in a constant supply over time from the nature, including wind power, solar energy, geothermal energy and marine energy etc. This type of energy does not cause pollution and discharge no green house gases basically.

Within the future 20 to 30 years, the renewable energy that can be exploited and applied equal to 800 mln tons of standard coal annually in China. In 2003 the installed capacity of wind power generator had reached 570, 000 kilowatt in China. China's production and application of solar energy heaters is leading the world. A total of 52 mln square meters have been applied in 2003, representing 40 percent of the total amount of the world. The annual production has amounted to 12 mln square meters. The installed capacity of biomasses energy generator has reached 2 mln kilowatts. Researches and experiments to extract solid and fluid fuel from biomass are underway. To sum up, China has already attained preliminary technology and laid foundation for application of renewable energy and has created conditions for large-scale commercialization of renewable energy.

[There is still difference compared with foreign countries](#)

Despite the progress made in this regard, China still falls behind of most developed countries in terms of growth rate and quality. It is even behind of developing countries like [India](#) and [Brazil](#). In the past China lacked laws and regulations that support development of renewable energy. The economic policies were not constant and stable in supporting the renewable energy. Part of key equipments was dependent on import.

The Baoding Tianwei Yingli New Energy Resources Co., Ltd is just one instance. The company is established as a model program for the solar energy industry by the State Commission of Planning. In 2004 its production capacity expanded to 70 mln watts by applying foreign investment of 400 mln yuan, hence ranked No. 3 in the world. But more than 90 percent of its products are exported to Europe and America. This doesn't suggest China is not in need of solar energy, but showing laws and favorable policies for renewable energy have boosted demands for renewable energy in foreign countries.



Bright prospect

Judging from the development trends in all localities and China's objectives, the consumption of renewable energy will probably increase to 10 percent of the country's gross energy consumption by 2020. The renewable energy will hopefully undergo great development and become one of important substitute energies following coal, natural gas and petroleum should the government backs it with policies. It will play an important role in securing China's energy safety, supporting sustainable development of economy and society of China, said Feng.

At present production and consumption of petroleum energy produce about 90 percent of sulphur dioxide and nitrogen oxide, and 70 percent of dust in China. Enormous environmental benefits will be attained if China achieves the goal it set in renewable energy by 2020.

Links:

The Renewable Energy Law stipulates responsibilities of the government and society in developing and applying renewable energy; establishes a series of policies and measures, including objective for long and mid-term quantity and development plan, encourage development of renewable energy industry and technical research, put up special fund for the renewable energy. The law will guide and motivate economic bodies home and abroad to participate in development of renewable energy; boost long-term development of the renewable energy, making it important in the energy structure. It will effectively eliminate environmental problems caused by burning of mineral fuel and promote sustainable development.

Britain expects more cooperation with China on renewable energy

(Xinhua, March 20, 2005)

Britain was looking forward to more technological and business cooperation with China in the area of renewable energy, Margaret Beckett, British secretary of state for environment, food and rural affairs, said Friday in Derby, England.

"There are already some professional British energy institutes working with their Chinese colleagues. We hope to see more cooperation between the two countries on renewable energy, such as solar, wind and tidal energy, especially from the business side," Beckett told Xinhua in Derby, central England.

Referring to the Energy and Environment Ministerial Meeting in London this week, Beckett said: "We hope to bring nations with big energy needs, like China, and international investors together for multilateral discussions. And we really appreciate China's participation and contribution into this kind of talks."

Energy and environment ministers, from 20 countries with the biggest domestic energy needs, met in London on Tuesday to discuss climate change and how to reduce dependence on fossil fuels.

Liu Jiang, vice-chairman of China's National Development and Reform Commission, said in his keynote speech that the Chinese government had formulated its energy development strategy with priorities on energy efficiency, energy diversification, renewable energy and related technology.

Beckett said: "We respect the development of China's environment in recent years and we appreciate the government's awareness of the importance of environment to economic development."

"As a nation with large needs for energy, China has thought much deeper about the issue of environment than other countries," she said.

Speaking of the Environment and Development Ministerial meeting of G8 (Group of Eight), which concluded Friday afternoon, Beckett said the ministers agreed to support developing countries financially and technologically to tackle the threat of climate change.



State Council calls for restraints on power plant construction

(People's daily on line, 2005.3.3)

China's State Council instructed Wednesday all government departments to overhaul power plant construction projects and immediately halt those without official approval.

All power plant construction projects must be re-appraised in line with the national industry development policy and the approved distribution arrangement, according to the decision made at Wednesday's State Council meeting.

The meeting, chaired by Premier Wen Jiabao, was convened to work on measures to curb rampant power plant construction across the country, which has emerged since the country began suffering from serious power shortages.

The meeting analyzed the current situation of power supply and demand. It stressed that the reliable power supply is a key factor to guarantee the country's sustainable economic and social development.

Despite the country's power shortage and increased demand, the current power plant construction projects have exceeded the potential power demand and will cause serious overplus in the future, said the meeting.

All unqualified power plant projects must be canceled and those illegal constructions should be rectified in accordance with regulations, the meeting said.

In order to guarantee the stable power supply, the meeting said China should strengthen power plant construction while curbing the over-headed power demand and encourage clean power supply.

The development of power industry should be coordinated with the country's overall economic and social development. The construction of power plants should be in line with the market rule and China's special condition, said the meeting.

The State Council urged an increase of the country's power utilization efficiency by optimizing the national power grid and upgrading the manufacturing level of power equipment.

The meeting also vowed to deepen the reform on the country's power industry and perfect the emergency plan to guarantee the power supply.

China to cooperate with US company on energy-saving buildings

(People's daily on line, 2005.3.3)

China's Ministry of Construction signed a cooperation memorandum on "green" building technology with American Standard Corporation Wednesday.

The agreement is an important step in strengthening its cooperation with foreign companies to promote China's development of green building technology, Qiu Baoxing, vice minister of construction said at the signing ceremony of the memorandum.

According to the cooperation memorandum, American Standard Corporation helped China launch the award for the best green buildings in the country, said Qiu.

The energy consumption per unit for Chinese construction is two or three times that of developed countries. Qiu said he believed that it is urgent for China to promote energy-efficiency buildings because the pace of China's industrialization and urbanization is putting pressure on the supply of energy and resources

With a scientific and systematic design, energy-efficiency and green buildings embraced high technologies including natural ventilation, natural lighting and water recycling, in a bid to make a full use of the resources and have the minimum effect on the environment, he said.

American Standard is a multi-national corporation and manufacturer of bathroom facilities. It began business in China twenty-five years ago.



GDP ecological costs closely calculated

(China Daily, 2005-03-01)

Ten municipalities and provinces, including Beijing, have started experimental work to deduct environmental costs from their gross domestic product (GDP), the State Environmental Protection Administration said yesterday.

The test results are expected to be released early next year and will lay a good foundation for nationwide implementation of the new method of calculating the so-called "green GDP."

Given that the country's economy is rapidly growing while its environment has been worsening, environmental officials and experts have been calling for the adoption of green gross domestic product throughout the country over the years.

Experts estimate that when environmental costs are deducted, the average annual GDP growth rate in China will be cut by as much as by 2 percentage points. The GDP growth in China was 8 per cent in 2002 and exceeded 9 per cent in the past two years.

According to the vice-minister of the administration Pan Yue, regional systems for environmental accounting will be set up to match the varied conditions in diverse municipalities and provinces.

Meanwhile, ways to assess and calculate economic damage caused by pollution will be developed and payments for environmental protection will be studied.

Tough task ahead

Admitting that setting up a green GDP calculation system in China is a tough task and will take a long time to implement, Pan said it was necessary to lay a foundation for the country's sustainable development.

Chief engineer at the Chinese Academy for Environmental Planning Wang Jinnan said a technical guide for environmental economic accounting has been designed for use as a reference by municipalities and provinces.

Based on the guide, the regions will develop accounting systems that match their own conditions, Wang said.

He said training programmes will also be offered later this month to officials from the 10 municipalities and provinces to help them better understand and complete the work.

Wang's academy is the leading research organization offering technical support to the experimental effort, a joint undertaking of the administration and the National Bureau of Statistics. The two authorities set up a team last March to carry out the study.

Wang said they are also doing similar calculations at the national level, but the results will not come out until next May.

Chen Kun of the Chinese Society for Sustainable Development said the move is a great step forward for the government but pointed out that green GDP is only a start and its implementation is not enough for the country to achieve sustainable development.

"Green GDP can expose existing problems, but it is not the solution," he said.

Chen said the best way for China is to change its model of economic development and pursue a circular economy, which employs the most efficient use of resources and achieves maximum economic and environmental benefits at a minimum cost.

Chen also said efforts should be made to solve the problem of an environment-related index since losses in natural resources are not easy to calculate.

Rural environment needs protection

(China Daily, 2005.3.9)

Lawmaker Jiang Deming wants to make sure rural regions will not find themselves lagging behind when the country takes action to "ensure people have clean water, fresh air and a better environment to live in."

The deputy to the National People's Congress (NPC) now in session has submitted a proposal calling for a draft agricultural environmental and ecological protection law.

He hopes it will prevent the rural environment from getting any worse.

While Premier Wen Jiabao undoubtedly had the whole nation in mind when he proclaimed environmental protection as a key national objective in his work report to the NPC on Saturday, Jiang said ad hoc legislation will help the countryside to be better protected from the negative effects of development.

"Unlike cities, most rural areas do not have special funds put aside for building sewage treating systems. As a result, waste collects here and there, and pollution is rampant in many regions," the legislator from East China's Jiangsu Province said.

Based on his research, Jiang said China's rural ecological system is extremely fragile. He cited a survey which claims one-third of the country's total area is already blighted by water and soil erosion.

Added to this, at least 133,300 hectares of farmland have been either occupied or ruined by solid wastes, and polluted air is fouling production conditions for more than 5.3 million hectares of arable fields, he said.

Furthermore, many farmers have applied excessive amounts of fertilizers and pesticides to their crops, leaving harmful residues in the soil and ultimately in agricultural products.

Gao Wangsheng, a professor at the Beijing-based China Agricultural University, said conserving the environment is important to safeguarding the security of the food supply in China.

The threats to the rural environment call for prompt and effective action, Jiang said.

"If we could formulate a statute specializing on protecting the agricultural ecology and environment, we could expect to reverse the situation," he said.

The proposed bill will prescribe an obligation for rural authorities to build and protect the ecology and environment.

In particular, the law will require local governments to include protection of the rural environment and ecology in their annual economic and social development plans, while budgeting special funds for cleaning up such areas, he said.

The legislation will also seek to keep at bay polluting firms from various cities, whose survival has been retreating to rural areas due to harsher urban environmental regulations, he said.

