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Man must conquer earth:  
three stages of CCP policies resulting in  
environmental degradation in China  
and characteristics of contemporary environmental politics.



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### Abstract:

This Bachelor's thesis follows aspects of environmental degradation stemming from the policies of the Chinese Communist Party over the latter half of the 20th century. These start with The Great Leap Forward in '58 in which people were exhorted to convert as much land to agriculture as possible, construct dams and implement agricultural techniques that in the long-term proved unsustainable and destructive. These were then continued with the Cultural Revolution through land reclamations, the uniform Dazhai-model in agriculture and sending youth brigades off to open up wilderness and convert to arable land, practices which in the long term proved unsustainable and lead to a variety of environmental problems. The economic policies following the reforms of '78 further served to degrade the land by promoting economic growth and effectively ignoring the ensuing degradation, the consequences of which are a huge aspect of Beijing's contemporary environmental problems.

The second part will shed light on Beijing's efforts at reversing this degradation, giving a brief account of environmental laws passed since '72 while presenting implications with law enforcement and changes in the system.

### 提要:

这篇论文研究中国共产党从1958年到现在一些方针都对环境有大的影响。这包括三个分别影响的时期: 大跃进时期(‘58-‘61), 文化大革命时期(‘66-‘76)和经济改革时期(‘78-)。大跃进时期特别是小高炉, ”以粮为纲”的方针, 文化大革命时期是大寨典型, 经济改革时期是重工业的政策, 都对环境有坏的影响。因此, 中国现在面临厉害的环境恶化, 比如沙漠化, 江河污染, 土壤浸蚀等等。

第二部分研究中国现代的环境法律, 1972后执法环境法律的问题和近年环境保护的动态。

### Method and Source Implications:

This thesis relies on Chinese language sources directly related to the topic, such as Mao's speeches and articles obtained from Chinese journals. These are then complemented by information obtained from Western language publications.

It should be noted that environmental studies is a relatively new field in all parts of the globe and that the research has been underway for only a few decades. Moreover, since sources dealing on the exact topic of degradation as actively resulting from policies are even fewer, the source material used for this paper has regrettably been limited. Furthermore, statistics on the environment in China are notoriously unreliable, with the figures on desertification and deforestation more often than not either conflicting or heavily censored.

Lastly, due to the immense scope, conflicting data and complexity of the directly related topics of air pollution and aforestation this paper will regrettably not touch on either of these.

### Introduction:

As of late, China has increasingly come under the attack of western media for lapses in environmental protection. Photos abound of lakes in various colours where eutrophication is too far gone for anything to live, steam rising from rivers too toxic to touch and vast areas, previously luxurious ecosystems, now lifeless and expanding deserts.

The current state of the Chinese environment is particularly distressing. Causes range from population pressures<sup>1</sup> to changes in climate, to degradation stemming from government policies since the 1950's, the latter of which this thesis will delve into.

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<sup>1</sup> Since the scope of this thesis is not environmental degradation per se, this thesis will not touch on implications with population pressures on habitat, but the reader is asked to keep in mind that overpopulation very densely ties in with destruction of the environment, and with Maoist emphasis on population growth it was in large part the very reason for overemphasis on grain and agriculture. For further reading on the subject of population and environmental degradation, see for instance *Population*

How did these policies affect the environment? What defines these policies, and in which respects did they come to be so destructive? Does it owe to the anti-environmentalist attitude of a single leader, Mao Zedong, as Judith Shapiro has argued for? How is Beijing dealing with this legacy, and are its methods as effective as they need to be in order to reverse the situation?



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*and the Environment in China* (1994, L. Rienner Publishers) by Qu Geping, Li Jinchang and Jiang Baozhong.

Part 1:

The three phases of CCP policies post 1958 resulting in environmental degradation.

1.1 The Great Leap Forward

The year 1958 saw the launch of the Great Leap Forward campaign (*da yue jin*), a mass mobilization of China's entire population, urging a rapid agrarian, economic and industrial transformation, lead by the CCP under the chairman Mao Zedong. The People's Republic had been established barely a decade earlier, China had only recently begun to recover from decades of a devastating civil war and the CCP was hard-pressed to maintain order and implement its rule in the new society. Ambitions ran high, and the new government looked abroad for models to stimulate growth; Eventual emphasis was kept on rapid industrialization and increase of agricultural output, with goals of swiftly surpassing the production output of the some of the world's major economies.<sup>2</sup> This, Mao believed, was very much realizable with the sheer power of revolutionary will.

