



IN THIS ISSUE:

IN A FORTNIGHT By L.C. Russell Hsiao.....	1
HU JINTAO PICKS CORE SIXTH-GENERATION LEADERS By Willy Lam.....	2
THE U.S.-CHINA STRATEGIC AND ECONOMIC DIALOGUE: CONTINUITY AND CHANGE IN OBAMA'S CHINA POLICY By Dennis Wilder.....	4
THE PANDA HUGS THE TUCANO: CHINA'S RELATIONS WITH BRAZIL By Jiang Shixue.....	7
THE SHANXI COAL MINE BLAST AND THE FAILURE OF SAFETY GOVERNANCE IN CHINA By JianJun Tu.....	10



Preparations begin for Kuayue-2009

China Brief is a bi-weekly journal of information and analysis covering Greater China in Eurasia.

China Brief is a publication of The Jamestown Foundation, a private non-profit organization based in Washington D.C. and is edited by L.C. Russell Hsiao.

The opinions expressed in *China Brief* are solely those of the authors, and do not necessarily reflect the views of The Jamestown Foundation.



For comments or questions about *China Brief*, please contact us at pubs@jamestown.org

1111 16th St. NW, Suite #320
Washington, DC 20036
Tel: (202) 483-8888
Fax: (202) 483-8337

Copyright © 2009

In a Fortnight

By L.C. Russell Hsiao

KUAYUE-2009: SHIFTS IN PLA MILITARY PLANNING?

According to official Chinese media reports, the People's Liberation Army (PLA) will hold a massive two-month long military drill that will involve 50,000 troops from four divisions across four of China's seven military commands in the second half of 2009. Citing a source from the PLA Headquarters of General Staff, which undertakes staff and operational functions for the PLA and implements military modernization plans, the drill, codenamed Kuayue-2009 (Stride-2009), is unprecedented in PLA military exercise history because it comprises four divisions from the Shenyang, Lanzhou, Jinan and Guangzhou Military Area Command. These exercises will reportedly include Air Force and Army Aviation units that military analysts say demonstrate a move toward bringing the PLA's growing assets under a "common operational structure" to undertake "integrated joint warfare" (*China Daily*, May 5; *China Review News*, May 8; *Defense News*, May 11).

The official Xinhua News Agency on May 5 reported that the PLA has already started preparations for the exercise. According to the report, the drill is designed to assess the PLA's capabilities in six major areas: 1) command and decision-making, 2) joint operations of land and air troops, 3) operations in complicated electromagnetic conditions, 4) paratrooper assault operations, 5) simulated battles, and 6) comprehensive exercises by specialist units (*China Daily*, May 5; *Global Times*, May 5). Although the number of troops mobilized is not substantially large in terms of the scale of previous exercises, the drill will mobilize "more than 60,000 vehicles and large weapons and equipments" over a terrain that will cover more than 50,000

kilometers, and that “the longest one-way journey for some units will be more than 2,400 kilometers,” which will be a significant feat for the PLA’s “overall capabilities of operations under informationalized conditions” (Xinhua News Agency, May 5).

Chen Hu, chief-executive editor of the *World Military Affairs Magazine*, pointed out several notable characteristics of the Kuayue military exercise, like its organization and how it will likely be simultaneously executed from multiple locations, which sets it apart from previous military exercises. Chen pointed out that since the exercise has been termed a “series” of “base training exercises,” the use of “bases” likely refers to the PLA’s joint tactical training bases. In recent years the PLA has been developing training bases in each military command area to better simulate actual battlefield terrains, such as the Sanjie Joint Tactical Training Base under the Nanjing Military Area Command, the Queshan Tactical Training Base located under the Jinan Military Area Command, and the Zhurihe Joint Tactical Training Base under the Beijing Military Area Command. Moreover, since the capacity of one training base is not likely to be able to accommodate four fully equipped divisions, the exercise will probably be launched simultaneously from different bases (*China Review News*, May 8). According to a Western analyst cited by U.S.-based *Defense News*: “The PLA is moving away from ‘a combination of sequential or single arm or service operations ... They are exercising this way and are doing it across regional and service boundaries’” (*Defense News*, May 11).

A professor at the PLA National Defense University, which is under the leadership of the PLA Central Committee, told the *Global Times*—an offshoot of *People’s Daily*—that the joint exercise is intended to help evaluate the PLA’s military delivery and logistics capabilities, as well as joint command and decision-making. Professor Li Daguang said that, “The PLA will practice the drill under almost real war conditions,” which means that it will most likely be a live-fire exercise. “Though China transported over 130,000 troops to the earthquake-hit region last year for relief work, troops were not armed with military equipment,” in Kuayue-2009 they “will maneuver 50,000 armed troops 50,000 kilometers in this drill” Li added (*Global Times* [Chinese], May 8).

According to an interview with Major General Luo Yuang, who serves as a political advisor and researcher at the PLA Academy of Military Science (PLAAMS), a research institute under the direct leadership of the Central Military Commission (CMC), “China’s positive defense policy is not makeshift, but a long-term policy based on traditional Chinese culture, the basic national situation and the social

system” (*Global Times*, May 8).

In an interview with *China Review News*, Liang Yongchun, a military correspondent for China National Radio, noted that the PLA has made a leap in progress in terms of long-range training exercises in recent years. The first PLA military exercise involving long-range maneuvers was carried out in September 2006 by 3,400 troops from a mechanized infantry unit under the Shenyang Military Area Command and a division under the Beijing Military Area Command, which was held in the grasslands of north China’s Inner Mongolia Autonomous Region. The second long-range military maneuvers took place in August 2007 with the PLA mobilizing 1,600 troops to participate in the Shanghai Cooperation Organization’s “Peace Mission-2007,” which was held in Russia. The PLA’s third long-range military maneuver, Sharpening-2008, took place in August 2008, which involved mobilizing mechanized infantry units from the Jinan Military Area Command more than 1,400 km to the Zhurihe Joint Tactical Training Base (see “PLA’s ‘New Leap Forward in Information-Centric Command,” *China Brief*, September 22, 2008).

A news report from Taiwan-based *China Times* described the absence of the Nanjing Military Area Command in the Kuayue-2009 exercise, which may be a possible sign of Beijing’s ‘good-will’ toward Taiwan, and may also be related to the current thaw in cross-Strait relations. The failure of the Nanjin Military Area Command to participate in the Kuayue-2009 exercise is notable because it oversees the “Taiwan area.” Chang Liang-ren, deputy minister of national defense of Taiwan, however, stated while responding to questions from ruling and opposition party members at a legislative hearing about the military exercise that it is still “premature” to draw such a conclusion and the question whether the exclusion of the Nanjing Military Area Command in the Kuayue-2009 exercise represents anything significant is being monitored and remains to be seen (*China Times* [Taiwan], May 7; Radio Taiwan International, May 7).

