

# China's Communist-Capitalist ecological apocalypse

Richard Smith [Institute for Policy Research and Development, London]

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A ship sails across the junction of the polluted Yangtze River (left) and the Jialin River in Chongqing, China, September 7, 2012<sup>1</sup>

## Abstract

This article seeks to explain why China's environmental crisis is so horrific, so much worse that "normal" capitalism most everywhere else, and why the government is incapable of suppressing pollution even from its own industries. I begin with an overview of the current state of China's environment: its polluted air, waters, farmland, and the proximate causes: overproduction, overdevelopment, profligate resource consumption, uncontrolled dumping and venting of pollutants. I then discuss the political-economic drivers and enablers of this destruction, the dynamics and contradictions of China's hybrid economy, noting how market reforms have compounded the irrationalities of the old bureaucratic collectivist system with the irrationalities of capitalism resulting in a diabolically ruinous "miracle" economy. I conclude with a précis of the emergency steps the country will have to take to take to brake the drive to socio-ecological collapse, with dire implications for us all.

The first time Li Gengxuan saw the dump trucks from the nearby factory pull into his village, he could not believe his eyes. Stopping between the cornfields and the primary school playground, the workers dumped buckets of bubbling white liquid onto the ground. Then they turned around and drove right back through the gates of their factory compound without a word. In March 2008 Li and other farmers in Gaolong, a village in the central plains of Henan Province near the Yellow River, told a Washington Post reporter that workers from the nearby Luoyang Zhonggui High-Technology Co. had been dumping this industrial waste in fields

<sup>1</sup> *Daily Mail*. More photos of same at <http://www.dailymail.co.uk/news/article-2199800/The-river-DID-run-red-Residents-Chinese-city-left-baffled-Yangtze-turns-scarlet.html#ixzz31PbZtLfZ>

around their village every day for nine months. The liquid, silicon tetrachloride, was the byproduct of polysilicon production and it is a highly toxic substance. When exposed to humid air, silicone tetrachloride turns into acids and poisonous hydrogen chloride gas, which can make people dizzy and cause breathing difficulties. Ren Bingyan, a professor of Material Sciences at Hebei Industrial University, contacted by the Post, told the paper that “the land where you dump or bury it will be infertile. No grass or trees will grow in its place ... It is ... poisonous, it is polluting. Human beings can never touch it.” When the dumping began, crops wilted from the white dust which sometimes rose in clouds several feet off the ground and spread over the fields as the liquid dried. Village farmers began to faint and became ill. And at night, villagers said “the factory’s chimneys released a loud whoosh of acrid air that stung their eyes and made it hard to breath.” “It’s poison air. Sometimes it gets so bad you can’t sit outside. You have to close all the doors and windows,” said Qiao Shi Peng, 28, a truck driver who worried about the health of his one-year-old. Reckless dumping of industrial waste is everywhere in China. But what caught the attention of the Washington Post was that the Luoyang Zhonggui High-Technology Co. was a “green energy” company producing polysilicon destined for solar energy panels sold around the world. Indeed, it was a major supplier to Suntech Power Holdings, then the world’s leading producer of solar panels, and Suntech’s founder, Shi Zhengrong, topped the Hunrun list of the richest people in China in 2008.<sup>2</sup>

Silicon tetrachloride is an unavoidable byproduct of polysilicon production. But reckless pollution of farm villages is not unavoidable and today China is the only country in the world where such criminal behavior and cynical disregard for the health and lives of farmers and workers has become standard practice on a national scale by governments at every level, even as the government’s own environmental agencies decry such behavior and struggle, mostly in vain, to stop it. As one Chinese researcher told the Post, “If this happened in the United States, you’d be arrested.” But in China environmental regulations are regularly flouted by state-owned and private industries with the connivance of government officials at all levels while protesting farmers, workers, and environmental activists are arrested, jailed, beaten or worse and their lawyers with them. Polysilicon production produces about four tons of silicon tetrachloride liquid waste for every ton of polysilicon produced. In Germany, where Siemens produces solar panels, pollution recovery technology is installed to process the silicon tetrachloride waste and render it harmless. But such environmental protection technology is expensive. In 2008 the cost to produce polysilicon safely was about \$84,500 a ton in Germany and would not have cost much less in China. Chinese companies have been producing it for \$21,000 to \$56,000 a ton, saving millions of dollars a month, by just dumping the toxic waste in rural areas on helpless village communities. Gaolong village is a mirror to China. It illustrates how the marriage of capitalism and Stalinist bureaucratic collectivism has created a diabolically destructive hybrid economic system, a rogue economy that is ravaging China’s environment, ruining the health of Chinese, rendering more and more of the country unlivable, driving the country to ecological collapse, and threatening to bring the whole planet down with it.<sup>3</sup>

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<sup>2</sup> Ariana Enjung Cha, “Solar energy firms leave waste behind in China,” *Washington Post*, 9 March 2008. All quotations are from this article.

<sup>3</sup> There’s no better illustration of this government-industry collusion and pollution’s catastrophic impact on the health of China’s people than journalist Chai Jing’s sensational new documentary on China’s smog *Under the Dome—Investigating China’s Smog* (Wumai diaocha: qiongdng zhixia) which went online in late February and is being rightly hailed as China’s *Silent Spring* <https://www.youtube.com/watch?v=T6X2uw1QGQM>.

## I. China self-destructs

For more than three decades, China's "miracle" economy has been the envy of the world or at least the envy of capitalist economists for whom wealth creation is the highest purpose of human life. Since 1979, China's GDP has grown by an average of just under 10% per year. Never, the World Bank tells us, has a nation industrialized and modernized so quickly or lifted so many millions out of poverty in such a short time. From a backward, stagnant, largely agrarian socialism-in-poverty, Deng Xiaoping brought in foreign investors, introduced market incentives, set up export bases, turned China into the light-industrial workshop of the world, and renovated China's huge state-owned enterprises (SOEs). Three and a half decades of surging economic growth lifted China from the world's tenth-largest economy in 1979 to No. 1 by 2014. What's more, after decades of export-based growth, China's 12<sup>th</sup> Five-Year Plan 2011-2015 sought to refocus the economy on internal market demand to realize Xi Jinping's "Chinese Dream" of national rejuvenation and turning China into a mass consumer society on the model of the United States. As China sailed right through the global near-collapse of 2008-9, hardly missing a beat, while western capitalist economies have struggled to keep from falling back into recession, even the Thatcherite *Economist* magazine had to concede that China's state capitalism may be in certain respects superior to capitalist democracies and is perhaps even the wave of the future.

But China's rise has come at horrific social and environmental cost. It's difficult to grasp the demonic violence and wanton recklessness of China's profit-driven assault on nature and on the Chinese themselves. Ten years ago, in an interview with *Der Spiegel* magazine in March of 2005, Pan Yue, China's eloquent young Vice-Minister of China's State Environmental Protection Agency (SEPA) told the magazine that "the Chinese miracle will end soon because the environment can no longer keep pace":

We are using too many raw materials to sustain [our] growth... Our raw materials are scarce, we don't have enough land, and our population is constantly growing. Currently there 1.3 billion people living in China, that's twice as many as 50 years ago. In 2020 there will be 1.5 billion ... but desert areas are expanding at the same time; habitable and usable land has been halved over the past 50 years... Acid rain is falling on one third of Chinese territory, half of the water in our seven largest rivers is completely useless, while one fourth of our citizens do not have access to clean drinking water. One third of the urban population is breathing polluted air, and less than 20 percent of the trash in cities is treated and processed in an environmentally sustainable manner... Because air and water are polluted, we are losing between 8 and 15% of our gross domestic product. And that doesn't include the costs for health... In Beijing alone, 70 to 80 percent of all deadly cancer cases are related to the environment.

And criticizing western economists who reassure us that more growth is the key to repairing the environmental damage done from growth, Pan said:

And there is yet another mistake ... It's the assumption that economic growth will give us the financial resources to cope with the crises surrounding the environment, raw materials, and population growth. [But] there won't be enough money, and we are simply running out of time. Developed countries with a per capita gross national product of \$8,000 to \$10,000 can afford that,

but we cannot. Before we reach \$4,000 per person, different crises in all shapes and forms will hit us. Economically we won't be strong enough to overcome them.<sup>4</sup>

Pan Yue's searing honesty got him sidelined but if anything, he understated the speed, ferocity and scale of China's ecological destruction, a destruction that extends far beyond China itself.

#### **A. Consuming the planet to support unsustainable growth**



Photo: *The Economist* 13 May 2008

As China's growth took off in the eighties and nineties, the industrial boom rapidly depleted the country's resources, especially lumber, oil and minerals, forcing Beijing to turn outward to feed its voracious engines of growth. The manic and thirsty industrialization boom in China's northern industrial cities drained China's northern fresh aquifers leaving some 600 cities including Beijing facing dire water shortages while severely polluting most remaining reserves. Profit-hungry loggers cut down most of what was left of China's forests, recklessly denuding mountains and precipitating such extensive flooding and loss of life in 2009 that the government banned domestic logging. Chinese loggers then turned to plundering Siberia, Malaysia, Indonesia, even New Guinea and parts of Africa. China had little oil to begin with so industrialization and automobilization quickly turned China from a modest oil exporter into a net importer in 1993 and the world's leading oil importer by 2013. China's iron ore, copper and other critical industrial mineral reserves have also been rapidly drawn down forcing the country to import growing quantities of minerals. In result, today, with 20 percent of the world's population, China is now by far the world's largest consumer of marketed primary industrial raw materials (cement, metal ores, industrial minerals, fossil fuels, and biomass).

<sup>4</sup> "The Chinese miracle will end soon," *Der Spiegel* 7 March 2005:  
[www.spiegel.de/speigel/0,1515,345694.html](http://www.spiegel.de/speigel/0,1515,345694.html).

China consumes more than 32 percent of the world's total of these resources, nearly four times as much as the U.S., the second largest consumer. China consumes just over half the world's coal and a third of the world's oil. China is the leading producer and consumer of steel with 46 percent of world output and now relies on imports for 77 percent of its iron ore.<sup>5</sup> China has become the world's largest consumer of lumber and forest products leveling forests from Siberia to Southeast Asia, New Guinea, Congo, and Madagascar. Greenpeace concluded on current trends "future generations will be living on a planet without ancient forests."<sup>6</sup>

Of course China has the world's largest population and is industrializing from a comparatively low level just three decades ago so it's hardly surprising that it would consume lots of resources to build infrastructure and modernize. But the fact is, most of these resources have been squandered on a stupendous scale and for all the waste and pollution, most Chinese have gotten surprisingly little out of it all.

### **The disposables revolution and "The Great Acceleration" of global consumption**

For a start, look at the export bases that have powered China's rise. When China launched its "reform and opening" (*gaige kaifang*) in the early 1980s and invited foreign investors to set up joint-ventures and Special Economic Zones, China's combination of ultra-cheap labor plus few-to-no environmental restrictions attracted many of the world's dirtiest and least sustainable industries. Steel, coke, aluminum, cement, chemicals and petrochemicals, metal plating, leather tanning, plastics, paints and finishes, synthetic fibers and textile production, fabric dyeing, paper production, along with auto battery and electronics recycling -- most of the toxic and smokestack industries facing increasingly tough environmental restrictions at home in the U.S. and Europe, relocated to China after 1980.<sup>7</sup> Seventy percent of the world's e-waste is dumped in China.

On top of this, China's masses of cheap migrant workers were a magnet for the world's most labor-intensive manufacturing and assembly industries. By the 1990s China had more than 104 million manufacturing workers, about twice as many as the United States, Canada, Japan, Germany, France, Italy, and the UK combined. And they worked 8-16 hour days, often 7 days a week, for an average of \$0.57 per hour in 2002, by one estimate, less than the handloom operators earned in the early Industrial Revolution in England. This "China Price" set the global floor for high-volume light-industrial manufacturing from the 1980s.<sup>8</sup>

The price collapse spurred the biggest boom in global consumption in history and this in turn accelerated global resource plunder on an unprecedented scale. The sudden availability of such a huge pool of ultra-cheap workers also spurred a minor industrial revolution enabling producers to annihilate most of the remaining categories of durable goods and replace them with cheaper, disposable replacements. With the disposables revolution, local tailors and alteration shops, shoe repair shops, appliance repair shops, TV repairmen and the like all but vanished in the West as it became cheaper to toss it and replace it than repair it. Take clothes: "Fast Fashion" (aka "Trashion Fashion") from H&M, Target, Zara's and others, now

<sup>5</sup> Elizabeth Economy and Michael Levi, *By All Means Necessary*, Oxford 2014, chapters 3 & 4.

<sup>6</sup> Craig Simons, *The Devouring Dragon*, New York, 2013, p. 9 and chapters 7&8.

<sup>7</sup> Joseph Kahn and Mark Landler, "China grabs west's smoke-spewing factories," *New York Times*, 21 December 2007. William J. Kelly and Chip Jacobs, *The People's Republic of Chemicals* (Los Angeles: Vireo 2014).

<sup>8</sup> Alexandra Harney, *The China Price*, New York, 2008, pp. 8-9.

rules the women's apparel market with clothes so cheap it's often not worth the cost of dry-cleaning them. As Elizabeth Kline relates in her recent book *Overdressed: the Shockingly High Cost of Cheap Fashion* "seasonal shopping patterns have given way to continuous consumption." Zara delivers new lines twice a week to its stores. H&M and Forever 21 stock new styles *every day*. In Kline's words: "Buying so much clothing and treating it as if it is disposable, is putting a huge added weight on the environment and is simply unsustainable." To say the least. The U.S. cotton crop requires the application of 22 billion pounds of toxic pesticides every year. Most fiber is dyed or bleached, treated in toxic chemical baths to make it brighter, softer, more fade resistant, water proof, or less prone to wrinkles. Upholstery fabrics and children's pyjamas are treated with ghastly chemicals to make them stain resistant or fireproof. These toxic baths consume immense quantities of chemicals and water and it goes without saying that in China, the chemicals are routinely just dumped in rivers and lakes, untreated, just like that silicon tetrachloride poured out on Li Guangxuan's cornfield. Then after all the chemical treatments, the fabrics have to be dried under heat lamps. These processes consume enormous quantities of energy. The textile industry is one of the largest sources of GHG emissions in the world, and it's growing exponentially. In 1950, when there were about 2.5 billion people on earth, they consumed around 10 million tons of fabric for all uses. Today, we are 7 billion, but we consume more than 70 million tons of fabric annually, nearly 3 times as much per person as we consumed in the fifties. Producing 70 million tons of fabric consumes astounding quantities of resources including more than 145 million tons of coal and between 1.5 and 2 trillion gallons of fresh water, every year. Synthetic fibers like polyester and such (now 60 percent of the market) are the worst: They consume between 10 and 25 times as much energy to produce as natural fibers. In short, "fast fashion" is speeding the disposal of planet Earth.<sup>9</sup>

And what's true for China's garment industry is true for most of the rest of China's export industries. From cheap disposable shoes and clothes, toys, tools, housewares, Christmas junk and flimsy plastic appliances to meticulously made and expensive but nevertheless designed-to-be-obsolete iPhones and 60 inch flat-screen TVs, most of the world's light industrial goods are Made in China and they are, for the most part, deliberately designed-to-be-obsolete, unrepairable, mostly unrecyclable. After they're short life, they all end up piled on the world's ever-growing garbage mountains, sent back to China in containers filled with E-trash to be "recycled" by children melting the plastic off mother boards over open fires, or left floating around the world's oceans in giant plastic gyres over vast stretches of oceans, hundreds of feet deep.<sup>10</sup>

### **Scenes of planetary destruction from the 12<sup>th</sup> Five-Year Plan**

When we turn to China's domestic economy, the waste is breathtaking. As China's economy opened to the West and China's exports began returning billions of dollars in foreign exchange, Beijing launched wave after wave of gargantuan development projects: dams, airports, rail systems, roads, subways, sewerage systems, new industries, new housing, new cities, new ports, and more. China's supercharged government planners have been showcasing China's engineering prowess and economic might by building the world's biggest

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<sup>9</sup> *Overdressed*, New York 2013, pp. pp. 3, 124-125. Energy consumption: FAO, cited in "Fabric and your carbon footprint, *O Ecotextiles*, 10 March 2013, at <http://oecotextiles.wordpress.com/2013/10/03/fabric-and-your-carbon-footprint/>.