While Jiang is eager to push the legislation, experts said it is more important to implement current statutes to tackle agricultural ecological and environmental problems.

Since late 1970s China formulated and has been revising laws and regulations regarding environmental protection, visiting scholar at Tsinghua University Zhang Jianyu told China Daily.

Although many of the statutes were prompted by industrial pollution, the laws apply to rural areas as well, he said.

Therefore, creating new laws specifically for rural regions may not be the best solution to farmers' woes. Rather it may be more practical to increase funds for existing projects and to launch special efforts to curb pollutions in the countryside, he said.



Three initial benefits achieved at Three Gorges Project

(People's daily on line, 2005.3.9)

The Three Gorges project, a project of splendid magnificence of the Chinese nation has so far been the extra-large project on the globe. For over half a century every step forward of the project has caught the great attention of the world. Up to the moment, the project now still underway for construction has already begun to display its great benefits in the prevention of floods, power-generating and navigation and some other aspects.

Flood water runs eastward head-bowing

The Yangtze River flood-water has always been a serious hidden trouble for the Chinese nation. According to the record in history during the long period of 2117 years from 206BC to 1911AD there had seen 214 times of big floods along the Yangtze River, an average of once every 10 years. And since the beginning of the 20th century there had happened four times of extra-serious floods in 1931, 1935, 1954 and 1998 respectively.

However, the Three Gorges project at Xiling Gorge of the Yangtze River with its quite favorable geographical location retained successfully the flood water from the Gorges in the Three Gorges, which had not only controlled effectively the water down from the upper reaches but also helped release the pressure of the prevention of flood water along the middle and lower reaches of the river, especially for along the section of the Jinjiang Embankment. It has become the key project for taming the Yangtze River and for the eradication of the flood.

On 8 September 2004, the flood peak water volume reached 60,500 cubic meters per second when it came to the dam area of the Three Gorges. This is the biggest flood following that of 1998 and also the first-time serious "ordeal" after the Three Gorges Reservoir started to retain water. To alleviate the pressure of flood prevention along the middle and lower reaches of the Yangtze River and effect a curb on the flood peak for regulating the water, the water-mark in the reservoir was raised from 135 meters to a height of 136.2 meters during the flooding period, retaining a water-storage of around 500 million cubic meters. This has not only ensured the safety operation of hydropower turbines but also released the flood pressure along the middle and lower reaches of the Yangtze River. The Three Gorges project still underway for construction has already displayed an initial effect for the prevention of floods.

Mitigated the "power shortage", a matter of crucial urgency

The designed installation capacity at the Three Gorges project is 18.20 million kilowatts/hours. When the 26 sets of hydropower turbines of 700.000 kilowatts are all put into operation, the annual power-generating capacity can reach an average of 84.7 billion kilowatts/hours. The power supply of the Three Gorges project will cover the mid-China, east China, Sichuan and Chongqing and the power-grid in south China. The power-covered area includes Hubei, Hunan, Jiangxi, Henan, Anhui, Jiangsu, Zhejiang, and Shanghai and Guangdong as well as Sichuan and Chongqing, a total of 11 provinces and cities.

In 2004 we saw from the Three Gorges to Shanghai a power transmission of 8 billion kilowatts/hours, the same as that to Guangdong. And up to 31 December 2004, a total of 11 sets of hydropower turbines were put into operation. The accumulated power-generating volume came to a total of 47.795 billion kilowatts/hours, an equivalent saving of 26 million tons of raw coal and its corresponding transportation.

The "golden water-channel" presents more charms than ever

Since the Three Gorges project began to store water the conditions along the waterways have been greatly improved and the Three Gorges water area has begun to become a "golden water-channel".

Last year witnessed a total sluice-gate operation of 8719 times with a total of 75,000 ship/times to ply in and fro through the gate and a passenger flow of 1.72 million person/times and the goods transport to have reached 34.30 million tons. The annual goods transport volume passing through the sluice gate has seen double that of 18 million tons (the highest transport volume) since the completion of the hinge project at Gezhou Dam.

China curbs land desertification

(People's daily on line, 2005.3.10)

Zhu Lieke, deputy director-general of the State Forestry Administration, said at a press conference held on Wednesday that by 2010 China will have brought 13 million hectares of sand-encroached land under control, protected 3.72 million hectares of land by setting apart sand areas for tree growing and set aside a number of sand-

encroached lands as protection zone. By then the trend of desertification in China will be effectively curbed and the ecological condition in the sand-encroached areas will be improved.

Zhu Lieke said the State Council deliberated and adopted the National Desertification Prevention and Control Program (2005 -2010) at the 81st Executive Meeting on Feb. 23. It is a major move in implementing the scientific outlook of development and constructing a harmonious socialist society. By the end of 2004 China has harnessed sand-encroached lands of 22.37 hectares. A historic breakthrough has been made in that harnessed area has exceeded the spread of desertification each year since 2001. The trend of accelerated expansion has been effectively checked and the ecological conditions in many areas have improved considerably, which is significant for the sustainable development of economy and society.

According to the Program by 2010 vegetation areas in the northwest, the western part of the northeast and the northern part of the north have been increasing steadily. The grain and farming production capabilities of farmers and herdsman have been improved and energy shortage in rural areas has been alleviated considerably. The problem of land desertification in Beijing and Tianjin as well as the surrounding areas has been basically solved and ecological conditions are improving in a comprehensive fashion. Industrial structure in rural areas has been optimized and the agricultural economy is developing rapidly. The sand-encroached areas have preliminarily realized coordinated development of ecology, economy and society.

Clean water needs urgent than ever

(China daily, 2005.3.11)

As Premier Wen Jiabao promised "clean water for the people" receiving thunderous applause from National People's Congress (NPC) deputies, one-third of China's rural population remained without access to safe drinking water.



[Villagers celebrate the arrival of tap water at a ceremony marking the launch of a clean water project in Changrong Village, Wangqing County of Jilin Province. The government has put ensuring safe drinking water at the top of its agenda. \[newsphoto\]](#)

On Saturday, Wen said in his work report the government will concentrate on providing clean water for everyone.

To help address the problem, the State has earmarked 2 billion yuan (US\$242 million) this year, 200 million yuan (US\$24 million) more than last year, an official at the Ministry of Water Resources revealed.

The fund will be used to seek out quality water sources and enforce water purification, said Zhao Leshi, a division chief of the ministry's rural water resource department.

In rural areas, the problems of contaminated water, seasonal water shortages, inconvenience in fetching water and deficient water supplies all need to be solved.

"The foremost threat nowadays lies in bad water quality," said Zhao.

Rural drinking water is now being polluted with industrial and agricultural pollutants, such as arsenic and fluorine at levels that exceed safe State standards.



Legislators and international advisers are deeply concerned, and put forward more ideas for sustaining the development of China's limited water resources at the NPC.

NPC deputies Sun Xiaoshan and Fu Qionghua from East China's Jiangxi Province both suggested the country establish a rural drinking water fund by collecting additional small fees from urban water consumption.

If each ton of water cost 0.2 yuan (2.4 US cents) more in the province's cities, each person would pay only an estimated 1.8 yuan (22 US cents) more a month, at most, Fu said in her proposal.

Given the growth rate of Jiangxi's gross domestic product, the small fees levied on water both for civic and industrial use would be translated into a fund of 1.8 billion yuan (US\$218 million) between 2005 and 2020, said Fu, also an engineer at the local water science academy.

"It is an international practice for the central government to finance the bulk of the input to rural water resources. But China's subsidies in the agriculture industry are far less than what they should be," she said.

"The fund will be a flexible supplement, while not burdening urban people too much."

Christoph Peisert, a German water conservation expert who has worked in China for 16 years, gave Fu's idea the thumbs-up.

But he pointed out that it must be shown that the fund is used exclusively for water protection activities.

"Basically, China's water problem is a problem of water management," noted Peisert, who is engaged in a Sino-German watershed management project in Beijing.

He said the success of water resource management projects should not be judged by the size of financial investment alone.

They should be evaluated on the basis of their ability to sustain economically-sound systems of water protection, he said.

The German believes that in the future some carefully selected and well-trained farmers should be given support to become foresters, instead of making their money from low-wage water polluting activities or part-time construction work.

He also said that every means should be adopted to reduce water wastage.

Lawmaker Yuan Hanmin from Gansu Province agreed with his proposals and called for the creation of a water-saving society.

"The water supply system should be changed. Extra charges should be placed on additional water use," said Yuan.

He said that water supply facilities must be upgraded soon in rural places to improve efficiency.

Currently only 40 per cent of the water from reservoirs arrives at its destination.

Unsafe drinking water is also becoming a threat to cities, where a huge sum is spent annually to purify polluted water.

In 2003, the country disposed of 64 billion tons of sewage. Only 28 per cent of the 46 key cities surveyed that year had access to good-quality drinking water.

In Jiaxing, a city in Zhejiang Province intersected by waterways, 70 per cent of the water in its rivers was found to be of low quality, according to its mayor Chen Derong.

Lying downstream of Suzhou and Hangzhou - two big cities with fast economic development - Jiaxing has suffered from extensive water pollution in the last two decades.

Law on circular economy in pipeline

(China Daily, 2005-03-11)

A law on the circular economy may make it onto the legislative agenda next year, an official involved in the process said yesterday in Beijing.

"With help from the Environmental and Resources Protection Committee of the NPC, we have finished the necessary investigation and research into the planned law and will soon submit a proposal to the State Council's Legislative Affairs Office," said Zhou Changyi, deputy director of the Environment and Resources Utilization Department of the National Development and Reform Commission, the cabinet's top economic policy-maker.

"But time is too tight to put this proposed law on this year's legislative agenda, it will be on the agenda next year if nothing goes awry," said Zhou.

He was speaking at a working meeting on the sidelines of the on-going session of the CPPCC National Committee, the country's top advisory body.

The meeting, organized by CPPCC's Committee on Handling the Proposals, included CPPCC members and parties who have submitted proposals on the circular economy and officials from relevant government departments to which such proposals are referred.

Promoting the circular economy and a conservation-minded society are some of the hot topics at this year's full session of the 10th National Committee of the CPPCC.

"The proposals on the circular economy submitted by the members and parties have increased dramatically over the past two years," said Song Baorui, deputy director of the CPPCC Committee on Handling Proposals, without giving specific numbers.

"Most of those proposals suggest speeding up legislation work to spur the development of the circular economy," said Song.

"Currently, there is a lack of overall legal framework covering the circular economy in terms of laws and rules," acknowledged Zhou.

"So we will work hard to work out, as soon as possible, the proposed law," Zhou said.

There do exist some laws concerning resource conservation in China such as the energy-saving law, but none of which is comprehensive enough to deal with the development of the circular economy, a concept that has been gaining momentum in the country since last year.

