



## Research and Environment News from China

August 14 - August 2005

Please note that the previous newsletters can be downloaded from the Website of the Embassy of Switzerland in China: [www.eda.admin.ch/beijing](http://www.eda.admin.ch/beijing). To subscribe/ unsubscribe or send us your comments, please send an eMail with the corresponding subject to [ziwen.zhu@eda.admin.ch](mailto:ziwen.zhu@eda.admin.ch).

### Introduction

In the past few months, it seems China is boosting the application of laws and organization to ensure environment and health protection. This month, a **draft law on animal welfare** ensures animals rights, for example being free from hunger and misery. However, this law has a much broader impact on environment and health protection since it also includes diseases and scare prevention.

A few months ago, it was a draft law on electronic waste. The good news is that SECO just launched a project, the second phase of "**Knowledge Partnerships in e-Waste Recycling**", in South Africa, India and China. In China, it will indeed cover legal and organizational issues. The project is run by EMPA and on the eWaste topic EMPA will also cooperate with another SECO-financed project, "Environmental footprint".

Again on the topic of environmental protection law, the Environment and Resources Protection Committee of National People's Congress is organizing an "**International Forum on Environmental Legislation and Sustainable Development**" from 20 and 22 November and hopes Swiss participation.

A few months ago, a very controversial initiative has been taken to implement the calculation of the "green GDB". The city of Beijing is indeed starting to calculate its 2004 development.

In the field of science and technology, China this month distinguished itself about **supercomputers, fuel cell** technology, **transgenic cotton, mathematics, anti-tumor drug**.

### Science & Technology

### KEYWORDS

- |                                                                                        |                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 1. China to develop basic conditions in science and technology                         | <i>organizational structure</i>                                           |
| 2. China's fuel cell technology advanced in the world                                  | <i>fuel cell technology</i>                                               |
| 3. China discovers two new human genes                                                 | <i>new HLA alleles</i>                                                    |
| 4. China joins global race for fastest computers                                       | <i>supercomputers</i>                                                     |
| 5. China creates digital dummy for medical research                                    | <i>digital dummy</i>                                                      |
| 6. Chromosome Abnormality Discovered                                                   | <i>chromosomal<br/>abnormality karyotype</i>                              |
| 7. New Test for Pig-borne Illness                                                      | <i>swine fever test</i>                                                   |
| 8. New Virtual Human Born in Guangzhou                                                 | <i>virtual man</i>                                                        |
| 9. Chen Zhiming invited to lecture at 2006<br>International Congress of Mathematicians | <i>Prof. Chen Zhiming numerical<br/>analysis and scientific computing</i> |
| 10. Chinese Calendars Reveal Ancient Science                                           | <i>the Season-granting calendar,<br/>Reforming</i>                        |



- 11. **China to select new national key labs** *labs national key labs*
- 12. **China leads world in transgenic cotton industrialization** *transgenic cotton*

## Environment

## KEYWORDS

- 1. **Energy efficiency stressed** *energy efficiency*
- 2. **Rooftop plan for solar power production** *solar energy*
- 3. **China's annual gas consumption to reach 100 bln cubic meters in next five years** *gas consumption*
- 4. **300 million kw water energy in China ready for exploitation** *water energy*
- 5. **China targets waste to sustain growth pace** *sustain growth*  
*restrain waste resources*
- 6. **China Enacts Law for Animal Welfare** *animal welfare law*
- 7. **Animal Husbandry Draft Law Deliberated** *animal law*
- 8. **Local Gov't Cleans up E-waste Sector** *E-waste*
- 9. **Guangdong Air Quality Takes Turn for Better** *air quality, Guangzhou*
- 10. **Environmental Agencies to Be Put Under Stricter Control** *environmental*  
*assessment agencies*
- 11. **New Rules to Reinforce Environmental Assessment Work** *environmental assessment*
- 12. **Foreign Investors Eye China's Water Sector** *Siemens, Ford, foreign inv.*
- 13. **Beijing Starts Trial Calculation of Green GDP** *Green GDP*
- 14. **New air conditioner to put electricity demand on ice** *air conditioner, ice*
- 15. **Chinese Vice-Premier: China hopes to boost renewable energy cooperation with Spain** *renewable energy cooperation*
- 16. **Guangzhou oil supply 'returning to normal'** *oil supply*
- 17. **China to Build 1st Offshore Wind Power Plant** *wind power*

## Health

## KEYWORDS

- 1. **China starts producing pig-borne disease vaccine** *pig-borne disease vaccine*
- 2. **Anthrax outbreak under control** *anthrax*
- 3. **Successful Development of Iodine [131 I] Mituxan, a New Drug for Tumor Therapy** *tumor new drug*
- 4. **Chromosome abnormality discovered** *chromosomal abnormality*



*karyotype*

**5. Rural kids 'need better healthcare'**

*rural healthcare*

**6. Family planning policy saves China 300 mln births**

*population, family planning*

**Activites coming up soon**

September 8, 2005
<b>Forum on Development of Traditional Chinese Medicine (TCM)</b>
Venue: Beijing Friendship Hotel, Beijing, China
Contact: Ms. Liu Jinlan
Tel: 88135480 Fax:88123280 Mobile: 1312 132 8769
September 14-16, 2005
<b>Water &amp; Membrane China (Beijing) 2005</b>
Venue: China World Trade Center, Beijing, China
Contact: Ms. Elaine PAN / Mr. Julius ZHU
Tel: 86-10-64433465 Fax: 86-10-64433465
E-mail: <a href="mailto:2000@membranes.com.cn">2000@membranes.com.cn</a>
September 25-29, 2005
<b>7<sup>th</sup> World Congress on 3R (with Exhibition)</b>
Venue: Beijing Friendship Hotel, Beijing, China
Contact: Prof.Dr.Huizhou Liu
Tel: 86-10-62554264 Fax : 86-10-62561822
Email : <a href="mailto:hzliu@home.ipe.ac.cn">hzliu@home.ipe.ac.cn</a>
September 26-28, 2005
<b>The 2<sup>nd</sup> Internatinal Conference and Exposition on the Modernization fo Traditional Chinese Medicine</b>
Venue: Chengdu International Exhibition Center, Sichuan, China
Tel : 028—86723142, 867 28520 Fax: 028—86728520, 866 69940
Email: <a href="mailto:kwsfc@sichuan.net.cn">kwsfc@sichuan.net.cn</a>
<a href="http://www.icetcm.com/en/index.aspx">http://www.icetcm.com/en/index.aspx</a>
November 1-4, 2005
<b>INTERNATIONAL CONFERENCE ON CIRCULAR ECONOMY AND REGIONAL SUSTAINABLE DEVELOPMENT</b>
Venue: Xizi Guest Hotel, Hangzhou
Contact : Mr. Bing Zhu International Coordinator Secretariat of 2005CERSD
Tel: 0571-85106941 Fax: 0571-85172009
Email: <a href="mailto:2005cersd@163.com">2005cersd@163.com</a> <a href="http://www.2005cersd.org.cn">http://www.2005cersd.org.cn</a>
November 7-8, 2005
<b>Beijing International Renewable Energy Conference 2005</b>
Venue: The Great Hall of the People, Beijing
Contact: Mr. Mu Xiongbing, Mr. Wan Qian (for Government Delegations)
Tel: 0086-10-51665898 or 68501341 Fax: 0086-10-84064862 or 68501971



