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Thesis Supervisor: Geir Sigurðsson
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Assembling the Green Dragon



Challenges and developments in contemporary Chinese environmental politics

Fífa Finnsdóttir
170785-3049

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Abstract:

This Bachelor's thesis deals with the evolution of China's environmental governance since the first United Nations Conference on the Human Environment in 1972. Already dealing with a long and intense history of environmental degradation, China left its centrally-planned market economy in the late 1970 – a move which has seen its environment deteriorate rapidly following an economic miracle, and has consequentially put the state under increasing pressure, internationally and domestically, to develop more sustainable environmental practices and approaches. In response the state has made changes to the legal system, strengthened law enforcement and, most recently, developed innovative concepts and programmes in environmental protection. This thesis aims to analyse and explain developments in China's environmental politics, point out their shortcomings and outline recent measures set to deal with environmental challenges in China's future.¹

List of Abbreviations:

CCP – The Chinese Communist Party

EPB – Environmental Protection Bureau(s)

GDP – Gross Domestic Product

GONGO – Governmental Non-Governmental Organisation

MEP – Ministry of Environmental Protection

NBS – National Bureau of Statistics

NEMC – National Environment Model City

NGO – Non-Governmental Organisation

SEPA – State Environmental Protection Agency, became MEP in 2008.

SOE – State Owned Enterprise

¹ For sources on China's environmental legacy prior to the 20th century, see for instance *The Retreat of the Elephants* by Mark Elvin. For 20th century environmental history of the PRC see *Mao's War against Nature* by Judith Shapiro, *The Bad Earth: Environmental Degradation in China* by Vaclav Smil and *Patterns of China's Lost Harmony: A survey of the country's environmental degradation and protection* by Richard Louis Edmonds.

Introduction:

The People's Republic of China has over the last two decades come increasingly under attack, domestically and internationally for the dreadful state of the Chinese environment. Large scale soil erosion, desertification and flooding can be attributed to unsustainable felling of forests and illegal logging, while rising water and air pollution have sharply increased incidents of health problems and social unrest. China had, in 2007, 16 of the world's 20 most polluted cities, with respiratory problems and acid rain stemming largely from domestic coal use. Acid rain now falls on one-quarter of China proper and one-third of its agricultural land, causing 12 million tons of grain to carry heavy metals from the soil every year.² According to Xinhua News Agency up to 90 percent of Chinese urban aquifers are considered polluted, 75 percent of China's rivers are polluted to the point of being unsuitable for drinking and fishing and 30 percent are deemed unsuitable for use in agriculture or industry.³ By now the world leader in air and water pollution, it is estimated that China's environmental degradation is costing the state around 8 to 12 percent of its yearly GDP.⁴ Yearly costs for urban air pollution are estimated at over 20 billion USD and the general consensus is that increasing water pollution and resource scarcity will be among China's most difficult problems to solve over the next century.⁵

To deal with the situation, the Chinese Communist Party has taken a number of different measures, such as increasing investment in clean technology, developing market-oriented programmes in environmental protection, making changes in the system of enforcement of environmental protection and setting ambitious targets for future pollution reduction. The Five Year Plan of 2005 called for a 20 percent reduction in the nation's energy intensity with 10 percent of power to come from renewable energy resources, notable pollutants such as sulphur dioxide to be reduced by 10 percent, and an increase from 1.3 percent to 1.6 percent of GDP to be invested in environmental protection by 2010.⁶ With these actions the Chinese have become the world's biggest investors in 'green' technology, but criticism is still loud and widespread as people point out the CCP's constant failures in implementing and enforcing environmental law, stemming mostly from major weaknesses in the system of environmental protection. While the effects of these processes on environmental degradation have mostly been a hit and miss, there has been a clear and growing

² Economy, Elizabeth C, 2007: "The Great Leap Backward?" *Council on Foreign Relations*. Accessed June 10th 2010. <<http://www.foreignaffairs.org/20070901faessay86503/elizabeth-c-economy/the-great-leap-backward.html?mode=print>>

³ Economy, "The Great Leap Backward?" 2007.

⁴ Economy, "The Great Leap Backward?" 2007.

⁵ Economy, Elizabeth. *The River Runs Black*. Cornell University Press, New York, 2004, p 88.

⁶ Economy, "The Great Leap Backward?" 2007.

tendency for the CCP to adopt progressive rhetoric when it comes to environmental protection, a striking trend for a party traditionally occupied with rigorous censorship and central control.⁷

This Bachelor's thesis sets out to analyse the evolution of contemporary environmental politics in China. How have these evolved over time, which challenges do they face and how has the CCP responded? What defines contemporary developments? And what is the likely future of environmental governance in China?

In this research I have mostly relied on journal articles from notable publications on China's environmental politics as well as prominent books on the subject, most markedly Elizabeth C. Economy's *The River Runs Black: The Environmental challenge to China's Future* and *Patterns of China's Lost Harmony: A survey of the country's environmental degradation and protection* by Richard Louis Edmonds. These are then complemented by Chinese and English internet-based language articles and publications. Two pronounced problems arose during the writing process: On one hand, the subject being a contemporary and rapidly evolving issue, all sources and references rapidly become outdated. The second are the respective standpoints of Chinese and Western media – the former, although gradually evolving, has consistently been under pressure to soften reports on topics deemed to be socially sensitive, while the latter tends to opt for exaggeration for marketability's sake. For these reasons, reports issued in the PRC and coverage by Western media respectively should be approached mindfully.

The foundations of China's environmental regulations

Following Mao's death in 1976, Deng Xiaoping's subsequent ascension and the initiation of the Open Door Policy in 1978, China started to leave its tightly controlled central market system and state-powered campaigns, opting instead for devolved state authority and an increasingly privatised and more capitalistic market economy. The Chinese Communist Party thus gradually granted higher authority to provincial levels, bestowing them with financial authority, capital construction, approval of foreign joint ventures, and reasonably independent appointment of officials.⁸ By 1987, the state had already begun to move away from the socialist state-owned enterprises that had formerly been the cornerstones of the Chinese Communist economy – these had monopolised infrastructure sectors (power, machinery, railroads, metals, chemicals etc,) and were also responsible for societal

⁷ Li, Vic & Lang, Graeme, 2010. "China's "Green GDP" Experiment and the Struggle for Ecological Modernization." *Journal of Contemporary Asia*, vol. 40, no. 1, p 44 – 52. Accessed July 21st 2010.

<<http://www.informaworld.com/smpp/content~db=all?content=10.1080/00472330903270346>>.

⁸ Economy, *The River Runs Black*, 2004. p60.

needs, such as child and elderly care, education, healthcare, housing, etc.⁹ In their stead, collective, private and joint-venture enterprises – most notably township-and-village – quickly sprouted. Over the next two decades, with increasing foreign investment, immense labour force and growing industry, China saw an increase of the GDP per capita from approximately 84USD (692CNY) in 1984 to 1100USD (9115CNY) in 2003,¹⁰ with standards of living changing vastly over the last thirty years.

This move away from state-controlled industry to loosely controlled privatised enterprises has resulted in what has rightly been called an economic miracle, but one that came at an immense cost for the Chinese environment. Already in a fragile state after millennia of population pressures, warfare and, more recently, mass campaigns for heavy industrialisation and agricultural developments through the 50's and 70's, the environment quickly deteriorated to its present state. The Chinese industry that was established between 1953 and 1978 had been based on Soviet technology and development models. Accordingly, it was solely driven by output rather than efficiency or profit and defined by high-pollution intensity, inefficient pollution-abatement machinery and wasteful, energy deficient industrial methods.¹¹ Lack of international contact and experience was made worse with persecution of intellectuals during the Cultural Revolution in the mid-60's to 70's¹², and coupled with traditional approaches and institutes of exploiting nature for man's needs¹³, China's legacy "provided little foundation for building a sound environmental apparatus."¹⁴ Lacking in funds, prior models, international expertise and experience, the foundation of China's environmental protection, started under Deng Xiaoping, was therefore inescapably weak from the start.