<sup>10</sup> Niu Yue, "China No 1 dumper of plastic into ocean," *China Daily*, February 19, 2015.

dams, the tallest skyscrapers, biggest airports, longest and highest bridges, longest rail and road networks, longest tunnels, etc. Since Deng Xiaoping launched his “Four Modernizations of agriculture, defence, science and technology” and reform and opening up, the country has been in perpetual Great Leap Forward mode: Five-Year plans have set annual industrial growth rates of 8 percent and promoted successive sets of “pillar” industries -- autos, electronics, petrochemicals, clean energy and so on. In the current 12<sup>th</sup> Five-Year Plan (2011-2015) the State Council calls for development of “seven strategic emerging industries” including (1) energy efficient and environmental technologies like “clean coal,” (2) next generation IT and cloud computing and the “Internet of Things,” (3) biotechnology, (4) high-tech manufacturing of vehicles and aircraft, expanding high-speed rail service to 45,000 kilometers, expanding motor expressways to 83,000 kilometers, (5) new-generation nuclear power, more solar and wind energy systems, (6) new materials including development of rare earths, special glass and ceramics, high-performance fiber and composite materials, (7) new-energy vehicles: motor batteries, drive motors, electronic controls, plug-in hybrid and electric vehicles, low-emissions vehicles.<sup>11</sup>

No doubt, the Chinese have benefited from new housing, new infrastructure, new schools, hospitals and so on. But the government has also squandered astounding quantities of resources building entire industries China does not need, building useless vanity projects, superfluous housing, redundant infrastructure and more. From the start this investment boom has been characterized by uncontrolled overproduction and out-of-control pollution.

### **Scene 1: The “car craze” China and planet Earth did not need**

The 12<sup>th</sup> Five-Year Plan calls for “enhancing China’s independent capacity to manufacture automobiles, domesticating production of all key parts,” for “large-scale commercialization” of energy efficient and hybrid vehicles, for “building ... world-famous brands and core competencies” and so on. Hybrid or not, this is an industry the Chinese do not need. Up to 1979 China produced around 160,000 motor vehicles per year with trucks and buses accounting for 90 percent of the output. People got around on bicycles, busses and trains. In 1990, China had just 5.5 million cars, trucks, and buses on the road. By 2013 China became the world’s largest auto assembler cranking out 18.7 million cars and light vehicles, more than twice the number produced in the U.S. in that year. By 2013, China had 240 million cars on its roads, almost as many as in the United States and estimates are that China could have 390-532 million cars on the road by 2050. The question is, why does China need anything like such a huge auto industry? The lead headline of *Bloomberg News* for April 9, 2014, citing the latest IPCC report, was “Cars become the biggest driver of greenhouse-gas increases.” What’s wrong with this picture?

The automobilization of China has brought three profound changes. First, it has dramatically lengthened the time it takes to get anywhere in China’s gridlocked cities (average speed on Beijing’s ring roads is 9 mph) and created epic, world-historic traffic jams on highways feeding

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<sup>11</sup> *State Council Decision on Accelerating the Development of Strategic Emerging Industries*, October 2010 at [http://www.gov.cn/zwqk/2010-10/18/content\\_1724848.htm](http://www.gov.cn/zwqk/2010-10/18/content_1724848.htm).

*State Council 12th Five Year Plan (FYP) on Development of Strategic Emerging Industries*, July 2012 at [http://www.gov.cn/zwqk/2012-07/20/content\\_2187770.htm](http://www.gov.cn/zwqk/2012-07/20/content_2187770.htm).

*MOF and NDRC Interim Measures for the Administration of Special Funds for Strategic Emerging Industries*, December 2012 at

[http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefagui/201301/t20130124\\_729883.html](http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefagui/201301/t20130124_729883.html).

into Beijing and other cities. One jam-up near near Beijing in 2010 stretched over 100 kilometers and lasted for *two weeks*. Secondly, it has added a dense new layer of smog on top of the already thick layers of smog from coal combustion smothering China's cities. And thirdly, it has paved over much-needed farmland and wetlands and wasted enormous resources China, and the world, does not have to waste. This did not have to happen.

The Communist Party promoted joint-venture auto production as a "pillar" industry in the 1990s for two reasons: First, once the government embarked on its market-reform strategy, abandoning lifetime employment, it needed to push growth to generate private and state-sector jobs, like capitalist governments everywhere. Speaking in November 2013, Prime Minister Li Keqiang stressed that:

Employment is the biggest thing for well-being. The government must not slacken on this for one moment ... For us, stable growth is mainly for the sake of maintaining employment.

Auto manufacture and related industries now account for 1 out of every 8 urban jobs in China excluding road-building, another big employer.

Secondly, the Party promoted the car craze to bolster status-seeking middle-class political support. In the 1980s, the Party supported a modest consumerism. But after the Tiananmen uprising in the spring of 1989, the government opted for expansive consumerism to placate the middle classes. Hence the car craze, followed by the airline craze, the shopping mall craze, the high-speed train craze, the foreign tourism craze, and so on. It is no small irony that just as the CCP was ramping up auto production and banning bicycles from public roads in the 1990s, European countries were moving in the opposite direction -- barring cars from many central city streets, promoting bicycles and car sharing, and expanding public transit. China didn't begin expanding its urban subways in earnest until the late 2000s, after two decades of automobilization had gridlocked its cities and dramatically increased air pollution.



Beijing 1981, before the car craze. Photo: [china-underground.com](http://china-underground.com).





Beijing 2013: the 3<sup>rd</sup> ring road in the midst of the car craze. According to the Beijing Municipal Transportation Commission, 44% of the capital's motor vehicles travel less than 5 km per trip – a trip that one used to be able to make in twenty minutes by bicycle. Photo credit: John Metcalfe, [Atlanticcities.com](#), January 15, 2013



Copenhagen 2011 (after the car craze). Photo: [sf:streetsblog.org](#)

## **Scene 2: The roads not taken**

As China was racing to surpass the U.S. as the world's largest car market, the Communist Party decided that China should also "catch up and overtake" the U.S. Interstate highway system as well. So by 2010 China built 53,000 miles of intercity expressways, exceeding the U.S. Interstate highway system's 47,000 miles. But this program, built at huge cost and by tearing through cities and paving over thousands of square miles of valuable farms, wetlands and so on, is yet another ill-conceived boondoggle because except for a few highways near major cities like Beijing or Shenzhen, China's expressways are often little used. In places,

farmers dry their crops on empty super highways. McClatchy's Beijing bureau chief Tom Lasseter writes under this picture:



Photo: Tom Lasseter

Do you see any cars along this road? One often hears about the traffic jams in the big cities of China. But here's the flip side of the coin: in rural towns and cities in China, local officials like to build big showcase projects, displaying grandiosity but little utility. I was in the city of Fengzhen in Inner Mongolia yesterday. By Chinese standards, it is a small place, maybe 200,000 people. So imagine my surprise as we leave the downtown to come across this eight-lane highway going past a mammoth new City Hall. Nary a car on it. A passerby could keel over with a stroke on that highway and not risk getting run over for many hours. The city is already in hot water for building a power plant that Beijing says is unneeded. Across China, there are plenty of largely empty hotels, brand new empty highways, modern airports that lose money for lack of traffic, etc. What happens is that unelected local officials, not particularly responsive to local needs, find that pharaonic projects give their municipalities a luster that can attract investment, which is their path to promotion within the one-party system. So for every eight-lane road you see like this, there is a happy bureaucrat pondering a bright career ahead.<sup>12</sup>

How much cement has been poured, how much iron rebar has been forged, and how much coal has been burned to produce the energy to pave over so much of China – for no useful purpose whatsoever?

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<sup>12</sup> Tom Lasseter, "Empty highways," *McClatchy News*, August 24, 2006, 11:33PM at [http://blogs.mcclatchydc.com/china/2006/08/empty\\_highways.html](http://blogs.mcclatchydc.com/china/2006/08/empty_highways.html).

### Scene 3: Half-empty trains and subways

And how much steel and aluminum and copper and cement and electricity have been consumed to build China's huge national network of high-speed trains? The 12<sup>th</sup> FYP budgeted hundreds of billions of dollars to build more than 16,000 miles of high-speed rails by 2020. By 2013, China had already built more high-speed train than the rest of the world combined. But this too is more make-work and prestige project than modernizing necessity. High-speed trains are hugely expensive to build and operate and consume more than twice as much electricity to run as regular trains, so tickets can cost ten times the price of regular train tickets in China. Since few Chinese can afford such prices, the trains often run at half capacity or less. Chinese transportation experts say the government is throwing money away on bullet trains, money that could be better spent on regular railroads, especially cargo lines, and developing mass transit in and around cities.<sup>13</sup> NYU economist Nouriel Roubini told *Reuters* in 2011:

I was recently in Shanghai and I took their high-speed train to Hangzhou," he said, referring to the new Maglev line that has cut traveling time between the two cities to less than an hour from four hours previously. "The brand new high-speed train is half-empty and the brand new station is three-quarters empty. Parallel to that train line, there is also a new highway that looked three-quarters empty. Next to the train station is also the new local airport of Shanghai and you can fly to Hangzhou," he said. There is no rationale for a country at that level of economic development to have not just duplication but triplication of those infrastructure projects.<sup>14</sup>

Duplication, triplication, overconstruction and waste is everywhere in China. Even with subways. Twenty-two cities already have subway systems and money was budgeted in 2012 to build subways in another 16 by the end of 2018. Wang Mengshu, a subway engineer from the Chinese Academy of Engineering who helped design China's first subway in Beijing in 1965, says these are completely unnecessary, too expensive, again more prestige projects than public service: "Second, third-, fourth-tier cities ... those cities don't need to build subways. Even if they can afford to build them, they can't afford to run them. But a lot of places think that if they have a subway, then they are a big city."<sup>15</sup>

### Scene 4: China as "major aerospace and air-travel power"

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<sup>13</sup> Professor Zhao Jian of Beijing Jiaotong University says that "It is unwise to continue building high-speed rail lines while the current high-speed network has a hard time getting enough passengers and is operating at a loss. . . The country has built more than 10,000 kilometers of high-speed rail lines and most lines are losing money because of inadequate demand." Some lines run at only 30% of capacity he said, and even the busiest, such as the train from Beijing to Shanghai, "will run a loss for a long time. . . The rush to build high-speed rail networks indicates that the old investment-driven growth model has hardly changed." Sun Wenjing, "Government throwing money away on bullet trains, expert says," *Caixin*, 10 July 2014 at <http://english.caixin.com/2014-07-10/100702343.html>.

<sup>14</sup> Kevin Lim, "'Meaningful probability' of a China hard landing: Roubini," *Reuters*, 13 June 2011.

<sup>15</sup> Wang is quoted in Tania Branigan, "Riding Beijing's subway end to end: 88km of queues and crushes on 20p ticket," *Guardian*, 10 September, 2014 at <http://www.theguardian.com/cities/2014/sep/10-sp-beijing-subway-china-metro-queues-ticket-investment>.

The 12<sup>th</sup> Five-Year Plan grandiosely calls for a push to make China a “major aerospace and air-travel power.” Plans call for nearly a hundred new airports, thousands of new airliners, thousands of helicopters, business jets and small aircraft of all varieties. Boeing estimates Chinese carriers will need more than 5260 new airliners alone – worth \$670 billion by 2031.<sup>16</sup> Great for Boeing. But not only did China not “need” this industry, it’s just suicidal for developing countries like China to repeat the same environmental mistakes as the West did. The UN IPCC calculates that aviation is currently responsible for about 3.5% of anthropogenic climate change and says that if present trends continue this share will grow to between 5% and 15% by 2050 while the absolute contribution of aviation generated emissions will soar. Aviation is already the fastest growing source of global CO<sub>2</sub> emissions and if it continues to grow at its current rate it will overwhelm all the cuts engineers have managed to make elsewhere.<sup>17</sup> There are not currently nor on the horizon any practical alternatives to kerosene-based fuels for commercial jet aircraft. This is why after surveying the literature on potentials for GHG mitigation in other forms of transportation, environmental journalist George Monbiot concludes that while some forms of transport can be rendered a bit greener, there’s virtually nothing we can do with aviation with present or foreseeable technologies:

There is, in other words, no technofix. The growth in aviation and the need to address climate change cannot be reconciled. Given that [efficiency gains tend to be canceled out by growth] a 90 percent cut in emissions requires not only that growth stops, but that most of the planes which are flying today are grounded. I recognize that this will not be a popular message. But it is hard to see how a different conclusion could be extracted from the available evidence.<sup>18</sup>

In a world where climate scientists tell us we need to cut global CO<sub>2</sub> emissions by 90 percent by 2050, global aviation emissions are on course to double by 2030. It will be suicidal to let this happen. Absent some technical miracle, the only way to suppress aviation emissions is to suppress the numbers of people jetting around the planet, not add hundreds of millions of Chinese to this jet set. Coming to grips with this reality may not be popular in China or the U.S. but the alternative is not going to be popular either.

### **Scene 5: Construction frenzies, ghost cities, and the mother of all real estate bubbles**

Yet none of the above compares with the resources squandered on the construction boom of recent decades. China’s construction juggernaut has been gobbling up China’s best peri-urban farmland, expelling tens of millions of farmers and urban residents and consuming staggering quantities of resources to build unneeded housing, shopping malls, industrial parks, office buildings, power plants and infrastructure in a country already bursting with overpopulated, polluted megacities.<sup>19</sup> Millions of urban residents were cleared out of Beijing

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<sup>16</sup> James Fallows, *China Airborne*, New York, 2012, pp. 28-29. David Barboza, “Airports in China hew to an unswerving flight path,” *New York Times*, 3 April 2013. *Bloomberg News*, “China plan seeks to bolster airports, locally-produced airplanes,” 21 January 2013 at <http://www.bloomberg.com/news/2013-01-21/china-plan-seeks-to-bolster-airports-locally-produced-airplanes.html>.

<sup>17</sup> IPCC, *Aviation and the Global Atmosphere: A Special Report of the Intergovernmental Panel on Climate Change*, Cambridge UK 1999, at <http://www.grida.no/climate/ipcc/aviation/index.htm>. George Monbiot, *Heat*, Cambridge UK 2007, p. 174.

<sup>18</sup> Monbiot, *Heat*, p. 182 and sources cited therein.

<sup>19</sup> In the decade from 2000 China’s cities expanded by over 80 percent. A national land survey found that 130,000 square kilometers of farmland, equal to half the area of Germany, was paved over in the

and Shanghai which were completely rebuilt with thousands of skyscrapers, apartment blocks, highways and shopping malls.<sup>20</sup> Cities and provinces compete to build cloud-piercing skyscrapers even if they have no prospective tenants for them. By 2020, 12 of the planet's 20 tallest towers are expected to be in provincial cities like Shenyang, Wuhan, and Suzhou. The office vacancy rate in Shenyang is nearly 30 percent, yet three more towers, all bigger than the Chrysler building, are under construction, and another 12 are on the drawing boards. Beijing's premier architectural atrocity, the Rem Koolhaas-designed CCTV tower – dubbed “Big Underpants” by the locals – sits nearly empty since it was built in 2008. Cities compete to build ersatz Wall Street “financial centers” as in Beijing (abandoned) and Tianjin (abandoned unfinished). Stunningly lavish offices for cadres are built everywhere (photos below). China's coast has multiple redundant ports, some nearly empty, but more are planned. Since the 1980s, China has built enough new housing to re-house the entire population but the construction boom has become a self-sustaining perpetual engine of construction for the sake of construction, supply with no demand. And not just miles of empty apartment blocks but entire “ghost cities” complete with office towers, hospitals, schools, futuristic airports, museums, universities, libraries, theaters, sports fields, miles and miles of apartment towers and subdivisions of McMansions – but almost no people.<sup>21</sup> Twenty-one percent of China's urban residents, the wealthy and middle classes, own two urban apartments, some own three or four – all bought for speculation, not to live in, not vacation homes. More than 22.4 percent of urban apartments and houses remained vacant in 2014.<sup>22</sup> By one estimate, more than 64 million surplus apartments had been built in China, enough to house almost half the population of the United States, yet millions more are under construction.<sup>23</sup> Economists have warned that what China is really building is the biggest real estate bubble in history. CBS interviewed Wang Shi, CEO of China Vanke, China's biggest home builder (which makes him the world's biggest homebuilder) who told CBS's Lesley Stahl that this can't last, “this is a bubble, for sure.” When it bursts, “it will be a disaster, a disaster.”<sup>24</sup>

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urbanization frenzy between 1996 and 2009 – and it hasn't slowed since. Mandy Zuo, “Stop concreting over prime farmland, China's big cities told,” *South China Morning Post*, 9 November, 2014. Cui Zheng, “Scientists issue warning over development of coastal wetlands,” *Caixin*, 25 November 2014.

<sup>20</sup> See Jasper Becker, *City of Heavenly Tranquility*, Oxford 2008, chapters 17 and 18.