Email: <a href="mailto:apecsmesa@vip.163.com">apecsmesa@vip.163.com</a> , <a href="mailto:wangwh@mx.cei.gov.cn">wangwh@mx.cei.gov.cn</a>
Contact: Qin Haiyan and Wang Zhongying (for others)
Web: <a href="http://www.birec2005.cn">www.birec2005.cn</a>
Email: <a href="mailto:birec2005@birec2005.cn">birec2005@birec2005.cn</a>
Tel: 0086-10-64228218 or 62180145 Fax: 0086-10-64428215 or 62180142
November 8 -11, 2005
<b>World Recycling – Shanghai’ 05</b>
<b>International Conference &amp; Exhibition on Car, Electronics &amp; Battery Recycling</b>
Venue: Hotel Shangri-La, Pudong
Contact: Ms. Jeanette Duttlinger
Tel: +41 62 785 10 00 Fax: +41 62 785 10 05
Email: <a href="mailto:info@icm.ch">info@icm.ch</a> Website: <a href="http://www.icm.ch">www.icm.ch</a>
November 20-22, 2005
<b>2005 international forum for environmental legislation and sustainable development</b>
Venue: Friendship Hotel, Beijing
Contact: Mr. Liu Jin Mr. Ge Chen Miss. Zhao Aihua
Tel: +0086-(10)-65257203, +0086-(10)-65257204 Fax: +0086-(10)-65257215
Email: <a href="mailto:zxem@npc.gov.cn">zxem@npc.gov.cn</a>
June 28-30, 2006
<b>Wind Power Asia 2006- The 3<sup>rd</sup> Asian Wind Power Exhibition and Conference</b>
Venue: China World Trade Centre, Beijing, China
Tel: 86-10-68360959, 68360575 Fax: 86-10-68360949
Email: <a href="mailto:marcowang@unique-expo.com">marcowang@unique-expo.com</a>
April 28 - 30, 2006
<b>The 7<sup>th</sup> China International Environmental Protection Exhibition and Hi-New Technologies Conference</b>
Venue: Shanghai International Exhibition Center
Tel: 021-54592323 Fax: 021- 54253480
Email: <a href="mailto:zmes@zhongmao.com.cn">zmes@zhongmao.com.cn</a>
Contact: Mr.Jiang Zhiyou 13370228868
January 15-16, 2007
<b>The 4th International Workshop on Energy and Environment of Residential Buildings (IWEERB 2007)</b>
Venue: Harbin Institute of Technology
Contact: Mr.Zhi Weiluo
Tel: 86-0451-898 60889 Fax: 86-0451-8628 2123
E-mail: <a href="mailto:iweerb2007@hit.edu.cn">iweerb2007@hit.edu.cn</a>

**Environment-related international tenders and investment opportunities:**

[english.cepi.com.cn/homepage/homepage.jsp](http://english.cepi.com.cn/homepage/homepage.jsp)



## Contact

### Patrick Freymond

Counsellor, Head of Science, Technology, Environment, Health, Project Financing

Embassy of Switzerland in the People's Republic of China

Tel +86 10 6532 2736 ext 311

eMail: [patrick.freymond@eda.admin.ch](mailto:patrick.freymond@eda.admin.ch)

[www.eda.admin.ch/beijing](http://www.eda.admin.ch/beijing)

## Science & Technology

### China to develop basic conditions in science and technology

(People's Daily on line, 2005-07-29)

According to Chinese Ministry of Science and Technology, China will, with resource sharing as the core, speed up building four platforms of basic conditions to effectively support the scientific progress and independent innovation of the entire society.

The four platforms are:

Platform for the sharing of research base and laboratory and large equipment

Integrate the scientific equipment with a unit value of 500, 000 yuan and a total value of 1.5 billion yuan to form a nationwide sharing network; while based on the existent advantageous resources, establish several centers of large scientific equipment in the fields of life science, material science and resource and environment; based on existent national, departmental and local laboratories, establish a group of key laboratories in important basic disciplines and some pioneering disciplines.

Platform for sharing natural science resources

Strengthen efforts in creating conditions for sharing the plant germplasm resources to put in place a new mechanism to realize the sharing of 450,000 kinds of plant germplasm resources; integrate the germ, fungus and virus which have scientific importance and are of practical and potential value for research and application. Plus, such a platform also includes building a sharing system of human genetic resources, animal germplasm resources, specimen resources, experimental animal genetic resource and experimental cell database, etc.

Platform for sharing scientific data

Put in place and improve ten-odd national scientific data sharing centers on meteorology, survey and mapping, seism, water resources, agriculture, forestry, ocean, land resources, geology and mineral resources as well as earth observation; in scientific and technological fields in which the data are under scattered management, build 11 scientific data sharing networks.

Platform for sharing scientific and technological literature

It includes a information back-up system for books in science and technology and a sharing system for patent literature.

Moreover, in order to accelerate the construction platform of the national basic conditions, the Ministry of Science and Technology, the National Development and Reform Commission, the Ministry of Finance and the Ministry of Education have issued a document on opinions on the its implementation in the Eleventh Five-Year Plan Period (2006-2010).

### China's fuel cell technology advanced in the world

(People's Daily on line, 2005-08-02)

Zhang Huamin, research fellow at Dalian Institute of Chemical Physics, CAS, said recently China has made many breakthroughs in recent years on the innovation of key fuel cell materials and technologies and has joined the rank of countries advanced in this respect.



According to Zhang, in future energy systems centered on hydrogen, fuel cells using hydrogen as fuel would no doubt be the key.

Zhang said the Chinese government places great importance on the research and development of fuel cells. In recent years China has developed 100-watt level to 30-kilowatt level hydrogen-oxygen fuel electrodes and fuel cell electric cars etc. Fuel cell technologies, particularly the proton exchange membrane fuel cell (PEMFC) technology, achieved fast progress, having developed PEMFC batteries of many specifications such as those of 60-kilowatt and 75 kilowatt.