It was on this background that the first steps of the long and frustrated process of China's environmental politics were played out, beginning with its participation in the first United Nations Conference on the Human Environment in Stockholm, 1972.¹⁵ China had only started to normalise relations with the US in January the same year – in light of the cold war, its stance at the conference was admittedly one of blaming the Western superpowers for "the policy of plunder, aggression and

⁹ Economy, *The River Runs Black*, 2004. p62.

¹⁰ Economy, *The River Runs Black*, 2004. p61.

¹¹ Shi, Han & Zhang, Lei. 2006. "China's Environmental Governance of Rapid Industrialization." *Environmental Politics*, vol. 15, no. 2, p271 – 292. Accessed April 9th 2010. <<http://dx.doi.org/10.1080/09644010600562567>>.

¹² Shapiro, Judith. *Mao's War Against Nature*. Cambridge University Press, Cambridge, 2001. P 130.

¹³ 'Traditional approaches and institutions' refer here to Confucian traditions of exploiting nature for man's needs, which many Western scholars blame for having contributed to the present state of environmental degradation. See Shapiro 2001.

¹⁴ Economy, *The River Runs Black*, 2004. p57.

¹⁵ "Milestones in United Nations History." United nations, New York. Accessed August 29th 2010.

<<http://www.un.org/aboutun/milestones.htm>>. China had earlier established various environmental programs, mostly in forestry to combat erosion, but the Stockholm conference marks the introduction of environmental policies in politics and legislations.

war carried out by imperialist, colonialist and neo-colonialist countries”¹⁶ – nevertheless, two years later the State founded the National Environmental Agency and held the first National Conference on Environmental Protection.¹⁷ Subsequent conferences were then held on provincial levels, and the national plan afterwards modified to include an addendum on environmental planning.¹⁸ The CCP steadily continued its efforts, eventually promulgating the trial implementation of the Environmental Protection Law in 1979. Since the 1970’s, the State has promulgated more than 100 environmental laws, regulations and programmes, such as the Environmental Impact Assessment, a Pollution Levy System and over 500 standards for pollution regulation, while over two thousand Environmental Protection Bureaus have been established at various administrative levels.¹⁹

During the developments of the 70’s through the 90’s the state played a central and dominant role while the industry and community exerted no influence: “the industrial sectors were only passive subjects regulated by the state, without any interest in compliance beyond state environmental regulations.”²⁰ With the civil community and judicial institutions separate from administration, the incentive for the industry to comply with regulations came only from higher levels in the chain of political command. If these were inadequate at enforcing the environmental law, the industry would be likely to largely ignore regulations. The trial Environmental Protection Law of 1979 is a case in point – the burgeoning industry, reluctant to sacrifice growth for the environment’s sake, responded by simply ignoring the law, claiming that a *trial* implementation meant precisely what was implied: that the law was of no consequence. Beijing, lacking either the will to impede economic growth or the framework to efficiently protect the environment (or both) responded with indifference, thereby confirming the law’s ineffectualness.²¹ The structure of the environmental protection system, still lacking in manpower, protocol and incentives, was thus powerless against the industry and the environmental law in its current form was eventually passed ten years later, in 1989.²² Another example is The National Environmental Protection Bureau: founded by the Ministry of Urban and Rural Construction and Environmental Protection in 1982, this bureau was established to provide environmental assessments to industry. But as its assessments were found inconvenient or costly to an industry they were eventually simply ignored, resulting in further environmental degradation while the bureau lacked funds, manpower and legal framework

¹⁶ “Stockholm 1972: Working Group on the Declaration on the Human Environment.” United Nations Environment Programme (UNEP). Accessed August 29th 2010.

<<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1529&l=en>>.

¹⁷ Shi, Han & Zhang, Lei, “China’s Environmental Governance of Rapid Industrialization.” 2006.

¹⁸ Edmonds, Richard Louis. *Patterns of China’s Lost Harmony: A survey of the country’s environmental degradation and protection*. RoutledgeCurzon, Oxford, 1994, p 228-235.

¹⁹ Shi & Zhang, “China’s Environmental Governance of Rapid Industrialization”, 2006.

²⁰ Shi & Zhang, “China’s Environmental Governance of Rapid Industrialization”, 2006.

²¹ Edmonds, *Patterns of China’s Lost Harmony*, p 228-235

²² Edmonds, *Patterns of China’s Lost Harmony*, p 231-233.

to enforce its assessments. The founding of the inter-agency State Environmental Protection Commission in '84 was set to tackle these problems by employing representatives from forty ministries meeting four times a year, but as it needed consensus of its members (that were frequently rooting for other interests) it too was, for the most part, entirely trivial. Even the aforementioned Environmental Impact Assessment was void both of directive and protocol prior to 2002 and in truth served very little purpose.²³ Regardless of whether these laws were designed with sincere intentions, the forms eventually passed were continuously attenuated at progressive levels to the interests of different actors such as construction and industry, resulting in laws promulgated at the centre eventually being watered out at township levels in the bureaucracy. The handling of the environmental laws prior to 2000 – and to a degree, up to the present day – has thus been characterised mostly by compromise, “a prolonged bargaining process among different interest groups”,²⁴ as the interests of the industry keep winning over environmental interests.

Western scholars are prone to blame this failure to successfully avert environmental degradation directly on the CCP's reluctance of strengthening the legislation system, which would have compromised China's rampant economic growth. Tempting as it is, these developments still need to be viewed in the light of how recently Rule of Law has been introduced in the PRC. While the chaos of the Cultural Revolution left little space for improving societal advancements such as the legislative sector through the 60's and 70's, the Constitution of 1954 was the sole statute to be passed for 25 years, up until the enactment of the criminal code in 1979.²⁵ Moreover, through the history of China laws have consistently been passed as strictly punitive, designed to scare civilians into subordination, making them still perhaps trigger aversion and lack of respect, even an 'us against them' mindset among civilians.²⁶ Today, China's legislative structure is “not one of checks and balances, where the legislative, executive and judicial branches stand independently of each other,”²⁷ but is ruled by one supreme legislative body that supervises all the aforementioned, namely the National People's Congress. Moreover, considering China's massive population, energy-intensive industry and infrastructure and rich domestic coal reserves, the CCP's reluctance to sacrifice growth for environmental protection can be made more understandable.²⁸

²³ van Rooij, Benjamin, 2006, “Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns.” *Development and Change*, vol. 37, no. 1, Blackwell Publishing, Oxford, United Kingdom, p 57 - 74.

²⁴ van Rooij, “Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns”, 2006.

²⁵ Xue, Susan, 2005. “China's Legislative System and Information: an overview.” *Government Information Quarterly*, no. 22, p 322 – 341.

²⁶ Elizabeth Economy cites an example of a ‘common Chinese saying: National policies, local countermeasures [*shang you zhengce xia you duice*]’. *The River Runs Black*, 2004, p 102. Taken there from Ma, Xiaoying & Ortolano, Leonard, *Environmental Regulation in China*, Rowan & Littlefield, Lanham, 2000, p 16.

²⁷ Xue, Susan, “China's Legislative System and Information: an Overview”, 2005.