"The development of the circular economy needs strong legal backing," said CPPCC National Committee member Yu Zhen who has submitted a proposal. "Laws (on circular economy) should be made to clearly define the roles of government, enterprise and the citizen in developing the circular economy."

"The proposed law on promotion of the circular economy is of vital importance and therefore it should be worked out soon," said Liu Zhao, an official from Legislative Affairs Office of the State Council, China's cabinet.

"But we still have not accepted the formal legislative motion from the National Development and Reform Commission, which is in charge of that proposed bill," said Liu.

"Though we have wrapped up the initial legislative investigation and research into the planned bill, we have not began the drafting process yet," added Zhou.

Consumers swallow organic food claims

(China Daily, 2005-03-11)

Consumers are being warned to watch out for fake organic food, which could account for about 10 per cent of all sales of "green" food in the capital.



Food producers in China have to follow a stricter rule to use the word "fresh" when advertising their products. [newsphoto]

Beijing Consumers Association, which has conducted a survey into organic food, discovered much food labelled organic on sale in the city was fake.

The association released the report on the eve of this year's International Consumer Rights and Interests Day, which is today.

The survey found that, in a random selection of 268 goods labelled organic, including rice, oil, eggs, vegetables and drinks, 25 samples were counterfeit.

Some of the fake food is produced by companies that do not have organic certifications, such as milk produced by a Heilongjiang-based company and rice from a Hebei-based plant.

Some enterprises pasted "organic food" labels on food that looks similar to genuine organic products, the association claimed.

According to food regulations, a company can only put an organic label on its products for three years before its products need to be re-examined.

The city's consumers association called on government departments to beef up supervision of organic food, which is regarded as a safe choice by consumers. They have been scared by numerous food safety problems, such as the overuse of pesticides, growth hormones in animal feed and unsafe food additives.

The release of the survey is just a small part of the various activities that will take place to mark consumers' day.

In the past four days, personnel from the association and other officials have been on the streets offering legal advice to consumers about their rights. Experts were also invited to give help on product quality.

According to statistics provided by the association, by the end of last year, it had received more than 20,000 complaints from consumers, 97 per cent of which had been resolved, resulting in compensation of more than 22.5 million yuan (US\$2.7 million) for consumers.

The complaints mainly focused on three areas, including poor after-sales service, which took up 40 per cent of the total complaints; quality problems, accounting for 28 per cent; and disputes over contracts, amounting to nearly 12 per cent.

Previously, most Chinese consumers silently tolerated violations of their rights, blaming the situation on bad luck. But now, consumers are becoming educated and developing a greater sense of self-protection.

In another development, the Chinese Consumers Association yesterday warned people who still use old-style water heaters to scrap the machines because of safety risks.

The old gas-fired water heaters, which discharge waste gases directly into rooms, can cause fatal accidents from carbon monoxide poisoning.

Statistics show that more than 1,000 such accidents happened last year.

The country forbade the selling of old-style water heaters in 2000. However, nearly 10 million such heaters are still in use around the country.



Chinese President urges to build energy-efficient and environment- friendly society

(People's daily on line, 2005.3.13)

Chinese central authorities held a seminar on population, resources and the environment Saturday. President Hu Jintao presided over the meeting and stressed the importance of building an energy-efficient and environment-friendly society in China.

The annual event has been held for consecutive years. Chinese leaders, including Wu Bangguo, Wen Jiabao, Jia Qinglin, Zeng Qinghong, Huang Ju, Wu Guanzheng, Li Changchun and Luo Gan, also attended the seminar.

Hu said that the comprehensive implementation of the "scientific concept of development," the further adjustment of China's economic structure and the transformation of economic growth methods are essential to ease pressure on population, resources and environment for the comprehensive, coordinated and sustained socio-economic growth in China.

"China should speed up the adjustment of its irrational economic structure and completely abandon the 'extensive way' of economic growth. China should promote economic growth based on improvement of quality of the people, efficient use of resources, environmental pollution reduction and the importance attached to quality and economic returns for the building of an energy-efficient and environment-friendly society," Hu said.

Hu urged all to clearly understand "the utmost importance" of economic structure adjustment and growth method changes to the easing of pressure on population, resources and environment.

To meet these ends, Hu said efforts should be made to adjust the investment structure and optimize the investment proportion and ways to pour various production elements.

In the process of promoting socio-economic development, efforts should be made to better save resources, protect environment, improve ecological system and adopt a new way of industrialization, he said.

The key to the structural adjustment and growth method changes depends on the improvement of self-creation ability and the speedup of technology progress, he said.

The impetus to the structural adjustment and the growth method changes rely on the deepening of reform and the innovation of systems and mechanism, he said.

"Creative thoughts and methods should be actively explored by government officials in population and family planning work," Hu said.

Hu also urged continued research on population development strategies, improvement of population quality based on a low birth rate, enhancement of technological and service levels in family planning and the reining of rising gender imbalance.

As for land and resources work, it is important to explore new mechanisms for land and resources administration, implement all regulations on land management, use land in an efficient way, and better protect the arable land, basic farmland in particular, he said.

Hu called for strengthening the administration of natural resources, enhancing the efficiency of resource use and protecting and making good use of China's preponderant mineral resources.

Environmental protection should strive to push forward recycling economy, speed up clean production, enhance pollution control and strengthen ecological protection and construction, Hu said.

Hu required better protected drinkable water resources, instructing all relevant departments to give clean water to the people "the highest priority."

Premier Wen Jiabao also addressed the meeting, highlighting the key works in 2005.



-- On population and family planning, Wen called for a good summary of experiences in rewarding and assisting rural families which abide by the state family planning policy, as well as the experiences in poverty alleviation through family planning.

-- On land management, Wen stressed the earnest protection of basic farmland and the rights and interests of farmers.

-- On energy and other resources conservation, Wen said equal attention should be paid to both resources development and economization.

-- On rectifying and regulating mineral resources development, Wen required to carry out a rectification campaign nationwide with coal mining as the focus.

-- On environmental pollution control, Wen urged to first resolve pollution problems that pose serious threats to the health and security of the people, such as the prevention and control of water pollution, atmosphere pollution control in urban areas, and the strict enforcement of environmental protection laws and regulations.

-- Wen also put construction of "key ecological projects", such as the anti-sandstorm forest belt construction in North China, in prior agenda in 2005.

All regions and departments are required to map out plans on population and resources in collaboration with China's masterplan for the 11th Five-Year Plan and Long Range Objectives to 2020, according to Wen.

Japanese loans to China to end by 2008

(People's Daily Online, March 18, 2005)

Japanese Foreign Minister Nobutaka Machimura said at the Foreign Relations Committee of the Liberal Democratic Party that Japanese loans to China during the 2004 fiscal year would be reduced by 11 percent and by the fiscal year 2008 Japan would stop providing new yen loans to China.

Nobutaka Machimura said as the Chinese economy develops and with its fundraising capability growing considerably the need of large-scale fund cooperation between the Japanese and Chinese governments has diminished. Japan plans to stop new yen loans to China by the fiscal year 2008.

In addition, Japan has made preliminary decision to reduce yen loans to China in the fiscal year 2004 by 11 percent, to 85.9 billion yen. This is the fourth consecutive year in which Japan reduces the loans.

China to build first 1,000 megawatt-level homemade nuclear power station

(People's Daily Online, March 17, 2005)

China [Guangdong](#) Nuclear Power Group signed contracts Wednesday with Chinese nuclear plant designers and equipment manufacturers to build the Lingao II project, the country's first 1,000 megawatt-level, domestic-built nuclear power plant.

Lingao II nuclear power station will be the third commercial nuclear power plant in South China's Guangdong Province, where China's first Daya Bay nuclear power plant began operation in 1991.

Construction will begin at the station, which has two 1,000 megawatt reactors, this December. The plant will be operational in 2010 and 2011.

China Guangdong Nuclear Power Group currently operates the Daya Bay nuclear plant and Lingao I nuclear plant, with total installed capacity of 4,000 megawatts. The plants are mainly designed and constructed by foreign companies.

China is planning to boost nuclear power development to meet the country's surging demand for electricity. The issue has become more urgent as the energy-hungry eastern provinces suffer increasingly severe power shortages.



China now operates nine nuclear power plants with a total installed capacity of 7,000 megawatts, about 1.8 percent of the country's total installed power generating capacity. According to government plans, a total of 32 new 1,000 megawatt reactors are expected to be brought on line by 2020.

China launches model program for clean production

(People's Daily Online, March 17, 2005)

China is now facing escalating pressure in supply of coal, electricity, oil and transportation in its economic activities. Promoting clean production will help enterprises improve efficiency in resource and energy application. The State Environmental Protection Administration of China and the Dow Chemical of the US launched on March 16 a model program for clean production in [Beijing](#), according to which the Dow Chemical will donate six million yuan annually in next three years.

In accordance with the program some enterprises from industries that cause heavy pollution, including chemical, pharmaceutical, printing and dyeing, brewing, electorplate and electrolyte aluminum will be selected to adopt measures of clean production. In these enterprises review of production will be adopted; staff will receive training; guideline for clean production will be compiled and database for clean production will be built. In addition, the program will publicize the concept of clean production in an attempt to guide more enterprises to adopt clean production.

According to Wang Jirong, vice director of the State Environmental Protection Administration, the Administration is making a mandatory plan for implementing review system for clean production. A batch of industries causing heavy pollution will be made key units to adopt clean production. The quantity of pollutant discharged from enterprises that have adopted clean production will serve as benchmark for granting pollutant discharge permit in all localities.

China to realize forestation of 7.3 mln hectares in 2005

(People's daily on line, March 22, 2005)

The State Forestry Administration declared on Mar.21 - the World Forest Day - that China planned to afforest an area of 110 million mu (about 7.33 million hectares) in 2005.

Cao Qingyao, spokesperson for the State Forestry Administration, said China realized forestation of 108 million mu (7.2 million hectares) in 2004 increasing total forest area to 2.62 billion mu (about 175 million hectares) - the fifth in the world. China's forest coverage rate is 18.21 percent with a forest stock of 12.456 billion cubic meters. China's plantation area is 799 million mu (about 53 million hectares), which tops the world. Most of the nearly 190 rare and endangered tree species on the national list of key wild plants have been effectively protected.

Cao Qingyao said overall inadequacy in forestry resources, imbalanced distribution, low quality as well as lots of forest land being shifted to other uses and overexploitation of forests are still serious challenges to the protection of China's forestry resources.

In general, Cao said, "overall deterioration and local improvement" is still China's ecological situation. Damage and control are locked in a stalemate at current stage. In the future China will continue to prioritize the protection and management of forest resources, constantly improve the quality of forestry, perfect forest resource management system so as to boost the sustainable development of forestry.