China also developed fuel cell engines with a net output of 40 kilowatt for electric sedans and of 100 kilowatt for urban passenger cars, making China's fuel cell technology one of the most advanced in the world.

### **China discovers two new human genes**

(People's Daily on line, 2005-08-05)

Beijing Blood Center has recently discovered two new HLA alleles, which have received official names from the HLA naming committee of the World Health Organization. The discovery may contribute to raising the survival rates of human marrow and organ transplantation, experts say.

The discovery is a result of years of studies and analysis on tens of thousands of samples by the HLA office of the blood center, which has entered the world largest Gene Bank, according to a person in charge from the center.

One of the most varied human heredity systems, HLA plays a certain role in disease occurrence, diagnosis and treatment, especially in marrow and organ transplantation.

### **China joins global race for fastest computers**

(New York Times, 2005-08-18)

SAN FRANCISCO A global race is under way to reach the next milestone in the performance of supercomputers, many times faster than today's most powerful machines.

And beyond the customary rivalry in the field between the United States and Japan, there is a new entrant - China - eager to showcase its arrival as an economic powerhouse.

The new supercomputers will not be in use until the end of the decade at the earliest, but they are increasingly being viewed as crucial investments for progress in science, advanced technologies and national security.

Once the exclusive territory of nuclear-weapons designers and code breakers, ultrafast machines are increasingly being used in everyday product design. Procter & Gamble used a supercomputer to study the airflow over its Pringles potato chips to help stop them from fluttering off the company's assembly lines.

Today, driven by advances in so-called parallel computing - with software making it possible to lash together arrays of tens and even hundreds of thousands of processors - the speed of future supercomputers is limited only by cost, adequate electricity and the ability to cool the systems, which now sprawl over thousands of square feet.

China has 19 supercomputers ranked among the 500 fastest machines, and recent reports in Chinese newspapers stressed the importance of developing high-performance computing technology not dependent on the United States.

"It's becoming an issue of national pride," said Steve Wallach, a supercomputer designer who is a vice president at Chiaro Networks, a technology provider for high-performance computing. "That's where the Japanese are coming from, and now the Chinese want to be viewed as a tier-one country in every respect."

Indeed, in recent weeks there have been reports that both the Japanese and Chinese are planning new investments in breaking the petaflop-computing barrier. A petaflop is a measure of computing performance that describes the ability to perform 1,000 trillion mathematical operations per second.

"Everyone appears to be in the race for a petaflop," said Jack Dongarra, a computer scientist at the University of Tennessee who maintains a list of the world's fastest computers.



Currently the world's fastest computer is a machine installed at Lawrence Livermore National Laboratory late last year - and still growing - that has reached more than 136 trillion operations per second, or 100,000 times the speed of a fast desktop personal computer. International Business Machines built the machine, known as BlueGene/L, and plans to double its speed before the end of the year. Only small amounts of research funds have been spent so far on designing a petaflop supercomputer, an accomplishment that Japanese and American experts believe will cost nearly \$1 billion to achieve.

In the United States, Cray, IBM and Sun Microsystems have begun work toward reaching a petaflop by the end of the decade, supported by a Pentagon-financed development project.

The project, the High Productivity Computer Systems program of the Defense Advanced Research Projects Agency, or Darpa, was begun in 2003 with about \$150 million. It was one of a series of U.S. responses to the emergence of a Japanese supercomputer - the Earth Simulator, intended for climate research - as the world's fastest in 2002, displacing America for the first time.

With significant government financial support, IBM, Cray and Silicon Graphics all built new massively parallel supercomputers, enabling the United States to recapture world leadership. As a result, in the most recent ranking of the world's 500 fastest computers, released in June, the United States holds the top three positions. The Earth Simulator has fallen to fourth place, with about one-fourth the computing speed of the new leader.

Some executives say they believe the United States is well positioned to stay dominant in computing technologies. "There is a lot less angst in the U.S. than there was previously," said David Turek, vice president for deep computing at IBM. "We're not asleep at the switch."

But the fastest American machines are used primarily for military applications at U.S. weapons laboratories. Scientists and many technology executives in the United States are concerned about losing out in crucial markets like oil and gas exploration and automobile design and manufacturing unless they, too, have access to the fastest supercomputers.

Not all supercomputer experts are convinced that having the world's fastest computer is essential to American competitiveness. "IBM and Cray are doing a good job of insuring that the U.S. remains competitive in the high-performance computing market," said Gordon Bell, a Microsoft researcher who is a computer industry pioneer and a former government official.

But in April, the Japanese Automobile Manufacturers Association reported that the Earth Simulator had been used by automotive engineers in greatly increasing the speed and resolution of car-crash simulations, potentially offering a significant reduction in development time for new car models.

That has alarmed some American industry executives, who argue that high-performance computing is now decisive in industrial competitiveness.

Last month in China, Lenovo Group, which last year announced the purchase of IBM's personal computer business, said it would take part in a Chinese effort to build a petaflop machine by 2010 as part of a five-year government plan to advance the country's computer technology. Two other Chinese companies, Dawning and Galactic Computer, have also indicated they intend to develop petaflop-scale systems.

And already there is discussion of frontiers beyond a petaflop.

The Japanese computer maker Fujitsu said last month that it planned a three-petaflop computer, and the director of the Earth Simulator told Nature magazine last week that he was planning an inexpensive and innovative modification to that machine that would give it power equivalent to a 16-petaflop conventional computer.

"These machines can be used to answer questions that literally will mean the life or death of humanity," said Peter Freeman, assistant director for computer and information sciences and engineering for the National Science Foundation. "Currently the data the United States has at its disposal is not as good as what the Japanese have. It's a national strategy question."



## China creates digital dummy for medical research

(People's Daily on line, 2005-08-10)

Chinese scientists have created the first Chinese male digital dummy, based on data about young a deceased male, to facilitate medical research and research in many other fields.

"Before operating on the patients, the doctor may first operate on the digital dummy to observe the effects. The doctor may also make the dummy take pills first before prescribing them to the patients," said Zhong Shizhen, an academician of the Chinese Academy of Engineering (CAE) and head of the Chinese male dummy research team.

The research program is based in the First Military Medical University in Guangzhou, south China's Guangdong Province, which also hosted the research on the first Chinese female digital dummy several years ago.

Zhong, known as the father of China's clinical anatomy, said the digital dummy is visible and adjustable on computer screens. Even blood vessels of the dummy can be seen distinctly, making the dummy superior to its counterparts in the United States and the Republic of Korea.

The technology is useful for research in medicine, space technology, garment making and the military, he said.