²⁸ The fact that China celebrates the largest population in the world, one that requires massive infrastructure and vast levels of energy that are most conveniently satisfied with huge domestic coal reserves, exerts immense influence on environmental protection in. Moreover, the State's constant quest for energy also casts light on Beijing's massive

By the 1990s it had already become apparent that China's regulatory framework had failed to halt increasing degradation. Most prominently, lack of experience, international study and institutional capacity at the time of founding the framework made for a conflicting and inadequate enforcement structure from the start. A second issue with the Chinese apparatus is the dominant role of the centre, which requires immense resources, capacity and authority to monitor and enforce the system. In China's case, an overwhelming number of environmental protection bureaus (EPBs) have consistently been lacking in staff and funds, therefore the regime has proven ineffective in enforcing pollution standards and environmental compliance.²⁹ As, at the time of founding, the system was set to deal with the large State-Owned Enterprises that dominated the industry a new problem has arisen; the transition of industry to small-scale, private and village enterprises, especially in the rural areas, has made monitoring too difficult for the State.³⁰ Due to all these reasons, in spite of the State's efforts to enhance and enforce laws more efficiently after 2000, their efforts continue to fall short while the system of environmental protection is inherently lacking.

Environmental Protection Bureaus

As explained, China's system of governance is a multi-layered institutional bureaucracy. At the centre reside the highest CCP officials and institutions, from which territorial divisions branch downwards into provincial, urban, county, township and village levels of governance. These levels are composed of administrative and Party units such as commissions, bureaus, offices and departments that are in charge of social welfare, e.g. education, finance, power, etc. These units receive guidance from the unit immediately above, making for a vertically replicating chain of functions and units through the succession of lower levels.³¹ The chain of environmental protection has, since 2008, adhered to the Ministry of Environment (formerly State Environmental Protection Agency), its lowest functional units being environmental protection bureaus at township levels.³² These EPBs are in charge of inspecting companies and comparing their pollution output with

contemporary investments in cleaner, sustainable technology and mass-scale hydroelectric dams, such as the controversial Three Gorges Dam. Considering these, the CCP's reluctance to sacrifice infrastructure or developments to environmental protection should be more understandable. Statistics on China's massive energy use available at <http://www.eia.doe.gov/cabs/China/Background.html>.

²⁹ This lack of funds and legislative structure is so severe that prior to 2004, town levels completely lacked environmental monitoring stations and inspection agencies. Shi & Zhang, "China's Environmental Governance of Rapid Industrialization", 2006.

³⁰ Shi & Zhang, "China's Environmental Governance of Rapid Industrialization", 2006.

³¹ Jahiel, Abigail R, 1998, "The Organization of Environmental Protection in China." *The China Quarterly*, no. 156, Cambridge University Press, Oxford, United Kingdom, p. 757-787. Accessed October 29th 2009. <<http://www.jstor.org/stable/656124>>.

³² Resolution of larger scale projects might involve other or more institutions, for instance State Forestry Administration, State Oceanic Administration, etcetera.

national standards – in case of violations, the EPBs have the authority to issue fines or close down said industries.

Historically, the most prominent setbacks to the EPBs have been chronic lack of funding and ill-defined, clashing authority.³³ These EPBs vary in size and financial support, with the largest and most efficient located in large coastal cities and the poorer and understaffed ones in remote regions.³⁴ Since China's legal system is uniform for all localities, these discrepancies eventually leave little space to enforce national regulations evenly and efficiently in all locations.³⁵ The EPB managers answer to higher levels of administrations as well as local governments, and are dependent on the latter for annual budgets, personnel advances and increases, even resource allocation (for equipment, housing, etc.) With their funds thus received straight from local governments they're inescapably susceptible to government whims, leaving the governments as the actual decision makers. These are then generally protective of the local industry, and the EPBs' weak legislative status simply enables the governments to ignore or incapacitate them. This protectionism can in some cases be directly attributable to government greed – for instance, in 2007, the city of Hefei in Anhui limited checks of companies by government bodies to one per year, seriously and obviously restraining the EPBs work in a bid to win over investors.³⁶ Frequently, the nature of this protectionism is more intricate, as shown in a study of a series of phosphorous mines at the Tanglang River west of Kunming from 2004;³⁷ these mines depend on local resources and chemical factories for raw materials. Those factories in turn depend on the locals and farmers who make up the workforce and own the village lands that the industry will want to expand on. The locals depend on their jobs at the mines or the chemical factories for income, whereas the farmers depend on these for selling their products to the workers. The local governments depend on the entire, intrinsic chain for tax revenue and social stability. In a scenario such as this one, in spite of the phosphorous mines far exceeding national pollution standards, the local government will be exceedingly reluctant to compromise the entire chain in the sole interest of protecting the environment by enforcing environmental law. The workers and local farmers, in spite of possibly experiencing the secondary effects of pollution like respiratory diseases or cancer, would be unlikely to protest against the factories lest they lose their livelihood.³⁸ The local governments would therefore be likely to impede the EPBs directly. To make matters worse, the EPBs that are most starved for funds rely on pollution

³³ Jahiel, "The Organization of Environmental Protection in China," 1998.

³⁴ For an in-depth analysis of the 00's environmental protection system, see Abigail Jahiel (1998).

³⁵ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

³⁶ Ma Jun. "Minding the enforcement Gap." Chinadialogue. Accessed August 24th 2010.

<<http://www.chinadialogue.net/article/show/single/en/3760-Minding-the-enforcement-gap>>.

³⁷ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

³⁸ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

fees for the rest of their funding, so can be said to be actually reliant on continued pollution.³⁹ Lack of funds often makes the already understaffed bureaus lack the proper training for enforcement, making the staff ineffective in carrying out its tasks,⁴⁰ while the pressure on the EPBs to finance themselves diminishes both their credibility and neutrality, leaving them ripe for corruption.⁴¹ Another problem with the EPBs' authority comes in with the Chinese system of bureaucracy, where a government office of a lower rank has little authority to make an office of a higher or similar rank comply with its orders. The rank of the EPB directors usually does not exceed the rank of the managers of State-Owned Enterprises, leading to great problems with enforcing of environmental regulations for the former.⁴²

Reversing the trend

Post-2000 developments have been made to respond with the EPBs poor positions – these have included heavier sanctions for offenders, minimum sanction levels and clearer definitions of offences to make for plainer guidelines for the EPBs to follow. A stricter system responds to growing concerns with the state of the environment, but China's uniform legislative system which ignores local topography, the complex bureaucracy and continuing problems with law enforcement have still made averting the escalating degradation immensely difficult. With China's acceptance into the World Trade Organisation in 2001 the state is now under increasing pressure to cope with the international standards and rules prevalent in the global economic sphere – this pressure is enhanced by growing civil participation in the forms of social unrest, increasing numbers of non-governmental organisations and involvement of media to highlight social issues. Since Premier Wen Jiabao and President Hu Jintao respectively took office in 2003 the CCP has gradually started to place a higher priority on social justice and environmental sustainability along with economic expansion, experimenting with ways to balance environmental protection with economic growth in an effort to efficiently enforce its agenda in spite of the system's shortcomings.

With growing foreign investment in China, accounting for over US\$1.5 trillion in 2004 alone, China's entrance in the global economy has had a decisive say in environmental protection, as China has had to conform to international standards and norms on the international market. These

³⁹ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

⁴⁰ Economy, *The River Runs Black*, p 108.

⁴¹ Carter, Neil T. & Mol, Arthur P.J. "China and the environment: Domestic and transnational dynamics of a future hegemon." *Environmental Politics*, vol. 15, no. 2, 2006. Routledge, London, United Kingdom. P 330-344. Accessed April 9th 2010. <<http://dx.doi.org/10.1080/09644010600562294>>.

⁴² Economy, *The River Runs Black*, p 109.



Sewage discharge in the Yangtze River from plastic processing plants and iron works. Ma'anshan, Anhui province, June 18th, 2009.



Villager washes clothes in a severely polluted pond. Guiyu, Guangdong province, November 25th, 2005.



Industrial wastewater flows into the Yellow River. Lasengmiao Industrial District, Inner Mongolia. July 26th, 2005.



Shexian Iron and Steel plant, Hebei province. March 18th, 2008.



Wastewater from Cihu Chemical Industry District, Anhui province, flows into the Yangtze river via an underground discharge pipe. The wastewater changes colour to black, gray, dark red or yellow, depending on which chemical factory it originates at. June 18th 2009.