China is now one of the major destinations for illegally harvested wood, with more than half of the country's timber imports coming from countries such as Russia, Malaysia and Indonesia, where illegal logging is a major problem.

China is the second-largest market for industrial timber, pulp and paper in the world, behind the United States.

Americans consume 17 times more wood per capita than the Chinese, but China is soon tipped to become the world's largest wood market.



Per Rosenberg, director of the Global Forest & Trade Network run by the WWF, of which the China initiative is a part, said that countries where much of the illegal logging takes place were finally waking up to the scale of the problem.

"I don't know if you can say things are getting better, but the awareness today compared to five years ago is much, much higher," said Rosenberg.

"Today I think everyone recognises that this is a huge problem ... that this is something you really have to do something about, not least because it's causing huge, not only environmental problems but also financial," he said.

Rosenberg said Indonesia alone was losing billions of dollars in tax revenue because of illegal logging.

China Timber Demand Threatens World's Forests - WWF

(rtr, 9.3.05)

HONG KONG - China's soaring demand for timber, driven by its rapid economic expansion, is a major threat to the world's forests as illegal loggers make fortunes supplying the mainland, conservation group WWF said on Tuesday. China's timber imports have increased dramatically over the past 10 years after the government banned logging following the devastating flooding of the Yangtze river in 1998, leading to a significant drop in domestic wood production.

"China's efforts so far in forest restoration and forest sustainable management are a good start towards preserving valuable and threatened forests," said Dr. Claude Martin, Director General of WWF International.

"But logging bans in China should not lead to forest loss in other parts of the world. Decisive action is needed to ensure that supply chains leading to or through China begin with well-managed forests," he said.

China's forests and plantations will provide less than half of the country's expected total industrial wood demand by 2010, according to a new WWF report titled "China's Wood Market, Trade and the Environment" that was released on Tuesday.

While China has worked to protect what's left of its own forests, its efforts have resulted in an increase in imports from countries where illegal logging is rife, the WWF said.

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China to step up water resource protection

(People's daily on line, March 22, 2005)

The severe situation of water resource environment has captured the high attention of the Chinese government.

Water resources are facing four challenges

China faces four long-term severe challenges in the water resource area.

- Flooding is still a serious trouble for the Chinese people.
- Inconsistency in water resource supply and demand is becoming increasingly prominent.
- Grave soil erosion situation
- Water pollution has not been effectively controlled.

Five measures to ensure water security

Pan Yue, deputy director-general of the State Environmental Protection Administration, said on Monday that China would strengthen water environment protection and ensure water security in five aspects.

- Prioritize the water quality in drinking water source areas
- Improve water pollution control level and push ahead water pollution control in key drainage areas
- Implement management of ecological systems and rejuvenate the river of life
- Step up enforcement of environmental protection laws and resolutely punish various illegal pollutant discharges.
- Do a good job in information release relating to water environment quality and implement the public's right to know regarding the environment

Ensure drinking water security for farmers

Water Resources Minister Wang Shucheng stressed on Monday that China currently has more than 300 million people whose drinking water security cannot be guaranteed. The monitoring and supervision of pollution sources in urban and rural areas must be enhanced to prioritize the protection of drinking water security and the public's lives and health as the top task in water conservation work.

Wang Shucheng said, during the eleventh "five-year" China would put emphases on solving problems such as inadequate drinking water quality including high fluorine content, high arsenic content, bitter and salty water and polluted water as well as serious shortages of drinking water in some areas. China is to reduce the proportion of population which are unable or cannot afford to drink safe water by one third by the year 2010. By the year 2020 China is to make sure that drinking water is safe or basically safe for urban and rural residents.

Thirsty countryside demands safe water

(China Daily, Updated: 2005-03-23)

More than 360 million rural Chinese need safe drinking water, the government was told yesterday.

Zhai Haohui, vice-minister of water resources, called for more funds from government coffers to be made available.

"Priorities of the government investment should be given to the construction of more projects capable of supplying clean drinking water for all people throughout China, particularly, the millions of rural people plagued by unclean drinking water," said Zhai yesterday, World Water Day.

Farmer Puchi washes her hands with tap water outside her home in Xigaze, the Tibet Autonomous Region March 22, 2005. The central government has injected 400 million yuan in providing 500,000 Tibetans with clean drinking water since 2001. [Xinhua]



Farmer Puchi washes her hands with tap water outside her home in Xigaze, the Tibet Autonomous Region March 22, 2005. The central government has injected 400 million yuan in providing 500,000 Tibetans with clean drinking water since 2001. [Xinhua]

The country is ready to launch a long-term project to deal with the lack of clean water, a situation threatening the health of some 360 million people, or about one third of the rural population.

"By the end of 2020, we hope we are going to reach the goal of basically providing safe drinking water for all rural people," Zhai said.

Polluted water spreads infectious intestinal and parasitic diseases, particularly the killer snail fever.

He said funds earmarked for such facilities should be raised in a variety of ways with preferential policies adopted for land-use, electricity supply and tax revenue.

"Only less than 40 per cent of the sections of China's seven major rivers monitored in 2003 reach the standards for drinking water while merely a quarter of the checked 28 key lakes and reservoirs were up to the criteria," Zhai said.

Groundwater is a major source of drinking water for many cities. But among those supplies checked in 44 cities, 95 per cent of them were polluted, some with sewage, according to a 2003 survey by State Environmental Protection Administration.

"People have the right to know such challenges face them while the authorities must rehabilitate clean water sources," said Pan Yue, vice-minister of the State Environmental Protection Administration.

It was estimated more than 63 million rural people in northern China, as well as across the Yellow-Huaihe-Haihe River Plains have to drink water with a high fluorine content.

The health of about 2 million people has reportedly been affected by diseases related to drinking water with high arsenic content in parts of the Inner Mongolia, Shanxi, Xinjiang, Ningxia and Jilin.

Drinking water with high arsenic content can lead to several types of cancer and salty water has also become a threat to some 38 million rural residents in northern and eastern coastal areas.

Diversion project forum

More than 70 experts from home and abroad attended a symposium in Beijing yesterday about a research programme on sustainable water integrated management of the eastern route of the South-North Water Diversion Project.

The giant water diversion project was started in late 2002, and aims to satisfy demand in the country's northern regions by diverting water from the Yangtze River, in the south, to the north through eastern, central and western routes.

When completed in 2050, the project, involving an investment of nearly 500 billion yuan (US\$60 billion), will bring 44.8 billion cubic metres of water to 300 million people in the north each year.

The research programme, launched last year and to be completed next June, is a joint effort by the Chinese Academy of Social Sciences, China's Ministry of Water Resources, China Meteorological Administration, and the Italian Ministry for the Environment and Territory.

It is among a series of Sino-Italian co-operative programmes in environmental protection.



"It studies the impact of the project on the environment, vegetation, climate and economic and social development along the east. It tries to work out the best water management method while learning from advanced international experiences," said Li Ping, an expert with the Chinese Academy of Social Sciences.

'Water' lot of trouble in Guangdong

(China Daily, Updated: 2005-03-22)

Water conservationists are urging the authorities in Guangdong to set up a special water supply group to make better use of drinking water.

The organization would be responsible for co-ordinating the development of water resources in the prosperous Pearl River Delta region and distributing drinking water to Guangdong, Hong Kong and Macao.

Wang Jin, a senior engineer from the Pearl River Water Conservation Committee, made the remarks at a seminar in Guangzhou, capital of Guangdong Province, Tuesday.

The seminar aims to discuss how water resources can be developed in the Pearl River Delta and comes at a time when South China's Guangdong Province is experiencing a drought.

"Guangdong, which used to be struck by floods, will face a shortage of drinking water in a few years unless effective measures can be taken to protect the province's water resources in the near future," Wang warned.

The seminar, that took place on World Water Day, attracted more than 30 government officials and experts from the central government, Guangdong Province and local scientific research institutions.

Drought has affected more than 16 million residents in the province.

In some rural areas, people do not even have enough drinking water while a large number of domestic animals have been killed by the drought.

Drought has also affected prosperous cities in the Pearl River Delta in Guangdong, seriously threatening the local economy.

The provincial capital Guangzhou, the Shenzhen and Zhuhai special economic zones and the cities of Huizhou, Dongguan and Zhongshan, have all experienced water shortages since the autumn.

Guangdong was also hit by a serious salt tide last winter. A salt tide is where salty water washes up rivers from river mouths because of low water levels caused by drought.

Wang urged water conservation departments in the province to fight against the scourge.

In addition to putting more money into building water conservation facilities, Wang said the local government would do more to encourage people to save water in the coming years.

He said Guangdong has poor water conservation facilities and cities in the Pearl River Delta do not work together to save water.

Worsening water pollution has also begun to threaten the safety of the province's drinking water, Wang added.

More than 16.75 billion tons of sewage are being discharged into the Pearl River and its tributaries annually without any treatment.

An official from the Guangdong Provincial Bureau of Water Conservation said Tuesday that his organization has selected three cities as pilot regions to start water-saving experiments later this year.

Meanwhile, the Guangdong provincial government plans to use more artificial rain to fight the drought later this year.



The official attributed less rainfall and the heatwave last summer to the province's worsening drought.

"The battle against drought will be a long-term task for Guangdong," the official said.

To help fight drought and salt tides, the province has diverted more than 750 million tons of fresh water from Guizhou Province and the Guangxi Zhuang Autonomous Region this year.

The Guangdong provincial government has invested more than 1.7 billion yuan (US\$207 million) to fight drought and salt tides.

Chinese cities totally lack 6 billion cubic meters of water

(People's Daily Online, March 23, 2005)

Chinese cities are short of a total volume of 6 billion cubic meters of water, according to construction vice-minister Qiu Baoxing, March 22, who said the nation's tight water supply had been intensified by water resources pollution, over-extraction of underground water and low-efficient water use.

Speaking at a meeting summing up a water conditions survey by college students, Qiu said China has more than 100 cities above-county level from 11 provinces and municipalities that are suffering from short water supply, and cases are serious in 56 percent of them. Many urban dwellers are facing severe water shortage for daily use, and the water security of cities has been greatly threatened.

China's per capita water resources is only one fourth that of world average, said Qiu, and the tight water supply has been intensified by ill-balanced water distribution and serious pollution. Some local officials, Qiu criticized, whose water-saving awareness is weak, developed blindly water-consuming and highly polluting projects. Some water-lacking cities were eager to build big lawns and other water-consuming attraction sites. Some of them even took low-price water as a favorable term to attract investors.

Pollution treatment projects in major rivers going too slow

(Xinhua, 2005-03-22)

Chinese environmental authorities urged main waterways to build pollution treatment projects as scheduled before the end of 2005.