Mr. L.C. Russell Hsiao is Associate Editor of The Jamestown Foundation’s China Brief.

Hu Jintao Picks Core Sixth-Generation Leaders

By Willy Lam

While the Chinese Communist Party (CCP) administration seems preoccupied with the twofold task of *baoba* and *baowen*—maintaining an 8 percent

growth rate and upholding social stability—it is also giving priority to the rejuvenation of the party's leadership. Attention is being focused on young turks of the Sixth-Generation, meaning cadres born in the early to mid-1960s. The identity of prominent Fifth-Generation cadres, who were born in the early to mid-1950s, was already revealed at the 17th Party Congress in 2007. For example, Vice-President Xi Jinping, 56, and First Vice-Premier Li Keqiang, 54, were inducted into the Politburo Standing Committee, China's highest ruling council, at that pivotal conclave. It is all but certain that Xi and Li will take over from respectively President Hu Jintao and Premier Wen Jiabao at or soon after the 18th Party Congress in late 2012. Since Xi and Li are deemed “safe choices” who will not deviate from the political line laid down by patriarch Deng Xiaoping, ex-president Jiang Zemin and President Hu, Beijing's political observers are most curious about the Sixth-Generation team, the great majority of whose members are unfamiliar figures even to their compatriots.

Some of the mystery surrounding these rising stars was lifted when a current issue of the official journal *Global Personalities* singled out five Sixth-Generation politicians with colossal potentials: Governors Zhou Qiang, Hu Chunhua and Nur Bekri, respectively of Hunan Province, Hebei Province and the Xinjiang Autonomous Region; Agriculture Minister Sun Zhengcai; and First Party Secretary of the Communist Youth League (CYL) Lu Hao (*Global Personalities* [Beijing journal], April 22; Sina.com.cn, April 15). Apart from Lu, Zhou and Hu (no relations to President Hu) are former honchos of the league; and Nur Bekri had served in its Xinjiang branch in his younger days. It is thus obvious that President Hu, a one-time CYL boss who heads the CCP's powerful *tuanpai* (CYL Faction), has played a pivotal role in the elevation of these forty-something neophytes. Moreover, Fifth-Generation stalwart Li Yuanchao, a Politburo member who is in charge of high-level personnel matters, is a *tuanpai* affiliate and crony of the president. Owing to factors including density of media coverage—and their prominence in the CCP's dominant faction—Zhou, 49 and Hu, 45, seem to have pulled ahead of their Sixth-Generation confreres in leadership sweepstakes (*Straits Times* [Singapore], April 27).

Zhou, a native of Hubei Province, began his career as a specialist in youth and ideological work. He gained ministerial ranking at the tender age of 38, when he was appointed CYL first secretary. Zhou, a protégé of President Hu, was transferred to Hunan Province in 2006 to widen his exposure to regional issues; he became governor of the central province a year later. The Chinese media has praised Zhou for helping to lift the economy of one of China's six land-locked internal provinces. Despite the global financial

crisis, Hunan's GDP grew by a stunning 10.3 percent in the first quarter of this year, which was 4 percent higher than the national average. A few years ago, Zhou won the United Nation's “Champion of the Earth” award for motivating young men and women to show concern for the environment (Xinhua News Agency, April 29; *People's Daily*, February 15; *Hunan Daily*, January 13).

The rise of Hu Chunhua, 45, also a Hubei native, has been even more meteoric. Apart from having served as CYL chief, Hu shares something important with President Hu, his key mentor: long experience in the Tibet Autonomous Region (TAR). Immediately upon graduation from the prestigious Peking University in 1983, Hu went to Tibet and worked there on and off for nearly 20 years—rising to TAR first vice-party secretary in 2006. After serving as CYL party secretary for less than two years, he became Hebei's acting governor in 2008 and governor early this year. A fluent Tibetan speaker, Hu was credited with reviving the Tibet economy, thwarting separatist tendencies among Tibetans, as well as moving more Han Chinese into the restive region (*People's Daily*, January 13; Sina.com.cn, January 22). It was perhaps due to his special relationship with the president that Hu did not need to take responsibility for the tainted milk scandal that first erupted in Hebei last year. As things stand, it is highly likely that both Zhou and Hu will be inducted into the Politburo at the 18th CCP Congress (Asiatimes.com, October 10, 2008).

There are important reasons why President Hu, 67, would want to confirm and consolidate the “core” of the Sixth-Generation leadership three years before his scheduled retirement from the post of party general secretary at the 18th Party Congress. In the run-up to the 17th Party Congress in 2007, Hu was prevented by a powerful coalition of party elders including ex-president Jiang from naming his own successor. While Vice-President Xi enjoys a reasonably good relationship with Hu, the “princeling” son of party elder Xi Zhongxun does not come from the CYL faction, and Hu's original intention was to elevate First Vice-Premier Li, a former CYL boss who is deemed the president's doubleganger, to the very top. Xi, who will most probably become party chief and state president at and soon after the 18th Party Congress, will have a ten year term (see *China Brief*, “Hu's Impasse at the 17th Party Congress,” October 17, 2007). By ensuring the political future of Zhou and Hu, President Hu will in fact be picking Xi's successor. This somewhat Byzantine practice of *gedai*, or “cross-generational” designation of leaders is not without precedent. At the 14th Party Congress in 1992, patriarch Deng surprised ex-president Jiang by effectively appointing the latter's successor. At Deng's insistence, Hu, then a 49-year-old ex-Tibet party secretary, was promoted a member of the Politburo Standing Committee—and

made the “core” of the Fourth-Generation leadership (*Apple Daily* [Hong Kong], May 7).

This latest development in internal CCP politics has posed a number of questions. Firstly, will President Hu get his way? As things stand, it seems apparent that Xi, who may feel unhappy about the practice of “*gedai*” designation, is going along with the machinations of his boss. In recent speeches on the grooming of cadres, Xi has toed the president’s conservative line that young officials worthy of promotion “must have both *de* (“moral and political rectitude”) and *cai* (“professional competence”), with priority being given to “*de*.” The vice-president pointed out at a conference on personnel issues that senior staff in organization and personnel departments must “raise [younger cadres’] level in Marxist theories and consolidate the foundations of their ideals and beliefs” (Xinhua News Agency, March 30; *People’s Daily*, April 18). Given that most members of the CYL clique are long-standing party functionaries—and that they have ready access to supremo Hu—*tuanpai* cadres are generally considered to be politically correct and knowledgeable about the requirements of the central authorities.