People of Fanjiazhuang show a complaint filled with their fingerprints, to seek compensation for pollution damages. March 19th, 2008.

standards have introduced issues such as food safety in agricultural exports, with problems such as heavy metal contamination, stemming from excessive use of pesticide, frequently compromising the produce.⁴³ Foreign companies operating in China sometimes bring environmental standards from abroad and transfer new technologies to local industries. These then spread to Chinese industries, at times prompting them to increase energy efficiency and introduce sustainable produce and processing. The raised living standards following the economic growth have even led to an increase in demand for environmental protection, heightened awareness and advanced environmental education among citizens in afflicted regions.⁴⁴ At the same time, foreign investment has introduced some of the world's most destructive industries in China, such as strip-mining and semiconductor industries. Some companies could even be taking advantage of China's weak system of environmental protection to successfully escape the pollution and health standards of their homelands to maintain substandard plants and production in China.⁴⁵

With new incentives to further environmental protection in the new millennium, the CCP has decidedly sped up its pace of tackling environmental challenges. Besides massive investments in sustainable technology, its measures can be said to mainly follow two trajectories. Firstly, up against the ill-controlled, rapidly developing industry and eager to advance economic developments, the state has started experimenting with programmes that aim to integrate environmental policy with the economy. Making use of foreign assistance and participation, these developments focus on decentralisation, environmentally oriented research and governance that revolves around market dynamics. Along those lines, tasks have increasingly been moved from state agencies onto market actors and businesses, while some EPBs have assumed private environmental assessment and consultation for companies. Subsidies of natural resources – previously set to encourage industry to grow extensively – have been abandoned, with a slow but gradual shift to rising costs of water and energy.⁴⁶ Secondly, since the mid-1990s, the CCP has slowly but steadily started moving towards information-oriented programmes, such as increased exposure of monitoring data and corporate programmes, softening at the same time its insistence on rigid central control of information. With this, the CCP has started making way for its most prominent environmental trend: the civil initiative and citizen participation in environmental protection.

Detailing every single of Beijing's efforts would far exceed the scope of this thesis, but in the following three of the most prominent ideas will be outlined, namely increased citizen initiative,

⁴³ Economy, Elizabeth. "Environmental Governance: the Emerging Economic Dimension." *Environmental Politics*, vol. 15, no.2 (April 2006). P 171 – 189. Accessed July 29th 2010. <<http://dx.doi.org/10.1080/09644010600562310>>.

⁴⁴ With economic growth, citizens are freer to pursue other jobs and interests, making them not as reliant on local industry. Economy, "Environmental Governance: the Emerging Economic Dimension", 2006.

⁴⁵ Economy, "Environmental Governance: the Emerging Economic Dimension", 2006.

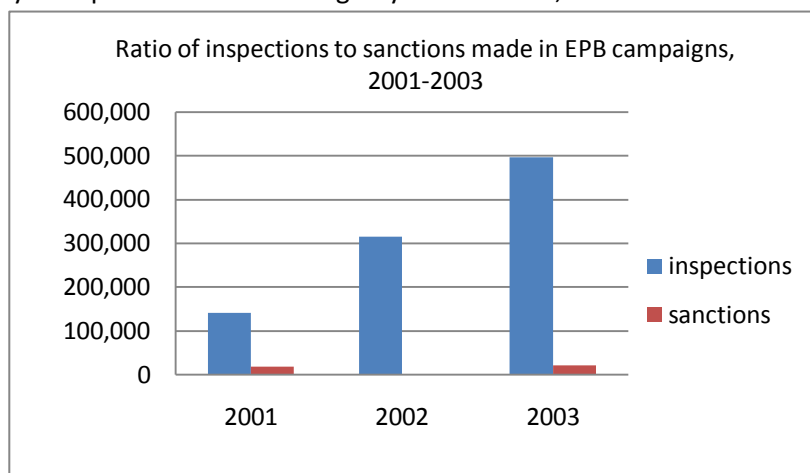
⁴⁶ Economy, "Environmental Governance: the Emerging Economic Dimension", 2006.

market-oriented instruments and programmes of environmental governance. The first example shows how the CCP works within the system, analysing campaigns executed by the EPBs in the 2000's and their effects. The second introduces the 'Green GDP programme', an albeit failed but innovative attempt on the CCP's half to combine GDP and environmental protection. The third is the National Environmental Model City Programme, an initiative that invites the local governments to follow an environmental protection award system by their own accord.

EPB Campaigns and inspections

Campaigns, slogans and models, deeply integrated in Chinese history,⁴⁷ have been employed by the CCP in particular since the 1950's as an instrument to rally public sentiment. Continuously espoused by Mao Zedong and the CCP since the founding of the People's Republic these are designed by the appropriate ministerial level, then passed down the bureaucracy to local levels to be carried out. Campaigns concerning the environment have been held at times since the 1970's but gained momentum and vigour with the new millennium.

Between 2001 and 2004 the focus of these campaigns ranged from stricter inspection of industry to public health concerns and resulted in different levels of governance (EPBs, local governments and justice departments) working together in inspections and clamping down on violators. The execution of these campaigns involves the EPBs compiling reports and proposing possible solutions to the local issues aimed at especially in the campaign, drafting a schedule of inspections of the violating companies and setting up complaint hotlines for people to report incidents of violations. If a company is inspected and deemed guilty of violations, the EPB will exert punitive measures which extend to fining and closing down obsolete industries or repeated offenders, eventually reporting the results to higher authorities.⁴⁸ The campaigns exhorted in 2001 to 2004 led to an increase in inspections and sanctions passed: numbers of



⁴⁷ The use of slogans and campaigns to appeal to the public complies with the Confucianist tradition of bettering oneself – these have been employed by various authorities throughout Chinese history, the CCP being the latest in the succession.
⁴⁸ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

inspections went from 142,121 in 2001 through 316,000 in 2002, to 496,000 in 2003, whereas sanctions passed went from 18,804 in 2001 to 21,000 in 2003 – the fact that penalties were given out in only 4 percent of inspections is largely attributable to industry protectionism by local governments.⁴⁹ Another problem is that companies have become very good at hiding unlawful discharge instead of clearing up their act. For instance, in the summer of 2004 near Kunming, inspectors consistently visited local factories for three months without a single incident of violations; after this time, the companies were eventually discovered to be making illegal dumping during the night.⁵⁰ In 2009 China Greenpeace published online a list of ways used by companies to conceal violations; examples include joining pipelines with other factories so that there's no way of telling whose discharge levels are unlawful, officials feigning ignorance when caught, factories setting up state of the art equipment without actually using it and making discharge pipes leading too far off to be traceable to their industry.⁵¹ Examples also abound of companies not heeding sanctions that call for closing down the industry and simply resuming production on the same scale after a short interval. Relapses of violations call for repeated campaigns on MEP's behalf, but this does not mean that they fall on entirely deaf ears. The campaigns put local governance under pressure and rouse the locals' awareness to violations; there are industries that then seek to find a viable mode of functioning and strive to meet state standards on pollution.

Arguably, the most important impact of these campaigns has resulted in the EPBs' reports having been made publicly available as of 2002, gendering a hugely positive response from environmental organisation. The Chinese State has consistently been wary of releasing data and statistics deemed socially sensitive to the public, and even when conceding their release, the tendency has been to soften statistics thoroughly – take the 2007 China Environmental Report as an example.⁵² Compared to other (eg. World Bank or Asian Developmental Bank) statistics this report is heavily censored – for instance, Chemical Oxygen Demand (COD), a measure of the intensity of water pollution, was in the 2007 report put at 13.818 million tonnes, and selectively excluded some important sources of pollution like agriculture. 3 years later, in the 2010 environmental report, this figure had jumped to 30.289 million tonnes – this is not explained by a twofold increase over three years, but by more stringent censorship in the first report.⁵³ With China having passed a trial implementation of Measures on Open Environmental Information on February 8, 2007 (effective as

⁴⁹ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

⁵⁰ van Rooij, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns", 2006.