<sup>21</sup> See Darmon Richter, “Welcome to Ordos: the world's largest ‘ghost city’ [China],” *The Bohemian Blog*, 13 February 2014 at: <http://www.thebohemianblog.com/2014/02/welcome-to-ordos-world-largest-ghost-city-china.html>.

<sup>22</sup> “Housing oversupply causing major crisis for Chinese economy, NTD.TV, 16 May 2014 at <http://www.ntd.tv/en/programs/news-politics/china-forbidden-news/20140516/143998-housing-oversupply-causing-major-crisis-for-chinese-economy-.html>. Eg. George Steinmetz, “Let a hundred McMansions bloom,” *New York Times Magazine*, 21 September 2014. Neil Gough, “A muddy tract now, but by 2020, China's answer to Wall Street,” *New York Times*, 3 April, 2014.

<sup>23</sup> Lillian Liu, “A question of time,” *FinanceAsia*, 8 September 2010 at <http://www.financeasia.com/News/231364,a-question-of-time.aspx>. Vincent Fernando, CFA, “There are now enough vacant properties in China to house over half of America,” *Business Insider*, 8 September 2010 at <http://www.businessinsider.com/there-are-now-enough-vacant-properties-in-china-to-house-over-half-of-america-2010-9>. Robin Banerji and Patrick Jackson, “China's ghost towns and phantom malls,” *BBC News Online*, 13 August 2012 at <http://www.bbc.com/news/magazine-19049254>. Yifei Chen, “Chasing ghosts: where is China's next wave of empty ‘new towns’?” *South China Morning Post*, February 13, 2015.

<sup>24</sup> “China's real estate bubble,” *CBS 60 Minutes*, 11 August 2013 at <http://www.cbsnews.com/videos/chinas-real-estate-bubble/>. Gus Lubin, “Satellite pictures of the empty Chinese cities where home prices are crashing,” *Business Insider*, 10 December 2011, 1:48PM at <http://www.businessinsider.com/china-ghost-cities-2011-11#>. David Barbaroza, “Chinese city has many buildings but few people,” *New York Times*, 9 October 2010.



Zhengzhou ghost city, Henan, 2013



Harbin state-owned pharmaceutical company office



Versailles in Harbin<sup>25</sup>



15 story high brass-clad 2,300 ton "Puffer fish" tower, Yanzhong, Jiangsu province<sup>26</sup>

<sup>25</sup> Joanna Corrigan, "Oh la la! Chinese state factory decked out to look like the Palace of Versailles (much to the disgust of neighbours)," *Mail Online*, 8 September 2011 at <http://www.dailymail.co.uk/news/article-2034679/Chinese-state-factory-decked-look-like-Palace-Versailles.html>.

<sup>26</sup> Chris Buckley, "As China vows austerity, giant brass fish devours \$11 million" *New York Times*, 12 October 2013.

## Scene 6: Tofu construction

Construction is breathtakingly fast in China but it can also be breathtakingly sloppy, dangerous, and destined to a short lifespan. That's because China's local building department regulators, like food safety and environment regulators, are subordinate to local officials who partner with and profit off the very construction companies the regulators are nominally supposed to regulate. In result, safety is often subordinated to speed and cost, with predictable results. The Chinese call it *doufazha*, "tofu" construction. Bridges collapse regularly. Between July 2011 and August 2012, eight major bridges collapsed. An Australian reporter counted 4 collapsed bridges in just *nine days* in July 2012.<sup>27</sup> High-speed railway bridges collapse. Buildings collapse. Some just topple over. Millions of peasants have been cleared off the land and dumped into "new towns" around cities where the shoddy new housing is already crumbling as the displaced farmers move in. In 2010, China's Ministry of Housing admitted the low quality of construction and warned that "China's newly-built houses can only last for 20 or 30 years."<sup>28</sup> Have the Chinese invented disposable housing?



This building collapse in Fenghua city, Zhejiang province on April 4, 2014 buried 7 people, killing one. Inspectors warned the rest could also collapse. Photo: China Daily

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<sup>27</sup> Zarathustra, "China's crumbling infrastructure model," *Macrobusiness*, 28 July 2012 at 9:49AM at <http://www.macrobusiness.com.au/2011/07/is-chinas-growth-model-a-train-wreck/>. *Wall Street Examiner* reporter/blogger Russ Winter posted several photos of collapsed bridges in his "Yes, China is truly different" *Winter Economic and Market Watch*, 28 August 2012 at <http://www.wallstreetexaminer.com/blogs/winter/?p=5290>.

<sup>28</sup> Lu Chen, op. cit. After the collapse of an apartment in Fenghua, Zhejiang province in April 2014, officials warned of a "coming wave of such accidents as the 'fast food' buildings built in the 1980s and 1990s enter their 30s and 20s." Building safety experts warned people not to purchase apartments in certain localities known to be particularly risky. Most "won't last 50 years, or in some cases about 25 years," and they present constant safety hazards. Zheng Fengtian, "Weak buildings threaten life," *China Daily*, 11-14 April 2014.





In June 2009, this nearly finished 13-story apartment building in Shanghai just toppled over killing a construction worker. Photo: Reuters



March 27, 2008: A 60-meter section of Jintang Bridge fell onto a cargo ship near the eastern port city of Ningbo, east of China's Zhejiang province. Photo credit: AP Images

Officials call for tougher regulation but most Chinese blame corruption. Zhu Lijia, a professor at the Chinese Academy of Governance in Beijing says bid rigging is the norm and there are no checks or balances on the procurement process. "We do have relevant laws regarding the bidding process, but there is a lack of enforcement. The bidding process is only a show." A college student, Zeo Niu, interviewed by National Public Radio after a major bridge collapse in 2012, knew the system well. Her uncle runs a construction company in central China. She said using substandard material while charging for high-quality goods is routine. "What really upsets her," she said, "is that so many projects collapse, people just become overwhelmed. I will never remember those victims' names in this accident, and people won't remember it. It will all be buried by the next accident."<sup>29</sup>

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<sup>29</sup> Frank Langfitt, "Chinese blame failing bridges on corruption," *National Public Radio*, 29 August 2012 at <http://www.npr.org/2012/08/29/160231137/chinese-blame-failed-infrastructure-on-corruption>.

**“Twenty more years of roaring growth”?**

In the *Wall Street Journal* of August 20, 2014, Justin Lin Yifu, an economist and close advisor to senior leaders in Beijing stated that he’s confident China can sustain its recent 8% per year growth rate for the foreseeable future. He predicts “20 years of roaring growth” for China. Really? Where does Mr. Yifu think the resources going to come from for this scale of consumption? As it happens, in 2011 the Earth Policy Institute at Columbia University calculated that if China keeps growing by around 8 percent per year, Chinese average per capita consumption will reach current US level by around 2035. But to provide the natural resources for China's 1.3 billion to consume on a per capita basis like America's 330 million consume today, the Chinese -- roughly 20 percent of the world's population -- will consume as much oil as the entire world consumes today. It would also consume more than 60 percent of other critical resources (Table 1).

**Table 1:** Annual consumption of key resources in China and U.S., latest year, with projections for China to 2035, compared to current world production

Production Consumption* Commodity	Unit	Consumption latest year		Projected consumption 2035	
		U.S	China	China	World
Grain	Million tons	338	424	1,505	2,919
Meat	Million tons	37	73	166	270
Oil	Million Barrels per day	19	9	85	86
Coal	Million Tons of Oil Equiv.	5	1,714	2,335	3,731
Steel	Million Tons	102	453	456	1,329
Fertilizer	Million Tons	20	49	91	214
Paper	Million Tons	74	97	331	394

\*Projected Chinese consumption in 2035 is calculated assuming per-capita consumption will be equal to the current U.S. level, based on projected GDP growth of 8 percent annually. Latest year figures for grain, oil, coal, fertilizer and paper are from 2008. Latest year figures for meat and steel are from 2010.

Source: Earth Policy Institute, 2011

How can this happen? What would the rest of the world live on? Already, as resource analyst Michael Klare reviews in his latest book, *The Race for What's Left* (2012) around the world existing reserves of oil, minerals and other resources "are being depleted at a terrifying pace and will be largely exhausted in the not-too-distant future."

## B. Airpocalypse now



“Who cares about GDP if we can’t live here?”

Decades of coal-powered industrialization combined with the government-promoted car craze since the 1990s have brought China the worst air pollution in the world. Scientists have compared north China’s toxic smog to a “nuclear winter” and the smog is also sharply reducing crop yields. Lung cancer is now the leading cause of death in Beijing and nationally pollution-induced lung disease is taking the lives of more than 1.2 million people a year. With 20% of the world’s population, China now burns as much coal as the rest of the world put together. Twenty of the world’s thirty smoggiest cities are in China.

Ironically, China is also a “green-technology” leader, the world’s largest producer of both windmills and solar panels. Yet in China these account for barely 1% of electricity generation in China. Coal presently supplies 69 percent of China’s total energy consumption, oil accounts for 18%, hydroelectric 6 percent, natural gas 4 percent, nuclear less than 1 percent, and other renewables including solar and wind 1 percent.<sup>30</sup> China currently burns four billion tons of coal a year; the U.S. burns less than 1 billion; the EU about 0.6 billion. China has marginally reduced the carbon intensity of production in recent years by installing newer more efficient power plants but these gains have been outstripped by relentless building of more power plants. To make matters worse, even when power plants are fitted with scrubbers to reduce pollution, operators often don’t turn on the scrubbers because these cut into their profits.

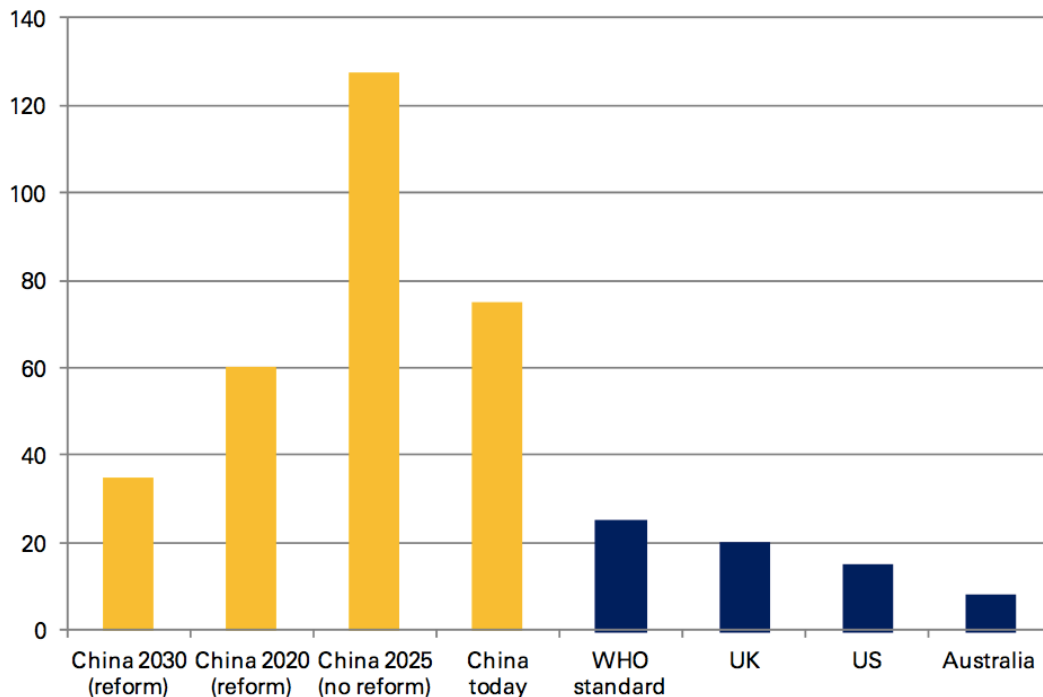
While government plans call for reducing coal’s share of the energy mix from 69 percent to 55 percent by 2040, it projects that China’s absolute coal consumption will still rise by more than 50 percent in the same period in line with China’s projected economic growth of around 7.7 percent per year. The World Health Organization considers air pollution above 25 micrograms of particulate matter per cubic meter (PM2.5) to be unsafe. China’s current national average is 75 micrograms but particulate levels in many cities averages in the hundreds. In the winter of 2013 China suffered from the worst air pollution in its history as half the country, nearly the

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<sup>30</sup> U.S. E.I.A., *China*, updated 4 February 2014 at <http://www.eia.gov/co>.

whole of northern and eastern China was smothered in dense smog for weeks at a time. Smog alerts were called in 104 cities in 20 of China's 30 provinces as schools and airports closed in Beijing, Shanghai and other cities. In January PM2.5 levels in Beijing reached 900 micrograms per cubic meter. As Beijing was choking in smog in the winter of 2013, Deutsche Bank analysts gloomily concluded that even if China's economy slowed to 5 percent growth per year from its current 7.6 percent rate, coal consumption would still nearly double and China's smog could increase by as much as 70 percent by 2030 (Figure 1).<sup>31</sup>

**Figure 1: Without reform, China's air pollution could worsen by another 70%: our forecast of PM2.5 levels**



Source: Deutsche Bank estimates, WHO, NASA

Source: Quartz, <http://qz.com/61694/chinas-nightmare-scenario-by-2025-air-quality-could-be-much-much-worse/>.

China's leaders thus face an intractable dilemma. They can't keep growing the economy without consuming ever more coal and oil and gas. Yet the more fossil fuels they burn, the more uninhabitable China's cities become, the more Chinese flee the country, and the faster China's emissions are driving global warming.

### **Cooking the planet to produce junk no one needs**

China surpassed the U.S. in 2007 to become the world's leading CO<sub>2</sub> emitter. By 2013, China's emissions were already nearly double those of the U.S. The EIA calculates that if even if China grows at only 5.7 percent per year, 2 percent less than its current rate and

<sup>31</sup> Lily Kuo, "China's nightmare scenario: by 2025 air quality could be much much worse," posted 12 March 2013 on Quartz at <http://qz.com/61694/chinas-nightmare-scenario-by-2025-air-quality-could-be-much-much-worse/>. Wang Yue, "China unlikely to reduce coal use in the next decade," *Chinadialogue.org*, 10 February 2014 at <https://www.chinadialogue.net/blog/6718-China-unlikely-to-reduce-coal-use-in-the-next-decade/esn>. U.S. EIA, *China*, 4 February 2014, op cit.

about half the average rate it grew over the past decade, its CO<sub>2</sub> emissions would still soar to almost 15 billion tons by 2040, almost triple those of the U.S.<sup>32</sup> By 2013 China's per capita emissions surpassed those of Europe. With just 20 percent of the world's population, China already accounts for almost 30 percent of global CO<sub>2</sub> emissions.

### **Coal-to-gas bases will doom the climate**

Under pressure to reduce smog and greenhouse emissions but still maintain economic growth, the government has begun talking about putting a cap on coal emissions. But this cap would be pegged to expected growth and demand, so coal use is likely to continue rising for years.<sup>33</sup> Yet the most worrisome threat to reducing emissions comes from the government's newest plan to "clean up its cities" by building dozens of huge "coal-gasification bases" in Shanxi, the Ordos Basin, Inner Mongolia, Xinjiang and other remote areas. These plants will burn coal directly to generate electricity *in situ* and convert coal to liquid fuels like "syngas" (like natural gas but from coal) which will then be transported to the cities to be burned in power plants, factories and cars. These huge bases, some encompassing areas larger than the states of Delaware and Connecticut, will be the largest fossil fuel development projects in the world. And far from reducing coal use, scientists say, these complexes consume so much coal-fired energy to produce the syngas and other chemicals that they generate almost twice as much CO<sub>2</sub> emissions as if the coal were just directly burned in power plants.<sup>34</sup> Furthermore, water-intensive coal extraction in the new coal bases in northern and western provinces threatens to seriously aggravate China's already severe water crisis in these regions.<sup>35</sup> And as if all this weren't enough, the government has also declared its intention to develop "fracking" wherever possible in China.<sup>36</sup>

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<sup>32</sup> Zeke Hausfather, "Global CO<sub>2</sub> emissions: increases dwarf U.S. reductions," *Yale Forum on Climate Change & the Media*, 2 July 2013 at <http://www.yaleclimatemediaforum.org/2013/07/global-co2-emissions-increases-dwarf-recent-u-s-reductions/>.