Much more significant for the future of the country, however, is whether CYL affiliates can acquit themselves of the task of tackling the increasingly complex challenges facing 21st century China. While the likes of Zhou and Hu may have impeccable credentials as the cream of the party faithful, their expertise in global business and high technology—two areas where China has to excel in order to maintain its competitiveness—clearly lag behind members of the so-called *haiguipai* (“Returnees Faction”), or officials with advanced degrees from Western universities. In terms of their upbringing, education and working experience, both Zhou and Hu have very little exposure to Western culture and institutions. It is ironic that the director of the CCP Organization Department, Li Yuanchao, has repeatedly called for the large-scale elevation of talented cadres with overseas training. Li introduced in the spring a so-called “A Thousand People Program” to lure highly qualified “returnees” to work in party and government departments. “We must speed up the process of attracting high-calibre returnees so as to combat the global financial crisis and to push ahead scientific development,” Li said at a seminar on personnel administration (Xinhua News Agency, April 6). Since the mid-1990s, more than 200,000 Chinese with foreign academic degrees have returned to work in China, and a dozen-odd members of the *haiguipai* have attained ministerial-level positions in the central government.

Like most members of the CYL clique, Zhou and Hu have steered clear of the controversial issue of political reform. It is noteworthy, however, that President Hu seems

to have violated the oft-cited principle of “intra-party democracy”—which would at least in theory allow cadres a bigger say in choosing their leaders—by letting two favorite underlings take the proverbial “helicopter ride” to the top. This is given the fact that a large number of CYL heavyweights have proven to be lackluster cadres who owe their rise to patronage rather than performance. Examples include the party secretaries of Tibet, Xinjiang, Sichuan and Shanxi, respectively Zhang Qingli, Wang Lequan, Liu Qibao and Zhang Baoshun. Zhang and Wang have been criticized for suppressing the religious and cultural heritage of ethnic minorities within their jurisdiction. Liu, together with his predecessor Du Qinglin, yet another CYL alumnus, has been faulted for the large number of shoddily constructed buildings that collapsed during the Sichuan Earthquake last year. And Zhang has been widely blamed for failing to cut down on the large number of deadly accidents in the coal mines of his resource-rich province (BBC news, May 15; AFP, February 22; *Telegraph.co.uk*, May 11). The onus is now on Zhou and Hu to prove to other cadres—and 1.3 billion Chinese—that they have what it takes to, in patriarch Deng’s memorable words, “prop up the sky” at times of monumental challenges.

Willy Wo-Lap Lam, Ph.D., is a Senior Fellow at The Jamestown Foundation. He has worked in senior editorial positions in international media including Asiaweek newsmagazine, South China Morning Post, and the Asia-Pacific Headquarters of CNN. He is the author of five books on China, including the recently published “Chinese Politics in the Hu Jintao Era: New Leaders, New Challenges.” Lam is an Adjunct Professor of China studies at Akita International University, Japan, and at the Chinese University of Hong Kong.

The U.S.-China Strategic and Economic Dialogue: Continuity and Change in Obama’s China Policy

By Dennis Wilder

Engagement between Beijing and Washington operates on many levels but none is more critical than a regularized mechanism for strategic discussion by the top officials in economics and foreign policy. While Presidential summitry is extremely valuable, it is too infrequent and too brief to cover the strategic issues in-depth. When President Barack Obama and President Hu Jintao met for the first time at the elegant U.S. Ambassador’s residence in London on April 1, they reemphasized this principle by announcing the creation of the “U.S.-China Strategic

and Economic Dialogue.” The statement released by the White House said that Secretary of State Hillary Clinton and Chinese State Councilor Dai Bingguo would chair the “Strategic Track” and Secretary of the Treasury Timothy Geithner and Chinese Vice-Premier Wang Qishan would chair the “Economic Track.” The White House noted that the first round of the dialogue would meet in Washington D.C. sometime this summer [1].

The announcement is a testament to the work pioneered by former Treasury Secretary Hank Paulson and former Deputy Secretary of State Robert Zoellick in engaging China in the Strategic Economic Dialogue (SED) and the Senior Dialogue (SD), respectively during the presidency of President George W. Bush. Paulson’s SED was begun in September 2006 at a moment when it looked as if the United States Congress might act to punish China for its ballooning trade surpluses with the United States by enacting high tariffs on Chinese imports unless China adjusted its currency peg to the U.S. dollar. The joint efforts of Secretary Paulson and Vice-Premier Wang Qishan helped to ease the Congressional concern and, indeed, from the first meeting of the SED in Beijing in December 2006 until the last round in December 2008, the SED accomplished one of its major goals as China’s currency appreciated by an impressive 20 percent against the U.S. dollar. Congress did not enact punitive legislation and a trade war was avoided.

Similarly, on the geopolitical side, the SD embodied the goal that Robert Zoellick famously outlined in a speech in September 2005 as the aspiration that China would one day soon become a “responsible stakeholder” in the international system [2]. Robert Zoellick and his successor at the Department of State, John Negroponte, engaged State Councilor Dai Bingguo in key global issues of the day ranging from the leakage of Chinese arms destined for the Iranian arms forces into the hands of terrorists in Iraq and Afghanistan to the dismal state of human rights in Darfur, Burma, and Zimbabwe [3]. In part because of this dialogue, China tightened its controls on weapons sold to Iran and, in 2007, began sending People’s Liberation Army (PLA) engineering troops to help build housing, an airport, fortifications and more than 6,250 kilometers of roads for the United Nations-African Union Mission of peacekeepers in Darfur [4]. China, for its part, had the opportunity through the SD to explicate, in depth, its concerns over such issues as the actions of then Taiwan President Chen Shui-bian.

Given this history, what are the implications of the creation of the new S&ED by the Obama Administration? The first implication seems to be that there is more continuity than change in the new administrations approach to engaging

China. The announcement by the new Administration that it seeks a “positive, cooperative, and comprehensive” U.S.-China relationship for the 21st Century echoes closely the Bush administrations policy of engaging China in “constructive, candid, and cooperative” ties. Indeed, as many commentators have remarked, the Obama team appears even more united than the Bush team in the conviction that strategic engagement with China is part of the solution to many of the daunting global and bilateral political and economic challenges. As James McGregor, one of the top American businessmen working in China and chief executive of JL McGregor and Company recently predicted, “Non-naïve, non-ideological, clear-eyed and serious engagement is where this relationship is headed” [5].

At the same time, officials in the Obama administration are quick to point out that this is not just a continuation of the Bush China policy but that the new dialogue will seek to take the relationship to a new level. After all, the U.S. participation is being “upgraded” by the direct involvement in the dialogue of the U.S. Secretary of State. This is no small thing as the Secretary of State’s time and energy is typically only engaged on those matters of foreign policy of highest priority to the President and the nation. Administration officials also point out that Secretary Clinton has elevated the issue of climate change and clean energy to a top priority in the new talks because she believes this is one of the most important issues where the United States and China need to intensify the global dialogue. When Secretary Clinton and her special envoy for climate change, Todd Stern, met with Chinese leaders in Beijing in February, they placed a high emphasis on the possibilities for a meaningful clean energy partnership not only between governments but between the business communities and academic institutions of China and the United States [6].