Mao was indeed a staunch believer in the force of willpower, and many of his comments and slogans promoted through the century betray this exact sentiment. His critique on Stalin's 'Economic Problems of the USSR' is a prominent example – Stalin, on the perceived fallacy of political economy being a law-governed process uninfluenced by men, noted that certain natural processes were susceptible to influence and remolding by humans but these were limited to “astronomical, geological and other similar processes.”<sup>3</sup> Mao noted that Stalin's “argument is wrong. Human knowledge and the capability to transform nature have no limit ... What cannot now be done, may be done in the future.”<sup>4</sup> His slogans from the time also bear evidence of his conviction that became characteristic of the Leap and consequent Maoist policies, such as “Great Courage Brings

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<sup>2</sup> Yang Dali 2002. "Great Leap Forward." *Encyclopedia of Modern Asia*.

<sup>3</sup> Mao Zedong (1961). “Critique of Stalin's Economic Problems of Socialism in the USSR.” The quote is in chapter 1 of *Economic Problems of the USSR*, (1951) titled “Character of Economic Laws under Socialism,” available at Joseph Stalin Reference Archive at <<http://www.marxists.org/reference/archive/stalin/works/1951/economic-problems/index.htm>> (accessed 7<sup>th</sup> December). Here taken from Mao Zedong (1961).

<sup>4</sup> Ibid.

forth great Yields” [*Ren You Duo Da Dan, Di You Duo Da Chan*] and “Man must conquer Nature” [*Ren Ding Sheng Tian.*]<sup>5</sup>

Furthermore, Mao was exceptionally suspicious of any criticism to his policies, owing to the scorching criticism targeted at him and the CCP by the intellectual elite during the Hundred Flowers Campaign in the spring of '57. Consequently, the following year he denounced all expertise and appropriate implementation in agriculture and industrialization that the experts had at their disposal, opting instead to persecute those people in the Anti-rightist campaign, carried out in the second half of 1957. As a result, criticizing the prevailing model by intellectuals was condemned and ‘being red’, ie. dogmatically devoting oneself to Maoist cause was deemed proper. With that, all incentive of criticism or objection to the policies was eradicated.<sup>6</sup>

These two aspects of Maoist thought set the ground for the Leap, a campaign characterized by chimerical expectations and rash implementation of well-meant but misguided policies. The ensuing social and economic consequences were disastrous, but for the environment they set the bar for consistent abuse that persists to this day.

### 1.1.2 Backyard furnaces and steel smelting

One of these well-meant but misguided campaigns was the backyard steel furnace campaign exhorted during the Leap. The masses were mobilized on an unbelievable scale, through extensive propaganda and promises of a socialist utopia to start smelting steel in their back yards as an incentive for industrial production and economic growth. With the fad at its height, furnaces numbered several million and as many as one in every six Chinese was participating, amounting to 90 million people smelting every single metal object they could scramble together.<sup>7</sup> As proper knowledge or implementation of metallurgy was considered inferior to sole willpower it was therefore effectively ignored.

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<sup>5</sup> Shapiro 2001. *Mao's War Against Nature: Politics and the Environment in Revolutionary China*. p 67 and p 68, respectively.

<sup>6</sup> Karlsson, Klas-Göran and Schoenhals, Michael. *Crimes against Humanity under Communist Regimes*. p 74

<sup>7</sup> Shapiro 2001. p 81.

The steel-smelting campaign turned out to be a disaster, resulting in nothing but dizzying amounts of useless pig iron and incredible amounts of waste and destruction.<sup>8</sup>

In spite of only lasting for a couple of years this campaign, virtually void of management and monitoring of environmental impact had devastating effects on the environment. The furnaces themselves didn't last but because of the campaign's huge scale vast areas saw frantic deforestation. In provinces where coal was available, the air pollution and waste following such a massive effort was immense. Provinces that lacked coal were deforested on a vast scale to keep the fires burning: planted shelterbelts, virgin forests, shelter plantations; anything that would burn was used as firewood. Shapiro notes that forest cover is likely to have dropped by roughly 10 percent from '56 to '59 – her numbers call for 30,000 to 40,000 sq km of forest having been degraded to different extents during the Leap and a 10 percent drop in national forest cover from 48 percent in only three years. Numbers from the the Ministry of Forestry (published in 1985) show a drop in shelter forest area from 9930 sqkm to 4350 sqkm between '57 and '64, and man-made forests from 435,500 to 29,110 sq km over the same period.<sup>9</sup> These were then followed by long-term consequences such as desertification, changes in microclimate and soil degradation,<sup>10</sup> as further explained in later chapters.