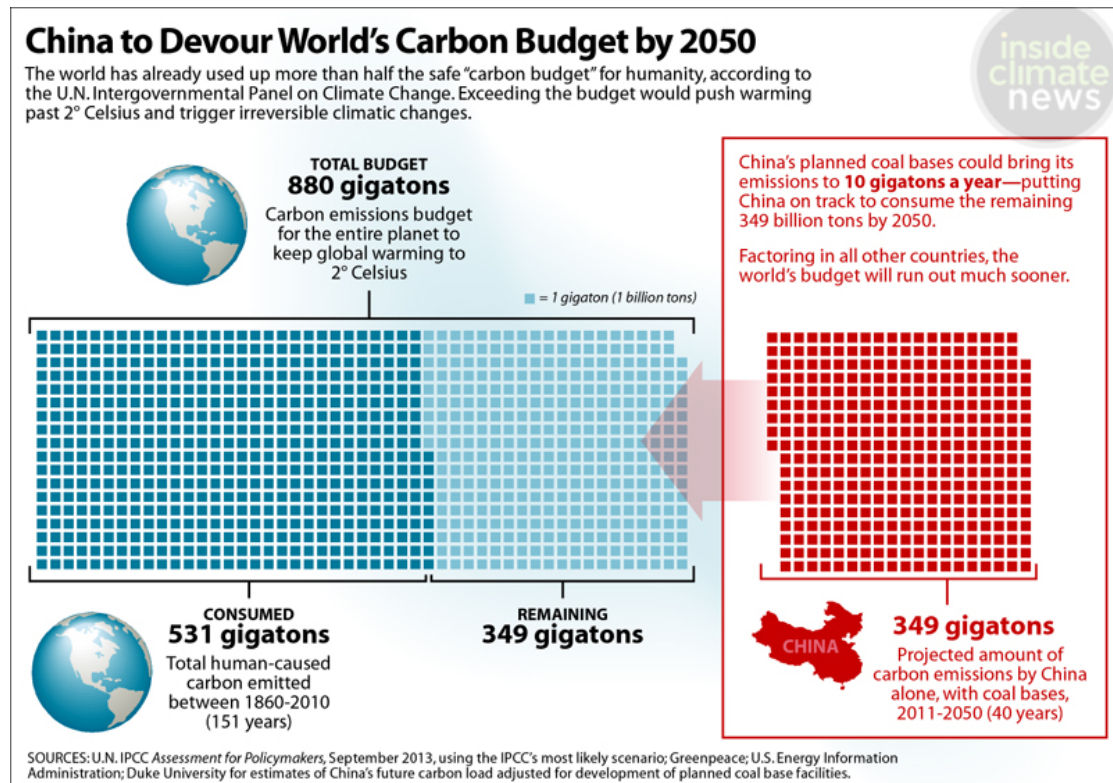
<sup>33</sup> Chris Buckley, "China's plan to limit coal use could spur consumption for years," *New York Times*, 25 July 2014. As Xi Jinping and Barack Obama concluded their "historic" accord in November 2014 to cut both country's CO<sub>2</sub> emissions and Xi promised reduce China's reliance on coal for power generation and boost renewables, the news that China's coal consumption actually fell by 2.5 percent in 2014, the first decline in a century, gave cause for optimism. Combined with the fact that China continues to lead the world in annual additions of wind and solar power, many hoped that China's coal consumption was finally peaking. But as Andrew Revkin points out, while China's coal production and imports declined in 2014, half of China's coal is used outside the power sector, in heavy industry, which use has fallen as the overall economy has slowed in recent years. Coal consumption in the *power sector* continues its relentless climb: in 2014 China newly-added coal power capacity exceeded new solar energy by 17 times, new wind energy by 4 times, even new hydro power by more than 3 times. In just the this one year, China added more new coal-fired power plants than Britain's entire fleet. These new plants will be pumping out GHG for many decades to come and in fact, most of China's coal-fired power plants are less than 15 years old so could they could still be running half a century from now. In short, for all the promises, coal is still king in China. Moreover, the economic slowdown is also likely to be shortlived as the government is furiously pumping money into the economy to revive growth. Andrew Revkin, "A look behind the headlines on China's coal trends," Dot Earth, *New York Times*, 18 February 2015: 6:00 PM at [http://dotearth.blogs.nytimes.com/2015/02/18/a-look-behind-the-headlines-on-chinas-coal-trends/?\\_r=0](http://dotearth.blogs.nytimes.com/2015/02/18/a-look-behind-the-headlines-on-chinas-coal-trends/?_r=0).

<sup>34</sup> William J. Kelly, "China's plan to clean up air in cities will doom the climate, scientists say," *InsideClimate News*, 13 February 2014 at <http://insideclimatenews.org/news/20140213/chinas-plan-clean-air-cities-will-doom-climate-scientists-say>.

<sup>35</sup> Reuters, "China's coal expansion may spark water crisis, warns Greenpeace," *Guardian*, 15 August 2012. See also the accompanying documentary photos by Lu Guang: "China's mega coal power bases exacerbate water crisis -- in pictures," *Guardian*, August 21, 2012 at <http://www.theguardian.com/environment/gallery/2012/aug/21/china-mega-coal-water-crisis-in-pictures>.

<sup>36</sup> See Sophie Beach, "China's fracking boom and the fate of the planet" in *China Digital Times* 19 September 2014 at <http://chinadigitaltimes.net/2014/09/chinas-fracking-boom-fate-planet/>.

The UN Intergovernmental Panel on Climate Change calculates that if we're to keep global warming below 2 degrees Celsius, humanity cannot add more than 880 gigatons of CO<sub>2</sub> emissions to the atmosphere before 2050. Collectively, we've already used up more than half of that "carbon budget" (see chart below) leaving us a remaining budget of just 349 billion gigatons. If China produces just 10 billion tons of CO<sub>2</sub> per year, its current rate, with no growth whatsoever, it will still consume the entire carbon budget for the whole of humanity by itself by 2050. Scientists calculate that if China's planned coal bases come on stream the country's CO<sub>2</sub> emissions will soar, putting it on track to consume the entire carbon budget for the whole of humanity years by itself by 2050.



Source: William J. Kelly, "China's plan to clean up air in cities will doom the climate, scientists say," Inside Climate News, February 13, 2014.

### C. Undrinkable water, poisoned soils, toxic food

If the air is bad, the water is far worse. In a few decades of breakneck industrialization, the Chinese have managed to severely and irreversibly pollute most of the nation's fresh water supplies with dire implications for public health. China's fresh water sources are contaminated by pesticides, industrial chemicals, heavy metals and myriad other toxics. China's largest rivers resemble vast open cesspools and for much of their length the banks are strewn with every imaginable kind of trash, numberless outlet pipes spewing multiple toxics, dead fish, dead pigs, pig swill, etc. Gushing pollutants turn long stretches of rivers bright red or purple or milky white or inky black. Sewage is routinely dumped mostly untreated in the nation's rivers, the same rivers many cities take their drinking water from, imperiling the health of hundreds of millions. The government has built wastewater treatment facilities all over the country but

most remain unused.<sup>37</sup> China's rivers suffer huge spills of all kinds of toxic chemicals – benzene, xanthogenate, aniline, etc. every year. In north China, the Yellow River “is a catastrophe” and the 300 odd rivers that drain the North China Plain “are open sewers if they are not completely dry” in the words of Ma Jun, China's leading authority on the country's water crisis.<sup>38</sup> According to a government report, the Yangtze River, the world's third longest, is seriously and irreversibly polluted. Long stretches are said to be in “critical condition,” in places, too dangerous even to touch. Aquatic life has all but collapsed. Pollution and shipping wiped out China's legendary Yangtze Baiji dolphin while even common carp “are gasping for survival.”<sup>39</sup> The five-hundred mile long reservoir filling up behind the huge Three Gorges dam on the Yangtze qualifies as the world's biggest cesspool. In some areas groundwater is being irreversibly polluted as textile dyeing mills and other factories, looking to avoid fines for dumping their effluents into rivers, instead drill and pump them into the earth. Some “use high-pressure pumps to discharge huge volumes of their wastewater directly underground.” According to one scientist: “deliberate, malicious waste discharge by factories has already become endemic.”<sup>40</sup> The China Geological Survey reported in 2013 that 90 percent of the country's groundwater is polluted, 60 percent of it is “severely” polluted. A survey of 11 cities across China in 2012 indicated that 64 percent of water sources were severely polluted and 33 percent moderately polluted. Only 3 percent of sources could be graded as clean.<sup>41</sup> It's difficult to overstate the dire implications of these practices: in China, groundwater is not only tapped for drinking water throughout rural China as well as in many cities, but over much of the country, especially the parched northern plains, this is the main source of water for farming.

### **Mass production of “cancer villages”**

China's rivers have received many major toxic industrial chemical spills over the years. In September 2004, Jim Yardley of the *New York Times* reported on the situation in the Huai River basin, upstream from Shanghai, after a huge chemical spill created an 82 mile-long band of water that killed nearly every living thing and was too polluted even to touch. And the Huai, Yardley pointed out, was supposed to have been a government “success story.”<sup>42</sup> In April 2014, a major leak of benzene poisoned the drinking water for millions in Gansu province.

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<sup>37</sup> Investigators have found that only a third of China's wastewater treatment plants are operating. Cui Zheng, “Seas of sewage,” *CaixinOnline*, 12 October 2012 at <http://english.caixin.com/2012-10-12/100446374.html>

<sup>38</sup> Ma Jun, *China's Water Crisis*, Norwalk 2004, p. vii.

<sup>39</sup> Sun Xiaohua, “Pollution takes heavy toll on Yangtze,” *China Daily*, 16 April 2007. Shai, Oster, “It may be too late for China to save the Yangtze goddess,” *Wall Street Journal*, 6 December 2006.

<sup>40</sup> Xu Nan, “Poisoned groundwater sparks media storm in China,” *China Dialogue*, February 2, 2013 at <https://www.chinadialogue.net/blog/5749-Poisoned-groundwater-sparks-media-storm-in-China/en>.

<sup>41</sup> Cecilia Torajada and Asit K. Biswas, “The problem of water management,” *China Daily*, March 5, 2013. Gong Jing and Liu Hongqiao, “Half of China's urban drinking water fails to meet standards,” *China Dialogue*, June 6, 2013 at <https://www.chinadialogue.net/article/show/single/en/6074-Half-of-China-s-urban-drinking-water-fails-to-meet-standards>.

<sup>42</sup> Ten years previously, a pollution tide had killed fish and sickened thousands of people. By 2001 the government claimed to have shut down polluters and declared the cleanup a success. But the Huai is now a symbol of the failure of environmental regulation in China. After spending more than \$8 billion over a decade to clean up the Huai basin, the State Environmental Protection Administration concluded in 2004 that “some areas were more polluted than before.” Jim Yardley, “Rivers run black, and Chinese die of cancer,” *New York Times*, 12 September 2004. An Baijie, “Polluted river flows with carcinogens,” *China Daily*, 8 August 2013 (on pollution of the Huaihe in Anhui Province by manganese, nitrates, and other carcinogens from local factories).

Beginning in the 1980s and 90s, the government promoted the development of market-oriented “township and village industries” (TVEs) to promote growth and employment. These industries, the darlings of the World Bank and western market-enthusiast academics, became notorious polluters. Foreign-invested Special Economic Zone industries are also major polluters.<sup>43</sup> In the 1990s and 2000s in response to growing anti-pollution protests in the cities, the government pushed dirty industries out the cities and into the countryside and rural towns. This brilliant move resulted in horrific contamination of whole rural regions and the mass production of “cancer villages” where extraordinary numbers of inhabitants are dying from intestinal, liver and other cancers caused by ingesting toxic water and food. NGOs count at least 459 villages spread across every province except far-western Qinghai and Tibet. In one village, 80 percent of the population is said to have died from pollution-induced cancers since 1991.<sup>44</sup> There are villages where almost every child is lead-poisoned.<sup>45</sup> Dumping of toxic chemicals and heavy metals extends even to remote corners of China. In neo-tropical Yunnan province, investigators have found “rampant chromium dumping” polluting rice paddies and drinking water.

### The damage done

The problem with water pollution, unlike air pollution, is that it doesn't disappear once the dumping stops. Heavy metals and other contaminants don't easily break down or wash away. They can be very long-lived and can't really be “cleaned up.”<sup>46</sup> Once ground water is polluted, there's just no possible remediation. This means that extensive areas of China's farmland, especially in the north, are effectively doomed.<sup>47</sup> This is taking a huge toll on the health of Chinese as well as non-human life forms and poses a mortal threat to entire society. Elizabeth Economy, author of *The Rivers Run Black* (2007), writes that “Less well documented [than air pollution] but potentially even more devastating is the health impact of China's polluted water. Today, fully 190 million Chinese are sick from drinking contaminated water. All along China's major rivers, villages report skyrocketing rates of diarrheal diseases, cancer, tumors, leukemia, and stunted growth.”<sup>48</sup>

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<sup>43</sup> Dr. Linda Greer (NRDC), “Top clothing brands linked to water pollution scandal in China,” *China Dialogue*, 9 October 2012 at <https://www.chinadialogue.net/blog/5203-Top-clothing-brands-linked-to-water-pollution-scandal-in-China/en>. (Armani, Calvin Klein, Marks and Spencer, Zara and others.)

<sup>44</sup> Xue Haitao and Liku Hongqiao, “Sip of death plagues cancerous river villages,” *CaixinOnline*, 9 October 2013 at <http://english.caixin.com/2013-10-09/100589447.html>. Yu Dawei et al., “The poisoning of the Nanpan river basin,” *CaixinOnline*, 1 September 2011 at <http://english.caixin.com/2011-09-01/100297332.html>. Sophie Beach “Shangba, China's village of death,” posted 3 December 2007 on [www.sprol.com/?p=371](http://www.sprol.com/?p=371). Mary Ann Toy, “Waiting for death in fetid cancer villages,” *Sidney Morning Herald*, 26 May 2007. Jim Yardley, “Rivers run black, and Chinese die of cancer,” *New York Times* 12 September 2004. Staff, “South China river polluted by thallium, cadmium,” *China Daily*, 6 July 2013. Elizabeth Economy, *The River Runs Black*.

<sup>45</sup> Michael Wines, “Smelter in China poisons more than 1,300 children” *New York Times*, 21 August 2009. Staff, “Anhui battery factory poisons 200 children,” *Caixin* slide show, 6 January 2011 at <http://english.caixin.com/2011-01-06/100214424.html>.

<sup>46</sup> Luna Lin, “China's water pollution will be more difficult to fix than its dirty air,” *China Dialogue*, 17 February 2014 at <https://www.chinadialogue.net/blog/6726-China-s-water-pollution-will-be-more-difficult-to-fix-than-its-dirty-air/en>. Zhang Chun, “China ‘lacks experience’ to clean up its polluted soil,” *China Dialogue*, 14 April 2014 at <https://www.chinadialogue.net/article/show/single/en/6897-China-lacks-experience-to-clean-up-its-polluted-soil>.

<sup>47</sup> Matt Currell, “Losing lifeblood in north China,” *China Dialogue*, September 17, 2010 at <https://www.chinadialogue.net/article/show/single/en/3823-Losing-lifeblood-in-north-China>.

<sup>48</sup> Economy, “The great leap backwards,” *Foreign Affairs*, September-October 2007.





A journalist takes samples from a polluted river in China, *Der Spiegel* 17 Oct.2012.  
Photo: Reuters

### **The bad earth and toxic foods**

China's farmlands are extensively polluted with synthetic fertilizers, pesticides, heavy metals, sewage sludge and innumerable industrial toxics. Much of this comes from polluted irrigation water. In places, even industrial waste water has been used to irrigate farms when local wells have dried up or are themselves too polluted to use. In December 2013, the Ministry of Land and Resources reported that 3 million hectares (8 million acres – roughly the area of Belgium) of China's farmland is too polluted to grow crops on and researchers said that "as much as 70 percent" of China's farmland could be contaminated to some degree.<sup>49</sup> In April 2014, the government reported that almost 20 percent of the country's arable land, 10 percent of its woodlands, and 10 percent of its grassland soils were seriously polluted with heavy metals: cadmium, mercury, arsenic, lead, chromium, zinc, nickel plus inorganic compounds including DDT. The survey, carried out between 2006 and 2010 but suppressed for four years as a state secret out of fear of public outrage, summed up the nation's farmland situation as "grim" (*yanjun*).<sup>50</sup> Shocking as this is for a nation that must try to feed 20 percent of the world's population on 7 percent of the world's arable, environmentalists suspect the published figures understate the true extent of soil contamination.<sup>51</sup> In November 2014, the government conceded that 40 percent of the nation's farmland is degraded from acidification, pollution and erosion, and the government "is growing increasingly concerned about its food supply after years of rapid industrialization resulted in widespread pollution of waterways and farmland."<sup>52</sup>

<sup>49</sup> Reuters in Beijing, "China says more than 3m hectares of land too polluted to farm," *South China Morning Press*, 30 December 2013.