⁵¹ "Playing Dirty: How Factories Hide Their Pollution in China." Greenpeace.org, 2009. Accessed September 3rd 2010. <<http://www.greenpeace.org/china/en/news/dirty-tricks>>.

⁵² "Report on the State of the Environment in China 2007" SEPA.org, 2007. Accessed August 24th, 2010. <http://english.sepa.gov.cn/standards_reports/soe/soe2007/200909/t20090902_159823.htm>.

⁵³ Ma Jun. "Dynamic Data." Chinadialogue, 2010. Accessed August 24th 2010. <<http://www.chinadialogue.net/article/show/single/en/3508-Dynamic-data>>.

of May 1st 2008)⁵⁴ this tendency of inflexible censorship might gradually weaken. According to Pan Yue, the Minister of then State Environmental Protection Agency the new demand for public environmental information on violations will “empower the people to participate in environmental management.”⁵⁵ These developments have been noted and lauded by numerous Chinese environmentalists. Ma Jun, the director of the Institute of Public and Environmental Affairs has joined in, pointing out the importance in Chinese society of involving the public in environmental surveillance. His institute has developed the Chinese Water Pollution Map,⁵⁶ an interactive online map of China which identifies industries that have been caught violating environmental. Similarly to the EPB campaigns, the public can notify the administrators of violating industries which then get marked out on the map, thereby enabling consumers to look up their supplier and simultaneously putting pressure on the companies to maintain a clear reputation; a prominent example of public involvement in environmental awakening.

Green GDP

With the inherent frailties in the structure of environmental law enforcement, the CCP has come up with innovative experiments in using the economy to further environmental protection. One of these experiments which actually highlights the problem with environmental protection was the ‘Green GDP Accounting Research Project.’ First promoted in 2004, the Green GDP programme was a joint project between SEPA and the National Bureau of Statistics. Simply put, Green GDP is the Gross Domestic Product percentage with cost of environmental degradation and natural resources subtracted.⁵⁷ The programme was conducted by SEPA, who designated test cities after working with data from Chongqing in 2001⁵⁸, eventually choosing Beijing, Tianjin, Chongqing, Hebei, Liaoning, Anhui, Zhejiang, Sichuan, Guangdong and Hainan⁵⁹ to carry out a test project to release reports on in 2004.

SEPA’s scope for environmental accounting was made very selective on purpose due to accounting difficulties, focusing on costs of air, solid waste and water pollution as well as ecological

⁵⁴ „Measures on Open Environmental Information (for Trial Implementation)“ Epa.gov (US Environmental Protection Agency). Accessed August 24th 2010. <http://www.epa.gov/ogc/china/open_environmental.pdf>.

⁵⁵ Pan Yue: quoted by Ma Jun, 2008. 你有权知道：一个历史性时刻 “Ni youquan zhidao: yi ge lishixing shike.” (Your Right to Know: A Historic Moment.) Accessed April 20th 2010. <<http://www.chinadialogue.net/article/show/single/ch/1962-Your-right-to-know-a-historic-moment>>.

⁵⁶ Ma Jun. Institute of public and environmental affairs. “Gongzhong yu huanjing yanjiuzhongxin zhongguo shuiwuran ditu.” (China Water Pollution Map.) Accessed April 20th 2010.< <http://en.ipe.org.cn/>>.

⁵⁷ “Green GDP Accounting Study Report 2004 Issued” Chinese Government’s Official Web Portal, 2006. Accessed August 24th 2010. <http://www.gov.cn/english/2006-09/11/content_384596.htm>.

⁵⁸ Economy, “The Great Leap Backward?” 2007.

⁵⁹ Li, Vic & Lang, Graeme. “China’s Green GDP Experiment and the Struggle for Ecological Modernization”, 2010.

damage. Costs of replacing resources, such as fisheries, forests and farmlands, were all roughly estimated, whereas effects of pollution on public health or worker productivity, along with loss of arable farmland to erosion and pollution, were too difficult to account for and therefore excluded.⁶⁰ By using a calculation-model created with the help of international agents, the first report was issued jointly by SEPA and NBS on the 8th of September in 2006: it indicated that pollution only cost China 511.8 billion yuan (US\$64 billion) in economic losses in the year 2004 or a total of 3.05% of the economic output,⁶¹ far less than had been expected – indeed, the World Bank along with scientists and international economists had consistently projected a percentage between 8 to 12 percent.⁶²

SEPA was fighting a lonely battle from the start, with the cities involved harshly criticising the accounting progress and validity of estimations and accounting, some of them threatening to withdraw from the pilot research or even asking to be excluded from public reports. For instance, the leader of Inner Mongolia was reported to laud the GDP when in public,⁶³ while the province, together with Ningxia, Hebei and Shanxi (all among China's most heavily industrialised provinces) were and are still in fact staunchly opposed to it. To make matters worse, the NBS then urged SEPA not to publicise the report in 2005, a year after it was finalised, with tensions having risen between the two institutions over financing, methodology but perhaps most of all due to "political frictions undergirding the project"⁶⁴ just ahead of the 17th party congress. The reason given by Xie Fuzhan, chief of NBS at the time was that "there was no internationally recognised standard and methods and data to come up with one were lacking."⁶⁵ In May that same year the two institutions had already submitted reports on their different standpoints, with SEPA wanting to publicise the results and NBS wanting to abandon or make the report stand as internal reference only.⁶⁶ The figures were eventually released in 2006, under the title 'China Green National Accounting Study Report 2004.' The support for the Green GDP programme was eventually withdrawn in 2007, in spite of having been widely publicised by Premier Hu Jintao himself back in 2004, and the project was officially cancelled in 2009.

The biggest problem with the Green GDP is the calculation – there are no universal standards for estimating costs of air, water and solid waste pollution to the economy, making the

⁶⁰ Li, Vic & Lang, Graeme. "China's Green GDP Experiment and the Struggle for Ecological Modernization", 2010.

⁶¹ "Green GDP Accounting Study Report 2004 Issued." Chinese Government's Official Web Portal, 2006. Accessed August 24th 2010. <http://www.gov.cn/english/2006-09/11/content_384596.htm>.

⁶² Economy, Elizabeth C, 2006, "Opinion: Green GDP. Accounting for the Environment In China." PBS (Public Broadcasting Service). Accessed August 24th 2010. <<http://www.pbs.org/kqed/chinainside/nature/greengdp.html>>.

⁶³ Li, Vic & Lang, Graeme. "China's Green GDP Experiment and the Struggle for Ecological Modernization", 2010.

⁶⁴ Ansfield, Jonathan, 2007. "Green GDP Praying for Hu's Help", China Digital Times. Accessed August 24th 2010. <<http://chinadigitaltimes.net/2007/08/green-gdp-praying-for-hus-help/>>.

⁶⁵ Ansfield, Jonathan. "Green GDP Praying for Hu's Help", 2007.

⁶⁶ Ansfield, Jonathan. "Green GDP Praying for Hu's Help", 2007.

methodology both difficult and unreliable. No prior models exist, and this project was made even more difficult with Chinese data being overwhelmingly censored by political concerns. Moreover, this idealistic programme did in the end prove no match for the issues it was set off to counter: the strong resistance and conflicts with officials at various levels, SEPA's lack of legitimacy and statistical manipulation in spite of the Centre's standpoint. There have been some concerns that the green GDP was eventually scrapped on purpose before accurate numbers could be reported, which could possibly have led to further politically damaging estimates.⁶⁷ All in all the programme can be seen as a noble attempt by the CCP that falls short due to the weaknesses of central control and conflicts of actors and interests at the various levels, eventually highlighting the heart of the problems with environmental protection. This defeat was seen as a sad loss by environmentalists, who along with the media still clamour for its unlikely comeback.