Aside from the environmental imperatives, engaging China on climate change is of urgent importance to the Obama Administration for at least two additional reasons. First, any effort to pass climate change and energy legislation in the U.S. Congress this year will be heavily influenced by whether the Obama Administration is making progress at getting China to do its part in reducing the global carbon footprint. After all, China may have overtaken the United States in 2007 as the world’s top annual emitter of carbon dioxide and the two countries together are responsible for over 40 percent of the greenhouse gases released into the atmosphere each year [7]. Many in the U.S. Congress have expressed concern that, in this time of recession, even more U.S. jobs will flee to China if production costs in America rise under a cap and trade system but China’s remain low. Secondly, many experts believe that the only

way that the U.N. Conference on climate change to be held in Copenhagen at the end of the year can be successful in designing a successor to the Kyoto Protocol is if the United States is able to convince China that it must take the lead in the developing world in reducing its carbon footprint. While China has increased its own attention to climate change in the past couple of years, it remains to be seen whether China is willing to commit itself to specific and internationally accountable targets for reducing overall emissions well below business-as-usual projections.

The S&ED also takes on new importance as China's global influence increases, particularly in this era of global recession. In the past five months, China has announced an unprecedented \$95 billion in currency swap agreements with six countries that hold part of their reserves in yuan. And, in the run-up to the G-20 meeting, Chinese Bank of China Governor Zhou Xiaochuan caught the world's attention by suggesting that it was time to look at the creation of a global super-sovereign reserve currency [8]. Both the United States and China have responded to the global recession with large domestic stimulus packages but those packages are band-aids designed to get each country through the current crisis. They do not, for example, address the systemic issues that have created the large annual bilateral trade imbalances between the United States and China, which have at their root cause the American propensity to high personal consumption and the Chinese propensity to high personal savings. The S&ED provides American and Chinese policymakers a top level forum in which to consult closely on their longer-range macroeconomic policies and plans so as not to surprise each other and hopefully design mutually reinforcing policies that raise all boats in the world economy.

Perhaps most importantly, the S&ED offers the potential for the United States and China to elevate their dialogue on global political issues to a new level. While U.S.-China engagement on such issues as North Korea and Taiwan is well developed, there have been less robust exchanges—and cooperation—on emerging concerns such as the unstable situations in Afghanistan and Pakistan. President Obama's decision to roll-out a new Afghanistan-Pakistan strategy now makes this a priority issue in U.S.-China relations. China's geographic proximity and its own concerns about terrorism should lead it to conclude that President Obama's success in the fight against al-Qaeda is in its own national interests.

Moreover, as the Obama Administration strikes a decidedly different tone from the Bush Administration on relations with countries from Cuba to Iran to Burma, it becomes critical for American and Chinese policymakers to engage in in-depth discussions of the implications of

these diplomatic shifts. Chinese companies are now major players around the globe and China is becoming a major international investor. Thus, China's influence and national interests are now far broader than they have been at any time in the history of People's Republic of China (PRC) and the prospect for mutually reinforcing diplomacy—or diverging diplomatic strategies—is also greater than it ever has been.

One important danger of too much emphasis on the new S&ED is a potential perception among America's allies that it signals the beginnings of an exclusive "G-2" relationship with China. From Japan to India, there are concerns that America's search for a solution to its worst economic crisis since the Great Depression may lead the Obama administration into not only expanded strategic and economic dialogues with China but a full-blown strategic partnership [9]. The Obama Administration will have to work hard to reassure America's allies and friends in Asia that they are not being relegated to a subordinate status and the Administration should be very clear on what the S&ED is—and is not.

Another danger that must be avoided is failing to get the right players to the table to make meaningful progress on key issues. While it is laudable that Secretary Clinton is willing to lead on creating a meaningful clean energy partnership with China, there is obviously a major role for other cabinet members, such as Secretary of Energy Steven Chu, on negotiating the details of such a partnership. After all, the basis of this was constructed last June when Secretary Paulson and Vice-Premier Wang Qishan adopted a "Ten-Year Energy and Environment Cooperation Framework" with the Department of Energy leading on the U.S. side. It will be critical to fill out that vague framework with a detailed road map created by the experts for clean energy and climate change cooperation.

Given all of the political and economic issues that the new S&ED could productively cover, it is difficult to understand why the two sides have decided on only an annual set of meetings. Over the past few years, both sides found the twice yearly schedule for both the Strategic Economic Dialogue and the Senior Dialogue productive and committed a great deal of time and energy to the dialogues. Deputy Secretary Negroponte, for example, even took up State Councilor Dai Bingou's invitation to visit his home province of Guizhou in southwest China during one round of their talks. China analysts have some concern that the large, annual summit could turn into less of an intimate dialogue and more of a media event. To avoid such an outcome, the Chinese and American co-chairs of the dialogue will have to commit themselves to carving out time for more than just formal meetings. This will not

be easy given the tremendous demands on their time and energies. Moreover, it will be crucial that a vibrant set of working groups be established that meet regularly in order to maintain momentum and tee up productive agendas for the annual summits. Only then will the new S&ED fulfill its promise as a vehicle for building a comprehensive U.S.-China relationship for the 21st century.

Dennis C. Wilder, a visiting fellow in the John L. Thornton China Center at the Brookings Institution, served as China director and then senior director for East Asian affairs at the National Security Council from August 2004 to January 2009.

NOTES

1. Whitehouse.gov, "Statement on Bilateral Meeting with President Hu of China," April 1, 2009.
2. Robert Zoellick, "Whither China: From Membership to Responsibility?," Speech to the National Committee on United States-China Relations, September 21, 2005.
3. "Discourage Chinese Arms Sales to Iran," AFP, September 11, 2007 and US Department of State, press roundtable, Deputy Secretary of State John Negroponte, Kabul, September 11, 2007, www.state.gov.
4. Chinamil.com.cn, "1st batch of Chinese peacekeepers to Darfur return home," January 13, 2009.
5. JImpacificepoch.com/blog, "Jim: No-Drama Obama China Policy", April 18, 2009.
6. U.S. Department of State, "The U.S. and China Working Toward Clean Energy", February 22, 2009 www.state.gov.
7. For an assessment of the potential for a U.S.-China energy partnership see, "Overcoming Obstacles to U.S. China Cooperation on Climate Change," Kenneth Lieberthal and David Sandalow, John L. Thornton China Center at Brookings Monograph Series, Number 1, January 2009.
8. Zhou Xiaochuan, "Reform the International Monetary System", March 23, 2009, www.pbc.gov.cn.
9. Dennis C. Wilder, "How a G-2 Would Hurt", The Washington Post, April 20, 2009.