### 1.1.2 Take grain as the key link

“Take grain as the key link, develop on a full scale” [*Yi Liang Wei Gang, Quanmian Fazhan*] was a slogan that would come to be frequently heard over the latter half of the 20th century. The roots of this grain emphasis reportedly date back to the war-economy of the Republican era, stressing self-sufficiency in communist and republican camps respectively, thereafter picked up again by Mao true to his emphasis on a strong, numerous nation.<sup>11</sup> Mao had two prime concerns at the start of the republic: one was the aforementioned industrialization, the other was feeding the growing masses<sup>12</sup> – “Take

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<sup>8</sup> Smil 1984. *Bad Earth*. p 15.

<sup>9</sup> Shapiro 2001. p 82-83.

<sup>10</sup> *Ibid*. p 80

<sup>11</sup> Ho, Peter 2003. “Mao’s War Against Nature? The Environmental Impact of the Grain-First Campaign in China.”

<sup>12</sup> Ren Songfeng, Cui Weiyong 2009 “试论毛泽东“以粮为纲，全面发展”方针”

grain as the key link” became an official policy emphasised to stress agricultural output to the extreme; in Mao’s own words, “Grain, iron and steel-smelting, machinery are the three most important things...Of these three, grain is of the most importance, we should pay full attention to the needs of agriculture.”<sup>13</sup> These words show an awareness of the importance of providing for the masses as his political success was largely dependent on the followers of his personality. After the disastrous famine that would follow the Leap, the grain-emphasis is likely to have grown even more urgent on him with the following decades. It has also been pointed out that the agricultural sector was lagging far behind the industrial sector at the time, to the point of it not supplying raw materials as needed and positively dragging it down<sup>14</sup> – all of these reasons came together for a nationwide, over-zealous emphasis on grain that would persist throughout Mao’s reign.

Just as the steel campaign, the Leap’s grain emphasis sprung from good intentions but was a gross blunder in implementation and scale. Planting of seedlings was kept close in the belief that it’d produce many more units, especially after Mao noted that seeds of the same kind would not compete with each other for light and nutrients: “With company they grow easily, when they grow together they will be comfortable.”<sup>15</sup> Instead most of the plants suffocated, then rotted, and there are even examples where the decay then caused the soil to become too soaked with hydrogen sulfate [H<sub>2</sub>S] too see anything grow afterwards, even for years.<sup>16</sup> Another aspect was the promulgation of deep ploughing and sowing in the depth of winter in belief of heightened grain yields: during the Leap farmers were exhorted to use this method, which involved ploughing arable land as deep down as 1 *chi* (aprx. one thirds of a meter) for normal land, and 2 *chi* in rich soil, in the depth of winter and “by manpower that should surpass the labour and land area in irrigation and waterworks by far.”<sup>17</sup> The reason for the lands being sowed in winter also owes to the belief in willpower as well as the pressure for unattainable yields – if science

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<sup>13</sup> Mao Zedong. Here taken from Ibid, originally from “Manuscripts since the founding of the state.” vol 7. Central Literature Publishing House. Beijing. (中央文献出版社编.建国以来毛泽东文稿(第7册).北京:中央文献出版社)

<sup>14</sup>Lippit, Victor D. 1975. “The Great Leap Forward Reconsidered.”

<sup>15</sup> Shapiro, Judith. 2001. p 76. Quote taken from Shapiro, there from Walker, Kenneth R. “A Chinese Discussion for Balanced Growth: A summary of the Views of Ma Yinchu and his Critics,” in Robert Ash, ed. *Agricultural development in China, 1949-1989: The Collected Papers of Kenneth R. Walker (1931 – 1989)*. New York: Oxford University press, 1998, pp. 333-355.

<sup>16</sup> Shapiro 2001. p 78.

<sup>17</sup> Zhang Tongle and Guo Qi. 2008. “我国生态环境恶化的理性思考”

could overcome nature then the farmers could force the land to yield a second harvest in spring.