A five-year cleaning plan launched in 2001 by China's State Environmental Protection Administration (SEPA) seems to be going too slowly -- by the end of 2004, 20 percent of the total 2130 projects had not yet started.

The main waterways include three main rivers -- the Liaohe, running through northeast China's Liaoning Province, the Haihe, in northern China, and the Huaihe, in eastern China; and three lakes -- Taihu Lake on the border between Jiangsu and Zhejiang provinces, Chaohu Lake in Anhui Province and Dianchi Lake in Yunnan Province. Three Gorges Reservoir area and its waterline diverting water from the South to the North are also included.

Among the total 2130 projects, 488, 496 and 221 are in Huaihe, Haihe and Liaohe. Taihu, Chaohu and Dianchi lake have 255, 46 and 26. 338 and 260 are in Sanxia and waterline of diverting water from the South to the North.

By the end of 2004, projects that did not start in the above three drainage areas accounted for 28.9 percent, 30.7 percent and 28 percent of the total projects that they have. Projects that did not launch in Taihu, Chaohu and Dianchi lake account for 28 percent, 30.7 percent and 28.9 percent of the total. 20.1 percent and 29.6 percent of the projects that in Sanxia and the waterline have not started yet.

An official with the SEPA said 2005 is the last year of the Tenth Five-year Plan, but a large gap still exists between the status quo of the pollution that has been cleaned up and the target of the Plan. He urged local governments and related departments to hurry up to meet the goal.



Projects that do not launch according to the plan, he said, will be exposed.

"The Chinese Miracle Will End Soon"

(March 7, 2005)

SPIEGEL Interview with China's Deputy Minister of the Environment

The world has been dazzled in recent years by the economic strides being made by China. But it has come at a huge cost to the country's environment. Pollution is a serious and costly problem. Pan Yue of the ministry of the environment says these problems will soon overwhelm the country and will create millions of "environmental refugees."

SPIEGEL: China is dazzling the world with its booming economy, which grew by 9.5 percent. Aren't you pleased with this speed of growth?

Pan: Of course I am pleased with the success of China's economy. But at the same time I am worried. We are using too many raw materials to sustain this growth. To produce goods worth \$10,000, for example, we need seven times more resources than Japan, nearly six times more than the United States and, perhaps most embarrassing, nearly three times more than India. Things can't, nor should they be allowed to go on like that.

SPIEGEL: Such a viewpoint is not exactly widespread in your country.

Pan: Many factors are coming together here: Our raw materials are scarce, we don't have enough land, and our population is constantly growing. Currently, there are 1.3 billion people living in China, that's twice as many as 50 years ago. In 2020, there will be 1.5 billion people in China. Cities are growing but desert areas are expanding at the same time; habitable and usable land has been halved over the past 50 years.

SPIEGEL: Still, each year China is strengthening its reputation as an economic Wunderland.

Pan: This miracle will end soon because the environment can no longer keep pace. Acid rain is falling on one third of the Chinese territory, half of the water in our seven largest rivers is completely useless, while one fourth of our citizens does not have access to clean drinking water. One third of the urban population is breathing polluted air, and less than 20 percent of the trash in cities is treated and processed in an environmentally sustainable manner. Finally, five of the ten most polluted cities worldwide are in China.

SPIEGEL: How great are the effects of this environmental degradation on the economy?

Pan: It's massive. Because air and water are polluted, we are losing between 8 and 15 percent of our gross domestic product. And that doesn't include the costs for health. Then there's the human suffering: In Beijing alone, 70 to 80 percent of all deadly cancer cases are related to the environment. Lung cancer has emerged as the No. 1 cause of death.

SPIEGEL: How is the population reacting to these health problems? Are people moving to healthier parts of the country?

Pan: Even now, the western regions of China and the country's ecologically stressed regions can no longer support the people already living there. In the future, we will need to resettle 186 million residents from 22 provinces and cities. However, the other provinces and cities can only absorb some 33 million people. That means China will have more than 150 million ecological migrants, or, if you like, environmental refugees.

SPIEGEL: Hasn't your government tried to get pollution under control?

Pan: Yes it has, and in some cities such as Beijing the air quality has, in fact, improved. Also, the water in some rivers and lakes is now cleaner than it's been in the past. There are more conservation areas now and some model cities that focus specifically on environmental protection. We are replanting forests. We have passed additional laws and regulations that are stricter than in the past and they are being more rigorously enforced.



SPIEGEL: But the economic growth fanatics in Beijing will still likely carry on just as before.

Pan: They're still playing the lead role -- for now. For them, the gross domestic product is the only yardstick by which to gauge the government's performance. But we are also making another mistake: We are convinced that a prospering economy automatically goes hand in hand with political stability. And I think that's a major blunder. The faster the economy grows, the more quickly we will run the risk of a political crisis if the political reforms cannot keep pace. If the gap between the poor and the rich widens, then regions within China and the society as a whole will become unstable. If our democracy and our legal system lag behind the overall economic development, various groups in the population won't be able to protect their own interests. And there! 's yet another mistake in this thinking.....

SPIEGEL: Which one?

Pan: It's the assumption that the economic growth will give us the financial resources to cope with the crises surrounding the environment, raw materials, and population growth.

SPIEGEL: Why can't that work?

Pan: There won't be enough money, and we are simply running out of time. Developed countries with a per capita gross national product of \$8,000 to \$10,000 can afford that, but we cannot. Before we reach \$4,000 per person, different crises in all shapes and forms will hit us. Economically we won't be strong enough to overcome them.

SPIEGEL: You have advocated the introduction of the so-called "green gross domestic product." What does that entail?

Pan: It is a model that also takes into account the costs of growth, like environmental pollution for example, and is a topic we are discussing with German experts. We want the performance! of functionaries to not only be measured in terms of economic growth but also in terms of how they solve environmental problems and social issues.

SPIEGEL: Does your agency even have the ability to clamp down on environmental criminals?

Pan: We recently shut down 30 projects, including several power plants -- one of those at the Three Gorges Dam. The companies involved failed -- as required by law -- to review what effect their new investments would have on the environment.

SPIEGEL: But 26 other projects were allowed to carry on. They only had to pay small fines -- peanuts compared to the billions that were invested.

Pan: Unfortunately, that's true. Which is why our laws and regulations need to be reformed. Even though we have little power, we will close down illegal projects, including economically powerful steel, cement, aluminium, and paper factories. And we will ignore the agendas followed by influential officials and companies.

SPIEGEL: Many environmental offenders have fistfuls of cash or are taking advantage of their political connections....

Pan: My agency has always gone against the grain. In the process, there have always been conflicts with the powerful lobbyist groups and strong local governments. But the people, the media, and science are behind us. In fact, the pressure is a motivator for me. Nobody is going to push me off my current course.

SPIEGEL: China lacks a grassroots, environmental movement. So far, the citizens have very little opportunity to stand up against questionable projects. Courts sometimes don't even accept the suits that the people are filing, and voicing opposition is not allowed.

Pan: Political co-determination should be part of any socialist democracy. I want more discussions with the people affected. However, I am not one to put on a show just to look democratic to the outside. We need a law that enables and guarantees public participation, especially when it comes to environmental projects. If it's safe politically to get involved and help the environment, then all sides will benefit. We must try to convince the central leadership of that.

Paper plant starts production amid outcry

(China Daily, 2005-03-28)

Hainan Jinhai Pulp & Paper Co Ltd, a subsidiary of the Indonesian paper making giant, Sinar Mas Group-APP, officially started production Monday, amongst accusations and actions against APP by environment campaigners.

The plant, with a total investment of 9.5 billion yuan (US\$1.15 billion), has an annual capacity of 1 million tons of pulp, the largest of its kind on the Chinese mainland.

"APP is promoting a manufacturing method that combines tree planting, pulp and paper-making together in the industry. Our plant in Hainan Province will play an important role to promote such a chain in China," said Yao Xusheng, chief executive officer of Sinar Mas Group-APP China.

However, its large capacity has initiated the concerns of environmental group Greenpeace.

Zhong Yu, director of the forestry protection division at Greenpeace, told China Daily that APP's Hainan plant needs to consume huge amounts of timber, and the existing eucalyptus forest that APP is planting cannot meet those demands.

Zhong expressed concern that the timber shortage will "unavoidably" result in the illegal logging of ecotypic forests.

Greenpeace has drawn its conclusions based on an on-the-spot investigation in Hainan recently.

Meanwhile, nearly 100 college students in Beijing Monday promised to reject APP products and called on more people to do the same.

"The students have been following media reports saying that APP is involved in damaging forests in China," said student Jia Wenqiang.

Since last November, when Greenpeace criticized an APP project in Southwest China's Yunnan Province, claiming it could damage local forests, there have been frequent media reports questioning APP actions in China.

APP's defence

APP argues it has a complete plan for the long-term supply of the raw materials needed for its production supplies.

"The Hainan provincial government has approved planting 3.5 million mu (233,000 hectares) of eucalyptus trees. We plan to plant 600,000 mu (40,000 hectares) of new trees and log 600,000 mu (40,000 hectares) of grown trees each year."

APP's long-term plans are to maintain 60 per cent of the raw material from the APP forest, 30 per cent from purchases and 10 per cent from imports.

The company promised it will not log a single tree from the ecotypic forest in Hainan.

APP so far carries out two methods to gain trees.

Renting land from local governments and planting trees by themselves and signing contracts to purchase trees from local farmers.

But according to Zhong, mass logging of original roadside trees in Hainan has already taken place along the Chengmai County section of an expressway in the province. Eucalyptus trees will be planted instead and become the raw material for the plant.

"Roadside trees are for public welfare, but eucalyptus trees are solely for commercial purpose," she argued.

Xie Yan with the Chinese Academy of Sciences said roadside trees play an important role in water and oil preservation, while eucalyptus can cause harm to the local ecosystem.

And Wang Rusong, a researcher with the research centre for ecological environment under the Chinese Academy of Sciences, was quoted by the Beijing News as saying that APP's Hainan project has not undergone environmental impact assessment, as required by law.

Wang used to take part in the environment assessment of the project in 1995.



However, Hainan Governor Wei Liucheng said APP has not brought any pollution or deteriorated the natural resources in the province.

"APP has input 2.4 billion yuan (US\$292.68 million) in the environmental protection, accounting for about one third of the total investment in the factory," Wei said at the launch ceremony of the Jinhai plant.

But the governor admitted the planting mechanism in the province needs to be improved.

The planting of eucalyptus has also ignited dispute.

Forestry experts point out that planting eucalyptus alone will influence the diversity of the local plants, and therefore harm the balance of the ecotype.

