



# Science, Technology and Education News from China

## Number 83 – May 2011

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### Introduction

This month's newsletter includes an analysis of foreign universities' offshore investment in China, interests and doubts from the government side and the challenges universities usually face in China. In science and technology, the bullet train from Beijing to Shanghai will start to operate in July. Tibet is set to become a leading solar power base in China. Chinese government finally admits problems with three gorges dam following severe drought in southern China. In education, reform pioneer South China University of Science and Technology is now clashing with existing education system in China. Other universities face decreasing number of applicants throughout the nation. In health, the first law to ban smoking in public was passed in Harbin, a city in Northeast China.

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<sup>1</sup> Please click on the blue texts to activate the hyperlinks to either email addresses or related websites.



## Policies

### Offshore Investment of Foreign Universities in China: Interests and Challenges

It is not difficult to find Sino-foreign joint programs or even joint academic departments in Chinese universities. However it took the Ministry of Education almost ten years to approve only 3 independent offshore investments in China: University of Nottingham Ningbo (2003), Xi'an Jiaotong-Liverpool University in Suzhou (2005) and the most recent New York University Shanghai (2010).

More universities in Hong Kong, UK and U.S. are ready to come, especially to Southeastern China. With the *Education Reform Agenda* and the 12<sup>th</sup> Five-Year-Plan, both “opening up education sector” and “encourage offshore investment of foreign universities” have explicitly been included as national guidelines, giving local governments enormous incentives to partnering with foreign universities. Zhejiang Province alone for example is ready to host 3 more similar investments in the next 5 years.

Interests from local governments and the general public are clear. China’s university landscape has been a rather unbalanced one, with most of the prestigious universities located only in big cities like Beijing and Shanghai. Hosting an offshore investment from a world-renowned university would be a very positive boost to its education sector. Like the case of Xi’an Jiaotong-Liverpool University, which is based in Suzhou, local governments are ready to offer free land which often even include state-of-the-art infrastructure. For the general public in China, access to high quality education is something they definitely welcome -especially when it is of the same standard, but cheaper than going abroad.

However, hesitation from the Ministry is also implicit. A dual degree system is implemented as a must, as foreign universities are not allowed to only grant their own diploma in China. Free access to the huge Chinese higher education market is not something that the Ministry would like to provide, considering the fact that local Chinese universities might not be able to compete. Offshore investment in China will further direct the brightest bachelor graduates out of China. For the two existing universities, it is already the case - the graduates are almost 100% going abroad for further studies and work. After four years of British education, for example, students are not prepared to compete in Chinese graduate studies entrance examination any more.

Therefore the challenges for any foreign university willing to become an investor in China remain serious. Compromising with current Chinese laws, regulations and education system is probably the biggest one. Government interference is inevitable on both local and central level, as eventually it is the local government who provides land, and the Ministry of Education who gives the final green-light for the investment and agrees to offer MoE-certified diploma. This would require at least a Chinese partner university, a CCP Committee, a party secretary and compulsory curriculum including Marxism and Maoism. Applicants are also required to take the national college entrance examination (gaokao) and be admitted on a merit-based way, leaving the university’s independence on student admission and flexibility in curriculum with a question mark.

Maintaining the quality and stability of faculty—teaching and research—is another headache for foreign universities, under the condition that they position the Chinese branch also as a research university. Besides living conditions, foreign researchers in these universities are not eligible for research funding provided by the Chinese government. Neither can they enjoy the incentive packages government offers to international talents. In China where private contribution to research still remains highly limited, lack of commitment for research funding also poses as a major barrier in the foreign universities’ long march to China.



## News

### 1. **Beijing-Shanghai High-speed Trains Start Trial Runs**

(China Daily, 10-05-2011)

A MONTH-LONG trial of the Shanghai-Beijing high-speed railway will start on May 11, a railways ministry spokesman said.

The line is expected to be fully operational by the end of June. Ticket prices are still under discussion, Wang Yongping said during an online session with the public. Price issues are crucial as the rail link is competing with airlines on the route.

Railway Minister Sheng Guangzu said in April that China was slowing the operational speed of its bullet trains from 350 kilometers per hour to 300kph following safety concerns and complaints that tickets were too expensive.

Wang also said that the Ministry of Railways' debt level was manageable after a huge first-quarter loss raised concerns about its financial health and the development of China's high-speed rail services.