The Panda Hugs the Tucano: China's Relations with Brazil

By Jiang Shixue

Brazil is the largest developing country in the Western Hemisphere, and China is the largest developing country in the world. According to some Western estimates, the combined economies of the BRIC (i.e. Brazil, Russia,

India and China) countries would surpass the combined economies of the richest nations of the world today by 2050 [1]. China and Brazil participate in the G-8 (Group of 8) Summit and are members of the G-20. Although China and Brazil are not official members of the G-8, Beijing and Brasilia's vocal participation in these summits symbolizes, in part, the rise of the developing world. In the wake of the global financial crisis, the G-20 has emerged as the de facto political vehicle leading global economic recovery. The realignment of power in the international system precipitating from the current global crisis has highlighted China's relations with the developing world, and in particular, its relations with Brazil, which is considered the most important bilateral relationship in Beijing's "South-South" strategy. Brazilian President Luiz Inacio Lula da Silva will pay his second official visit to China from May 18 to May 20. The year 2009 marks the 35th anniversary of the establishment of diplomatic relations between China and Brazil.

FROM TEA GROWERS TO STRATEGIC PARTNERS

China's relations with Brazil date back to the early 19th century when several hundred tea growers from China were transferred as laborers to Brazil via Macao (an administrative region of China). In the mid-19th century, Brazil was eager to import more Chinese laborers so as to make up for the shortage of labor after slave emancipation in Brazil, and offered to establish diplomatic relations with China, which was under Qing rule at the time. In 1880, China and Brazil signed a treaty of friendship stipulating the immediate establishment of diplomatic relations and the free flow of people and goods.

After U.S. President Richard Nixon visited China in 1971 and the People's Republic of China (PRC), which was founded in 1949, assumed the seat of China in the United Nations in 1972, many Latin American countries proceeded to change their stance toward the PRC. On August 15, 1974, the PRC and Brazil established diplomatic relations and in May 1984, Brazilian President *João Baptista Figueiredo* visited China. The late Chinese patriarch Deng Xiaoping chose the occasion of Figueiredo's visit to put forward his well-known theory of a dichotomous international system comprised of "East and West" and "North and South." Deng said, among the many issues that the world was facing then, the two most important were: to maintain peace by reducing East-West confrontation, and to promote international development so that it narrows the gap between the developed world (North) and the developing world (South). Nearly a decade thereafter, when Chinese President Jiang Zemin visited Brazil in November 1993, the two countries announced the formation of a "strategic partnership" between the two sides. Brazil thus became

the first developing country to have a strategic partnership with China.

COMPLEMENTARY ECONOMIES

The economies of China and Brazil are complementary and their respective comparative advantage plays a decisive role in helping both sides expand market share, develop economic relations and promote economic growth. Brazil is well-endowed with natural resources (e.g. bauxite, gold, iron ore, manganese, nickel, phosphates, platinum, tin, uranium, petroleum, hydropower, timber). For instance, its iron ore reserves account for 22.5 percent of world supply [2]. China's economy is resource-intensive, and the country is dependent on importing natural resources in order to sustain its high-speed growth.

Another area of increasing complementary cooperation is in Brazil's infrastructure sector. Brazil has recently decided to upgrade its critical infrastructures by proposing the "Accelerated Growth Plan" in early 2007, which China can invest in and supply technology to.

Brazil has a population of 192 million and an economic size of \$1.66 trillion. Its per capita GDP reached \$8,676 in 2008, which makes Brazil a sizeable market for China's labor-intensive export products [3]. At the same time, China's enormous market, a population of 1.3 billion and more than \$4 trillion GDP, is even more attractive to Brazil. Due to China's rising demand for natural resources, Brazil has benefited greatly over the past several years from the high price of commodities in the world market.

BRAZIL'S LARGEST EXPORT MARKET

According to data obtained from the PRC's Ministry of Commerce (see table below), China's trade with Brazil has grown exponentially from \$3.7 billion in 2001 to \$42.5 billion in 2008 (January to October). In March 2009,

Brazil exported \$1.74 billion worth of goods to China and \$1.27 billion to the United States, which means that China overtook the United States as the largest export market for Brazil's goods [4].

China exports electronics and textiles to Brazil and imports raw materials and commodities. China has a trade deficit with Brazil, which has been increasing from almost \$1 billion in 2001 to more than \$9 billion in 2008 (January to October).

By September 2008, China had a stock of non-financial investment totaling \$210 million in Brazil, mainly in mining, wood processing and production of motorcycles and home electronics.

The most impressive Chinese investment in Brazil in scale was made by Baosteel in cooperation with the mining company Vale do Rio Doce (CVRD) for the construction of a steel plant in the southern state of Espirito Santo. The whole investment, in the amount of \$3 billion, was divided between 60 percent for Baosteel and 40 percent for CVRD (Baosteel.com, October 9, 2007).

By October 2008, Brazil's stock of investment in China had reached \$270 million, mainly in the manufacturing sectors making airplanes, compressors, automobile parts, hydroelectric machines and textiles. The largest investment was made by Embraer in 2002 to make airplanes. The Chinese media coverage of this project has been labeled as a model of "South-South" cooperation, particularly in the manufacturing sector (Xinhua News Agency, November 8, 2007).

China is also interested in Brazil's energy sector. During the visit to Brazil by Chinese Vice-President Xi Jinping in February 2009, China and Brazil reached an "oil for loan" agreement. According to this agreement, China Development Bank would provide Brazil with a loan in

TABLE1: CHINA'S TRADE WITH BRAZIL (IN \$100 MILLION)

	Total Trade	Growth Rate	China Exports	China Imports	Balance
2001	37.0	...	13.5	23.4	-9.9
2002	44.7	20.8	14.7	30.0	-15.3
2003	79.8	78.5	21.4	58.4	-37.0
2004	123.6	54.8	36.7	86.8	-50.1
2005	148.2	20.0	48.3	99.9	-51.6
2006	203.0	37.0	73.8	129.2	55.4
2007	297.0	46.4	113.7	183.3	-69.6
2008	425.4	81.0	166.4	259.1	-92.7

Note: 2008 covers the period from January to October.

Source: China's Ministry of Commerce
(<http://zhs.mofcom.gov.cn/tongji.shtml>)

the amount of \$10 billion to finance the exploration for oil in Brazil's pre-salt layer reserves. Brazil has agreed to supply up to 100,000 barrels of oil per day to China (Domain-b.com, February 19).