<sup>50</sup> Ministry of Environmental Protection, Huanjing baohu bu he guotu ziyuan bu fabu quanguo turang wuran zhuangkuang diaocha gongbao (Environmental Protection Ministry and Land and Natural Resources Ministry release nationwide soil contamination condition survey bulletin), 17 April 2014 at [http://www.mep.gov.cn/gkml/hbb/qt/201404/t20140417\\_270670.htm](http://www.mep.gov.cn/gkml/hbb/qt/201404/t20140417_270670.htm).

<sup>51</sup> See Sam Geal and Elizabeth Hilton, "Culture of secrecy behind China's pollution crisis," and Angel Hsu and Andrew Moffat, "China's soil pollution crisis still buried in mystery," both in *Pollution and Health in China: Confronting the Human Crisis*, special issue of *China Dialogue*, 9 September 2014 at [https://s3.amazonaws.com/cd.live/uploads/content/file\\_en/7289/chinadialogue\\_health\\_journal.pdf](https://s3.amazonaws.com/cd.live/uploads/content/file_en/7289/chinadialogue_health_journal.pdf).

<sup>52</sup> Xinhua, "More than 40% of China's arable land degraded," *China Daily*, 5 November 2014.

In May 2013, the Food and Drug Administration of Guangzhou, the capital of Guangdong Province, reported that 40 percent of the rice tested at restaurants that spring was contaminated with cadmium, a highly toxic heavy metal that can cause bone disease, cancer and other illnesses. Since extensive national testing has not yet been done for this or other contaminants, there is concern that such pollution is widespread. Fish (and fishermen) have also been found to have high levels of cadmium, mercury, and lead.<sup>53</sup>

To add further insult to consumers, deliberate food adulteration, contamination and fakery is rife in China. In 2008 public anger erupted after the government reported that tens of thousands of children were at risk of kidney stones and other organ damage from milk powder mixed with melamine, a chemical used to deceive protein tests. At least six infants died from illnesses linked to the tainted powder, which sickened more than 300,000 children. Despite repeated government crackdowns, food contamination is severe and growing in China. As domestic food grows increasingly unsafe, alarmed middle-class Chinese strip supermarkets of imported food and Chinese tourists clear out the shelves of baby formula from New Zealand to the Holland to pack home in their suitcases. Public alarm is also driving up food imports, which in turn is driving up world food prices.<sup>54</sup> For the first time in its history, China now imports more grain than it produces. This is bad news not only for China's basic food security but also for natural resources around the world as China's demand for soybeans, corn, wheat and other grains is leveling forests from Africa to the Amazon.

### **What's going on here?**

Why is it that the same government that has lifted the living standards of more millions of people faster than any other nation in history, that has built the world's largest high-speed rail network, the largest airports, longest bridges, skyscrapers by the hundreds, whole cities practically overnight, can't guarantee safe drinking water or food or medicines or breathable air to its citizens. Why can't it enforce its own environmental regulations, its own building codes? Why can't stop its own local governments from squandering money building unneeded housing, airports, and rail lines? Why is it that the same ruthless police state that so proficiently crushes dissent and censors the internet can't stop producers, even state-owned companies, from making lead paint coated toys, poisoned milk, baby formula, toxic meat and dumplings, and can't suppress corruption in its own officials? The answer to all these questions is to be found in the nature, contradictions, and tendencies of China's hybrid bureaucratic collectivist-capitalist economic system.

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<sup>53</sup> Liu Hongqiao, "The polluted legacy of China's largest rice-growing province," *China Dialogue*, 30 May 2014 at <https://www.chinadialogue.net/article/show/single/en/7008-The-polluted-legacy-of-China-s-largest-rice-growing-province>. Zheng Yesheng and Qian Yihong, Shendu Youhuan — Dangdai Zhongguo de Kechixu Fazhan Wenti (*Grave Concerns: Problems of Sustainable Development for China*) (Beijing: China Publishing House 1998), pp. 8-10.

<sup>54</sup> John Dearing, "China's polluted soil and water will drive up world food prices," *China Dialogue*, 3 March 2015 at <https://www.chinadialogue.net/article/show/single/en/7768-China-s-polluted-soil-and-water-will-drive-up-world-food-prices>.

## II. A POLITICAL ECONOMY

China's rulers preside over the largest and most dynamic economy in the world, a powerhouse of international trade whose state-owned conglomerates count among the largest companies in the world. They profit immensely from their state-owned enterprises (SOEs) market returns. But they're not capitalists, at least not with respect to the state-owned economy. Communist Party members don't own individual SOEs or shares in state companies like private investors. They collectively own the state which owns most of the economy. They're bureaucratic collectivists who run a largely state-planned economy that also produces extensively for market. But producing for the market is not the same thing as capitalism.<sup>55</sup>

Three of the top ten 2014 Fortune Global 500 corporations are Chinese. But they're not owned by Chinese capitalists. They're owned by the Chinese government. James McGregor notes that "Of the sixty-nine companies from mainland China in the Fortune Global 500 in 2012, only seven were not SOEs [and all of these seven] companies have received significant government assistance and most count government entities among their shareholders." Thirty-five years after the introduction of market reforms, China's government still owns and controls the commanding heights of the economy: banking, large-scale mining and manufacturing, heavy industry, metallurgy, shipping, energy generation, petroleum and petrochemicals, heavy construction and equipment, atomic energy, aerospace, telecommunications, vehicles (often in partnership with western companies), aircraft manufacture, airlines, railways, biotechnology, military production and more. Plus all the land and natural resources: there is no private property in China. In key industries SOEs own and control between 75 and 100 percent of assets including 96.2% of telecom, 91.6% of power generation, 76.6% of petroleum and petrochemicals, 76.2 % of airlines, 74% of autos, and so on. China's banks are 100% state-owned (though there are some private equity firms).<sup>56</sup> In the words of James McGregor, "SOEs monopolize or dominate all significant sectors of the economy and control the entire financial system. Party leaders deploy the SOEs to build and bolster the economy – and undergird the Party's monopoly political control. The private sector provides a lubricant for growth and the opportunity for people to become rich as long as they support the Party."<sup>57</sup> SOEs together with local government-owned urban collective and township and village industries currently account for 50 percent of China's current non-farm GDP. Foreign-invested joint ventures account for about 30 percent of non-farm GDP (though Chinese partners of larger joint ventures, like auto assembly, are mostly SOEs). China's indigenous private sector accounts for about 20 percent of non-farm GDP.<sup>58</sup>

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<sup>55</sup> For example, Antebellum southern planters produced cotton, tobacco, sugar and indigo entirely for market, indeed for the world market. But they did so with slave labor. This hybrid capitalist-slave mode of production was obviously radically different than production for market based on free labor in the North and it had broad implications for productivity, economic development, and more. It gave their economy an entirely different character, dynamic and trajectory, and it had profound economic, social, political, and psychological consequences, many of which we still deal with today.

<sup>56</sup> James McGregor, *No Ancient Wisdom, No Followers: the Challenges of Chinese Authoritarian Capitalism* (Westport: Prospecta Press: 2012), p. 4-5, 16-19 (quote from p. 57) and the sources cited therein, including the head of the State-owned Assets Supervision and Administration Commission (SASAC).

<sup>57</sup> *No Ancient Wisdom*, p. 2

<sup>58</sup> Andrew Szamoszegi and Cole Kyle, "An Analysis of State-owned Enterprises and State Capitalism in China," October 26, 2011. US-China Economic and Security Review Commission (USCC), pp. 21-22 at [http://origin.www.uscc.gov/sites/default/files/Research/10\\_26\\_11\\_CapitalTradeSOEStudy.pdf](http://origin.www.uscc.gov/sites/default/files/Research/10_26_11_CapitalTradeSOEStudy.pdf). On state control of the banking sector, see Carl E. Walter and Fraser J.T. Howie, *Red Capitalism: The Fragile*

SOEs resemble capitalist corporations but they're not driven by the same motor of market competition, they don't face the same incentives and penalties as capitalist firms, at least not to the same extent, and they're not run like capitalist companies.<sup>59</sup> These days China's state sector has all the superficial trappings of a market economy: corporations, CEOs, IPOs, stock markets, and so on: The Ministry of Petroleum is now called China National Petroleum Corporation. Baoshan Iron and Steel now calls itself Baosteel Group Corp. and so on. But SOEs aren't "corporations." Dozens of Chinese SOEs have held IPOs listings on the New York Stock Exchange and China's own toy stock markets in Shenzhen and Shanghai. But the government won't allow its companies to be bought and sold. It will only permit a minority of shares, not more than 25 percent, and only non-voting shares at that, to be traded on the market. As one expert put it "the Chinese government is the only shareholder that counts."<sup>60</sup> Lots of SOEs produce some or most of their output for market. State Grid produces power for, besides China (where it has a monopoly), Singapore, Australia and is developing facilities in the Phillipines and Portugal. But State Grid does not answer to shareholders or boards. China's SOEs are not run by boards of directors and elected CEOs. They don't have boards of directors. And their CEOs and senior management are all appointed by the Communist Party. All Chinese state "corporations" have Communist Party secretaries who without exception outrank the enterprise CEOs.<sup>61</sup>

To be sure, China has a vast capitalist market economy side-by-side with the state sector. Thousands of real corporations, foreign corporations, operate in China today: Apple, Toyota, Audi, GM, Samsung, Procter & Gamble, Walmart, even the Avon lady. And China has plenty of home-grown entrepreneurs and privately-owned businesses. China is said to have more than a million U.S. dollar-millionaires and at least 89 billionaires. The private sector includes sizeable companies like Baidu (the internet search giant that dominates the China market since Google left), Tencent (instant messaging), Jack Ma's Alibaba, real estate developers like Dalian Wanda Group and China Vanka, food processors like Wahaha Corp., insurance companies, and others. But these are not the core of the economy. China's biggest private company by valuation, Alibaba, doesn't produce anything at all; like Ebay it just connects sellers with buyers. Most of China's private businesses are small, on average less than half the size of SOEs and the vast majority are even smaller: thousands of small coal mines, thousands of local construction companies, some small steel mills, textile and garment

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*Foundations of China's Extraordinary Rise* (Singapore: Wiley & Sons, 2012), pp. 31-33 and passim. Also: Henry Sanderson and Michael Forsythe, *China's Superbank* (Singapore: Wiley & Sons, 2013). Barry Naughton, *The Chinese Economy: Transitions and Growth* (Cambridge: MIT 2007), pp. 190, 299-304, 325.

<sup>59</sup> Thus with respect to the banking sector, Szamosszegi and Cole write that: "The state banking sector dominates the landscape in China and tends to favor SOEs at the expense of private sector firms. Second, SOEs are in general an important instrument of government policy. The government uses SOEs to facilitate structural change in the Chinese economy, to acquire technology from foreign firms, and to secure raw material sources from beyond China's borders. For example, in 2009, the government turned to its SOEs and state-owned banks to provide stimulus to the domestic economy. Third, the CCP and SASAC maintain important influence over the executives of SOEs. These executives face two sets of incentives. On the one hand, the entities they control are supposed to be profitable, and SOE executives are now rewarded based on financial performance. On the other hand, the appointments of top executives to SOE management and their future career paths upon leaving the SOE are determined by the Central Organization Department of the CCP. Thus, SOE executives have an incentive to follow the government's policy guidance. Recent examples, as well as financial disclosure documents, indicate that if maximizing shareholder value conflicts with state goals, SOEs and their wholly-owned subsidiaries are likely to pursue the goals of the state." "An Analysis of State-owned Enterprises" op.cit. p. 3.

<sup>60</sup> McGregor, *No Ancient Wisdom*, p. 59.

<sup>61</sup> Walter and Howie, *Red Capitalism*, p. 24, 187.

industries, shoemakers, retail shops and supermarkets, restaurants, self-employed truckers, family businesses, and the like.

**“Get rich and you’ll get audited”**

The Communist Party keeps its domestic capitalists on a short leash. Successful entrepreneurs soon find they need a state “partner,” or the government sets up its own competitors to suppress them, or they suffer forced buyouts. Those who cross the Party disappear and their property is seized, and worse.<sup>62</sup> Those whose names appear on Forbes list of the world’s wealthiest citizens or the Hong Kong Hunrun Rich List sometimes vanish without a trace. Chinese call these the “pig-killing lists.” Middle-class Chinese speculate on apartments and suburban villas but the land they sit on is state-owned. Indeed, even title to the apartments and villas they’ve bought is never really secure because these can easily be seized by the state on a whim, with no recourse. It’s been estimated that in the last three decades more than 60 million Chinese farmers and urban residents have had been summarily evicted from their homes and farms to make way for government development projects of all sorts across the country. More than a million and a half farmers and townfolk were evicted to make way for the Three Gorges dam. Several million residents of Beijing were evicted to shabby satellite towns while their ancient Beijing homes, some dating back to the Ming Dynasty, were leveled to make way for shopping malls, apartment towers, and Olympic sports stadiums.<sup>63</sup> In such a system, arbitrary political power and generalized insecurity condition every aspect of life, even within the ruling Party itself. *Especially* within the ruling Party.

### **A. Beijing’s Game of Thrones**

China’s ruling class is the *nomenklatura*, the upper ranks of the 86 million-member Chinese Communist Party. Since the victory of the revolution in 1949, China has been run by the party-army-bureaucratic aristocracy, the leaders of which reside behind the walls of the Zhongnanhai complex adjacent to the Forbidden City.<sup>64</sup> In the 1950s, they nationalized the economy, divided up government administrative and economic management posts amongst themselves and centralized all surplus extraction. Today this state-owned economy is run by their children and will soon be run by their grandchildren. Since Mao’s death in 1976, the inner circle of the ruling “red families” have been headed up by the so-called “Eight Immortals”: Deng Xiaoping, Chen Yun (the CPC’s leading economic planner), Wang Zhen, Li Xiannian (PRC President) Peng Zhen (NPC Congress Chair), Song Renqiong (party personnel chief), Yang Shangkun (PRC President), Bo Yibo (Vice Premier and last of the eight to die at 98 in 2007).<sup>65</sup> As the elders retired and died off they entrusted the reins of power to their children, the “princeling” (*taizi dang*) sons and daughters of the first generation of communist rulers. Since the bad old days when Mao and his Gang of Four dispatched their rivals to rot in dungeons, or shot Lin Biao’s plane out of the sky to prevent his escape to Moscow, the Communist Party has made every effort to present a public façade of leadership

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<sup>62</sup> Ben Blanchard, “Chinese billionaire mining tycoon Liu Han is executed over his links to a ‘mafia-style’ gang,” *Sydney Morning Herald*, 9 February 2015. Most accounts say that his real crime was his link to the Zhou Yongkang clique.

<sup>63</sup> Becker, *City of Heavenly Tranquility*, pp. 287-289.

<sup>64</sup> Sydney University’s Kerry Brown says the number of “high-level cadres” (*gaoji ganbu*) who run the ministries, the state conglomerates, and the administration, all concentrated in Beijing, total no more than 2,562, which means, he says, that China is effectively “run by group of people that is smaller than most villages in Europe.” *The New Emperors: Power and the Princelings in China*, New York 2014, pp. 20-21.

<sup>65</sup> Richard McGregor, *Th*, New York 2010. Carl E. Walter and Fraser J.T. Howie, *Red Capitalism*, Singapore 2012, pp. 22-25 and passim.

unity and discipline and portray its internal workings as “regularized” with “collective leadership,” “ten-year rotations” of “presidents” and “prime ministers,” “mandatory retirement of senior officials at 65” and so on. Nothing could be further from the truth.