Lacking the scientific base and time to test this method, the farmers were exhorted with a ‘more is better’ approach to ploughing – the deeper the better and the higher the yields, leading to ditches being dug as deep down as a meter into the ground. In an account from Anshui county in northern Hebei, the peasants were described as working under the slogan “change winter to spring, with willpower the earth will not freeze over,” and in just above ten days over 13 200 *mu*<sup>18</sup> were ploughed to a depth exceeding 1 *chi*. Those who pointed out that the seedlings planted in the heart of winter would not survive risked persecution for ‘rightist tendencies’. Descriptions abound from the North and Northwestern provinces on how the sand would seep in as soon as the trenches were dug and the sandy soil soon started to erode but policies still persisted - vegetation would be removed from large plots of land, the areas would succumb to erosion with the weather and lack of vegetation, eventually being abandoned to gradually exacerbated desertification, with the sandy soil sweeping further over adjacent lands.<sup>19</sup> The Leap’s emphasis on unattainable yields in timber production also further exacerbated deforestation: With cadres clamouring to gain favour with Mao and the CCP, the soaring targets lead to people being urged to cut forests excessively with no efforts made at afforestation. Private forest plots were also collectivized for the sake of the new society.<sup>20</sup> Similar campaigns running at the same time further illustrate the misguided fervour, for instance the frequently referred-to Four Pests campaign [*Chu Si Hai*] that called for killing of rats, fleas, flies and sparrows, the last of the four believed by the CCP to be eating up the grain. From 1956 to 1958 the sparrow population was decimated greatly: As a result, the ensuing famine was exacerbated by locust eating up large parts of the harvest.<sup>21</sup>

All of these policies indicate lack of forethought by abandonment of traditional and local methods that had shown their legitimacy and sustainability over the centuries, in favour of new and unproven science. Considering the policies were then urged,

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<sup>18</sup> 1 *mu* amounts to aprx. 1/15<sup>th</sup> of a hectare. 13,200 amounts to 8.8 sq km.

<sup>19</sup> Zhang Tongle and Guo Qi. 2008.

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

seemingly blindly, in all provinces regardless of topography and climate, they come across as bizarre and arrogant. In Judith Shapiro's book *Mao's War on Nature* these rash policies are to a degree represented as consequences to Mao's personal conviction on agriculture. The uniform agricultural policies implemented during the Great Leap were however largely derived from the Soviets: Cluster planting was popularized by Trofim Lysenko, a 'scientist' extolled by the Stalinist leadership after agricultural hardships in the 30's as the Soviet counterpart to Mendelian scientists in the west.<sup>22</sup> For a society that at the start drew on virtually every aspect of Soviet planning it's easy to understand the CCP's enthusiasm for this new 'science' that promised utopian yields. It's also likely that the Sino-Soviet split in 1960 had a considerable influence – that split led to the Soviets removing all their experts and technological equipment from in China (including pollution-abatement machinery), making China entirely reliant on their own capital and independent interpretation of blueprints without Soviet aid and engineering.<sup>23</sup> Thus the outcome promised by Soviet science would have grown even more urgent and appealing to Mao, witnessed in the even greater emphasis on grain over the consecutive decades.

### 1.1.3: Damming: The Sanmenxia Dam

Hydropower, larger-than-life megaprojects and dams came to be a particular fascination of Mao's, as they effectively symbolize man's power over the wild forces of nature. As a consequence, megaprojects consistently won over the practical, small-scale projects that the persecuted experts vouched for. In the characteristic fervour of the Leap the dams were usually hurriedly constructed, often to shoddy blueprints and void of environmental awareness and testing time.

Along with the massive agricultural efforts, Mao also called for a dramatic mobilization in the building of reservoirs, dams and irrigation projects. People were mass-mobilized for irrigation works: well-digging and construction of reservoirs on a huge scale has caused water tables to drop in some areas and land to become salinated

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<sup>22</sup> Reportedly, he's also been quoted as saying that "wheat plants raised in the appropriate environment produce seeds of rye." His doctrines were officially discredited in '64 following Nikita Krushchev's political demise. "Trofim Denisovich Lysenko." Encyclopedia Britannica. 2009.