The railway ministry had 3.41 trillion yuan (US\$525 billion) in total assets by the end of the first quarter and 1.98 trillion yuan in total liabilities, according to figures released last week. Such a debt-to-asset ratio, of 58 percent, is within control and the ministry can avoid a debt crisis, Wang said.

Some industry experts and economists have voiced concerns about the economic sustainability of the railways, especially the costly high-speed lines, especially after the sacking of former Railway Minister Liu Zhijun, who led an investment boom in the high-speed railway sector before being caught up in a graft probe in February.

The Ministry of Railways, which acts as a corporation in the debt market, has sold at least 50 billion yuan of bonds this year to fund construction.

The high debt ratio and a pre-tax first-quarter loss of 3.76 billion yuan triggered a sell-off in rail-related stocks last week on concern the government would scale back its ambitious rail spending program. The slide also came after a media report said the government would cut spending on high-speed railways by more than 200 billion yuan from 700 billion yuan this year.

The railway ministry soon denied the spending-cut figures and attributed the quarterly loss to rising costs of raw materials such as fuel and steel. And later, on Friday, the ministry said total investment this year would be 745.5 billion yuan.

<http://english.peopledaily.com.cn/90001/90776/90882/7374772.html>

### 2. **Tibet to Become a Leading Solar Power Base**

(Global Times, 11-05-2011)

Southwest China's Tibet Autonomous Region is poised to become the country's leading solar power generation base with 10 more photovoltaic power plants to be completed within 2010.

The new plants, with a total investment of 2 billion yuan (\$308 million) and a combined 100-megawatt capacity, will take advantage of Tibet's ample solar energy resources to ease the plateau region's power shortages, said Wang Haijiang, a noted researcher on Tibet's energy development. Construction of most of the new plants has begun, including a 30-megawatt solar photovoltaic generation plant in Xigaze



prefecture, about three kilometers northwest of Tibet's second largest city Xigaze. Upon its completion this month, the plant will generate up to 20.23 million kilowatt-hours of electricity annually, said Wang.

Meanwhile, a 10-megawatt solar photovoltaic generation plant is being built in Yangbajing, a town 90 kilometers northwest of the regional capital Lhasa, [...]. Tibet has abundant solar energy resources, with an average 3,000 hours of solar radiation annually, or about 6,000 to 8,000 megajoules per square meter [...]. Today, the region's installed 9-megawatt solar photovoltaic generation system accounts for 13 percent of China's total. Solar energy is now widely used by Tibetan families, with nearly 400,000 solar stoves installed in Tibetan kitchens, 10,000 square meters of homes being heated by solar energy and 200,000 households relying on solar energy for lighting [...]. Tibet's regional government estimated solar power helped save at least 162,800 tons of coal equivalent last year. China's total domestic demand for solar photovoltaic energy was around 500,000 kilowatts a year, according to the National Energy Administration (NEA), the country's top energy planner. China plans to expand the solar PV energy market gradually, to about 5 million kilowatts installation capacity in 2015 and 20 million kilowatts in 2020, according to the NEA.

### 3. China Admits Problems with Three Gorges Dam

(Nature, 25-05-2011)

China has finally admitted that all is not rosy with its Three Gorges Dam, the world's largest hydroelectric power project. The dam is plagued by problems that need to be resolved urgently, the State Council — China's cabinet — said on May 18.

The statement was made after a high-level meeting presided over by Premier Wen Jiabao, and highlights issues such as pollution, silt accumulation, ecological deterioration and geological hazards near the dam. It also points out the project's adverse effects on irrigation, water supply and shipping in downstream regions, which affect an area of 633,000 square kilometres over eight provinces. These problems should be addressed through more research and monitoring, and more efficient dam operation, the statement says. [...]

The statement comes amid severe drought in provinces downstream of the Three Gorges Dam. Between January and April this year, rainfall in the Yangtze River Basin was 40% below average, according to the Xinhua News Agency.

Widely considered the worst drought in 50 years, it has devastated 3 million hectares of farmland, left millions of people and livestock short of drinking water, and threatened wildlife and ecosystems in many rivers and lakes, including the endangered Yangtze finless porpoise.