Today, as in Mao’s day, CP internal political machinations resemble nothing so much as *The Godfather* or *Game of Thrones*. And how could it be otherwise? In the absence of the rule of law, without elections to choose government representatives, without inner-party democracy, without constitutional procedures to regularize succession to office, without an independent judiciary, justice department, attorneys general and police to systematically prosecute and punish corrupt politicians, in such a system no one owns their office, position or job on the basis of merit, professional qualification, fixed-year terms, or enforceable contracts. Every cadre’s personal and political security depends, above all, on the strength of his/her *guanxi*: his connections and relationships with networks of allies, their patrons above, their supporters below and especially to families, clans, and factions. From the days of Mao’s purges of “capitalist roaders” Lin Biao, Liu Shaoqi and Deng Xiaoping, to Deng Xiaoping’s own purge of the Maoist Gang of Four, to Jiang Zemin’s purge of “counterrevolutionaries” Zhao Ziyang, Bao Tong et al. in the wake of the 1989 Tiananmen uprising, to current President Xi Jinping’s show trials of “corrupt” rival Bo Xilai (son of Bo Yibo) and his persecution of powerful opponents in the Oil Faction and secret police led by Zhou Yongkang, the Chinese Communist Party’s internal political dramas differ little from the treacherous, fratricidal power struggles of the Coreleones, Barzinis and Straccis of *The Godfather* or the bloody feudal wars of the Starks, Tullys and Boltons for supremacy in Westeros. As in the *Game of Thrones*, China’s Communists are embroiled in non-stop faction building, never ending intrigue and infighting, and treacherous factional struggles while the paramount leader *du jour*’s claim to the Red throne in Zhongnanhai is never completely secure.<sup>66</sup>



Cover of Yu Jie’s as-yet unpublished book *China’s Godfather Xi Jinping*

<sup>66</sup> Eg. Shi Jiangtao, “Struggle for supremacy by party factions now on display,” *South China Morning Post*, 13 October 2012. Matthew Robertson, “China’s ‘hatchet man’ set to be purged in party struggle,” *Epoch Times*, 30 May-3 June 2014 (reporting a rumored threat to Xi Jinping’s life by the Bo Xilai faction). Teddy Ng, “Rising star Li Yuanchao forges ties with all political factions in China,” *South China Morning Post*, 1 October 2012.

## Godfather Xi Jinping

President Xi Jinping came into office in 2012 on a campaign vowing to “swat tigers and flies alike.” Xi had been brought in to replace the disgraced Shanghai Mayor Chen Liangyu on the strength of his anti-corruption campaigns in Zhejiang province where he once told an anti-graft conference: “Rein in your spouses, children, relatives and friends and staff, and vow not to use power for personal gain.”<sup>67</sup> But Xi is just as corrupt as all the rest, and just as thuggish.

Xi once remarked that as a young man he liked to watch the *The Godfather*. Yu Jie, an exiled author of numerous critical books on China, titled his latest book: *Godfather of China Xi Jinping* (still awaiting publication as of March 2015). Yu told the New York Times that the film was Xi’s political study guide: “The Communist Party is China’s biggest Mafia, and the party boss Xi Jinping is the Godfather of China.” As if to confirm Yu’s thesis, when he tried to publish the book in Hong Kong, one publisher was arrested in Shenzhen and disappeared. A second prospective publisher received a threatening phone call from Beijing telling him that the book “absolutely cannot be published” and if he publishes it, “your personal safety and the safety of your family cannot be guaranteed” so he immediately dropped the project. Life in the Communist Party is not so different from life in the Mafia: it’s a constant, treacherous, and highly dangerous non-stop factional struggle between crime family-based groupings in struggle with one another over top offices and treasure. The key to safety is building unshakable vertical and horizontal networks of support and protection -- of *guanxi*. And the key to solidifying those networks is sharing the loot from corruption. As political scientist Minxin Pei put it: “If your patrons do not protect you, you’re toast. . . Corruption is the glue that keeps the party stuck together.”<sup>68</sup>

## B. Grabbing the brass ring: gangster capitalism and the necessity of corruption

China’s economy mirrors its politics. China’s communist party-state has grown immensely wealthy over the past three decades from rivers of income flowing in from huge state monopolies like Sinopec (China Petroleum), State Grid, Bank of China, China Telecom, from taxing export foreign exchange earnings, and more. But the question is, how is this loot shared out amongst the ruling class of China, the “gang” of eighty-six million Communist Party members? In capitalist economies, this is entirely formalized and regularized. One’s wealth is based on property, cash in the bank, stock ownership and such – all secured by the rule of law, enforceable contracts, an impersonal state, independent judiciary, police, etc. But China has none of this. Cadres don’t privately own SOEs, they don’t own shares in SOEs.

Yet we know from multiple sources including trials of corrupt officials, revelations about secret offshore bank accounts, records of foreign property purchases, and especially from recent headline exposés in the The New York Times and Bloomberg News on the wealth of China’s leading “princelings” including former current heads of state, that China’s Communist Party cadres have gotten gloriously rich out of market reform.<sup>69</sup> The New York Times calculated

<sup>67</sup> Quoted in *Bloomberg News*, “Xi Jinping millionaire relations reveal fortunes of elite,” 29 June 2012.

<sup>68</sup> Quoted in David Barboza, “The corruptibles,” *New York Times*, 3 September 2009. See also again, Robertson, “China’s ‘Hatchet Man’ set to be purged. . .” in op cit.

<sup>69</sup> Outgoing Premier Wen Jiabao, incoming Premier Xi Jinping, and other wealthy princelings were profiled in *Bloomberg News* and the *New York Times*, in 2012 and 2013 – which got both papers shut

that former Premier Wen Jiabao was worth at least \$2.7 billion when he retired in 2012, all secreted under the names of close relatives.<sup>70</sup> As Xi Jinping climbed the Party ranks, his extended family got rich in minerals, real estate and mobile-phone equipment. Today his family is worth at least \$376 million, again, with virtually all of it listed in the names of his close relatives rather than his own.

### **Markets and the mother of all moral hazards**

When Deng Xiaoping rejected Maoism and told the Chinese that now it was OK, even “glorious to get rich,” he faced an immediate problem: to get marketization rolling, he urged the cadres to promote private businesses, joint-ventures with foreign investors, to “jump into the sea of commerce” as he said in his famous “southern tour” of Shenzhen 1992. Deng’s market reforms thus presented the personally penniless but functionally all-powerful CCP cadres with mother of all moral hazards. China’s re-introduction of capitalism presented the cadres with a once-in-an-epoch opportunity to grab the brass ring, to get rich, *really* rich, and *fast*. The party-state owned all land, resources, industries, controlled the banks and pension funds, foreign trade and currency exchange, the courts, police, everything. The problem was that the only ways to profit from this were all illegal: bribery, smuggling, influence peddling, embezzling money from state industries, profiting from *guandao* (reselling state-owned raw materials and commodities on the free market at huge markups), asset stripping, currency manipulation, money laundering and so on. Risky, but how could they resist? Far from resisting, they led the way in what exiled economist He Qinglian called “the marketization of power.”<sup>71</sup> Besides, since there was no independent judicial system, it was left to the party officials to police themselves. The very people who stood to gain the most from the coming market boom were supposed to refrain from self-dealing. Even so, the breadth and brazenness of corruption grew slowly at first. Looking back to the 1980s, Bao Tong, a senior party official arrested and imprisoned as a “counterrevolutionary” during the 1989 Tienanmen crackdown told Bloomberg News in December 2013: “A bottle of Moutai, two cartons of Chungwa cigarettes – corruption was no more than that at the beginning.” “Now an enterprise worth 10 billion yuan can be purchased with 1 billion. This would have been appalling to people back then.”<sup>72</sup>

**“It doesn’t matter who owns the money, it only matters who gets to use it.”**

Today, the buffet of benefits available to the upper ranks includes extravagant state-provided housing, posh offices, fleets of limousines, access to state-owned vacation villas, travel and plenty of pocket change to spend on fine French wines, Rolexes, LV handbags and the rest. At the top, princelings are often heads of giant conglomerates which themselves own dozens or even hundreds of individual SOEs. Presumably this gives them access to multiple income streams and ample opportunities to plunder the government’s ever-growing treasure. Princeling Bo Xilai didn’t send his son Guagua to Harrow and Oxford and Harvard, buy him

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down in China and their reporters denied visa renewals in 2013. See “Heirs of Mao’s comrades rise as new capitalist nobility” and links to related stories in *Bloomberg News*, 26 December 2012 at <http://www.bloomberg.com/news/2012-12-26/immortals-beget-china-capitalism-from-citic-to-godfather-of-golf.html>. Also again Richard McGregor, *The Party* and Kerry Brown, *The New Emperors*.

<sup>70</sup> David Barboza, “Billions in hidden riches for family of Chinese leader,” *New York Times*, 25 October, 2012.

<sup>71</sup> *Zhongguode xianjing (China’s Pitfalls)* (Hong Kong: Mingjing chubanshe, 1997)

<sup>72</sup> “Heirs of Mao’s comrades rise as new capitalist nobility,” op cit. p. 11.



Porches and Ferraris and fancy apartments in Oxford and Cambridge Mass. on his official salary. Even China's leaders complain that China's "governments at all levels" had turned the state's banks into "ATMs for officials and official businessmen."<sup>73</sup> As one SOE boss put it: "It doesn't matter who owns the money, it only matters who gets to use it."<sup>74</sup> As individuals, they loot according to their rank and positions and *guanxi*. And of course, who gets to use exactly what is shrouded in secrecy. Financial Times Beijing bureau chief Richard McGregor quotes a businessman jailed on corruption charges who said: "Every official has three lives. Their public life, their private life, and their secret life."<sup>75</sup>

In the boom years of the 1990s and 2000s in China's ruling class, taking their cue from New York banksters who were becoming their partners and backers, corruption flourished on a previously unimagined scale. They siphoned huge sums from state banks, SOEs, ministries. They looted pension funds and state charities. They've profited from illegal arms sales and smuggling. They made vast fortunes in real estate evicting millions of farmers and selling their lands to developers. They made more fortunes taking cuts from listing Chinese companies on the New York stock exchange. In all this the "princeling" children and grandchildren of the "Eight Immortals" have led the way. In the 1980s, Deng Xiaoping, Chen Yun, and the other aging revolutionary generation leaders entrusted their children to run the new market-oriented state conglomerates like CITIC, China Poly Group (arms, African oil, etc.). Deng's daughter Deng Rong and her brother Deng Zhifang were among the first to go into real estate in the 1990s. As Bloomberg reported in its investigative report on the 103 children and grandchildren of the Eight Immortals, "Families benefited from their control of state companies, amassing private wealth as they embraced the market economy. Forty-three of the 103 ran their own business or became executives in private firms ... The third generation – grandchildren of the Eight Immortals and their spouses, many of whom are in their 30s and 40s – have parlayed family connections and overseas education into jobs in the private sector." Others took over state sector conglomerates and SOEs. Twenty-six of the heirs of just these eight revolutionary leaders ran or held top positions in big SOEs: "Three children alone – General Wang's son, Wang Jun, Deng's son-in-law, He Ping; and Chen Yuan, the son of Mao's economic tsar – headed or still run state-owned companies with combined assets of about \$1.6 trillion in 2011."<sup>76</sup> Deng's son-in-law Wu Jianchang, got himself appointed head of numerous metals companies and then became, conveniently, Minister of Metallurgy. Deng' grandson Zhuo Su got himself appointed head of a company that bought into an Australian iron-ore business. Wang Jun, the revolutionary general's son set up a huge conglomerate, Poly Group, with Deng Xiaoping's son-in-law He Ping, another general. Chen Yun installed his son Chen Yuan as head of the giant state-owned China Development Bank with assets of more than \$1 trillion. His sister, Chen Xiaodan worked at Morgan Stanley in New York, set up her own private equity firm, and worked with her father's China Development Bank to support Chinese firms investing abroad in Europe and elsewhere. Wang Zhi, General Wang's third son, "borrowed" ¥300,000 yuan from his employer, the Ministry of Electronics, to set up his own company building personal computers, eventually

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<sup>73</sup> Ex-Premier Zhu Rongji, quoted in Richard McGregor, *The Party*, p. 45.

<sup>74</sup> Quoted in Walter and Howie, *Red Capitalism*, p. 23. . In October 2014, one high-level cadre in the energy ministry caught up in Xi Jinping's anti-corruption sweep, had stashed away 200 million yuan (HK\$252 million) in banknotes in one of his apartments. The pile of banknotes weighed more than 2.3 tons.

<sup>75</sup> Quoted in Richard McGregor, *The Party*, pp. 140-41.

<sup>76</sup> "Heirs of Mao's comrades rise as new capitalist nobility," *Bloomberg News*, 26 December 2012 p. 3 at <http://www.bloomberg.com/news/2012-12-26/immortals-beget-china-capitalism-from-citic-to-godfather-of-golf.html>. Further citations below are from articles in this collection.

partnering with Bill Gates to develop a Chinese version of Windows software. As Yang Dali of the University of Chicago put it: “The entire country was in business – the, the military, the courts, the prosecutor’s office, the police.” “Insiders could get rich very quickly.” And “when the top is corrupt, this is how it will be all the way down” said Dai Qing, China’s leading environmental activist who herself grew up in the Zhongnanhai compound with the princelings after being adopted by a famous general.<sup>77</sup> Bloomberg reports that, when he was lying in a hospital bed in 1990, hard-line Maoist General Wang Zhen (1908-1993) told a visitor that he felt betrayed by his own children. Decades after he had risked his life fighting for an egalitarian utopia, his children were only interested in getting rich: “Turtle eggs,” he said to the visiting well-wisher, using a slang term for bastards. “I don’t recognize them as my sons.”<sup>78</sup>

### Getting the loot out of China

International banking connections have been also been key to the princeling’s strategy of getting their loot out of China. Over the years, it has been estimated that princelings and other high cadres, cronies and capitalists have funneled between one and four *trillion* U.S. dollars in unreported assets out of the country since 2000. Credit Suisse, PricewaterhouseCoopers, and UBS -- Western banks with notorious experience in sheltering U.S. and other tax evaders, set up secret companies and accounts for at least 21,000 Chinese in Caribbean tax havens including for Wen Yunsong, Wen Jiabao’s son. High cadres, their relatives and other rich guys fly suitcases of money to North America, Australia, Caribbean havens, and other friendly destinations.<sup>79</sup> In February 2014, it was reported that more than 45,000 (!) Chinese *millionaires* had queued up in Vancouver, British Columbia to get investor residence visas in return for five-year interest-free loans to the Canadian government. In the U.S. 80 percent of the government’s EB-5 investor program visas are going to wealthy ex-mainland Chinese; in Australia it’s 9 out of 10. At least 18 of the Eight Immortals’ descendants own or run entities registered in the British Virgin Islands, Cayman Islands, Liberia and other secret offshore tax havens.<sup>80</sup> Bo Yibo’s wife Gu Kailai, convicted in 2012 of murdering her British business partner controlled a web of businesses from Beijing to the Caribbean worth at least \$126 million and stashed many of her assets with her sister in places like the British Virgin Islands, according to Bloomberg.<sup>81</sup> So it goes.

### C. Implications, tendencies, consequences

This structural arrangement of bureaucratic/gangster capitalist power and property has given China’s economy a radically different pattern and trajectory of economic development from normal capitalism anywhere in the West. We can specify at least the following broad systemic tendencies in this hybrid economic system:

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<sup>77</sup> Yang Dali and Dai Qing were quoted in *Bloomberg News*, “Heirs” op cit. pp. 5,6 and 10.

<sup>78</sup> *Bloomberg News*, “Heirs,” pp. 1,5.

<sup>79</sup> Chinese fly cash to North America, by the suitcase,” *Wall Street Journal*, 2 January 2013. Shen Ming, “Chinese military officers secretly moving money offshore,” *Epoch Times*, 28 June 2012. Benjamin Robertson, “US1.25 trillion moved out of mainland China illegally in 10 years, says report,” *South China Morning Press*, 16 December 2014.

<sup>80</sup> James Ball and Guardian US Interactive Team, “China’s princelings storing riches in Caribbean offshore haven,” *Guardian*, 21 January 2014, reporting on the findings of a two-year reporting effort by the International Consortium of Investigative Journalists (ICIJ). *Bloomberg News*, “Heirs” p. 6.

<sup>81</sup> “China murder suspect’s sisters ran \$126 million empire,” *Bloomberg News*, 13 April 2012.

**1. Priority to the state-owned economy:** Shocked and riveted by the collapse of communism in Eastern Europe and especially the communist debacle in the USSR, Deng Xiaoping and his successors have been determined to avoid such a fate by maintaining state control over the commanding heights of the economy, avoiding substantial privatization, and limiting the internal market, as we noted above. That's why the maximand of China's SOEs is not profit maximization. Their maximand is the security, wealth and power of the Chinese Communist Party and that's not the same thing. The Bank of China, China Development Bank, the Industrial & Commercial Bank of China and other huge state banks sit at the apex of China's economy and count among the Global Fortune 500 largest companies. But unlike Citibank or HSBC, their job isn't to make money. Their job is to lose money – or more precisely, to disburse it. It's often said that in the transition to capitalism China's market reformers "abandoned central planning." That's an exaggeration. They reduced the scope of indicative planning but they did not abandon planning the state sector; they monetized it. Instead of issuing physical output targets à la Stalin and Mao, they direct most of the state economy by writing checks: by ordering state banks to disburse funds to support the production goals of the state plans (though they still do also set physical targets for some items – kilometers of rails, kilometers of roads, tons of wheat and cotton etc., as noted above). In the 1990s the government leased out, sold off, or closed down thousands of small unprofitable SOEs producing consumer goods including wood and leather products, furniture, building materials, garments, food products and the like. Dispensing with these, the government concentrated on restructuring, modernizing, expanding and diversifying the state's SOEs.<sup>82</sup> The government also expanded the state sector by establishing entirely new industries: consumer appliances, solar and wind power, biotech, high-speed trains, passenger aircraft, IT, and others. But instead of assigning production targets for quantities of Geely cars or Suntech solar panels or China National Railways (CNR) high-speed trains, they allocate funds via state banks to fund support state-owned industries like CNR and to establish and support state-private joint ventures like Suntech and Geely. Since the 1990s, China's SOEs, and the entire state industrial sector, have grown enormously. Whereas in the 1970s, China's SOEs counted for almost nothing in the world economy, today, China's "national champions" Sinopec, China National Petroleum and State Grid Corporation rank among the ten largest companies by revenue in the 2014 Fortune 500.