National Environmental Model City Programme:

The National Environmental Model City Programme presents a different approach in integrating market dynamics and environmental protection from the Green GDP: instead of focusing on tackling governments or officials who are ineffectual at averting degradation, the NEMCP is a direct reward for governments who decide to follow the centre's initiative. First introduced in 1989 as a part of SEPA's Urban Environmental Quality Examination System (UEQES), this programme is a part of the Japan-China Environmental Development Model City Scheme, an agreement between China and Japan dating back to 1997.⁶⁸ The UEQES annually provides targets for major Chinese cities to measure their environmental performance, with scores being published not only within government levels but increasingly via the mass media to civil society.

NEMC status can be attained by meeting an array of pre-established targets and demands: Natural gas (as opposed to, for instance, coal) must supply over 90 percent of the city's energy, while over 80 percent of the city's solid waste and 50 percent of urban household wastewater must be treated. Public green spaces must exceed 10m², the city is required to devote over 1.5 percent of GDP to protecting the environment and surveys conducted with at least 1 percent of its population must show a satisfaction rating of over 60 percent.⁶⁹ Achieving the recognition of Model City is highly esteemed, as it introduces opportunities for foreign investments and gatherings. As of 2010, 77 cities and municipalities hold this status, while 122 cities and 10 municipal city governments have

⁶⁷ Kirykovicz, Alexander. "China & Green GDP". Climatico, 2010. Accessed August 25th 2010. <<http://www.climaticoanalysis.org/post/china-green-gdp/>>.

⁶⁸ Economy, "Environmental Governance: the Emerging Economic Dimension", 2006.

⁶⁹ Economy, "Environmental Governance: the Emerging Economic Dimension", 2006.

applied, and many cities and municipalities in various provinces are in the process of becoming NMECs.⁷⁰ The process of attaining the Model City status can take several years, and international assistance often plays a part – for instance, The European Union began assisting the city of Nanjing in 2007, and Zhongshan has received assistance from Singapore. The success stories include some of China’s formerly most polluted cities – for instance, the city of Shenyang (Mukden) rose from one of China’s 10 most polluted cities in 1984 to pass national inspection and win the title of model city in 2004, after three years of intensive effort. The desirability of the status can perhaps best be seen in the investments made to attain it – in a bid to achieve the NEMC status, the city of Wuhan in Hubei province has invested 3.44 million RMB in a plan which will include establishing forest conservation districts on the city’s 9 peaks and expanding wetlands and nature reserves in order to green the city, the construction of 6 domestic garbage treatment facilities which should increase the overall capacity to 7750 tonnes per day, and lastly, the creation of 13 water treatment plants and networks in order to increase wastewater treatment from 36 percent to 70 percent before 2021.⁷¹ The possibility of a NEM city slipping back was countered when SEPA passed an edict calling for regular re-evaluations of the cities, with the status at first granted for 5 years with inspections made every 3 years, and cancellation of status in case of violations.⁷²

With this, the CCP has created an incentive which stands outside the legislative system. The drawbacks to the program are reminiscent of the problems EPBs face when curbing violations: some cities, such as Zhongshan in Guangdong, have simply relocated the polluting industry to the outskirts, thereby ignoring the purpose of the programme completely in its quest for the status. Heavy polluters have also been known to simply relocate from the densely populated east coast to the central and western provinces, bringing pollution and new problems to areas where environmental enforcement and surveillance is inadequate.⁷³ In their quest for this status, cities have even been known to face resistance from their own inhabitants – in the case of Guangzhou, the Guangzhou Price Control Administration’s bid to raise water prizes in 2005 was met with “media and public criticism amidst accusations of a lack of popular representation in the decision-making process”⁷⁴ – in cases like these, an authentic effort of the government’s behalf might be annulled by local consumers.

⁷⁰ “国家环境保护模范城市” (“National Environmental Model City”) Baidu.com, 2010. Accessed August 25th 2010 <<http://baike.baidu.com/view/1456260.htm>>.

⁷¹ Chen Hui. “武汉投资 344 亿规划五年创建国家环保模范城市” (Wuhan invests 34.4 billion in a programme to become an National Environmental Model City) Xinhuanews: Hubei pindao, 5th June 2006. Accessed August 25th 2010. <http://www.hb.xinhuanet.com/newscenter/2006-05/23/content_7064088.htm>.

⁷² “国家环境保护模范城市” (“National Environmental Model City”) Baidu.com, 2010. Accessed August 25th 2010 <<http://baike.baidu.com/view/1456260.htm>>.

⁷³ Economy, “Environmental Governance: the Emerging Economic Dimension”, 2006.

⁷⁴ Economy, “Environmental Governance: the Emerging Economic Dimension”, 2006.

This status can be seen as an interesting initiative on the CCP's half. With the growing influx of domestic and international tourism in China, a NEMC status might become an instrument for provinces to flaunt these cities when vying for the increasing tourism as well as foreign investments – an example being the city of Weifang, proudly flaunted by Shandong Province's official website for its 'environmental governance.'⁷⁵ With added citizen initiative, inhabitants of these cities might also start taking pride in the status, while it could serve to further fuel local environmental awareness and education.

Participation of Civil Society: The role of NGOs and the media

It should be apparent by now that Beijing's task of efficiently enforcing environmental law through its legislative system promises to be immensely difficult. The best of the CCP's efforts tend to fall short due to fundamental weaknesses in the legislative system, individual actors and complex bureaucracy, with too many actors at too many levels rooting for their own interests.

It is in the midst of this weak central control that the devolution of authority to market economy has had a secondary effect: that of diminishing state control of the activities of its citizens.⁷⁶ Moreover, as the state has increasingly started to encourage the private sector to respond to societal needs to fill in the gaps in the central system, (such as medical care, education and environmental protection,) civilians have been left with added room and incentives for private initiatives. With that, a platform has opened up for the participation of non-governmental organisations (NGOs) in China's system of environmental protection. Beginning with the first environmental NGO, Friends of Nature in 1994,⁷⁷ these establishments mark a growing trend of immense importance in Chinese society.

As these developments are reminiscent to those of the former Soviet countries, the CCP has grown ambiguously supportive of these NGOs.⁷⁸ In a single-party society, this support for NGOs and

⁷⁵ "Weifang" Shandong China daily, 2010. Accessed August 25th 2010.

<http://shandong.chinadaily.com.cn/m/shandong/e/2009-07/23/content_8464120.htm>.

⁷⁶ Lee, Namju, 2006, "The Development of Environmental NGOs in China: A Road to Civil Society?" *The Jamestown Foundation*, 2006. Taken there from *China Brief*, vol.6, no.23. Accessed August 26th 2010.

<[http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=32261](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=32261)>.

⁷⁷ Economy, *The River Runs Black*, 2004. P 130.