The dummy is modeled on a male who died at the age of 28 of no infectious disease or metabolic disorder.

China created the first Chinese female digital dummy in 2003 in the First Military Medical University, making it the third country in the world to have created digital dummies modeled on their own people after the United States and the Republic of Korea.

So far, China has created 10 digital dummies.

## Chromosome Abnormality Discovered

(China Daily August 15, 2005)

The third and thirteenth chromosomes of a 29-year-old man, surnamed Yang, were recently confirmed to be the world's first reported chromosomal abnormality karyotype, according to the National Medical Genetics Key Laboratory in Changchun, capital city of northeast China's Jilin Province.

The chromosome karyotype, the world's first known case of balanced translocation of the third and thirteenth chromosomes, has been listed in the database of China human chromosomal abnormality karyotypes, according to Changchun Maternity Hospital.

Experts say that the discovery of this new chromosomal abnormality karyotype not only enriches the world's chromosome data bank, but is also very helpful to the study of hereditary improvement of the human race, and useful in the clinical studies of genetics.

Yang's wife was pregnant twice, but unfortunately twice suffered a miscarriage within the first two months of pregnancy.

Medical tests showed that Yang's third and thirteenth chromosomes are different from those of normal people.

"The two chromosomes set off a balanced translocation, which means that the two chromosomes became fractured, and they have changed to become two totally new chromosomes after their natural reconstruction," said Du Wei, doctor from Changchun Maternity Hospital's Cytogenetics Lab.

Since there was no record on balanced translocation of human's third and thirteenth chromosomes at home or abroad, the hospital sent Yang's cell sample to the National Medical Genetics Key Laboratory for verification.

Since the quantity of the chromosome has not changed, Yang is no different in appearance, personality or intelligence from a normal human.

However, the couple only have a one in eighteen chance of having a healthy child through regular pregnancy, and the child in turn has a one in eighteen chance of inheriting the chromosomal abnormality.



"A method to treat this kind of disease is still under investigation." Du added.

According to Du, chromosomal abnormality karyotype may be inherited from the parents, or caused by long-term exposure to chemicals, radioactive material or a biological virus.

Yang was found to have no experience of such exposures, leaving inheritance as the only explanation. However, tests on his parents' chromosomes have yet to be conducted.

### **New Test for Pig-borne Illness**

(CCTV August 2, 2005)

The Chinese Academy of Inspection and Quarantine has developed a high-speed test to screen pigs for swine fever.

The new test delivers results in just four hours, and is expected to be in use nationwide within the week.

The test is dubbed multiple polymerase chain reaction, or PCR, and its makers say it can screen pigs accurately and conveniently.

Compared with other testing methods, which can take up to four days and sometimes fail to detect bacteria, multiple PCR is a considerable achievement.

It can find all strains of streptococcus suis, the virus causing the illness, in a pig in four hours. The academy will establish training workshops in a few days.

PCR is commonly used in labs to diagnose infectious diseases.

### **New Virtual Human Born in Guangzhou**

(Shenzhen Daily August 9, 2005)

The Southern Medical University has recently established the data bank of a virtual man, the fourth virtual human born at the university.

Virtual humans are three-dimensional anatomical and dynamic physiological models of the human body to investigate a wide range of biological and physical responses to various stimuli.

Zhong Shizhen, dean of the university's clinical anatomy school, said the virtual man, dubbed "No. 1 Male of Chinese Virtual Humans," was the best example in the world, due to the amount of data and the resolution of the images.

The university, formerly the First Military Medical University, created a virtual woman in February 2003 to make China the third country to have a native virtual human, after the United States and Russia.

The university created another virtual man and a virtual baby girl soon after.

The latest virtual man was created on the basis of the data from a man who died in 2002. The man, from Hunan Province, had volunteered to donate his body for medical research.

The body was cut into pieces 0.2 millimeters thick by fine cutting knives. Every piece was photographed and the data was put into computer to create three-dimensional images.

China is at a preliminary stage of virtual human research. Software can be developed to apply virtual human data to teaching, medical care, aviation, scientific research, movie and television and military. Virtual humans can make medical experiments easier because they have the same biological data as humans.



## **Chen Zhiming invited to lecture at 2006 International Congress of Mathematicians**

(CAS, 2005-8-16)

Prof. Chen Zhiming, a mathematician of the CAS Academy of Mathematics and Systems Science (AMSS), has been invited to make a 45-minute lecture on his work in the field of numerical analysis and scientific computing at the International Congress of Mathematicians (ICM) in Madrid, in August 2006.

Held every four years, the ICM brings together mathematicians from all over the world to discuss the latest developments in all areas of mathematics. The Fields Medals, which many consider the equivalent of the Nobel Prize in mathematics, are presented at the ICM meetings. An ICM invitation is one of the most significant recognitions of a mathematician's work.

In recent years, Prof. Chen has been focused on systematic and in-depth studies on adaptive finite element methods for nonlinear partial differential equations and multi-scale computation of flow transport in heterogeneous porous media. Some of his significant achievements in the fields are a posteriori error analysis of elliptic variational inequalities, adaptive finite element methods for nonlinear convection-dominated diffusion equation, adaptive PML technique for electromagnetic scattering problems, and the upscaling of well singularities in the flow transport through heterogeneous porous media.

After receiving his PhD from the Institute of Mathematics, University of Augsburg in Germany in 1992, Prof. Chen joined CAS in 1994. Now he is the principal investigator of a National Basic Research Project on high performance scientific computing, and serves as executive vice director of the AMSS Institute of Computation Mathematics. Some of the awards and honors Prof. Chen received recently include the CAS Bairen Award (a prestigious prize of CAS to recruit outstanding research professionals ) in 1999, the Outstanding Young Scientist Award from the National Natural Science Foundation of China in 2000, and Feng Kang Scientific Computing Prize in 2001.

## **Chinese Calendars Reveal Ancient Science**

(China Daily August 3, 2005)

<http://www.china.org.cn/english/scitech/137245.htm>

## **China to select new national key labs**

(People's Daily on line, 2005-08-15)

[http://english.people.com.cn/200508/15/eng20050815\\_202592.html](http://english.people.com.cn/200508/15/eng20050815_202592.html)

## **China leads world in transgenic cotton industrialization**

(People's Daily on line, 2005-08-16)

[http://english.people.com.cn/200508/16/eng20050816\\_202800.html](http://english.people.com.cn/200508/16/eng20050816_202800.html)

# **Environment**

## **Energy efficiency stressed**

(China Daily, 2005-08-08)

China's economy is vulnerable to the difficulties posed by soaring international oil prices, currently fluctuating around US\$60 per barrel.