Prioritizing the state sector means that the government often finds it rational subvert its own market reforms to protect state interests: So when the head of a major state-owned conglomerate was removed for embracing market economics too enthusiastically, a Beijing University expert on China's state-enterprises commented: "There's a system in place, not just one person. The party's appointee draws his position from patronage ... and the task is to engage with state leaders and safeguard government assets, not to maximize profits."<sup>83</sup> This is why the government enforces SOE monopolies regardless of efficiency, why it limits western investor ownership share in joint ventures, why it bars western firms from investing in key industries, why it directs its huge sovereign wealth fund mainly to invest in the resource extraction industries China needs to fuel its national economic development even though global resource prices and resource industry profits have both been falling since 2008.<sup>84</sup> This

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<sup>82</sup> On SOE restructuring and growth of the planned economy, see Peter Nolan, *Transforming China: Globalization, Transition and Development*, London 2004, chapter 5.

<sup>83</sup> James T. Areddy and Laurie Burkitt, "Shake-up at China firm shows reach of graft crackdown," *Wall Street Journal*, 23 April 2014.

<sup>84</sup> So for example, with respect to China's investment in mines in Zambia, Professor Ching Kwan Lee quotes a Chinese mining executive who says "We don't need to maximize profit, but we need to make some profit. The state won't support us if we make losses year after year." Lee adds that "between profit optimization and profit maximization lies the space for achieving other types of return – political

is all in the collective interest of China's state-based ruling class.

Yet at the same time, individually, princelings and well-placed cadres are simultaneously conniving, like the gangsters they are, to privatize pieces of the state-owned economy, to sell them at huge discounts to themselves, their relatives and partners, usually via private investment banks whose real owners are concealed behind multiple layers of paper and shell companies. Cadres also funnel money out of SOE profits to buy businesses and properties in the West. SOE overseas companies open still other opportunities to privately pocket profits earned overseas before they're sent back to China. It can't be ruled out that such trends could eventually lead to a broad selloff of state assets à la Poland. But for the present, the party seems determined to protect the state-owned economy rather than let it collapse and be sold off and privatized.

**2. Hypergrowth drivers: incentives without penalties:** China's SOEs, as we noted, don't live or die on the basis of their performance in the market. Lots of SOEs are inefficient but because many are also monopolies, they can still be gold mines.<sup>85</sup> As one official observed, *"the overall economy has been so good that even pretty stupid SOEs could do well without much effort."*<sup>86</sup> Broke, indebted, inefficient or not, so long as their SOEs are in-plan, and especially if they've been designated "key" or "strategic" or "pillar" industries like coal or oil or autos or aerospace or biotech or high-speed rail or some other priority, SOE managers could assume that they would never be forced out of business regardless of their economic performance and generally speaking they have not been. In result, SOE managers have had the best of both worlds: they have every incentive to borrow and spend, especially on capital construction (including those palatial offices to run the operations), but they face little or no threat of discipline for excess or failure. Given the profit sharing arrangement between the Center and the SOEs, for SOE bosses, it is capitalism when the SOE is making money but socialism when it needs a government bailout. This is the main driver of "blind growth" across the economy and this can be expected to continue.

**3. Hypergrowth drivers: job creation:** In capitalist economies, neither individual companies nor governments are obliged to create jobs, though in extreme circumstances like the Great Depression, governments have set up jobs programs to keep the peace. But in China, in the old Maoist bureaucratic collectivist system, the government was the only employer, so it had to employ everyone because there was nowhere else to find work. In Mao's day, successive generations of workers were simply assigned to work units (*danwei*) with the result that China's industries and government offices were often abundantly overstaffed. But with the turn to the market, the government abolished guaranteed employment in the mid-1990s and SOEs laid off some 50 million superfluous workers in the 1990s to make their industries more efficient. By then however, many excessed workers could find jobs in the new parallel market economy while others were forced into retirement on subsistence pensions. The destruction of millions of state jobs with state benefits provoked widespread protests and unrest in the late 1990s and early 2000s. To contain this unrest, and also to keep up with China's relentless population growth, the government has been forced to spend heavily on wave after

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influence and access to raw materials." "The spectre of global China," *New Left Review* 2/89, September-October 2014, p. 36.

<sup>85</sup> Thus James McGregor writes: "Despite their chronically imprudent lending habits, SOE banks are kept afloat – and reap huge profits to boot – through government-set interest rates. With a ceiling on the interest rates for deposits and a floor on lending rates, China's banks have enjoyed a comfortable spread of about three percentage points, which guarantees profits." *No Ancient Wisdom*, p. 65.

<sup>86</sup> Long Youngtu, China's chief negotiator at the WTO, quoted in James McGregor, *No Ancient Wisdom*, p. 5 (my italics).

wave of WPA-like make-work capital construction projects across the country since the 1990s, even if much of what got built was unneeded, as noted above. Given the special threat that extensive unemployment poses to a nominally workers state, this pattern of make-work overproduction and overdevelopment can be expected to continue.

**4. Collective property weakens efforts to reduce pollution:** Collective ownership means that even with its police-state dictatorship, the Center can't always enforce its will against lower level officials because those local, country, provincial, ministerial officials, SOE bosses and so on are more partners with Beijing in their joint ownership of the national economy than strictly subordinates. They all have their own *guanxi* networks to defend their turf and promote their own interests in contravention of central initiatives when it suits their purposes. This is why central efforts to restrain pollution tend to be subverted or defeated by local officials whose overriding concern is to keep the economic engines running regardless of the smog. China has comprehensive environmental legislation on the books. It has its own EPA equivalent, the State Environmental Protection Agency (SEPA). It has a State Food and Drug Administration (SFDA) and other regulatory agencies. But the evidence everywhere is that regulation is largely a failure.<sup>87</sup> Here and there SEPA has managed to enforce some cleanups and shutdowns of some conspicuous polluters, usually smaller operations. But more often than not, SEPA regulators are powerless against polluters because environmental protection officers are subordinate to and even paid by local officials who profit from and generate jobs in the same polluting industries SEPA wants to suppress.<sup>88</sup> In her documentary *Under the Dome*, Chai Jing asks Ding Yan the Director of the government's MEP Vehicular Pollution Research Institute about why his agency doesn't force China's vehicle manufactures to stop selling trucks with fake National Standard 4 emission stickers certifying that the vehicles meet the highest emissions standards when in fact they only meet the lowest National Standard 1. "If you (the MEP) assert you have legal authority, no one can deny that, so why not just execute the law?" Ding told her that regardless of the law, his agency had no real power to enforce it: "Nowadays, I don't dare open my mouth out of fear that [the polluters] will see that I have no teeth" (at 48:19).

Since the highly personalized and politicized state can't rely on the rule of law, on independent courts and police to enforce its environmental regulations, the government has to resort to "campaigns" to enforce environmental compliance. But this approach is hopelessly ineffectual. Beijing issues big directives, sends inspectors around, fines the polluting companies. But as often as not local government partners just pay the fines, or block regulators from shutting down the polluters, or let the regulators shut them down but then let the companies reopen under a new name. If all else fails, there's always bribery. Ministry of Environmental Protection (MEP) officials are regularly bribed to let polluters continue operations.<sup>89</sup>

A year after Xi Jinping launched his "war on pollution," the official press describes Beijing as

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<sup>87</sup> Liu Jianqiang, "China's environment ministry an "utter disappointment," *China Dialogue*, March 7, 2013 at <https://www.chinadialogue.net/article/show/single/en/5788-China-s-environment-ministry-an-utter-disappointment>. Tang Hao, "China's food scares show the system is bust," *China Dialogue*, 31 August 2012, at <https://www.chinadialogue.net/article/show/single/en/5142-China-s-food-scares-show-the-system-is-bust>.

<sup>88</sup> See Brian Tilt, *The Struggle for Sustainability in Rural China*, New York 2010, chapter 6. Han Wei, "Officials failing to stop textile factories dumping waste in Qiantang River," *China Dialogue*, 1 August 2013 at <https://www.chinadialogue.net/article/show/single/en/5589-Officials-failing-to-stop-textile-factories-dumping-waste-in-Qiantang-River>.

<sup>89</sup> Liu Qin, "China's environment ministry launches anti-graft reforms," *China Dialogue*, 11 March, 2015.

“all but unlivable.” A study released in February 2015 declared that living in China’s cities is “as deadly as smoking.”<sup>90</sup> The government’s ambitious plans to improve water quality and safety have likewise failed. The 12<sup>th</sup> Five-Year Plan goal of “completely solving rural drinking water issues” by the end of 2015 “will not be met, and some villages are going backward because of scarcity and pollution.” Urban water safety has not improved and even bottled water is often contaminated.<sup>91</sup>

Moreover, the Center itself is conflicted about enforcing its own pollution regulations because the central government, as much as local governments, needs to maximize growth to meet its plan targets and maintain employment to keep the peace. So while it talks about cracking down on pollution, more often than not Beijing also has to prioritize job creation over environmental protection.<sup>92</sup> So long therefore, as there is no real separation of powers, these trends can be expected to continue and China’s pollution problems will remain essentially unsolvable.

#### **5. Bureaucratic particularism and competition drive redundancy and overinvestment:**

SOE bosses, local, provincial, and ministerial officials may not face market competition in the same way and to the same extent as capitalist firms, but they face intense bureaucratic competition for access to resources and appropriations from the Center. This particularistic intra-ruling class struggle over access to state funds also shapes the broad pattern of China’s economic development, powering tendencies to redundancy, duplication, irrational investment and waste throughout the economy. Thus, in his book on China’s growing airline industry, James Fallows writes:

Foreign reports often present these projects as carefully coordinated expressions of China’s larger ambitions for a modern transportation system and to an extent they are. But there is also bitter bureaucratic and commercial rivalries between the airline and railroad interests within China, each seizing on any opportunity to argue that it reflected the wiser and more farsighted use of the country’s resources.<sup>93</sup>

In China’s hybrid economic system, generally speaking, officials can only profit from their own units -- their localities, ministries, and SOEs. Cadres can’t buy shares in SOEs anywhere in

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<sup>90</sup> John McGarrity, “One year on after “war” declared on pollution, Beijing air scarcely improves,” *China Dialogue*, 2 February 2015. <https://www.chinadialogue.net/blog/7695-One-year-on-after-war-declared-on-pollution-Beijing-air-scarcely-improves/en>. Xu Nan, “China’s noxious air ‘as deadly as smoking: study,” *China Dialogue*, 4 February 2015 at <https://www.chinadialogue.net/blog/7697-China-s-noxious-air-as-deadly-as-smoking-study/en>.

<sup>91</sup> Lu Hongqiao, “China set to miss safe rural drinking water targets,” *China Dialogue*, March 5, 2015 at <https://www.chinadialogue.net/article/show/single/en/7762-China-set-to-miss-safe-rural-drinking-water-targets>. Huang Hao, “Village water supplies in China hit by scarcity and contamination,” *China Dialogue*, March 5, 2014 at <https://www.chinadialogue.net/article/show/single/en/7209-Village-water-supplies-in-China-hit-by-scarcity-and-contamination>. Abigail Barnes, “China’s bottled water: the next health crisis?” *China Dialogue*, July 22, 2014 at <https://www.chinadialogue.net/article/show/single/en/7152-China-s-bottled-water-the-next-health-crisis->.

<sup>92</sup> Judith Shapiro writes that “There are competing and conflicting emphases on growth, government legitimacy, clean development, and stability, creating a confusing policy-making landscape in which actors sometimes work at cross purposes or with uncertain lines of responsibility. . . . Economic realities and concerns about unemployment and social unrest often push the government away from environmentally friendly action. The Ministry of Environmental Protection is hardly in a position to close the enormous state-run iron and steel plants in the great north-eastern rust belt, where unemployment is exceedingly high and shutdowns would mean even more job losses.” Shapiro, *China’s Environmental Challenges*, Cambridge UK 2012, pp. 69-70.

<sup>93</sup> *China Airborne*, p. 99.

the economy like in capitalism. No cadre in Sichuan can invest in and profit off of state-owned industries in Shanghai or Shenzhen. So if Sichuan officials want to profit from Premier Wen Jaibao's call at the launching of the 12<sup>th</sup> Five-Year Plan, to "enhance China's automobile manufacturing capability," their only way to do was to build auto plants in their own province. And that's what happens. That's why China has more than 130 auto plants, thousands of power plants (one for every three square kilometers in Jiangsu province), roads and bridges to nowhere, more than 30 airlines, near-empty airports everywhere, more than 800 shipyards, redundant ports, redundant "world financial centers," redundant shopping malls, ghost cities, etc. with all the waste those entail. These tendencies are, again, built into the bureaucratic collectivist nature of this economic system and will continue as long as this system is in effect.

**6. Rampant, ineradicable corruption:** Anti-corruption campaigns have been a feature of CCP inner-party struggles since long before the founding of the People's Republic. They reached their apogee of hysteria in Mao Zedong's terror campaign of "cultural revolution" against "capitalist roaders" in his own party. These days the party brags that it disciplines tens of thousands of corrupt officials every year. Prominent party and state figures tried and punished in recent years include Beijing Mayor Liu Zhihua who received a suspended death sentence in 2009 for bribery. Shanghai party chief Chen Liangyu got 18 years in 2008 for corruption. Zheng Xiaoyu, head of China's SFDA was executed in 2007 for taking bribes to approve an antibiotic blamed for at least 10 deaths. Rixin Kang, former head of China's nuclear power agency was sent to prison for life in 2011, Cheng Tonghai, former head of Sinopec got a suspended death sentence in 2009. Li Peiying, the head of Beijing's Capital Airport was executed in August 2009. Railway minister Liu Zhijun was given a suspended death sentence in 2013. Bo Xilai, the first member of the Party's Politburo to be arrested since the end of the Mao era was given a suspended death sentence in 2013. In January 2015, 70 SOE bosses were nabbed in one sweep, 16 generals in another.

Yet for all the campaigns, arrests and executions, corruption only grows worse every year. And why would it not? Opportunities for getting rich quick have grown as fast as the economy. And despite all the lurid press reports, the chances of getting caught are miniscule and for most corruption cases the consequences are not nearly so dire as the headlines imply, especially for the most elite, the biggest gangsters.<sup>94</sup> Prof. Geremie Barmé of the Australian National University says that in his research, for all the drama, most of the offspring of China's revolutionary founders, the so-called "second red generation" whose ranks include Xi Jinping and Bo Xilai, had largely escaped serious punishment: "In the murky corridors of Communist power, an impressive number of party gentry progeny, or the offspring of the Mao-era nomenklatura, have been implicated in corrupt practices... But word has it that, like the well-connected elites of other climes, they've enjoyed a 'soft landing': being discretely relocated, shunted into delicate retirement or quietly 'redeployed.'"<sup>95</sup> Bo Xilai's confinement is thought to be not too harsh, and no orange suits.

*Guanxi* rules. Xi Jinping's "war on corruption" is swatting competing tigers like Zhou Yangkang's clique but has conspicuously failed to swat blatantly corrupt tigers right under his

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<sup>94</sup> China's Communist Party currently counts around more than 85 million members. Last year, the government reported that more than 71,000 cadres were "investigated for violating Party regulations." Of these only 23,000 "received Party or administrative penalties," mostly censures, and comparatively few were actually sent to prison or are executed. Pretty good odds. "Disciplinary watchdogs seek to fight factionalism within the Party," *People's Daily*, 12 January 2015 at <http://en.people.cn/n/2015/0112/c90785-8834538.html>.