TRADE FRICTIONS

Despite the rapid progress made in bilateral relations, further development of this relationship faces one major hurdle: increasing trade frictions.

Increased economic exchanges have resulted in more trade disputes. Brazil imposed its first anti-dumping measure against Chinese exports in December 1989. Even though China was granted so-called "market economy status" in November 2004, Brazil continues to levy anti-dumping tariffs against China. In October 2005, Brazilian President Luiz Inacio Lula da Silva signed an order that allowed the government to restrict imports of Chinese products by imposing temporary safeguards until 2013.

Brazil's lack of competitiveness can be attributed, in part, to its rapidly appreciating currency, which has gained more than 30 percent in value in the past two years and more than 100 percent since 2002 (Reuters, August 20, 2008). The rising value of a country's currency makes it difficult for it to expand exports.

The rising sense of a "China Threat" mentality held by some Brazilians may have contributed to the repeated use of anti-dumping practices by Brazil against China. Those who subscribe to such views believe that the influx of Chinese products is a threat to local Brazilian businesses. For instance, Roberto Giannetti da Fonseca, head of trade issues at the Industrial Federation of the State of São Paulo, Brazil's most powerful business association that represents industry in the state of São Paulo, said that China is "not a strategic partner," and Beijing merely "wants to buy raw materials with no value added and to export consumer goods" (The Economist, August 4, 2005).

Some Brazilians were disappointed by the extent of Chinese investments in the region, saying that Beijing's promises were "lots of smoke and little fire," in reference to President Hu's alleged promise to offer \$100 billion in 'direct investment' in Latin America when he spoke to the Brazilian congress during a visit in November 2004. In fact, President Hu was referring to overall China-Latin American trade value by the year 2010, and not specifically targeted investment. In terms of investments, President Hu stated that he hoped both China and Latin America would double the current stock of Chinese investment in the region, which totaled \$4 billion (Xinhua News Agency, November 13, 2004).

CRISIS AND OPPORTUNITIES FOR COOPERATION

China and Brazil have taken common positions in response to the current financial crisis. Referring to the cause of the crisis, President Lula said in his speech to the plenary meeting of the Ministers of Finance at the G-20 meeting in São Paulo on November 8, 2008: "The crisis started in advanced economies. It is a result of the blind belief in the market's self-regulation capacity and, by and large, of the lack of control of the activities of financial agents" (Xinhua News Agency, February 3).

President Lula's remarks were echoed by Chinese Premier Wen Jiabao. Speaking at the University of Cambridge on February 2, Premier Wen said:

"The international financial crisis once again ... demonstrates that a totally unregulated market economy cannot work. We must strike a balance between financial innovation and regulation, between the financial sector and real economy, and between savings and consumption" (Brazilian Ministry of Finance, August 11, 2008).

Indeed, the ongoing financial crisis has created multiple fronts for China and Brazil to cooperate. The current financial crisis has prompted China and Brazil to more systematically coordinate their positions on the issue of reforming the international financial system, so that their joint efforts, along with actions by other developing countries, may result in their having a bigger say in the World Bank and the International Monetary Fund. Brazilian Finance Minister Guido Mantega stated that a new international financial architecture, based on different rules, should be established and BRIC countries (Brazil, Russia, India and China) are expected to play a more important role.

THE FUTURE OF SINO-BRAZILIAN RELATIONS

Leaders from both nations have repeatedly expressed their desire to further promote the development of bilateral relations. In his address to the Brazilian congress on August 31, 2006, visiting Chairman of the Standing Committee of China's National People's Congress, Wu Bangguo, said that the Chinese government attaches great importance to the relationship between China and Brazil and the Chinese see Brazil as a sincere partner and friend. Meeting with the visiting Chinese Vice-President Xi on February 19, President Lula said that Brazil is satisfied with the development of friendly ties with China and is willing to work along with China to deepen the strategic partnership, to which the Brazilian government also attaches great importance.

Against the backdrop of the global financial crisis, China and Brazil have realized that they can strengthen cooperation in both the economic sphere and other areas so as to reap mutual benefits and further strengthen “South-South” cooperation. Therefore, the future of the relations between the world’s largest developing nation and the Western Hemisphere’s largest developing nation seems promising and bright.

Jiang Shixue is the Vice President of the Chinese Association of Latin American Studies and Professor at the Chinese Academy of Social Sciences.

Notes

1. Goldman Sachs, “Global Economics Paper No: 99,” October 1, 2003, sourced at: <http://www2.goldmansachs.com/ideas/brics/book/99-dreaming.pdf>.
2. See Latin American Business Chronicle website, “Latin American GDP Ranking,” sourced at: <http://www.latinbusinesschronicle.com/app/listado2.aspx>.
3. Bhpbilliton, “Brazil: Analyst Visit,” March 2007, sourced at: <http://www.bhpbilliton.com/bbContentRepository/brazilpresentationtoanalystsmarch2007.pdf>
4. Department of Economics and Commerce of the People’s Republic of China Embassy in the Federation of Brazil, “China Surpasses the United States in March as Brazil’s Largest Export Market,” April 2, 2009, sourced at: <http://br.mofcom.gov.cn/aarticle/ztdy/200904/20090406143390.html>.

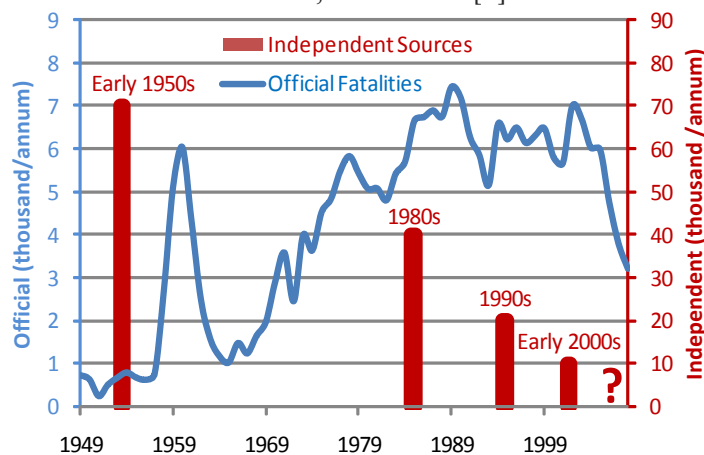
The Shanxi Coal Mine Blast and the Failure of Safety Governance in China

By JianJun Tu

A methane blast at the Tunlan coal mine in Shanxi on February 22 killed 78 miners and the last body was not recovered until five days later (*Nanfang Daily*, February 27). China’s numerous collieries, most of them being township and village enterprises (TVEs), have long been the world’s most deadly. Since the inception of the People’s Republic of China (PRC) in 1949, official sources have put China’s cumulative coal mining fatalities at more than 250,000, and independent estimates are much higher (see Figure 1). While the official coal mining death tolls in 2008 were 3,210, a 54 percent drop compared to 6,995 in 2002, China’s 2008 fatality rate of 1.182 deaths per million tons (Mt) of coal mined means that the world’s largest

coal producer’s safety standard still lags far behind the second largest one, the United States, by at least 55 years [1]. Due to recent economic slowdown, China has been experiencing a potential coal surplus for the first time since the late 1990s, which should offer a long-awaited window of opportunity to address its safety challenge. Yet, the deadly Tunlan accident has revealed that the fundamental illness of China’s safety governance mechanisms remains unscratched by scrutiny.