<sup>23</sup> Edmonds, 1994. *Patterns of China's Lost Harmony*. p 229.

and alkalized, a consequence of the Leap which affects water quality even today.<sup>24</sup> In 1949 China had 23 big to medium dams; by the dawn of the 90's over 80,000 more had been built, out of which 2,967 had collapsed by 1980. Many of the dams were built to fallacious blueprints but constructed anyway as engineers that saw the problems were either scared or already undergoing 'rehabilitation for rightist views' – a case in point being the Sanmenxia dam.<sup>25</sup>

Begun in '56, the dam was built to Soviet Blueprints and in spite of protest from engineers it was finished in '58, its purpose being hydroelectricity generation along with flood control. Under the slogan "relocate one family, save ten thousand" [*qian yijia, jiu wanjia*], 280,000 farmers from Shanxi, Shaanxi and Henan were made to relocate to Ningxia and Gansu to bordering the Gobi deserts that are barely arable. With the dam more than 670 sq km were flooded, 75 percent of that being arable land on which there had been 253 villages.<sup>26</sup>

Not long after the flaws began showing. Prior to the damming, scientists had argued that instead of constructing one superdam, a series of smaller dams would be more appropriate, making much of the relocation unnecessary and efficiently controlling flooding. They had also pointed out obvious problems with siltation that were lightly dismissed at the time, then turned out to render the dam completely inefficient. Indeed, the frequent floods in the Yellow River are largely attributable to this high silt content, which is as high 40%, effectively and gradually raising the riverbed, causing the river to flood in large areas.<sup>27</sup> The dam then silted up in two years, threatening to overflow settlements upriver along with Xi'an, the capital of Shaanxi province. Relentless reconstructions and revisions had to be done, tubes laid to relieve silt discharge and eventually "the dam was so pierced with holes that it became virtually worthless for either flood control or electricity regeneration."<sup>28</sup> The extent of the problems with the Sanmenxia dam run through frequent dike collapses, unpredictable flooding through sediment buildup and ecological changes, exacerbated with increasing silt loads sweeping

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<sup>24</sup> Shapiro 2001. p 76.

<sup>25</sup> Shapiro 2001. p 64.

<sup>26</sup> Shapiro 2001 p 61-63.

<sup>27</sup> Smil, Vaclav. 1984. *The Bad Earth*. p45.

<sup>28</sup> Smil, Vaclav 1984. p 46.

in from the eroded loess region – in 2001, people would still have to be relocated through the flood season.<sup>29</sup>

### The Legacy of the Leap

The Great Leap Forward resulted in a disaster on an unprecedented scale, bringing with it a three-year famine during which around 30 million people perished.<sup>30</sup> For the environment, the legacy of the Leap is twofold: tangible consequences such as deforestation and ensuing soil erosion, and intangible consequences in the form of government policies, a Maoist mindset that persisted for the next few decades that would further exacerbate the degradation of the environment. Land reclamation, the filling in of lakes to create arable land was a practice that had existed since the Ming dynasty; with the Leap it was urged on a greater scale and would come to be further emphasised over the following two decades, even at the cost of local aquaculture and freshwater fisheries, leading to lowered ground water levels and destruction of ecosystems. The deforestation exacerbated flooding since without the plants shielding the soil the ground succumbed to erosion, which in turn lead to siltation of rivers and greater flooding. The overemphasis on grain would persist and gain momentum again with the Cultural revolution, regardless of the need to revert to more sustainable practices. Another aspect of the Leap that resulted in environmental degradation was sporadic industrial distribution: industry was located close to raw materials, and as a result factories such as steel mills, chemical distillations, tanning and dyeing industries were located in pristine wildernesses, while railroads were laid over the large areas to connect these to cities, all with devastating effects on ecosystems. Similarly, the same industries, all lacking any pollution abatement machinery, were also situated in the hearts of the cities, close to railway stations and main roads, often to let stand for many years despite apparent effects on inhabitants. An example was a chemical distillation in downtown Shijiazhuang (capital of Hubei) in Qiaoxi district, only closed in December 1979, despite lengthy protesting over the

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<sup>29</sup> Shapiro 2001. p 63.

<sup>30</sup> Karlsson, Klas-Göran and Schoenhals, Michael. p 78.

factory's poisoning of groundwater.<sup>31</sup> This goes to show not only a lack of environmental awareness to the policies, but a general lack of forethought, even understanding for long-term consequences.

This lack of environmental awareness is the crucial aspect of the degrading effects of Maoist policies. To blame Mao for not giving thought to these is tempting but extremely ludicrous, as the concept of environmental assessment only came to exist in the mid-70's<sup>32</sup> – indeed, the current state of the planet is largely attributable to lack of environmental awareness in pan-national government policies through the 20th century. Certain aspects of the Leap were particularly unfortunate all the same: The massive, uniform scale of implementations made the ensuing consequences all the more dire. The single-minded denial of traditional and local practices in favour of rushed implementations of 'new' and 'revolutionary' – rejecting much of western science as bourgeois and discarding traditional and local practices as antiquated and not efficient enough in favour of new and exciting 'en mode' leftist ideas. Mao's refusal to heed advice or compromise for improvisation, instead opting for persecuting the educated is similarly extremely unfortunate, and makes it so that consequences that could have been avoided or softened were all the more intense. By the same token, if Mao hadn't been fixated on his belief in revolutionary willpower and science overcoming the laws on nature then perhaps the consequences wouldn't have been as devastating. Most importantly, these aspects of the policies that were ushered in by the Leap wouldn't have been continued through the tumultuous 60's and 70's.