<sup>95</sup> Barmé is quoted in Andrew Jacobs, "In China's antigraft campaign, small victories and bigger doubts," *New York Times*, 16 January 2015.

nose, starting with his own sister, brother-in-law, niece, and their private sector partners, all of whom have all made fortunes trading influence for lucrative state-private deals. Instead, Xi is just pushing them to cash out of their hundreds of millions of dollars in politically vulnerable investments.<sup>96</sup> Novelist Murong Xuecun writes in the *New York Times* that “the anticorruption push is more of a Stalinist purge than a genuine attempt to clean up the government.” Xi, he says, has mainly targeted specific party factions while those groups that support and pledge loyalty to Xi appear untouched. He notes that in Xi’s former fiefs in Fujian and Zhejiang provinces, “as best I can tell not one official above the deputy provincial level has been arrested on suspicion of corruption. Recently the question was raised on the internet: Why have no ‘big tigers’ been found in Fujian and Zhejiang? The message was almost immediately deleted.”<sup>97</sup>

Without the rule of law, without an independent judiciary, courts and police to prosecute and punish corrupt cadres, Xi Jinping’s only option is to try to terrorize the cadres by sending down “discipline inspection teams” to punish local transgressors, and jail some blatant offenders. The Chinese call it “killing the chickens to scare the monkeys.” But after the terror passes and the teams return to Beijing, it’s back to business as usual. So after wrapping up the second round of two-month inspections in 10 provinces launched in July 2014, Wang Qishan, head of the Central Commission for Discipline Inspection (CCDI) warned officials “Don’t go back on your old ways when our backs are turned ... we will come back and catch you off guard.”<sup>98</sup> But really, what can the poor CCDI do? The Chinese Communist Party is a cesspool of corruption from top to bottom. The CCDI can’t arrest the entire party. Xi needs these officials to run his economy and administration, but most are well enough connected to avoid his terrorists. Xi can’t trust the police to systematically enforce anti-corruption measures because the police themselves are notoriously corrupt. Even his corruption investigators can’t be trusted (1575 corruption investigators were themselves busted in 2014). By October, Wang was complaining that the cadres were not taking him seriously: “We have stepped up the anti-graft campaign but some party cadres are still undeterred. Some have become even more corrupt.” Wang “vowed to ramp up inspections of the lower tiers of government.”<sup>99</sup> Good luck on that, Mr. Wang.

Pursued with too much vigor, Xi’s anti-corruption campaign against senior officials risks not only unsettling elite stability but destroying what’s left of the party’s credibility. As a retired princeling military officer said about the most recent campaign against graft and profiteering in the army: “*You can’t do it too much, otherwise the party comes out too black, and the leaders won’t like it.*”<sup>100</sup> Of course, self-limiting anti-corruption campaigns only guarantee that corruption will continue to grow. Moreover, the anti-graft drive is also hurting economic growth as cadres sit on their hands, fearing to do any work that might bring complication and companies pull back from spending on luxury goods, feasting, champagne, cars – the spending by the 1% that drives so much growth in China, as in the West.

What’s worse is that with the spectacle of China’s political leadership by “communist” princelings-turned-billionaires, corruption rots the whole society from the top down. Whereas

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<sup>96</sup> Michael Forsythe, “As China’s leader fights graft, his relatives shed assets,” *New York Times*, 17 June 2014.

<sup>97</sup> “China’s selective crackdown,” 17 January 2015.

<sup>98</sup> Alice Yan, “Don’t go back on your old ways when our backs are turned, CCDI warns cadres,” *South China Morning Post*, 5 November 2014.

<sup>99</sup> Andrea Chen, “Some cadres shrugging off anti-corruption campaign, graft-buster warns,” *South China Morning Press*, 25 October 2014.

<sup>100</sup> Jane Perlez, “Corruption in military poses a test for China,” *New York Times*, 14 November 2012.



in the 1980s, millions of China's youth were idealistic passionate protestors for democracy, today many of China's millennial generation have lost all hope for change, many have been seduced by capitalism, consumerism, become cynical and indifferent toward politics, human rights, the environment, insouciant toward CCP lies and repression. Others are just giving up and emigrating.

### III. BRAKING THE DRIVE TO COLLAPSE

It goes without saying that the Chinese have every right to modernize, industrialize, and improve their material standard of living. But the problem is that capitalism can't sustainably provide this for the Chinese, the Americans, or anyone anymore. As many Chinese say today, "Who cares if we have the world's highest GDP if we can't live here? The Chinese don't need a higher standard of living based on endless consumerism. They need a better mode of life: clean unpolluted air, water and soil, safe and nutritious food, comprehensive public health care, safe, quality housing, a public transportation system centered on urban bicycles and public transit instead of cars and ring roads. And more. We all need to live better by consuming less and consuming rationally, fairly, and sustainably. Given the planet's desperate shape today, the only way humanity is going to survive this century is if developed countries and developing countries contract and converge their resource consumption and pollution around a sustainable global average that will permit the world's peoples to live in tolerable conditions while reserving resources for future generations and other life forms."<sup>101</sup>

#### As China goes, so goes the world

Climate scientists tell us that, given all the failed promises to date, the backpedaling and soaring CO2 emissions, we now face a "climate emergency." On present trends we're on course to a 4°- 6° Centigrade warming before the end of this century: if we don't radically suppress fossil fuel burning over the next few decades to keep the warming below the 2° Centigrade threshold, planetary heating will accelerate beyond any human power to stop it and global ecological collapse will be unavoidable. To have a chance of staying below 2°, the industrialized nations and China must cut carbon emissions by 40-70 percent globally by 2050 as compared to 2010, which would require cuts on the order of 6-10 percent per year.<sup>102</sup> China would have to cut its industrial emissions by 30 - 90% as compared to 2010, the variance depending upon expected growth rates and other assumptions.<sup>103</sup> The only way China could suppress its GHG emissions by anything like that amount would be to impose a drastic across-the-board economic contraction, including radical retrenchments and shutdowns of most of the industries that have been built up in the last three decades of market mania. I'm sure this sounds extreme, if not completely crazy. But I don't see what other conclusion we can draw from the science. On the positive side, as I surveyed above, since so

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<sup>101</sup> On this see my "Capitalism and the destruction of life on earth: six theses on saving the humans" *Real-world Economics Review*, July 2013 at <http://www.paecon.net/PAERReview/issue64/Smith64.pdf> and my "Climate crisis, the deindustrialization imperative, and the jobs vs. environment dilemma" in *Truthout*, 17 November, 2014 at <http://www.truth-out.org/news/item/27226-climate-crisis-the-deindustrialization-imperative-and-the-jobs-vs-environment-dilemma>.

<sup>102</sup> IPCC, *Climate Change 2014: IPCC Fifth Assessment Synthesis Report* (November 2014) at <http://www.ipcc.ch/report/ar5/syr/>. James Hansen, *Storms of My Grandchildren*, New York 2009.

<sup>103</sup> Ecofys, WWF Report 2015, *It's Time to peak: why China's corporate sector needs to set ambitious greenhouse gas reduction targets*, (WWF, February 2015) p. 11 at <http://www.ecofys.com/files/files/wwf-ecofys-2015-it-is-time-to-peak.pdf>.

much of China's resource waste and pollution is just completely unnecessary and harmful, what sounds like extreme austerity could prove just the opposite: liberating, a move to that "better mode of life." Such an emergency plan would have to include at least the following elements:

- **Shut down all but critically essential coal-fired power plants** needed as a temporary measure to keep the lights and heat on and essential public services in operation until renewable replacements can be brought on line. Abandon the coal gasification projects and phase out oil- and gas-powered fuel plants as quickly as possible. Force a rapid transition of energy generation to renewable wind, water and solar energy sources but with the goal of producing much less electricity overall, closer to what China produced in the early 1980s before the market-driven industrialization boom. The U.S. and other developed countries should be obliged to provide extensive technical and material assistance to facilitate this transition.
- **Shut down most of the auto industry.** This industry is just a total waste of resources and is the second biggest contributor to global warming. Most public transportation will have shift to back to bicycles, busses, trains, and subways -- basically a modernized and expanded version of what the Chinese had in the early 1980s before the auto craze. But the air will be cleaner, transportation will be faster, people will be healthier, and immense resources will be conserved.
- **Shut down most of the coastal export industries:** Most of China's coastal export industries are geared to producing unsustainable disposable products, as noted above. There is just no way to have a sustainable economy in China or anywhere if we don't abolish the throwaway repetitive-consumption industries in China and around the world.
- **Retrench or close down aviation, shipping, and other redundant and unsustainable transportation industries.** Abandon the "aviation superpower" boondoggle. Abandon further expansion of the high-speed train network. China has already built more planes, trains and subways than it needs by any rational accounting of needs. Same with shipbuilding industry, most of which is geared to container and bulk carrier shipping. This industry needs to be drastically reduced as China's imports and exports decline with industrial contraction.
- **Shut down most of the construction industry:** Even with China's huge population, the country is massively overbuilt, littered with useless, superfluous buildings, housing, highways, bridges, airports, and so on. Some of this can be repurposed. Some should be demolished and the lands returned to farmlands, wetlands, parks or other beneficial use.
- **Abandon the urbanization drive** and actively promote re-ruralization. Urban life has its advantages but urban residents consume several times the energy and natural resources and generate several times as much pollution as rural farm families. Besides, most of the tens of millions of Chinese who were relocated to the cities in

the last three decades did not go voluntarily; they were forced off their farms by land-grabbing profiteering local officials. Those ex-farmers who wish to return to the land should be permitted to do so. There is no law of nature that says farm families must be impoverished. In today's world, family farmers with adequate land and decent technology, who can market their own produce so they don't get ripped off by middlemen, and who are not under the thumb of banks, landlords or state-landlords, can do very well.<sup>104</sup> China's farmers are poor because the state has been squeezing them to subsidize industrialization. The best way to raise rural living standards is give them security in their farms and pay them fair prices for their produce.

- **Abandon the imperial plunder and Han colonization of the West:** Xinjiang, Tibet and Mongolia are not ethnically Chinese. If the Chinese government abandons its market-based development strategy it would have no "need" to plunder the natural resources of the West, those peoples can be left in peace to develop at their own pace and in accordance with their ecological limits. And after wrecking so much of their environment, the Chinese owe them some help.
- **Launch an emergency national plan for environmental remediation and restoration of public health:** Chinese environmental and health experts have called for a comprehensive integrated plan to address the nation's environmental and public health issues.<sup>105</sup> Experts say it could take generations to restore China's farmlands, rivers and lakes to tolerable biological health though, as noted above, in places this may be impossible. A significant share of the costs of this remediation should also be borne by the western nations whose companies callously contributed to this pollution by offshoring their dirtiest industries to China.
- **Launch a national public works jobs program:** If China is going to have to shut down so much of its industrial economy to brake the drive to ecological collapse, then it is going to have to find or create new jobs for all those displaced workers. In Guangdong Province alone, there are something like 40 million manufacturing workers, most of them dedicated to producing the sorts of needless products described above. Forty million unemployed workers would be a big problem. And that's just Guangdong. But unbreathable air, undrinkable water, unsafe food, polluted farmland, epidemic cancer, rising temperatures and rising seas along coastal China are bigger problems. So there's just no way around this very inconvenient truth. Making bad stuff has to stop; stopping it will unemploy vast numbers of workers, and other, non-destructive, low-carbon jobs have to be found or created for them. Fortunately, in China, there is no shortage other socially and environmentally useful

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<sup>104</sup> Eg. Chrystia Freeland, "The triumph of the family farm," *The Atlantic*, 13 June 2012. Also: "Rebuilding America's Economy with Family Farm-centered food systems," n.a., *Farm Aid*, 2013 at [www.farmaid.org/makethecase](http://www.farmaid.org/makethecase). Alan Bjerga, "Organic lets family farms prosper in industrial-agriculture era," *Bloomberg News*, 28 June 2012 at <http://www.bloomberg.com/news/2012-06-28/organic-lets-family-farms-prosper-in-industrial-agriculture-era.html>.

<sup>105</sup> Eg. He Guangwei, "China faces long battle to clean up its polluted soil," He Guangwei, "The victims of China's soil pollution crisis, Chu Han, "The human cost of living in the 'mercury capital' of China [Guizhou province]," Angel Hu and Andrew Moffet, "China's soil pollution crisis still buried in mystery," all in *Pollution and Health in China: Confronting the Human Crisis*, special issue of *China Dialogue*, September 9, 2014 (in Chinese with some English summaries) at [https://s3.amazonaws.com/cd.live/uploads/content/file\\_en/7289/chinadialogue\\_health\\_journal.pdf](https://s3.amazonaws.com/cd.live/uploads/content/file_en/7289/chinadialogue_health_journal.pdf).

work to do: environmental remediation, reforestation, transitioning to organic farming, transitioning to renewable energy, rebuilding and expanding public social services, rebuilding the social safety net, especially for China's ageing population, and much else.

Pan Yue was certainly prescient: the Chinese miracle has come to an end because the environment can no longer keep pace. The question is, can the Chinese find a way to grab hold of the brakes and wrench this this locomotive of destruction to a halt before it hurls the country off the cliff.

### **Revolution or collapse?**

One thing is certain: this locomotive is not going to be stopped so long as the Communist Party has its grip on the controls. The Chinese Communist Party is locked in a death spiral. It can't rein in corruption because the party is built on corruption, thrives on corruption and can't police itself. It can't rein in ravenous resource consumption and suicidal pollution because, given its dependence on the market to generate new jobs, it has to prioritize growth over the environment like capitalist governments everywhere. It can't even discipline its own subordinate officials to enforce and obey the government's environmental, food and drug safety, building codes and similar laws because in this system subordinate officials aren't necessarily subordinate and can often mobilize their family and *guanxi*-based backers to defend their interests and thwart Beijing. So long as this basic structural class/property arrangement remains in effect, no top-down "war on pollutions" or "war on corruption" is going to change this system or brake China's trajectory to ecological collapse. Given the foregoing, I just don't see how China's spiral to collapse can be reversed short of social revolution.

China's Communist Party seems all-powerful, unassailable. But it's not. It's frightened, desperate, and disintegrating. It faces unprecedented threats: near daily industrial strikes, militant and often violent protests over land grabs, chemical plants, incinerators, power plants and the like, "terrorist" attacks in from Xinjiang, and even worse, subversive thought that just can't be stopped by the Great Firewall. Chai Jing's *Under the Dome* had three hundred million downloads before the government took it down off the web after a week and a half. Who knows what spark will light the next social explosion? Resistance is growing as pollution and public health worsens, as it becomes harder to sustain that 8 percent growth rate to stave off unrest, as Xi Jinping's war on corruption only serves to publicize the unregenerate character of the entire Communist Party and underscores its incapacity to solve any of China's huge problems. Since Xi took over 2012, he's been determined to save China's Communist Party from the fate of its Soviet cousin. Xi ridiculed Gorbachev's "weakness" and cast himself as the tough-guy Godfather, cracking down on the press, the internet and social media, religious groups, democrats, NGOs, western joint-venture partners, and "western ideas." But this repression just reveals his weakness not his strength. The more he harasses, fines, and drives western joint-venture partners out of China, the less access he will have to their technology and the less competitive his SOEs will become. The more tightly he polices culture and censors the internet, the faster China's intellectuals, scientists, professionals and college graduates will pack up and move to Australia. Nothing demonstrates this weakness and lack of self-confidence more than the party's very public disintegration: the government bitterly complains that large numbers of "ready-to-flee" "naked officials" (so-called because they've sent their families and money to Los Angeles or Vancouver), are scheming to follow

them. Surveys show that half of China's rich (most of whom are Communist Party members) have either left the country or are planning to do so as soon as they can.<sup>106</sup> China has to be the first nation in history in which significant numbers of its own triumphant ruling class are abandoning their own success story en masse. Today, Xi Jinping faces subversion and resistance everywhere he looks yet he can't even count on his comrades. To add to his headaches, Godfather Xi now faces an in-your-face democracy movement in Hong Kong that refuses to die. From workers strikes to environmental protests to Occupy Central for Love and Peace, these struggles and movements are fragmented, inchoate and unorganized, so far, but they all share a common demand: bottom-up democracy. Therein lies China's best hope.

**Author contact:** [richardsmith2120@gmail.com](mailto:richardsmith2120@gmail.com)

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<sup>106</sup> "Almost half of wealthy Chinese want to leave, study shows," *Wall Street Journal*, 5 September 2014. Benjamin Carlson, "As war on corruption mounts, China's rich flee to America," *Global Post*, 9 February 2014. John Kennedy, "China has at least 1.18 million ready-to-flee 'naked officials', anti-corruption rant reveals," *South China Morning Post*, 27 February 2013 at <http://www.scmp.com/comment/blogs/article/1159628/china-has-least-118-million-ready-flee-naked-officials-anti-corruption>.