But APP denies the accusation. Ko Hsiang Shen, an official of APP's pulp and forestry division, said the eucalyptus trees have been growing well with other plants in many countries, and they will grow unhindered on Chinese farm land.

Ko told China Daily that all of APP's forest in China are applying for the certificate of FSC (Forestry Stewardship Council), a certification system that promotes responsible management of the world's forest.

He said the company is expecting to gain the certificate within six months.

Chinese Zoos Ban Feeding Live Animals to Carnivores

(ENS March 16, 2005)

Live horses, calves and oxen will no longer be fed to carnivores in the majority of China's zoos and animal exhibits, at least when visitors are present.

Representatives from 22 of China's 30 animal reserves and zoos meeting Saturday in Kunming agreed that the spectacle of tigers or lions tearing at a live horse has a negative psychological effect on visitors.

Delegates to the meeting signed an agreement that their carnivores will be fed only carcasses or pieces of meat when visitors are watching.

All of the reserves and zoos that ratified the agreement have links to the state. Any facilities that break the pledge will lose their operating licenses.

This lion is in residence at the Beijing Zoo. (Photo credit unknown)



The live animal feedings have been a popular attraction for visitors, but animal welfare groups and parents have been upset by the bloody scenes.

Research on zoo feeding sessions with live prey by teachers and students from four Beijing universities reported by the "South China Morning Post" found that while numbers of visits peaked at feeding times, many visitors were distressed by the sufferings of the prey animals.

The researchers cited an incident in Harbin in northeast Heilongjiang province when a tearful young zoo visitor reacted to a dying ox twitching on the ground after being bitten by more than 10 tigers. "Why hasn't anyone tried to save it? Why is everyone ignoring it?" the child asked his mother.

But some of the reserve and zoo directors who signed the agreement said the new policy would make it harder for them to survive financially.



"If we have no money, it'll be impossible for us to continue," an unnamed park director was quoted by Yunnan media as saying.

Animal protection groups were pleased with the agreement. Zhang Li of the International Fund for Animal Welfare's Chinese branch said, "We welcome the passing of the industry agreement and hope animal welfare protection will also become enshrined in mainland law."

Beijing is revising the 1988 Wild Animal Protection Law to add animal welfare sections, but no date for release of the revisions has been made public.

When the animal parks are not open, feeding of live prey to the lions, tigers, leopards and bears will still be allowed.

China Beyond 2012

China needs to become a leading partner in efforts to 'decarbonize development'

(CICERO, March 3, 2005)

At the UNFCCC's 10th Conference of the Parties (COP-10), which took place from December 6th to 17th in Buenos Aires, Argentina, several delegates made the point that since it was the last session prior to the Kyoto Protocol's entry into force, it must also be the first session of a new chapter devoted to taking action. In the coming decades, nowhere will action be as important as that taken in China. Though it has ratified the Kyoto Protocol, China's status as a developing nation means it is not bound to any quantitative restrictions on its greenhouse gas (GHG) emissions under the Kyoto Protocol's commitment period, from 2008-2012. The Chinese have taken steps to reduce pollution levels, but GHG emissions are still increasing apace, and it remains unclear to what extent they would be willing to take on legislated emissions targets post-2012.

Probably the only way China will take on emissions restrictions is if it can implement clean energy technologies that will allow its economy to keep growing swiftly. However, technology transfer from the developed nations, on an unprecedented scale, is likely the only way to bring about serious cutbacks while preserving economic growth. In this respect, most of the challenge lies with the industrialized nations to agree on a framework to efficiently transfer cleaner energy technologies to the developing world.

Current and future emissions

China's CO₂ emissions, projected to grow by 65% between 2000 and 2010 (Pan 2004), are now the second largest in the world after the US, and bigger than those of the entire European Union (O'Connor et al. 2003). Its emissions increase from 2000 to 2020 will be larger than the total global increase between 1990 and 2001 (Pan 2004). The nation is already the engine of global oil demand growth, and two-thirds of China's energy use is currently supplied by coal, which when burned releases nearly twice as much carbon dioxide per unit of energy as natural gas. Although Chinese policymakers have set the goal of reducing coal use, other polluting sectors are on the rise, such as transportation. Rising incomes and entry to the World Trade Organization are making cars more affordable to the growing number of middle income Chinese. Car sales during the first five months of 2002, for example, were up nearly 40 percent from 2001 (Pew Center 2002). With a per capita income only about one eighth that of the US (at the purchasing power parity exchange rate) and a rate of GDP growth projected around 8 percent in the coming years, energy demand is not likely to slow down anytime soon.

Clean energy and energy efficiency

Nevertheless, China has been implementing coordinated pollution mitigation strategies since the late 1980s, and the country ratified the UNFCCC in 1992. Policies promoting energy conservation and diversification have been implemented, including interest payment rebates, differential interest rates, income tax reductions, and accelerated depreciation for renewable energy investments and purchases of energy conservation equipment. These favourable incentives have had an impact on the growth rate of clean energy. Installed capacity of hydro power increased on average by 8.7% per year from 1995 to 2000, and from 1990 to 2000 13.1 gigawatts (GW) of small thermal power units were established. Twenty-six wind farms have been built and connected to the grid, with installed capacity



increasing from 30 megawatts (MW) in 1994 to 375 MW in 2000. The installed capacity of nuclear power plants in operation totaled 2.1 GW in 2000, with a further 6.6 GW under construction. Altogether the utilization of renewable energy totaled 34 million tons of coal equivalents in 2000 (People's Republic of China 2004).

Energy efficiency in China has also improved considerably. From 1980 to 2000, China's energy intensity went down by an average annual rate of 5.3%. However, it can do better – from 1990 to 2001, the EU produced three times the GDP of China with a net increase in CO₂ of only one-eighth that of China's.

Development and technology transfer

China's number one priority at the moment, understandably, is development, and this is likely to limit the level of pollution mitigation undertaken. However, there is one sector where development and pollution mitigation have complementary goals: residential pollution. A large proportion of households burn coal and biomass for their energy needs, leading to significant indoor pollution, and to high rates of disease, largely in the form of lung and heart conditions. The key to avoiding this source of disease burden and labour productivity loss is in transforming the domestic energy sector, from one based on the combustion of coal and biofuels in small heaters, to one that increasingly uses coal briquettes, natural gas, electricity and renewable energy (Streets 2004).

Since current and planned mitigation measures, in both the industrial and household sectors, will have a small overall impact on emissions growth, the role of technology transfer from the industrialized nations will have to increase exponentially if China is to substantially reduce emissions without compromising its development goals. China will have to be a major partner in attempts to 'decarbonize development' (Pan 2004) through technology transfer, a reality which led a Canadian delegate at COP-10 to state that this process will require a 'technology revolution' (IISD 2004b). In addition, other large developing nations, such as India and Brazil, will also have to be important partners.

Signs that the Chinese will take serious steps to promote technology transfer were evident at COP-10. Delegates from China called for mobilization of funds for technology transfer from developed countries, urged Parties to establish an international mechanism for technology innovation, and pushed for a shift from negotiations and rule-making to implementation and concrete action (IISD 2004a).

Climate Change in China

These calls for action may have something to do with China's first official National Communication on Climate Change, which was presented at COP-10. The document states that the 1990s in China were one of the warmest decades in the 20th century, that warming over the past 100 years has caused mountain glaciers in western China to shrink by 21%, and that future possible impacts include continued shrinking of mountain glaciers, the submersion of parts of South China due to a rise in sea levels, and a net increase in agricultural production costs. Under the scenario where CO₂ concentration in the atmosphere doubles, the single crop season area in China would be reduced by 23%, with an overall decrease for wheat, rice, and maize yield (People's Republic of China 2004).

All of these possibilities pose serious socioeconomic risks for a country with per capita water resources about one fourth the world average, per capita arable land one-third the world average, and an urbanization level beyond 36% in 2000, with the largest cities concentrated near the country's coastal areas.

Post-2012 possibilities

Large scale technology transfer in China will probably only take place within a framework coming into effect after the first commitment period of the Kyoto Protocol. Negotiations for this period are set to begin this year, and they are likely to be highly contentious because the developing nations will not be willing to compromise their development goals. Some post-2012 global climate regime options that were discussed in Buenos Aires, in a side-event by the Fridtjof Nansen Institute, included sectoral targets for developing countries, an expanded scope for Clean Development Mechanism (CDM) projects, and additional eligibility criteria for CDM host countries (see IISD 2004c). An expanded focus on the CDM would be welcome, because new technologies are often part of CDM projects. A future agreement whereby technology transfer is explicitly linked to the CDM could also strengthen the link between development and clean energy.



China to invest US\$157 billion in environmental protection in coming five years

(People's Daily on line, March 30, 2005)

China's investment in environmental protection is expected to reach 1,300 billion yuan during the 11th Five-Year (2006-2010) plan period in line with the country's rapid economic growth, an official at the State Environmental Protection Administration said here on Tuesday.

The investment will account for 1.4 to 1.5 percent of China's GDP, said Chen Bin, deputy director of the administration's financial department, during an international seminar on investing in and financing for environmental protection in China, which opened on Tuesday.

Chen said the Chinese government pays great attention to environmental protection and lists the issue a top priority. The country's investment in the sector stood at 47.6 billion yuan during the seventh Five-Year (1986-1990) plan period and is expected to exceed 700 billion yuan during the tenth Five-Year plan (2001-2005) period, he added.

In the year 2003, China's investment in environmental protection accounted for 1.39 percent of the GDP, according to Chen.

Wang Yuqing, deputy director of the administration, also said at the seminar that in the coming five years the government will focus efforts on ensuring the safety of drinking water for urban and rural citizens, combating the pollution of key rivers and lakes, controlling air pollution in big cities and ameliorate soil pollution.

The one-day seminar was jointly sponsored by the China Environmental Protection Foundation, the United Nations Development Program and the China International center for Economic and Technical Exchange.

Health

Birth defects on rise as China loosens premarital checks

(People's Daily on line, 2005-03-03)

China should amend the marriage registration regulations to reinstate mandatory premarital health checks so as to guarantee the health of newborn babies, according to a proposal submitted to the incoming political consultative session.

"The rate of premarital health checks have plummeted as China ended the mandatory practice in the marriage registration regulations that took effect on Oct. 1, 2003," said Chen Shouyi, a member of the National Committee of the Chinese People's Political consultative Conference (CPPCC) and one of the three sponsors of the proposal, to be tabled to the annual CPPCC National Committee session to begin on Thursday.

This situation has led to a noticeable rise in the rate of birth defects and newborn deaths, which could be spotted in premarital health checks and prevented, acknowledged Chen.