⁷⁸ In fact, China's current woes are very reminiscent of those of East-European countries in the 70s and 80s: The German Democratic Republic used coal to supply more than 80 percent of its energy need in the 80's, with research showing that the rate of respiratory and heart diseases in polluted regions was 10-15 percent over the national average. In the late 80's, Polish scientists estimated that a mere 1 percent of surface water was suitable for drinking (and as much as 49 percent too polluted to use even in industry). When local corruption made enhancing laws to impede environmental degradation largely futile, these countries raised local awareness to environmental problems, which lead civilians to found NGOs and begin public protests. Gaining immense momentum after the nuclear disaster of Chernobyl in 1986, civilian response

civil initiative in social welfare is a highly interesting one – on one hand, NGOs come in where the system is too weak or protectionism too integrated as a force of pressing the local authorities into compliance. As public demand for environmental protection grows stronger, NGOs address a wide array of issues on local levels, helping enforcement efforts and coming in where corruption or nepotism is too integrated for the State to act efficiently. At times these organisations attract international interest and goodwill, since they tend to be regarded by western countries as the closest form to a democracy in Chinese society. In 1998, the CCP even sponsored a roundtable discussion with former US president Bill Clinton and leaders of environmental NGOs.⁷⁹

On the other hand, the possibility of these NGOs growing out of their current form and into a full-fledged political force is very real to Beijing. These organisations often spring out of public discontent, where they attract intellectuals and organised dissidents, even religious movements. As a result, Beijing is extremely concerned with their potential, and environmental along with humanitarian activists can still risk being arrested for their work.⁸⁰ Therefore, Beijing's attitude towards these NGOs is characterised by contradictions and ambivalence – while they're praised for their efforts, they must comply with stringent regulations and guidelines, giving Beijing a great amount of control over them and a chance to intervene whenever it sees fit.⁸¹ Moreover, the CCP has taken to establishing its own government-organised nongovernmental organisations, or GONGOs. These organisations are frequently established with foreign aid and often simple fronts for the government to exploit foreign attempts to finance Chinese civil participation, rather than have them actually reach real NGOs.⁸² In these GONGOs, Beijing has established organisations whose efforts can be directly affected, without risking social threats like those of the genuine NGOs. GONGOs, while likely to undermine the efforts of NGOs at times, have still been known to act as mediators between the government and NGOs, facilitating compromises between both sides, and even helping the NGOs when their demands are especially socially sensitive.

gradually grew so fierce that social welfare, including environmental interests, found a definite platform in politics. The fact that public empowerment eventually grew strong enough in these countries to bring down the Soviet bloc is likely to have a say in the attitude of the CCP towards local NGOs. Economy, *The River Runs Black*, p 223 – 230.

⁷⁹ Economy, *The River Runs Black*, 2004. P 132.

⁸⁰ See for instance Amnesty International 2010 appeal for jailed activist Tan Zuoren at <http://www.amnesty.org/en/library/asset/ASA17/008/2010/en/f6fef101-bd72-4764-888e-56e83dcb5234/asa170082010en.pdf> and environmentalist Wu Lihong's description of his detention available (in French) at http://www.lemonde.fr/international/article/2010/05/11/l-ecologiste-chinois-wu-lihong-raconte-ses-conditions-de-detention_1349367_3210.html

⁸¹ Cooper, Carlonie M. " 'This is Our Way In': The Civil Society of Environmental NGOs in South-West China", *Government and Opposition*, vol 41, no 1, 2006. Blackwell Publishing, Oxford, United Kingdom.

⁸² Economy, *The River Runs Black*, 2004. p 135.

It is in the media that the NGOs find their strongest allies, and many of the most notable environmentalists are former journalists, who frequently investigate issues first-hand.⁸³ Increasingly, the radio and television have come to the forefront of bringing attention to social issues such as environmental protection, helping the NGOs and EPBs in their campaigns. With the advent of the internet, the media not only provides a public forum for voicing oppositions to government projects, but ignites grassroots efforts, even joins in investigations and protest against environmental crimes. Furthermore, it can even bring the attention of top level officials to environmental problems. In 2003, environmental NGOs along with the media rallied support against a dam that was planned near the ancient irrigation system and World Heritage site Dujiangyan in Sichuan, eventually successfully averting halting the project.⁸⁴ Usually NGOs band together, sometimes even with foreign organisations, to generate public support – the media then carries the message to society, leading to pressure on local authorities. An example of this is the opposition to plans of constructing 13 hydropower dams on the Nu River, where 76 organisations from 33 countries contacted General Secretary Hu Jintao in 2004 and voiced concerns, eventually prompting the government to review the plans.⁸⁵ Another way for the NGOs to successfully bring attention to an issue is by writing ‘internal-references’ – these are the reports that circulate within the party and are intended only for officials and not the public. At times their references receive redress on their issues by top-level officials, who, in many cases, share the NGOs concerns but are unable to act within the system. In the case of Dujiangyan, local officials had already opposed the dam and eventually invited the NGOs to visit and report on the matter firsthand. In the continuing campaigns against APP, a major pulp- and paper making company, environmental NGOs have used information actually supplied by local officials to accuse the company of ruining natural forests in Yunnan and Hainan by planting fast-growing, introduced species in place of the ancient forests to supply their paper mills.⁸⁶

⁸³Even here there are complications as state control and censorship of media has always been very tight. Xinhua news, China’s biggest newsagent, has been under party control since its founding and was consistently used as an instrument for party propaganda. Newsagents that are situated further away from Beijing in economically rich zones on the east coast celebrate more freedom than their Beijing counterparts but this freedom is still largely limited. For analyses on China’s media, see NIASnytt, no 3, September 2005, *Nordic Institute of Asian Studies*, Copenhagen. For examples of censorship directives for newsagents, see for instance “Latest Directives from the Ministry of Truth, August 14-August 24, 2010” available at , <http://chinadigitaltimes.net/2010/08/latest-directives-from-the-ministry-of-truth-august-14-august-24-2010/>>. Yiyi, Lu, 2006, “Environmental Civil Society and Governance in China”. *International Journal of Environmental Studies*, vol 64, no 1. P 59 – 69.

⁸⁴ Yiyi, Lu. “Environmental Civil Society and Governance in China”, 2006.

⁸⁵ Transcript of letter available at http://www.internationalrivers.org/files/nu_hujintao_letter.pdf

⁸⁶ Yiyi, Lu. “Environmental Civil Society and Governance in China”, 2006.

Conclusion

China's escalating need for energy, increasing population pressures and growing industry have already put the country amongst the world's top polluters, and the situation could potentially get far worse before it gets any better.

China continues to face grave problems to its regulatory framework and enforcement. The instability in relations between different levels of governance has led to a fundamental inadequacy in the state's environmental capacities. The system of the EPBs, plagued by regional disparities, still lacks funds and staff, leaving a lot to be desired before satisfactory enforcement can be upheld. Moreover, the MEP and the chain of EPBs continue to lack institutional credibility in the face of protectionism and corruption. Even Beijing's investments to strengthen the system still fall short, with conflicting levels of officials integrated enough to thwart experiments such as the Green GDP programme. The State's new award schemes, such as the National Environmental Model City awards, stand as interesting and innovative developments, but stringent censorship and manipulation of statistics still mean that these programmes will need to be monitored with a greater degree of transparency if they are to be of an impact.

Meanwhile, China's integration into global economics has had a definite say on the future of the environment. China's major investments in clean technology set an example to other countries, while its innovations in environmental governance and programmes such as the NEMC and Green GDP could even end up being adopted and furthered in other countries.⁸⁷

Major transitions are on the way, as China's future of environmental protection may likely rest with the participation of civil society. With the EPB campaigns held in the new millennium to further public awareness and introduce pollution complaint hotlines, China has started to hand over a portion of the state's task to citizens, hoping for them to hold officials responsible and pressure them into compliance. This approach will still be limited for as long as the state maintains its stringent control of NGOs and retains its ambivalence towards civil society's participation. If the CCP starts to regard this trend as a threat rather than an opportunity it could even be prompted to move in and squash these organisations, thereby eliminating its strongest prospect of environmental protection. On the other hand, the various societal NGOs might end up acting as a 'Trojan horse,' eventually furthering democratic advancements, similarly to developments in the former Soviet bloc. Whatever the outcome, China will continue to deal with its challenges of balancing the economy with the environment – a problem it shares with a growing number of the earth's countries.

⁸⁷ Carter, Neil T. & Mol, Arthur P.J., "China and the environment: Domestic and transnational dynamics of a future hegemon," 2006.

Sources

All photos courtesy of the photographer Lu Guang, recipient of the 2009 Eugene Smith Award for photography. Taken from <<http://image.fengniao.com/vision/content/1/122-1.html>>. Accessed September 8th 2010.

Books and Journals

Economy, Elizabeth. *The River Runs Black*. Cornell University Press, New York, 2004.