FIGURE 1: COAL MINING SAFETY IN CHINA: OFFICIAL NARRATIVE VS. INDEPENDENT ESTIMATES, 1949-2008 [2]



THE TUNLAN COAL MINE BLAST

Unlike most of China’s coal mining accidents, the blast at Tunlan has nothing to do with TVE mines, which currently account for about one third of China’s coal output, but 77 percent of its coal mining fatalities [3]. Instead, the 5 Mt Tunlan Mine boasts one of the best mining facilities in China. Its parent company, Shanxi Coking Coal Group (SCCG), is China’s largest and the world’s second biggest coking coal producer. Tunlan is not only the first mine at SCCG to utilize fully mechanized mining equipment, but also the first colliery in the world to utilize the “Large Cross Section Supporting Technology,” which is Tunlan’s proprietary invention and won the first class prize of the National Technical Advancement Award. Being a gaseous mine with fugitive methane emissions rate at about 20 cubic meters per ton of coal mined, Tunlan has installed highly efficient ventilation system, and utilized coal bed methane to fuel its boilers. Many of Tunlan’s dedicated underground inspectors are equipped with state-of-the-art methane detectors, which further eliminate the possibility of explosion. Since 2004, Tunlan has prided itself for zero mining fatality (First Financial Daily, February 23; Caijing Network, February 25). Not only were Chinese officials surprised by the bloody explosion at one of the country’s best collieries, many survivors were caught tragically unprepared.

Another unique quality of the Tunlan blast rests on how the accident was covered by the Chinese media, which has long been regarded as the propaganda machine of the state and ruling party. While the reporting of major catastrophes is a sensitive topic under heavy government control, the Chinese media nevertheless has become increasingly critical toward coal mining accidents. The authorities classified the country's most deadly coal mine accident at Laobaidong in Shanxi in 1960, which killed 682 miners, as a 'state secret,' it was eventually disclosed by China Coal Post in 1998 [4]. On July 17, 2001, when 81 coal miners died in an inundation accident in Nandang County, courageous reporters working for Yangcheng Evening News and other media risked their lives to dig out the story for the outside world [5]. Yet, in recent years, Chinese media has become less critical on sensitive topics, which is especially evident in the news coverage of Tunlan blast.

DRIVERS UNDERLYING THE CATASTROPHE

Though the February 22 blast happened at a state-owned mine, the most important contributing factor is the authorities' inability to develop an effective strategy to manage China's TVE mines. After China was opened to the outside world in 1979, state-owned mines were unable to meet the burgeoning demand due to heavy welfare obligations to their bloated workforces and retirees. Beijing was forced to allow private investment into the coal industry. In 1991, the number of TVE mines reached to an astonishing 100 thousand, and the share of coal production by TVE mines grew from 17 percent in 1979 to 46 percent in 1997 [6], which soon led to problems such as tax evasion, environmental degradation and mounting accidents. In the late 1990s, lured by a temporary coal surplus, Beijing launched a national campaign to close TVE mines. Since then, China's coal industry features the love-and-hate relationship between the state and private enterprises: 1) with governmental favoritism, state-owned mines expanded rapidly; 2) Beijing orders targets for TVE mines' closure; 3) fearing loss of tax revenues and often personal gains, local officials quietly resist Beijing's orders, and many TVE mines that were supposed to be closed still secretly operate; 4) the burgeoning economy needs much more coal than state enterprises can meet, Beijing realizes the private sector has been overdosed, with no choice left but to loosen permit requirements; and 5) TVE mines flourish in the market again.

Though TVE mines are the de facto swing producer in the Chinese coal market, with a critical role to meet any shortfall between domestic demand and what state-owned mines can produce, their contribution to the Chinese economy has been intentionally downplayed in the past. Instead, TVE mines are the easiest targets whenever pointing

fingers become a necessity. Because the number of TVE mines is being reduced to 10,000 by 2010, the private coal mining industry as a whole has no incentive to make long-term investment to improve mines safety. Overproduction (typically 150 to 300 percent of design capacity) and death toll falsification whenever possible are the norms. While TVE mines are the weakest link of China's coal industry, many state-owned mines are expanding at breakneck paces and often produce much more than they should without adequate safety margins.

To solve its safety challenge, Guangdong, one of the most developed provinces and a major coal consumer in China, shut down all collieries within its geographic boundary in 2005. Though undeniably effective, such an administrative decision not only deeply hurts the interests of all stakeholders in Guangdong's coal industry and wastes indigenous resources, but also put extra pressure on China's over-loaded transportation infrastructure. In addition, the subsequent transferring of sizable death tolls from a wealthy coastal province to much poorer hinterland such as Shanxi is also morally questionable.

Similarly, in the wake of the Chinese Spring Festival, annual sessions of people's congresses, and people's political consultative conferences, TVE mines have been closed across the country just for the sake of political sensitivity. In January 2009, though China's national coal output declined by 11 percent on a year-over-year basis, production by key state-owned mines actually grew by 12 percent on a similar basis [7]. As a result, many state-owned mines operated beyond their safety margins in early 2009. Though Tunlan's annual capacity was retrofitted from 4.0 to 5.0 Mt in 2005, an anonymous source cited 4.0 Mt as Tunlan's optimal output level, and 4.5 Mt as its safety threshold, beyond which equipment overcapacity and worker fatigue would make its operations prone to accidents. In 2008, Tunlan produced 4.62 Mt of coal, which already exceeded the alleged threshold (First Financial Daily, February 23), so whether the massive TVE mine closure in early 2009 has lured Tunlan to operate beyond its safety margin is a legitimate question that deserves attention during the accident investigation.

The heavy death tolls at Tunlan are also a direct result of the low productivity of China's coal industry. Considered to be one of China's best collieries, Tunlan is actually not exceptional in this regard and as many as 436 miners crowded its tunnels when the blast occurred. To counter individual accidents with heavy fatalities, Shanxi government in 2005 put limits on the number of miners allowed to work at an underground colliery in accordance with its design capacity. For a 0.09 Mt mine, the maximum allowable miners are 29. For a 0.9 Mt mine, the limit is

set at 99 instead of 290 because the expected economy of scale [8]. Given Tunlan's design capacity of 5 Mt, 436 underground miners at one shift do not even meet the expected minimum productivity standard implied by Shanxi government's 2005 regulation.