As the rate of premarital health checks dived to 3.1 percent in 2004 from 98 percent in 2001 in Ningbo City in eastern Zhejiang province, the rate of birth defects shot up to 19.56 per thousand births in 2004 from 12.6 percent in 2001, according to relevant statistics of the Chinese Ministry of Health.

Less than 10 percent of the would-be couples underwent premarital health checks nationwide in 2004, with the rate dropping to less than 1 percent in certain regions, noted statistics.

Of the premarital health checks conducted in China each year, venereal disease, hepatitis and other hereditary diseases are found in nearly 3 percent of the checks, said Chen.

Shandong Province, east China, spent more than 500 million yuan (about 60 million US dollars) on the raising the kids classified as congenital deformities and idiocies annually in the mid-1990s. Calculated on this basis, the relevant national spending could amount to tens of billions of yuan. The psychological burden on the part of parents should be even greater.



"It's apparent that the health of the newborn has an impact on the medical burden of the society," said Zhao Suqin, a deputy to the law-making National People's Congress.

Zhao, Chen and another CPPCC National Committee member have proposed amending the marriage registration regulations in a bid to make premarital health checks mandatory. In this proposal, they also appealed for reducing or exempting check charges of the disadvantageous group of people and phasing in free checks across the country.

The service standards of relevant medical workers should also improve so that more people have access to them, says the proposal.

"The marriage registration regulation, which took effect in 2003, is designed to respect individual privacy," acknowledge Chen,"but the rise in the number of birth defects also deserves attention."

WHO names HLA allele identified by Chinese scientist

(People's Daily on line, 2005-03-05)

A new human leukocyte antigen (HLA) allele, identified by Dr. Li Jianping with Liaoning Blood Center in NE China, has been named by the WHO Nomenclature Committee for the HLA System as HLA-A*2451. It is No. AY904343 in the gene database.

Li said the discovery may help to increase the success rates of organ transplants and marrow transplants, and is great news for human immunogenetics science.

HLA is a kind of antigen of the white blood cells. Doctors rely on an HLA antigen system that gauges how well donated tissue matches the patient's immune system. The more HLA matches there are, the greater the success rate of transplants.

The gene sequence Li identified will be reported in the upcoming issues of Tissue Antigens, Human Immunology and the European Journal of Immunogenetics, the WHO committee told Li.

Li found the gene in the blood sample of a young man who donated haematogenous stem cells in Liaoning Province. Further testing is needed to determine whether the identified gene is inherited or a genetic mutation and how many Chinese people carry it, Li said.

By early 2005, scientists have identified 1,013 HLA alleles, 70 percent of which were identified by American scientists and 10 percent by Chinese scientists.

Medical service to be extended to farmers

(People's Daily on line, 2005-03-09)

He Zhonghua, a farmer in central China's Henan Province, was overjoyed to receive 5,000 yuan (approximately 602.4 US dollars) of medical subsidies when he left hospital. It meant the financial burden on the family would be much alleviated.

The benefit comes from a rural medical cooperative system under construction across the country. Under the system, each farmer pays 10 yuan to a medical fund. Correspondingly, the state and local governments each pay 10 yuan to the fund. When a farmer receives medical treatment, he could have a certain proportion of the medical expenses refunded.

"This is a significant project," said Jiang Zhongpu, a member of the National Committee of the Chinese People's Political Consultative Conference (CPPCC), at a meeting during of the committee's annual session being held in Beijing.



He said in the past, rural residents will be dragged into abyss once they get ill. "Illness causes poverty and poverty in turn deprives them of medical service. That land them forever in a vicious circle."

Jiang said the average annual income of a farmer in Henan (a little more than 1,000 yuan) is less than the total medical coverage for an appendectomy, a very ordinary medical operation.

The current medical insurance system in China mainly targets the urban population. Statistics from the Ministry of Health show half of the 900 million rural residents cannot afford medical treatment for various financial reasons.

In 2003, the Chinese government initiated the program to build a rural medical cooperative system in eight years.

A medical assistance system for rural residents is being built across the country. At the end of 2004, 1,003 counties have started to provide medical aid to rural residents out of a pool of fund already amounting to 1.18 billion yuan. The system has benefited 5.49 million rural needy residents.

In north China's port city of Tianjin, the municipal health bureau started to offer farmers free medical checkups from March 2004.

China to continue keep low birthrate: report

(People's Daily on line, 2005-03-07)

China will continue to keep a low birthrate while make efforts to improve the health of newborns in 2005, according to a report on the national economic and social development plan which has been submitted to China's top legislature for approval.

The report says the natural population growth rate should be confined to 7 per thousand in 2005. This figure was set higher than the actual growth rate for last year after taking into consideration several major factors.

"China has a large population, which makes keeping the birthrate low a monumental task," says the report on the implementation of the 2004 plan for national economic and social development and on the 2005 draft plan for national economic and social development, submitted Saturday for approval to the ongoing session of the National People's Congress.

It says more women are now at childbearing age in China, and this will create pressure on the birthrate.

In addition, it is still hard to carry out family planning work among the floating population and it is extremely difficult to maintain a low birthrate in rural areas and in poverty-stricken areas in the central and western regions, says the report.

The report also says continuous efforts will be made to improve prenatal and postnatal care, improve the ability to prevent birth defects and provide better reproductive health services to address the problem of the high rate of birth defects in some areas.

According to the report, the natural population growth rate in China was 5.87 per thousand in 2004.

Chinese scientists conduct HIV vaccine test

(China Daily, 2005-03-14)

China has begun the first phase of testing an HIV vaccine.

Eight volunteers were injected with either an HIV vaccine or a placebo that is free of the virus on Saturday in Nanning, South China's Guangxi Zhuang Autonomous Region, reported Xinhua News Agency.



[A woman volunteer gets a dose of HIV/AIDS vaccine in Nanning, Guangxi Zhuang Autonomous Region on March 12, 2005. \[Xinhua\]](#)

The eight, four men and four women, did not show any unhealthy symptoms during a 50-minute clinical observation after their injections, Xinhua said.

Neither the volunteers nor the doctors knew whether the injections were vaccines or placebo, according to Xinhua. This is a usual practice in clinical tests. AIDS or HIV cannot be caught from the vaccine.

Chen Jie, head of the Guangxi Centre for Disease Control and Prevention, told Xinhua News Agency that 49 healthy and HIV-free volunteers between the ages of 18 and 50 had been selected for the first phase of clinical tests.

The clinical experiment will have three phases, with the first lasting for 14 months, according to Xinhua.

The State Food and Drug Administration approved the first phase test last November. The whole experiment was designed by more than 20 Chinese experts in clinical experiments and vaccines.

One of the volunteers, college student Xiao Chen, told the Beijing Youth Daily the work was honourable and his classmates and teachers all supported him.

But he did not tell his family, concerned they would not understand.

"It is not hopeless, but we are a long way from an effective vaccine," said Ray Yip, director of the Beijing office of the Global AIDS Programme of the United States.

Unlike SARS (severe acute respiratory syndrome) or hepatitis, the HIV virus changes quickly not only in the body of a person but also as it moves from one person to another person, he noted.

Under these circumstances, it is hard for scientists to find a vaccine to curb it, he said.

Over the past few years, dozens of groups of scientists have carried out HIV vaccine experiments both on animals and humans.

However, none has succeeded in finding an effective antibody in any of the volunteers although a lot of money and time has been spent, Yip said.

"China's capability in vaccine research and production is not bad, but it has only taken the first step in the HIV virus vaccine clinical test," he said.

With a population of nearly 1.3 billion, China has an estimated 840,000 HIV carriers.

First human trials of AIDS vaccine launched

(China Daily, 2005-03-13)

China, criticized for a slow initial response to its AIDS/HIV crisis, has begun its first human trials of a new AIDS vaccine, Xinhua news agency said.



Chinese Premier Wen Jiabao and Vice-Premier Wu Yi, who also serves as the health minister, marked World AIDS Day Monday by meeting with AIDS patients at Beijing's Ditan Hospital, December 1, 2003. Wen became the first Chinese premier to shake hands with AIDS patients. China has reported 840,000 HIV/AIDS cases, among which 80,000 were AIDS patients. Despite the low prevalence rate nationally, the epidemic spread to 31 provinces of the country. [Xinhua]

A 20-year-old man became the first volunteer to receive the AIDS vaccine on Saturday, followed by seven others, four of them women, Xinhua said.

Some 49 volunteers aged between 18 and 50 would receive the tests in three phases, the first lasting 14 months.

Experts have faulted China for being slow to recognize a growing AIDS problem, exacerbated by the cover-up of the blood-selling schemes in the central province of Henan that infected scores of people in the mid-1990s.

The government estimates that China, with a 1.3 billion population, has 840,000 people with HIV.

The United Nations has said that the number of HIV/AIDS victims in China could rise to 10 million by 2010 unless serious steps are taken to fight the disease.

On World AIDS Day in 2003, Premier Wen Jiabao shook hands with AIDS patients at a Beijing hospital in a symbolic display of commitment to fighting the disease.

But efforts to step up AIDS prevention remain shackled by conservative attitudes toward sex.

The AIDS virus has infected more than 43 million people worldwide and killed 25 million. The incurable virus spreads through sexual contact, blood products and mothers' milk but can be controlled to some degree with cocktails of drugs called highly active antiretroviral therapy.

The International AIDS Vaccine Initiative has said dozens of potential vaccines are being tested and more than 70 human clinical trials have taken place although none has yet promised to conquer the virus.

Ministry of Health set on drafting regulations for AIDS prevention

(People's Daily on line, 2005-03-14)

The "Regulations for Prevention and Control of AIDS"(draft) is expected to see the light this year, said Shao Yiming, member of the CPPCC, first chief expert of Venereal Diseases and AIDS Prevention and Control Center of China Diseases Prevention and Control Center. The new regulation will be enforced with a distinctive penalty on those being held responsible. Government officials shall be held responsible for the matter should they pay no enough attention to the prevention of the AIDS (acquired immunodeficiency syndrome) and those causing the outspread of the disease shall be condemned to criminal liabilities.

The State Council takes the lead for the drafting of the regulation which is drafted by the Ministry of Health as Shao Yiming introduced. Up to now, the draft has already been brought out and the opinions are being sought for from localities and departments concerned. And it is also hoped that we'll be able to hear more opinions and views from the masses of the people, especially from the groups who are now suffering from the disease.

The relevant regulations of the past and the drafted regulation at present have all made clear the principle of non-discrimination against the AIDS sufferers, he said, the framework regulation is quite good in general. However, there is no particulars about how to mete out punishment should the discrimination be inflicted to an AIDS sufferer and it also lacks of relevant rules and regulations as how an AIDS sufferer can come to maintain his/her own rights when suffered from discrimination.