According to Zhang Guobao, vice-minister of the National Development and Reform Commission, the best way to cope is by improving energy efficiency and developing alternative energy resources.

Per one unit of GDP, China consumes considerably more energy resources than Japan. Experts estimate that if it could use energy as efficiently as Japan, China would not have to increase its energy demand in the next 60 years.

According to Chen Mian, professor of the University of Petroleum, depending on market forces, energy efficiency can only be improved by 20 per cent. So the government should take the crucial leading role in improving energy efficiency by introducing a series of policies concerning production, consumption and technologies, to ensure energy will be used efficiently by both producers and consumers, he said.



Ethanol gasoline, coal-liquefied oil and methanol gasoline are all alternative choices under experimentation in China. Due to the lack of financial, taxation or subsidy supporting policies, these new energy resources cannot be widely used.

### **Rooftop plan for solar power production**

(China Daily, 2005-08-08)

SHANGHAI: A government-funded project, to turn the city's roofs into sites for solar-energy production, will soon be submitted for final approval.

If the project becomes operational, 100,000 of the 6 million roofs in Shanghai, a city plagued by chronic power shortages, will be used to supply solar energy to local residents, revealed Professor Cui Rongqiang, director of the Institute of Solar Energy at Shanghai Jiaotong University and the head of the project, over the weekend.

According to Cui, the selected roofs will be equipped with a system that is able to convert sunlight into electricity by the end of 2015,

Crystalline silicon solar cells inset onto large boards, that turn sunlight into solar energy, will be linked to the buildings' cables, which will then transmit electricity to the power grid.

It is estimated that the 100,000 roofs will be able to generate at least 430 million kilowatt hours (kwhs) of electricity every year, enough to supply the city for nearly two days.

Last summer, the peak daily power consumption went up to 300 million kwhs.

"If it works well, the system will be applied more widely," said Cui.

All of the current 200-million-square-metres of rooftops could produce more than 28.6 billion kwhs of power, as each square metre is capable of giving out 143 kwhs every year.

This is equal to one-fourth of the city's power consumption for a year. The roof areas will expand as the city is constructing more houses, malls and factories.

"Shanghai does not have huge oil or coal resources, but it has all those roofs which are exposed to sunlight 1,100 to 1,300 hours a year," enthused Cui.

However, the financial cost is high.

It costs at least 150,000 yuan (US\$18,496) just to set up one roof.

Currently, only some big enterprises in the city are using the 6.2 million kwhs of electricity generated by wind or sunlight. It is about two times that of the usual power price. The enterprises pay the extra money to arouse people's awareness of clean energy and improve their own public image.

But Cui said that the initial high cost of turning ordinary roofs into "generator roofs" would pay off in the future.

"Once it is installed, it will work for 30 to 35 years, during which no more investment is needed," said Cui.

And unlike the conventional power plant burning coal or fuel, it produces no pollution at all.

Chen Jinhai from the Shanghai Municipal Economic Commission said the system would first be tried in some factory buildings.

### **China's annual gas consumption to reach 100 bln cubic meters in next five years**

(People's Daily on line, 2005-07-29)

China's annual consumption of natural gas will reach 100 billion cubic meters during the country's 11th Five-Year Plan period (2006-2010), the China Securities Journal reported on Friday.



Currently, China's annual consumption of natural gas stands at 40 billion cubic meters, making up only three percent of the country's total demand for energy.

The proportion will increase to 6-8 percent in the next five years, the report said, quoting a source from the National Development and Reform Commission.

China's demand for natural gas is expected to come to 200 billion cubic meters by the year 2020, with half of the supply coming from overseas.

Liquefied natural gas (LNG) supplied by Southeast Asian countries, Australia and the Middle East will account for one-third of the country's total consumption.

In the first half of this year, both the national output and consumption of natural gas increased by nearly 20 percent.

So far, the China National Petrochemical Corp., China National Petrochemical Corp. and China National Offshore Oil Company Ltd. are the country's three major natural gas suppliers.

### **300 million kw water energy in China ready for exploitation**

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

Academician of CAS (Chinese Academy of Sciences) Lu Youmei, a renowned expert on hydroelectric power, member of China Three Gorges Project Corporation (CTGPC) Technology Commission as well as chairman of China National Committee on Large Dams, is a guest at People's Daily Online on August 2, 2005, answering questions of common concern such as hydro electric power and sustainable development. Lu noted that hydroelectric power is a kind of renewable energy, and should be given priority.

How much water energy does China possess? Technologically and economically, around 400 million kw is exploitable. By the end of 2004, China has exploited 100 million kw, and the remaining 300 million kw waits to be exploited.

Lu added that China has great potentialities in terms of hydroelectric power development. Among the national total power installation, hydroelectric power only has 100 million kw-capacity, and generates even fewer electricity. Because of the uneven water flow, the installed capacity of hydroelectric stations can only be operational for 4,000 "C 5,000 hours annually.

### **China targets waste to sustain growth pace**

(Bloomberg, 2005-08-15)

China's long-term economic development may be stymied because of wastage of resources such as water, oil and electricity, says Vice-Premier Zeng Peiyan. Bloomberg reported.

"Economic development will be restricted if we don't restrain the waste of resources," Mr Zeng told China Central Television. "We're at a stage of economic development where we don't have the luxury to be wasteful."

China will adopt economic measures to curb waste and accelerate the development of new technology to increase the efficient use of existing resources, Mr Zeng said, without providing details.

Demand for fuel to run power plants, cars and machinery has risen as the economy has expanded, making China the world's biggest oil consumer behind the US. Premier Wen Jiabao tightened controls on investment by state-owned companies last year to alleviate power shortages and unplug transport links.

China is experiencing a third year of power shortages as economic growth, which reached 9.5 per cent in the first six months of the year, boosts electricity demand beyond generation capacity. The country may have 25,000 megawatts less than it needs when demand peaks in the northern hemisphere summer. Last year's shortfall was 30,000 megawatts.



Between now and 2010, China would speed up development of technology to convert domestic coal resources into fuel and chemicals to cut reliance on oil imports, Liu Yanhua, Vice-Minister for Science and Technology, told the same China Central Television program.

China's crude oil imports rose 15 per cent in July as refiners bought more of the fuel to process into diesel, petrol and chemicals.

Oil imports climbed to 11.1 million tonnes last month, says the Customs General Administration of China, without giving a year-earlier figure. Oil shipments from overseas in the first seven months rose 5.5 per cent to 74.5 million tonnes.

Crude oil increased to a record \$US67.10 a barrel in New York on Friday. Oil prices have risen 54 per cent this year on concern refineries aren't producing enough fuels to meet rising demand.