The drought has also stranded numerous ships and triggered a power shortage in central and eastern China as water levels at some big dams, including the Three Gorges, have fallen below the level required for full power generation.

But Wang Hai, director of the transport division of the China Three Gorges Corporation, dismisses the idea that the dam has caused water-supply problems downstream. Things might be worse without the dam alleviating the drought by releasing more water to flow downstream.

Others disagree, saying that it's inconceivable that a hydroelectric project on the scale of Three Gorges — which includes a 185-metre-tall dam and a reservoir more than 600 kilometres long with a storage capacity of 40 billion cubic metres — would have little downstream impact.

"It's difficult to say whether the dam has exacerbated this year's drought in central and eastern China, or, if so, to what extent," says Zheng Chunmiao, a hydrologist at Peking University in Beijing. "But dams and reservoirs can certainly impact the hydrological cycle of the river basin." In particular, they can lower groundwater levels, potentially worsening the situation when a drought strikes.

(<http://www.nature.com/news/2011/110525/full/news.2011.315.html>)



#### 4. **South University of Science and Technology China Encounters Difficulties during Reform**

(ScienceNet 30-05-2011)

South University of Science and Technology China SUSTC, a pioneer education reform project in Shenzhen, is now facing various difficulties in its efforts to break through the boundaries of administrative bureaucracy.

The university made a bold move by admitting the first group of 45 students in Spring semester without the final green-light from the Ministry of Education MoE, meaning the SUSTC diploma will not be certified and recognized by MoE as the university has no "qualification" to grant bachelor degree yet. According to President ZHU Qingshi, by surviving outside the policy and regulation framework, the university is trying to maintain as much independent as possible.

MoE made a surprising remark in late May by saying the Ministry supports SUSTC's education reform, but all universities should "abide law and regulations" even during their reform. With no further comment from the Ministry, the public interpretation of this statement is to urge the 45 SUSTC students to take college entrance examination (gaokao) on June 6. The students are senior year high school students or younger, admitted to SUSTC through independent examination and individual interview.

In response to the call for gaokao, SUSTC students released an open letter on May 30, refusing to take the examination and confirming that they are ready to continue studying in SUSTC, with or without a MoE certified diploma.

With gaokao just a week away and fall semester coming soon, President ZHU Qingshi told press that SUSTC so far didn't receive any approval from the MOE to recruit students through gaokao. The university is also thinking about postponing its fall semester student recruit.

#### 5. **China's National Deep-Sea Base to Begin Construction This Year**

(Xinhua News, 16-05-2011)

Construction of China's national deep-sea base is expected to begin this year in eastern Shandong Province, officials there said on May 16.

Initial planning for the base has been finished and detailed construction plans are being drafted, said Liu Baohua, director of the base's administrative center.

The construction work will start after the State Ocean Administration (SOA) approves the construction plans, said Liu.

Located in east China's coastal city of Qingdao, the base will cost 495 million yuan (76.2 million U.S. dollars) and will be a multi-functional institution that will aid China in its study and exploration of the ocean, according to Liu.

Scientists believe that the area's seabeds hold abundant deposits of rare metals and methane hydrate, a solidified form of natural gas that may serve as a new source of energy.

The base will also serve as a ground support station for a submersible vehicle nicknamed "Jiaolong," which reached a record depth of 3,759 meters during test runs conducted last year, according to Liu.

([http://news.xinhuanet.com/english2010/china/2011-04/26/c\\_13846854.htm](http://news.xinhuanet.com/english2010/china/2011-04/26/c_13846854.htm))



## 6. Enrollment Crisis for Chinese University in 2011

(Xinhua News, 23-05-2011)

A recent slump in the number of students enrolling to take the college entrance examinations in China has awakened Chinese universities to an inconvenient truth: the era of glory has gone and they will soon have to contend for the decreasing number of students.

This year, central China's Henan Province reported a decrease of 97,000 applicants for the national college entrance exam (NCEE). It is the largest year-on-year drop for the province after the number of applicants took a downward spiral in 2008. The province, however, after registering 855,000 applicants for the exam in June, still ranks the first in China. More alarming is that the trend is becoming national. According to a report on eol.cn, a major portal reporting on education in China, this year's NCEE registration has dropped 10 percent in Anhui, 6 percent in Beijing, and 12 percent in Shanghai. The overall number of candidates seeking to take the NCEE in China, it said, shrank 1 million in 2009 and 2010 after the culmination of candidates in 2008.