He hopes that particular clauses and articles be added in for looking into the case should an AIDS sufferer be discriminated so that s/he can have the law to seek for when defending his/her own right. "As there is no law for guaranteeing the right of the AIDS sufferers so far we've seen nobody stand out for maintaining his/her own right."

Shao Yiming said that at present an important factor that restricts the implementation of the policy for the prevention of the AIDS is the shortage of men-power. China is short of a contingent for the prevention and treatment of the AIDS, especially the detachment comprising of the AIDS sufferers and HIV (human immunodeficiency virus) carriers. Therefore, we have to resort to the law for maintaining their rights and benefits. "Those who care most of the AIDS disease are the AIDS sufferers and so they should be given the arms of the law" said Shao Yiming, member of the National People's Political Consultative Conference.

China plans database of HIV/AIDS victims

(China Daily, 2005-03-21)

China plans to set up a national database containing the records of its HIV/AIDS victims in a bid to get a better grip of the extent of the epidemic.



The Ministry of Health had vowed to establish the database, with entries for every reported HIV/AIDS patient, the Xinhua news agency reported.

"One question is that we are still blind about some vital aspects of HIV/AIDS control," said Wang Longde, vice-minister of health.

[An AIDS billboard in Beijing. China plans to set up a national database containing the records of its HIV/AIDS victims in a bid to get a better grip of the extent of the epidemic. \[AFP/file\]](#)

China has an estimated 840,000 HIV carriers -- a figure disputed by many independent observers -- and the government has precise knowledge of only a small percentage even of that conservative number of patients.

A mere 12.7 percent were registered with the health authorities, and disease control centers only had detailed records of 4.2 percent, according to Xinhua.

The draft of China's first HIV/AIDS prevention and control regulation had almost been completed and would be given to the State Council for further discussion this May, the agency said.

The regulation would mainly set out the rights and duties of regional governments and residents in controlling the deadly disease, according to Xinhua.

To identify more HIV/AIDS cases, every province would offer free, voluntary tests for the HIV virus this year, Wang said.

In a sign of future policies, southwestern Yunnan province, one of the most seriously affected areas of the country, recently finished testing 410,000 high-risk people.



While China is groping in the dark as it tries to cope with its looming AIDS disaster, it is also hampered by a lack of resources.

Hao Yang, vice-director of the health ministry's Disease Control Department, told Xinhua there were only about 200 professional health workers engaged in HIV/AIDS treatment and prevention at the moment.

Many doctors who are employed in this field have not been well trained in taking care of HIV/AIDS patients, he said.

The United Nations has predicted 10 million cases in China in five years' time if the epidemic goes unchecked.

HIV/AIDS is already moving from high-risk groups to the general public in China, the coalition said.

The primary transmission route in China is through drug injection, but the proportion of sexually transmitted HIV infections and mother-to-child transmissions has rapidly increased in recent years.

Many others were infected through insanitary blood-buying schemes in the early 1990s.

Kunming orders AIDS tests for some services

(China Daily, 2005-03-22)

Kunming, capital city of southwest China's Yunnan Province, will require annual AIDS tests for people working in hotels, nightclubs and other entertainment outlets, according to a Xinhua News Agency report on Monday.

Under the new rules, announced Monday and effective immediately, those testing positive will be fired, Xinhua said, citing the text of the regulation.

But Wang Yinsheng, an official with the Yunnan AIDS Prevention Center, said health authorities wouldn't insist that those found to be infected be fired. They could instead be moved to jobs not involving contact with the public, he suggested.

The free tests are meant to identify people with HIV and AIDS in order to provide them with treatment and curb the disease's spread, said Wang.

"Identifying this special group of people helps to reduce the chance of spreading and helps them to get timely treatment," Wang said.

Those who test positive for HIV/AIDS or for venereal diseases would be denied a certificate of good health, without which they cannot legally work in the hospitality or service industries, Xinhua said.

Employees of hotels, bath houses, beauty salons, night clubs and other entertainment venues are covered by the rules, which appeared to be an implicit official recognition of the role such facilities play in the country's illegal sex industry.

Bordering on Southeast Asia's drug-producing Golden Triangle, Yunnan has China's second largest population of registered AIDS sufferers — 18,000 according to official figures. The province has taken some of the country's most aggressive measures, including promoting condom use and clean needles and setting up AIDS centers.

Most of the 1 million people infected with HIV/AIDS in China became so through intravenous drug use, although insanitary blood-buying schemes mainly in the central province of Henan — the worst affected area — accounted for large numbers as well.

Henan has also mandated AIDS tests for people in service industries.

China for years hid its AIDS outbreak but has become increasingly open amid warnings the disease is spreading from high-risk groups to the general population.

The U.N. AIDS agency says the number of infected people in China could rise to 10 million by 2010 unless urgent action is taken.



Since last year, health officials have offered a free AIDS test to anyone who wants one and free treatment for the poor. Health officials are also now encouraging pregnant women to be tested.

Despite the new openness, infection still carries a heavy stigma. Few AIDS sufferers have gone public and entire villagers have been shunned after residents were found to have contracted the disease.

Search for regular and willing blood donors

(China Daily, 2005-03-16)

A nationwide drive to establish teams of regular voluntary blood donors highlights the desire for a safer and more reliable blood supply.

A regular voluntary donor is someone who gives blood at least twice a year and can be reached in an emergency, instead of just disappearing after a one-off donation, said Yi Mei, director of the Division of Blood Management at the Ministry of Health.



[Border security troops donate blood in Wenzhou, East China's Zhejiang Province, March 14, 2005. \[newsphoto\]](#)

"It is the key to solve problems such as temporary shortages in the clinical blood supply, planned voluntary donation and blood sale," Yi noted.

In China, blood donated by volunteers accounted for 91.3 per cent of total clinical blood consumption in 2004. The remainder still depends on people asking for payment for their blood.

While 71.5 per cent of the blood is given by volunteers who go to donation sites on their own, nearly 20 per cent is given by groups organized by employers planned voluntary donation.

China's goal is to gradually phase out blood selling within three years, Yi said.

"But it is not good for us to totally depend on people who freely and casually donate their blood; a comparatively steady team must be selected from these volunteers," said Ge Jinglan, spokeswoman of the Beijing Blood Centre.

Many cities, such as Beijing, still do not have such teams, and mainly depend on voluntary donation on the street, mostly done by university students, migrants and local residents who suddenly want to donate as they are shopping or taking a walk.

However, as university students and migrants go back home and local residents prefer to travel during holidays such as Spring Festival, these cities usually face a blood shortage.



This happened in Beijing, Nanjing, Guangzhou and many other cities during the Lunar New Year holiday this year, which started on February 9.

Several of China's regions and cities have set up such teams and 100 per cent of their blood is provided by volunteers.

For example, Taiyuan, capital city of Shanxi Province, has organized a team of more than 20,000 volunteers who have each donated blood three times and at least once annually.

The team has played a vital role in ensuring the clinical blood supply. A great advantage of such a team is that they can be contacted if hospitals need a large quantity of blood, such as if there is a large accident, said Xu Hong, spokeswoman of the Taiyuan Blood Centre.

Xu was echoed by Ge who says Beijing, which only has a team of about 240 volunteers who can donate blood of a rare type, will make a great effort in the future to organize a large and loyal donation team from amongst ordinary donors.

Beijing is organizing experts to draft an emergency plan on how to ensure enough blood storage and supply including various rare types during the 2008 Olympic Games period when thousands of people from different countries will travel to the city, Ge noted.

In China, there is a big obstacle to establishing regular donation teams as people often misunderstand blood donation.

"Many people believe that if you lose a drop of blood you cannot replenish it even if you eat 10 chickens," said Ge, adding that people may be brave enough to donate once, but no more.

"However, blood donation even makes me more energetic and younger than ever," said Yu Jinzhao, a Beijing-based 54-year-old civil servant who has donated blood 63 times.

He says that it is a pity the Law of Blood Donation says that people who are over 55 are not allowed to donate, meaning he will have to stop donating in June.

Blood selling has been a cause of the spread of HIV/AIDS in many rural areas of Henan, Shanxi and other provinces since the early 1990s as many farmers rushed to sell blood to illegal blood stations without any testing measures.

Fortunately, all these illegal blood stations were closed at the end of the 1990s, and now all blood, however donated, must pass tests for various viruses, including HIV.

In Central China's Henan, all blood in hospitals is now donated by volunteers.

Black lung disease claims 140,000 lives in China

(People's Daily Online, March 18, 2005)

The black lung disease has claimed 140,000 lives in the Chinese mainland since the occupational disease report system was founded in 1950s, revealed vice Health Minister Jiang Zuojun at a televised conference for prevention and treatment of occupational diseases held in Beijing March 17.

A total of 580, 000 black lung cases have been reported in China so far, and there are 440, 000 people suffering from black lung disease at present. The number of black lung case is increasing roughly 10,000 annually. In addition, China reports nearly 30, 000 poison cases relating to occupation and use of pesticide in production. About 1,500 people die from poison.

Jiang acknowledged the occupational disease has grown so rampant in some areas that "black lung village" and "poison village" have emerged. Many laborers have become impoverished due to the disease. Moreover inappropriate settlement of disputes over occupational diseases has led to incidents that influence social harmony and stability, including blockade of road, strike, demonstration, and group appeal to higher authority for help. Occupational disease has become a grave problem that harms public health and social stability.



To strengthen prevention and treatment of occupational diseases, the Chinese government has adopted occupational health review system for construction projects; imposed strict approval for aptitude of service departments for occupational health; rectified diagnosis and appraisal for occupational disease. j i j i j i j

The Health Ministry has decided to launch a publicity week with feature "Safeguard laborer's health by prevention of occupational diseases", in which consultation regarding prevention and treatment of occupational disease will be offered to laborers free of charge.

Third Military Medical University develops fast diagnosis reagent box for SARS

(People's Daily Online, March 20, 2005)

The Institute of Respiratory Diseases of the Xinqiao Hospital, the Third Military Medical College has recently developed a "fast diagnosis reagent box for SARS virus", in [Chongqing](#). The relevant experts in Chongqing said recently after assessment on the reagent box that the diagnosis reagent box for SARS virus can complete the whole process of measuring SARS virus within three hours.

According to experts' introduction, prior to the development of the reagent box the SARS virus was measured by the serum blood detection method, which is limited by antigen production capacity. So that is only suitable for the suspected patients with symptom or patients for their observation and diagnosis. And that is not suitable for large-scale clinical application and for diagnosing suspected patients in initiative stage. The successful development of the reagent box makes up for the insufficiency of the serum blood detection method.

So far the reagent box has not been applied to challenge virus detection. However, it can be ascertained according to its extra high detection rate against cloning virus. The research result can play an important part in the control and early detection of SARS epidemic situation.



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.