### **China Enacts Law for Animal Welfare**

(Xinhua News Agency August 25, 2005)

A draft law on animal husbandry, now under deliberation at the on-going legislative session, includes articles on animal welfare.

Giving attention to animal welfare is crucial for improving the quality of China's livestock products and shows progress of civilization, says Shu Huiguo, vice-chairman of the NPC Agriculture and Rural Affairs Committee, when explaining the draft to the NPC Standing Committee.

The welfare of livestock refers to the animals' rights of being free from hunger, misery, diseases and scare, according to the draft law.

The draft law on animal husbandry was submitted to the 17th meeting of the Standing Committee of the 10th National People's Congress, which will be held from August 23 to 28, for first reading.

Shu said scientific experiments show that if maltreated, animals would react by producing poisonous substances in body which blocks water circulation, affects the quality of livestock products, and harms health when people dine on them.

The draft law on animal husbandry regulates that local stock farming supervision departments should give direction to stock farmers and tell them how to ensure animal's welfare.

The draft law also stipulates that stock farmers should provide proper environment for animals to live and reproduce, regularly feed and take care of them, when they are under transportation.

In today's international trade, Shu acknowledged, poor animal welfare has become a new trade barrier, which often made Chinese companies and farmers suffer losses in livestock trade.

The legislation for animal welfare is for fitting the international trend and to make Chinese livestock products more competitive.

### **Animal Husbandry Draft Law Deliberated**

(China Daily August 24, 2005)

Amongst drafts being considered by national legislators during their current session in Beijing is China's first comprehensive law on animal husbandry, which began to be discussed yesterday as fatal swine and cow-borne disease outbreaks continue to haunt parts of the country.

"China has enacted some laws and administrative rules in relation to animal husbandry, but as they each deal with one aspect of the sector, they cannot regulate the whole process of production and management," said Shu Huiguo, vice-chairman of the National People's Congress (NPC) Agriculture and Rural Affairs Committee.



Aiming to improve meat safety whilst protecting farmers' livelihoods, it is undergoing its first reading at the 17th meeting of the NPC Standing Committee, scheduled to conclude on Sunday, after which it will need to pass another two.

The bill, in the pipeline since 2001, would enshrine in law key policies and measures that have proven instrumental in animal husbandry development, said Shu.

According to the draft, the government should offer financial and technical support to farmers to expand and improve production, whilst farmers should register their farms and establish breeding records, which will also log the use of veterinary feed and medicine.

Farmers would be required to report outbreaks to local animal epidemic prevention agencies and take measures to curb infections, and if diseased stock are ordered culled, they would be entitled to claim compensation.

The draft law does not include regulations on slaughtering and the circulation of meat products, which Shu said were covered by separate legislation.

The Standing Committee, which began its session on Tuesday, made the second revision of China's Securities Law and Company Law as well as the draft amendment on women's rights protection yesterday.

### **Local Gov't Cleans up E-waste Sector**

(China Daily August 24, 2005)

Lin Xiling still dismantles and processes electronic waste to make a living, but he no longer works from home. His business continues, but at a newly erected industrial park on the outskirts of the town of Guiyu.

But the middle-aged man and his fellow townspeople still suffer from the effects of environmental deterioration caused by the trade of dismantling and recycling electrical goods.

The environmental group Greenpeace recently released a report stating that the concentration of lead in dust samples collected from some workshops in the town is hundreds of times higher than the levels found in household dust.

"The e-waste recycling workshops of the past are to blame for the pollution problems," noted Li Xisong, an official with the news office of the Chaoyang District government.

Official statistics indicate that over 5,500 households, or over 50,000 people, in the town depend on the e-waste business for a living and over 75 percent of the town's 300-odd private enterprises are in the business of reclaiming, dismantling or processing e-wastes.

Lin was born of a waste collecting family in Guiyu, Shantou's Chaoyang District, over 400 kilometers away from Guangzhou.

Like many of the locals, Lin's family used to run a workshop for dismantling e-waste at their own house.

"The local government urged us to relocate our workshops to a newly built industrial park and many of my fellow townsfolk have done just that," Lin told China Daily over the phone yesterday.

"The government has been hammering out policies to regulate the development of the e-waste dismantling business," he added.

Since the industrial park was set up last year to accommodate the local e-waste industry, many families have chosen to move to the park. But there are still some private workshops operating in the town.

The local government has taken measures to restrict the number of private e-waste workshops, but how effective they are remains to be seen.



"Dismantling and processing e-wastes is easy money," Lin said. "That is why the majority of local people are involved in this business in some way."

"Careless treatment of this waste over the previous 15 years has made the quality of air and water much poorer than in other towns nearby," Lin admitted.

Both Lin and Li believe that moving the recycling business out of the town could be an effective way to curb the environmental hazards.

### **Guangdong Air Quality Takes Turn for Better**

(China Daily August 15, 2005)

The air quality of south China's Guangdong Province is getting better, but acid rain is still a major environmental problem for the province, according to an air quality report issued by the Environmental Protection Bureau of Guangdong Province on Thursday.

The report shows that only Guangzhou amongst the 21 cities of the province, is not up to the national standards for sulphur dioxide, nitrogen dioxide and breathable particles.

The report is published at least twice a year.

The concentration of nitrogen dioxide in Shenzhen's air is 0.04 percent per cubic meter, a 52.6 percent decrease compared with the same period last year, the best showing among all the 21 cities.

#### Drinking water

Also, the quality of drinking water met the national standard in 20 of the 21 cities. The report does not say which city failed to meet the standard.

"Most of Guangdong cities have invested a lot of money and energy in a bid to reduce and control environmental pollution last year, which has led to the favorable conditions," Chen Guangrong, vice-director of the bureau, told China Daily yesterday.

The abundant rainfall in the past several months has also helped improve environmental conditions, Chen said.

On the other hand, the pollution caused by acid rain is still a serious problem for many cities in the province.

The report shows 18 of them recorded acid rain falling during the past six months.

The frequency of acid rain occurrence in eight cities including Guangzhou, Shenzhen and Foshan, where heavy industry is more prominent exceeded 80 percent.

"Acid rain is the result of air pollution from industrial sources as well as emissions from vehicles," Chen said. "Acid rain has been known to cause damage to trees, streams, lakes, animals and even man-made structures.

"Sulphur dioxide and nitrogen oxides are major sources of the acid rain."

#### Air quality

Chen said that all the departments involved in environmental protection in the province would attach more importance to improving air quality in the next phase.

Guangzhou has outlined a detailed scheme to improve the air and expects to complete all facets of the scheme by the end of the year.



Especially, Sun Dayong, an officer with the Guangzhou Municipal Bureau of Environmental Protection, told China Daily: "We will attach more importance to controlling the emissions from motor vehicles."