Edmonds, Richard Louis. *Patterns of China's Lost Harmony: A survey of the country's environmental degradation and protection*. RoutledgeCurzon, Oxford, 1994.

NIASnytt, "Theme: Media and Globalisation in China," no 3., september 2005. *Nordic Institute of Asian Studies*, Copenhagen.

Shapiro, Judith. *Mao's War Against Nature*. Cambridge University Press, Cambridge, 2001.

Journal Articles

Carter, Neil T. & Mol, Arthur P.J., 2006, "China and the environment: Domestic and transnational dynamics of a future hegemon." *Environmental Politics*, vol. 15, no. 2, p 330 – 344. Routledge, London. Accessed April 9th 2010. <<http://dx.doi.org/10.1080/09644010600562294>>.

Cooper, Carlone M, 2006, " 'This is Our Way In': The Civil Society of Environmental NGOs in South-West China", *Government and Opposition*, vol 41, no 1. Blackwell Publishing, Oxford, United Kingdom.

Economy, Elizabeth, 2006, "Environmental Governance: the Emerging Economic Dimension." *Environmental Politics*, vol. 15, no.2, p 171 – 189. Accessed July 29th 2010. <<http://dx.doi.org/10.1080/09644010600562310>>.

Jahiel, Abigail R, 1998, "The Organization of Environmental Protection in China." *The China Quarterly*, no. 156. Cambridge University Press, Oxford, p. 757-787. Accessed October 29th 2009. <<http://www.jstor.org/stable/656124>>.

Li, Vic & Lang, Graeme, 2010. "China's "Green GDP" Experiment and the Struggle for Ecological Modernization." *Journal of Contemporary Asia*, vol. 40, no. 1, p 44 – 52. Viewed July 21st 2010. <<http://www.informaworld.com/smpp/content~db=all?content=10.1080/00472330903270346>>.

Shi, Han & Zhang, Lei. 2006. "China's Environmental Governance of Rapid Industrialization." *Environmental Politics*, vol. 15, no. 2, p271 – 292. Accessed April 9th 2010. <<http://dx.doi.org/10.1080/09644010600562567>>.

van Rooij, Benjamin, 2006, "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns." *Development and Change*, vol. 37, no. 1, p 57 - 74. Blackwell Publishing, Oxford

Xue, Susan, 2005. "China's Legislative System and Information: an overview." *Government Information Quarterly*, no. 22, p 322 – 341.

Yiyi, Lu, 2006, "Environmental Civil Society and Governance in China". *International Journal of Environmental Studies*, vol 64, no 1. P 59 – 69.

Websites

Ansfield, Jonathan, 2007. "Green GDP Praying for Hu's Help", China Digital Times. Accessed August 24th 2010. <<http://chinadigitaltimes.net/2007/08/green-gdp-praying-for-hus-help/>>.

Chen Hui. "武汉投资 344 亿规划五年创建国家环保模范城市" (Wuhan invests 34.4 billion in a programme to become an National Environmental Model City) Xinhuanews: Hubei pindao, 5th June 2006. Accessed August 25th 2010. <http://www.hb.xinhuanet.com/newscenter/2006-05/23/content_7064088.htm>.

Economy, Elizabeth C, 2006, "Opinion: Green GDP. Accounting for the Environment In China." PBS (Public Broadcasting Service). Accessed August 24th 2010. <<http://www.pbs.org/kqed/chinainside/nature/greengdp.html>>.

Economy, Elizabeth C, 2007: "The Great Leap Backward?" *Council on Foreign Relations*. Accessed June 10th 2010. <<http://www.foreignaffairs.org/20070901faessay86503/elizabeth-c-economy/the-great-leap-backward.html?mode=print>>.

"Green GDP Accounting Study Report 2004 Issued." Chinese Government's Official Web Portal, 2006. Accessed August 24th 2010. <http://www.gov.cn/english/2006-09/11/content_384596.htm>.

Kirykowicz, Alexander. "China & Green GDP". Climatico, 2010. Accessed August 25th 2010. <<http://www.climaticoanalysis.org/post/china-green-gdp/>>.

Lee, Namju, 2006, "The Development of Environmental NGOs in China: A Road to Civil Society?" *The Jamestown Foundation*, 2006. Taken there from *China Brief*, vol.6, no.23. Accessed August 26th 2010. <[http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=32261](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=32261)>.

"L'écologiste chinois Wu Lihong raconte ses conditions de détention" (Environmentalist Wu Lihong describes conditions in detention.) *Le Monde*, 2010. Accessed September 3rd 2010. <http://www.lemonde.fr/international/article/2010/05/11/l-ecologiste-chinois-wu-lihong-raconte-ses-conditions-de-detention_1349367_3210.html>.

Ma Jun, 2010, "Huanjing zhifa yiran shouzhi yu zhaoshangyinzi." 环境执法依然受制于招商引资 (Minding the enforcement Gap). Chinadialogue.net. Accessed August 24th 2010. <<http://www.chinadialogue.net/article/show/single/ch/3760-Minding-the-enforcement-gap>>

Ma Jun, 2010, "Pucha shuju jieshi wuran jianpai bixu ti su" 普查数据揭示污染减排必须提速 (Dynamic Data). Chinadialogue.net. Accessed August 24th 2010. <<http://www.chinadialogue.net/article/show/single/ch/3508-Dynamic-data>>.

Ma Jun, 2008. "Ni youquan zhidao: yi ge lishixing shike." 你有权知道：一个历史性时刻 (Your Right to Know: A Historic Moment.) Chinadialogue.net. Accessed April 20th 2010.

<http://www.chinadialogue.net/article/show/single/ch/1962-Your-right-to-know-a-historic-moment>>.

Ma Jun, 2010, "Gongzhong yu huanjing yanjiuzhongxin zhongguo shuiwuran ditu." 中国水污染地图 (China Water Pollution Map.) Institute of public and environmental affairs. Accessed April 20th 2010. <<http://en.ipe.org.cn/>>.

„Measures on Open Environmental Information (for Trial Implementation)“ Epa.gov (US Environmental Protection Agency). Accessed August 24th 2010. <http://www.epa.gov/ogc/china/open_environmental.pdf>.

“Milestones in United Nations History.” United Nations, New York. Accessed August 29th 2010. <<http://www.un.org/aboutun/milestones.htm>>

“国家环境保护模范城市” (“National Environmental Model City”) Baidu.com, 2010. Accessed August 25th 2010 <<http://baike.baidu.com/view/1456260.htm>>.

„Playing Dirty: How Factories Hide Their Pollution in China.“ Greenpeace.org, 2009. Accessed September 3rd 2010. <<http://www.greenpeace.org/china/en/news/dirty-tricks>>.

“Report on the State of the Environment in China 2007“ SEPA.org (State Environmental Protection Agency), 2007. Accessed August 24th, 2010. <http://english.sepa.gov.cn/standards_reports/soe/soe2007/200909/t20090902_159823.htm>.

“Stockholm 1972: Working Group on the Declaration on the Human Environment.” United Nations Environment Programme (UNEP). Accessed August 29th 2010. <<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1529&l=en>>.

Untitled (letter to ‘president’ Hu Jintao expressing concerns about hydropower projects on the Nu River). International Rivers Network, 2004. Accessed September 3rd 2010. <http://www.internationalrivers.org/files/nu_hujintao_letter.pdf>.

“Urgent Action: Environment Activist Jailed After Unfair Trial.” Amnesty International, 2010. Accessed August 25th 2010. <<http://www.amnesty.org/en/library/asset/ASA17/008/2010/en/f6fef101-bd72-4764-888e-56e83dcb5234/asa170082010en.pdf>>.

“Weifang” Shandong China daily, 2010. Accessed August 25th 2010. <http://shandong.chinadaily.com.cn/m/shandong/e/2009-07/23/content_8464120.htm>.