A number of factors, including a declining birth rate, difficulties in obtaining quality education, and easier access to overseas universities, have combined to drain the student pool of Chinese universities. "This year's huge drop followed the exodus of second-time applicants who are disappointed by the fierce competition," said Chen Daqi, an official at the provincial office for college enrollment. This extraordinary competition in the NCEE used to compel many Chinese students to study extra years before they receive high enough scores and satisfactory offers. In Henan, about one-third of those taking the NCEE are not first-time applicants. Apart from the disenchanting veterans this year, many are also leaving the NCEE army as they question the quality of Chinese higher education. Educational experts said that the reduced supply of students has brought a financial crisis to Chinese universities and colleges. Many private schools, due to their low rank and enrollment rate, are nearly forced into insolvency.

[http://news.xinhuanet.com/english2010/china/2011-05/23/c\\_13889505\\_1.htm](http://news.xinhuanet.com/english2010/china/2011-05/23/c_13889505_1.htm)

## 7. China's First Law Targeting Second-Hand Smoke Passed in NE China City

(Xinhua, 26-05-2011)

A local draft law that bans indoor smoking in public places was passed on May 26 in Harbin, the capital city of northeast China's Heilongjiang Province, becoming the first law in China to specifically target second-hand smoke.

The standing committee of the city's people's congress voted and passed the draft Regulations on the Control of Harm Posed by Second-hand Smoke. It will take effect after being approved by the provincial people's congress, said a spokeswoman for the city government of Harbin. Offices were not defined as "public places" under the city's previous smoking laws. The regulations, which include all public indoor areas in their definition of "public places", also outline penalties for smokers who light up in public places and harm others with their second-hand smoke. Restaurants, schools and hospitals can face penalties if they allow people to smoke on their premises, according to the regulations. These fines can range from 2,000 to 30,000 yuan. Businesses may also be subjected to the suspension of their business licenses if they break the new smoking law, according to the regulations. The city's governmental authorities, such as its education department, transportation department and industrial and commercial bureau, will now be required to supervise bodies under their administration in order to make sure the new smoking regulations are properly enforced.

According to the 2011 China Tobacco Control Report released on Thursday morning, about 740 million people, including 180 million children and teenagers, are affected by second-hand smoke. More than 1 million people die every year from smoking-related diseases, and more than 100,000 of those cases can be traced back to second-hand smoke, the report said. Yang Gonghuan, director of China's National Office of Tobacco Control, said the regulations are a clear interpretation of Article 8 of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC).

[http://news.xinhuanet.com/english2010/health/2011-05/26/c\\_13895813.htm](http://news.xinhuanet.com/english2010/health/2011-05/26/c_13895813.htm)



## Events (June – July 2011)

### June 2011

#### **2<sup>nd</sup> Art Science Society Lectures 2011 Corporate Social Responsibility**

Date: June 1<sup>st</sup>  
Place: Shanghai  
Contact: Swissnex China

#### **2011 International Symposium on Environmental Science and Technology**

Date: June 1<sup>st</sup> to 4<sup>th</sup>  
Place: Dongguan  
Contact: Chinese Society for  
Environmental Sciences

#### **2<sup>nd</sup> Swissnex China Lecture Cosmology**

Date: June 3<sup>rd</sup>  
Place: Shanghai  
Contact: Swissnex China

#### **International Forum on Resources, Environment and Sustainable Development of Northeast Asia and Central Asia**

Date: June 8<sup>th</sup>  
Place: Beijing  
Contact: Institute of Geographic Sciences  
and Natural Research, CAS

#### **The Second International Conference on Plant Secondary Metabolites**

Date: June 8<sup>th</sup>  
Place: Shanghai  
Contact: Shanghai Institute for Biological  
Sciences, CAS

#### **2011 International Conference on Industrial Technology and Management (ICITM 2011)**

Date: June 10<sup>th</sup> to 12<sup>th</sup>  
Place: Chengdu  
Contact: <http://www.icitm.org>