The scheme proposes that vehicles that do not meet EU emission standards (EURO I and EURO II) will not be allowed on certain busy roads.

Guangzhou has more than 1.74 million registered automobiles. To decrease the large number that do not meet the standard, the bureau is planning to give financial rewards to people who stop using their cars before the service lives of their cars are reached.

In collaboration with the public security departments, the municipal bureau will be able to assign more traffic policemen to monitor pollution on the roads.

### **Environmental Agencies to Be Put Under Stricter Control**

(Xinhua News Agency August 11, 2005)

The government plans to initiate a round of reforms in the environmental assessment sector, Beijing-based People's Daily reported Wednesday.

Under the new mechanism, the environmental agencies will be held responsible for irregularities in environmental assessment, according to the State Environmental Protection Administration (SEPA).

Different companies will be encouraged to set up environmental agencies and compete on the market. Meanwhile, these agencies are encouraged to become larger and more capable.

Environmental assessment agencies will be urged to accept social responsibilities and behave ethically and professionally.

All major development projects will have to pass environmental assessments to prevent environmental degradation and ecological damage.

Early this year, the management of the Yuanmingyuan Park, an imperial garden in Beijing which was burned by invading foreign troops in 1860, came under fire when it started to dredge the lake to lay a plastic membrane on the lake bed.

### **New Rules to Reinforce Environmental Assessment Work**

(Xinhua News Agency August 9, 2005)

China is expected to introduce new rules to smooth out its environment assessment work, aiming to promote the reform of the country's environment impact assessment practices and strengthen the administration of assessment bodies.

According to Pan Yue, deputy director of the State Environmental Protection Administration (SEPA), SEPA will issue a set of new management rules on the qualification of the organizations that carry out environment impact assessments of construction projects. But Pan did not say when the rules will take effect.

"The new rules will be a major reform of the country's environment assessment service, which for the first time integrates the service's profession qualification with institution qualification works," said Pan in Beijing Monday.

The new rules aim to make assessment employees accountable.

Employees who provide false figures may be deprived of their qualifications, he said.

Private and foreign companies will be encouraged to enter the assessment market and the professionals may shift their posts in different assessment bodies.



At the same time, assessment institutions lacking technologies, professionals and the sense of responsibility should be washed out, said Pan.

Assessment bodies, according to the rules, are prohibited from both accepting business against laws and refusing business without proper reasons.

### **Foreign Investors Eye China's Water Sector**

(Chinanews.cn August 26, 2005)

Shortage of water resources and protection of water environment are becoming another focal point of the society. Industry sources estimate that in the next five years, investment in the Chinese water sector will double to 40 billion yuan (US\$4.93 billion).

Siemens Industrial Solutions and Services Group (I&S) China's General Manager Hans-Werner Linne revealed yesterday that Siemens had established a professional water technologies department and would increase investment in China's water supply and waste water treatment market.

With 1.5 billion euros sales revenue, Siemens has become one of the world's largest water and waste water treatment equipment suppliers. It has over 200,000 sets of water and waste water treatment equipment operating around the globe. In the near future, Siemens will increase investment in its joint venture Tianjin National Water Engineering & Equipment Co. Ltd. and strengthen cooperation with North China Municipal Engineering, Design & Research Institute. Siemens's sales revenue in China is expected to exceed 250 million US dollars by 2010, and water treatment solutions will become a new light spot in its business.

Shanghai water environment and technologies forum was opened on Aug. 24. The forum, with a theme to protect water environment and create a harmonious life together, was initiated by the State Environmental Protection Administration of China and co-organized by Ford Motor Company, which has held six annual Conservation and Environmental Grants programs in China successively and spent 1 million yuan each year on such programs.

### **Beijing Starts Trial Calculation of Green GDP**

(Xinhua News Agency August 27, 2005)

Beijing is attempting to calculate the city's "green" gross domestic product (GDP), the Beijing News reported Friday.

The experiment is scheduled to figure out the "green" GDP of 2004 by the end of next year based on the formula of "conventional GDP minus environmental losses".

At the first working meeting held by the municipal government on Thursday, the "green" GDP was defined as the GDP resultant from deducting resource consumption and environmental losses from the conventional GDP.

The pilot calculation will not include the cost of resource consumption, said the newspaper.

The report lists the ten fields that the investigation will cover, including the cost on pollution management and sewage disposal, the effect of air and water pollution on human health, the effect of water pollution on crops, the condition of construction materials and the economic losses caused by pollution.

Beijing, along with nine other provinces and municipalities, was chosen by the central government in March to conduct experiments on calculating the green GDP.

The full test results are expected to be released next year and will lay the foundation for a nationwide system of green GDP.

### **New air conditioner to put electricity demand on ice**

(People's Daily on line, 2005-07-30)

[http://english.people.com.cn/200507/30/eng20050730\\_199320.html](http://english.people.com.cn/200507/30/eng20050730_199320.html)

### **Chinese Vice-Premier: China hopes to boost renewable energy cooperation with Spain**

(People's Daily on line, 2005-07-23)

[http://english.people.com.cn/200507/23/eng20050723\\_197872.html](http://english.people.com.cn/200507/23/eng20050723_197872.html)



## Guangzhou oil supply 'returning to normal'

(China Daily, 2005-08-19)

[http://www.chinadaily.com.cn/english/doc/2005-08/19/content\\_470365.htm](http://www.chinadaily.com.cn/english/doc/2005-08/19/content_470365.htm)

## China to Build 1st Offshore Wind Power Plant

(Xinhua News Agency August 13, 2005)

<http://www.china.org.cn/english/BAT/138326.htm>

## Health

### China starts producing pig-borne disease vaccine

(People's Daily on line, 2005-07-29)

People in southwest China that affected by a pig-borne disease are expected to receive vaccines soon.

According to experts with the team sent by the Ministry of Agriculture to the area of the outbreak, the vaccines for streptococcus swine type II, a bacteria carried by pigs, will soon be batch-produced in south China's Guangdong Province and are expected to reach Sichuan Province in about one week after being inspected by the Ministry of Agriculture.

Yongshun biomedical company in Guangdong will be the first to mass-produce the vaccines. It has already produced a small number of vaccines after receiving emergency training from the expert team.

Ning yubao, a member of the expert team and researcher with the China veterinarian medicine monitoring institute, said the vaccine should help control the outbreak.

The Ministry of Health announced 152 confirmed or suspected infections by noon on Thursday, killing 31 people. All those infected are reported to have handled sick pigs.