To make matters worse, both Tunlan's investment on safety equipment and emergency training for its miners are insufficient. When the blast occurred, Tunlan's methane alarm system did not send off a signal. While the accident at Tunlan was a localized methane explosion, the number of miners that were directly killed was not so high. If the evacuation was implemented under an ideal scenario (e.g. well trained miners with adequate protection), the final death tolls would have been far less than the actual level. Unfortunately, many first round survivors still had no clue what happened even after they were ordered to evacuate, some did not wear their self-rescue equipment at first. For those who remembered such a procedure, several of them are reported to have fainted when they rushed through the mine shaft. As a result of such a messy evacuation, all 340 miners evacuated from the mine showed symptoms of carbon monoxide poisoning. Of 114 miners hospitalized, 11 died and 26 were found to be in critical conditions (*China Daily*, February 22; February 23; *Chutian Golden Newspaper*, February 23; February 24; *Nanfang Daily*, February 26).

To further complicate the matter, the lack of qualified employees is endemic to a disease that plagues China's coal industry. Low income levels, highly undesirable work conditions and negative exposure in the Chinese media make it extremely difficult for Chinese collieries to attract and retain qualified employees, which creates a shortage of expertise required to raise mine safety standards. According to the Safety Training Centre of the SCCG, more than 80 percent of Tunlan's trained safety inspectors, arguably the most important position for safety operations, only received middle school education, and none of them has a college or higher level degree [9]. As Tunlan is actually one of the best state-owned collieries in China, the picture of staff qualification is far bleaker for other coal mining enterprises, especially China's numerous TVE mines.

IS THERE A WAY OUT?

Given the large size of operating collieries in China, Beijing's efforts to reduce the number of operating mines is legitimate. Yet, instead of blindly closing coal mines whenever a major accident happens at the adjacent region or just for the sake of avoiding political sensitivity, the authorities should take each mine's unique conditions into consideration even if a safety rectification campaign is necessary. Currently, Beijing plans to reduce the number of

"small mines" (a politically correct terminology for TVE mines) to 10,000 by 2010. At the same time, shutting down a coal mine solely based on its capacity is not only unfair for small collieries that strive to meet safety standards, but also encourages more to operate illegally across the country, which will have a detrimental impact on the accounting methods used in calculating Chinese coal statistics.

TVE mines are widely regarded as the black sheep of China's coal industry, and private colliery owners are often portrayed by the media as rude, self-aggrandizing, and tax-evading upstarts. Yet, since 1978, TVE mines have provided more than 35 percent of China's cumulative coal output to fuel China's burgeoning economy [10], and have become an indispensable part of China's energy sector. They were always Beijing's last resort whenever a coal supply shortage occurred due to the flexibility of their operations. As a result of the extremely complex geological structure of China's coal resources, a large portion of Chinese coal deposits are only suitable for small scale underground mining operations. Without a reasonable presence of private enterprises, the level of competition required for long term healthy development of China's coal mining industry cannot be ensured. Further, TVE mines are important taxpayers in many coal producing regions, they employ large number of migrant workers, and are important to China's social stability. Not only the governmental favoritism towards state-owned mines needs to be reconsidered, the indispensable role of TVE mines to the Chinese economy should also be formally recognized.

The most formidable measurement imposed by Beijing regarding safety management so far may be the so-called "The Safety Framework Governing Resignation of Responsible Officials." Meng Xuelong, the former governor of Shanxi, was the first provincial cadre in China to resign under such a safety framework after a major mining-related accident in September 2008. Following Meng's resignation, Beijing appointed Wang Jun, the former director of the State Administration of Work Safety, as the acting governor of Shanxi (*Nanfang Daily*, September 14, 2008). While Wang Jun's political ascendancy in Shanxi has shown Beijing's determination to reign in China's chaotic coal industry, the Tunlan blast nevertheless demonstrates that the "top-down" punitive measurements used toward government officials alone are insufficient to solve China's mounting safety challenges.

As the Chinese economy becomes increasingly market-oriented, Beijing should adopt an alternative approach that can be described as "enforceable sticks with sufficient carrots." While punitive measurements for safety violation are an indispensable component to solve China's safety challenges, enforceability should be a prerequisite for

introducing such enactment. For instance, introducing overly ambitious targets (e.g. TVE mine closure) is a very counterproductive practice that should be avoided in the future. More importantly, a legal and taxation environment featuring transparency and stability should be nurtured to create a fair playground for all coal enterprises, especially TVE mines. Only if such type of carrots is made available, sufficient resources of China's private coal mining industry could be directed towards safety investment and long term growth instead of beating around the rules and colluding with local officials.

Kevin JianJun Tu is a Vancouver-based senior energy and environmental consultant, and a research associate at the Canadian Industrial Energy End-Use Data and Analysis Centre. The views expressed herein are his own and do not necessarily represent the views of any organization with which he is affiliated.

NOTES

1. According to the Mine Safety and Health Administration, U.S. Department of Labor, coal mining fatality rates in the U.S. were 1.191 and 1.041 in 1952 and 1953, respectively.
2. Tu, J. (2008). Coal Mining Safety: China's Achilles' Heel. *China Security*. Vol. 3(2). P.36-53. / The State Administration of Work Safety's (SAWS) website. / China Coal Industry Yearbook, various years. / Guo, G. and et al. (2006). Coal Mine Safety Technology and Management. Metallurgical Industry Press: Beijing.
3. Production share is based on 2008 data from the China Coal Transportation and Marketing Association, fatality share is based on 2007 data from the SAWS.
4. He, Y. (1998). "Wen Cangmang Dadi (Report of China's Most Deadly Coal Mining Accident)," *China Coal Post*.
5. Zhao, S. (2004). Nandan Mining Accident: Case Study of the Struggling News Coverage, in *Investigating China: Stories behind the Headlines*. Chinese Fangzheng Publishing House: Beijing.
6. China Coal Industry Yearbook, various years.
7. Source: China Coal Transport and Distribution Association (CCTD).
8. Inter-ministry Office on Coal Mine Methane Accident Prevention (2006). "Shanxi Limits Number of Coal Miners Working Underground." *Coal Mine Methane Prevention*. Issue 32.
9. Website of the Safety Training Centre of the SCCG, at <http://www.xsmdap.com/ns.php?catid=3286&nowmenuid=4737&cpath=3285:3286>:
10. China Coal Industry Yearbook, various years / CCTD.