#### **2011 International Conference on Knowledge and Education Technology (ICKET 2011)**

Date: June 10<sup>th</sup> to 12<sup>th</sup>  
Place: Chengdu

Contact: <http://www.icket.org>

#### **2011 China (Shanghai) International Heavy Machinery Equipment Exhibition**

Date: June 11<sup>th</sup>  
Place: Shanghai  
Contact: Chinese Mechanical Engineering  
Society

#### **2011 International Conference on Computer and Network Engineering (ICCNE 2011)**

Date: June 17<sup>th</sup> to 19<sup>th</sup>  
Place: Zhengzhou  
Contact: <http://www.iccne.org>

#### **The 12<sup>th</sup> World Conference on Titanium**

Date: June 19<sup>th</sup>  
Place: Beijing  
Contact: China Nonferrous Metal  
Association, CAST

#### **International Meetings on Solid Sensors, Actuators and Microsystems**

Date: June  
Place: Beijing  
Contact: Institute of Electronics, CAS

#### **China International Petrochemical Industry Congress 2011**

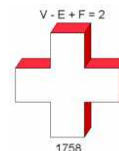
Date: June 22<sup>nd</sup> to 25<sup>th</sup>  
Place: Tianjin  
Contact: <http://www.cipic.com.cn>

#### **The 19th International Conference on Geoinformatics**

Date: June 24<sup>th</sup> to 26<sup>th</sup>  
Place: Shanghai  
Contact: East China Normal University

#### **The 8<sup>th</sup> International Conference on Service Systems and Service Management**

Date: June 25<sup>th</sup> to 27<sup>th</sup>  
Place: Tianjin  
Contact: Nankai University



## July 2011

### **International Workshop on Computational Geodynamics**

Date: July 1<sup>st</sup>  
Place: Beijing  
Contact: Graduate University of Chinese Academy of Sciences, CAS

### **2011 International Conference on Remote Sensing and Data (ICRS2011)**

Date: July 2<sup>nd</sup> to 3<sup>rd</sup>  
Place: Hong Kong  
Contact: <http://www.icrsd.org>

### **The 7<sup>th</sup> China-Korea Symposium on Polymer Materials**

Date: July 3<sup>rd</sup>  
Place: Dalian  
Contact: Changchun Institute of Applied Chemistry, CAS

### **IMR Materials Week 2011**

Date: July 4<sup>th</sup>  
Place: Shenyang  
Contact: Institute of Metal Research, CAS

### **2<sup>nd</sup> Art Science Society Lectures 2011 Art & Culture**

Date: July 14<sup>th</sup>  
Place: Shanghai  
Contact: Swissnex China

### **International Symposium on Laser Cut and Related Application**

Date: July 15<sup>th</sup>  
Place: Changchun  
Contact: Changchun Institute of Optics, Fine Mechanics and Physics, CAS

### **The 18<sup>th</sup> East Asia Joint Symposium on Biomedical Research**

Date: July 11<sup>th</sup>  
Place: Shanghai  
Contact: Shanghai Institute for Biological Sciences, CAS

### **China Municipal Solid Waste Forum 2011**

Date: July 21<sup>st</sup> to 22<sup>nd</sup>  
Place: Shanghai  
Contact: <http://www.mswforum.com.cn>

### **The 3<sup>rd</sup> International Business Intelligence Summer School**

Date: July 22<sup>nd</sup>  
Place: Beijing

Contact: Academy of Mathematics and Systems Sciences, CAS

### **The 3<sup>rd</sup> International Symposium on Signal Transduction and Cancer**

Date: July 24<sup>th</sup>  
Place: Shanghai  
Contact: Shanghai Institute for Biological Sciences, CAS

### **International Symposium on Organometallic Chemistry Directed towards Organic Synthesis (OMCOS)**

Date: July 24<sup>th</sup>  
Place: Shanghai  
Contact: Shanghai Institute of Organic Chemistry, CAS

### **Carbon 2011 Conference**

Date: July 24<sup>th</sup>  
Place: Shanghai  
Contact: Institute of Coal Chemistry, CAS

### **The 1<sup>st</sup> Asia-Pacific International Symposium on Integrated Behavioral Research**

Date: July 25<sup>th</sup>  
Place: Xi'an  
Contact: Institute of Zoology, CAS

### **2011 International Workshop on Environmental Engineering and Technology**

Date: July 29<sup>th</sup> to 31<sup>st</sup>  
Place: Kunming  
Contact: Kunming University of Science and Technology