### Anthrax outbreak under control

(China Daily, 2005-08-08)

SHENYANG: An anthrax outbreak that has killed one person in Northeast China's Liaoning Province is under control, local officials said last night.

The cow-borne disease was discovered on July 29 in the farms of two villages in Damintun township of Xinmin city. Seven people were confirmed to have been infected and five others were suspected of having the disease. No new cases have been reported in the past five days, according to local health authorities. The two villages were yesterday still under supervision and nobody was allowed to enter without special approval.

All the infected people were being treated in hospital and were said to be in a stable condition, according to the official website of the provincial health authorities on Saturday.

The patients were infected with the bacteria through raising, slaughtering, processing, transporting, selling or eating infected cows.

All sick animals in the town have been slaughtered and buried to prevent the bacteria from spreading. All livestock in the affected areas have been vaccinated. There are three types of anthrax; one that infects the skin, another the digestive system and the third the lungs of humans during close contact with infected livestock. The current outbreak is caused by the anthrax that infects human skin, experts said, adding that the bacteria can be killed if it is placed in boiled water for at least 10 minutes.

Anthrax patients can be cured by an injection of antibiotics if given in time, said the website. Vaccines against the bacteria, either for animals or for humans, are available.



## Successful Development of Iodine [<sup>131</sup>I] Mituxan, a New Drug for Tumor Therapy

(MOST, 2005-6-28)

Through the arduous endeavor of the Fourth Military Medical University and Chengdu Hoist INC., Ltd., the topic of "Research on Iodine [<sup>131</sup>I] Mituximab Injection", a special project of the state S&T project of "Innovative Drug and Modernization of Traditional Chinese Medicine" achieved significant technical breakthrough and obtained the new drug certificate from the State Food and Drug Administration on April 20, 2005. The product is about to appear on the market.

This drug is characterized mainly by definite mechanism of action (having the targeted effect of being directed at the part of liver cancer and the effect of sealing the target antigen), clear anti-body gene and target molecule and advanced production technology. This drug owns 4 state invention patents, 3 PCT international patents that are on the stage of substantive examination in the US, Europe and Japan. This is the first mab drug in the world used for treating primary liver cancer and also the first tumor targeted anti-body drug in China with independent intellectual property rights. The successful development of this drug is of far-reaching importance to the development of the anti-body drug industry with Chinese characteristics.

## Chromosome abnormality discovered

(China Daily, 2005-08-15)

CHANGCHUN: The third and thirteenth chromosomes of a 29-year-old man, surnamed Yang, were recently confirmed to be the world's first reported chromosomal abnormality karyotype, according to the National Medical Genetics Key Laboratory in Changchun, capital city of Northeast China's Jilin Province.

The chromosome karyotype, the world's first known case of balanced translocation of the third and thirteenth chromosomes, has been listed in the database of China human chromosomal abnormality karyotypes, according to Changchun Maternity Hospital.

Experts say that the discovery of this new chromosomal abnormality karyotype not only enriches the world's chromosome data bank, but is also very helpful to the study of hereditary improvement of the human race, and useful in the clinical studies of genetics.

Yang's wife was pregnant twice, but unfortunately twice suffered a miscarriage within the first two months of pregnancy.

Medical tests showed that Yang's third and thirteenth chromosomes are different from those of normal people.

"The two chromosomes set off a balanced translocation, which means that the two chromosomes became fractured, and they have changed to become two totally new chromosomes after their natural reconstruction," said Du Wei, doctor from Changchun Maternity Hospital's Cytogenetics Lab.

Since there was no record on balanced translocation of human's third and thirteenth chromosomes at home or abroad, the hospital sent Yang's cell sample to the National Medical Genetics Key Laboratory for verification.

Since the quantity of the chromosome has not changed, Yang is no different in appearance, personality or intelligence from a normal human.

However, the couple only have a one in eighteen chance of having a healthy child through regular pregnancy, and the child in turn has a one in eighteen chance of inheriting the chromosomal abnormality.

"A method to treat this kind of disease is still under investigation." Du added.

According to Du, chromosomal abnormality karyotype may be inherited from the parents, or caused by long-term exposure to chemicals, radioactive material or a biological virus.

Yang was found to have no experience of such exposures, leaving inheritance as the only explanation. However, tests on his parents' chromosomes have yet to be conducted.



### **Rural kids 'need better healthcare'**

(China Daily, 2005-08-08)

More money must be invested in China's healthcare system to ensure children receive effective medical treatment, an official from the Ministry of Health told China Daily yesterday.

Shortage of funds is the main reason for the lack of medical treatment for rural children, said Zhang Xun, vice-director of the Department of Maternal and Child Healthcare and Community Health under the ministry.

In 2003, half of rural infants, aged five and under, who died from diseases, did not receive hospital treatment before they died, according to a report submitted earlier this week to a conference focusing on the situation of Women and Children in China.

More than a fifth of the dead infants received no medical treatment at all before their deaths and more than 28 per cent received only cursory diagnosis and treatment at outpatients departments, but were not admitted to hospital.

The survey was carried out in 116 counties covering a population of 12 million people.

Zhang was unable to provide more up-to-date figures on infant mortality, but said a report covering 2004 is expected to be published in the coming weeks.

The main causes of infant deaths are premature birth, low birth weight, suffocation during birth, and pneumonia, Zhang said.

A major reason for death during childbirth in rural areas is that families cannot afford to pay for babies to be delivered in hospital, she added.

Poverty also means families cannot afford treatment if their children become ill.

On the Chinese mainland, at least 70 per cent of rural residents, including women and children, currently have no medical insurance.

Zhang called on the central government to provide free medical care allowing rural mothers to give birth in hospital.

Infectious diseases, such as HIV/AIDS, are also threatening the health of children, Jiang Zuojun, vice-minister of health, told the national conference.

Mother-to-infant transmission has become a major channel for the spread of HIV, Jiang said.

To curb mother-to-infant transmission, 170,000 pregnant women across five provinces and regions have received HIV testing in a pilot programme, said Jiang.

The five regions are Henan, Yunnan and Guangdong provinces, the Guangxi Zhuang Autonomous Region and the Xinjiang Uygur Autonomous Region.

Meanwhile, the Ministry of Health yesterday denied reports of a nationwide outbreak of anthrax, saying the disease has been under regular monitoring since Tuesday.

"Starting monitoring in some regions does not mean anthrax is breaking out in these regions. We are monitoring other infectious diseases as well," a media co-ordinator of the ministry's information office told Xinhua.

### **Family planning policy saves China 300 mln births**

(People's Daily, 2005-08-08)

[http://english.people.com.cn/200508/08/eng20050808\\_200955.html](http://english.people.com.cn/200508/08/eng20050808_200955.html)