To judge the policies implemented decades ago by any country by today's standards would be naive and the Maoist policies are no different – in spite of unrealistic ideology and arrogant implementation they were after all well-meant. The socialist utopia extolled in propaganda at the time was a viable eventuality for the Mao and the CCP. Shapiro argues that a lot of the devastation wrought on the environment with the Great Leap

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<sup>31</sup> Zhang Tongle and Guo Qi. 2008.

<sup>32</sup> The United Nations Conference on the Human Environment held in Stockholm on the 5<sup>th</sup> to 16<sup>th</sup> of June in 1972 is generally considered to mark the start of common environmental awareness and principles amongst many governments. The Chinese sent delegates to the meeting, which came as a surprise at the time as the Chinese were partial to keeping to themselves during the cold war. A transcript of the declaration is available at <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503> (accessed on Dec 8<sup>th</sup> 2009.)

Forward was derived directly from Mao's disdain for nature, quoting general Yang Shankun as boasting, "no other world leader looks down with such disdain on great mountains and powerful rivers."<sup>33</sup> She argues that this megalomania of a man conquering nature and mending it completely to his will was in large part the cause for the utter destruction, but I find it a glaring oversimplification – while it's true that Mao spoke on many occasions about his disdain for nature it's more likely that the environmental degradation was something seen (and is sadly still seen) as a necessary evil for growth, that nature was a passive victim of a war fought on poverty and social structure, not a direct consequence of Mao's hate of nature and love of industry. That being said, it's also obvious that rallying the populace with a common threat or a goal are common tactics of governments to control its citizens more effectively and that it's very likely that Mao was employing those tactics to some extent,<sup>34</sup> but the policies were to a large part quite simply misguided and overzealous emphasis on mobilization without heeding to expertise.

Shapiro points to how the persecution of people is analogous to the active degradation of the environment and she has a point: both were expendable for the utopia. But the policies, completely unrealistic as they were, were still aimed at bringing good life to a huge nation: to usher in a luxurious society set in bountiful surroundings. The wilderness was seen as wasteland, made valuable with grain and inhabitants – it's only recently with concepts such as biodiversity and ecosystems that the wilderness is starting to be of value in itself.

## 1.2: The Cultural Revolution '66 – '76

There's a plethora of books out there aimed at making sense of the chaotic period between '66 to '76 dubbed the Cultural Revolution, and given the complexity of the period and the limited scope of this thesis, the paper will not go further than shedding some light on agricultural policies and the ensuing degradation.

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<sup>33</sup> Shapiro p68. There from Simon Winchester, *The River at the Centre of the World: A Journey Up the Yangtze, and Back in Chinese Time* (London: Viking Press, 1997) p199.

<sup>34</sup> This militaristic mindset translates very well in CCP propaganda films from the Leap, espousing utopian yields and agricultural practices. The active 'militarization against the environment' is the core teaching of Shapiro's book, but her attributing it entirely to Mao's personal belligerence and hate for nature is somewhat inappropriate. An example of these is available at <http://www.tudou.com/programs/view/PsLlwQRw0-A/>

As the decade was steeped in politics and faction fighting, environmental policies were consequently largely subjected to political partisanship through the mid-60's and the 70's. The official agricultural policy, the Dazhai-model implemented in '64 was partly a continuation of uniform over-emphasis on grain established by the Leap and partly a political maneuver on Mao's part. Consequently, this model was rashly implemented and picked up by overzealous cadres clamouring for Mao's approval. With his death in '76 the need to please the chairman subsided along with other forces in the society, the model eventually got discredited by the CCP but the consequences of the agricultural methods further exacerbated the degradation ushered in by the Leap.

### 1.2.1 Learning from Dazhai

Dazhai, located in Xiyang county in Shanxi, is a village set on loess-covered rocky slopes and thin topsoils, at the time comprised of 88 households and 450 people.<sup>35</sup> Situated in fairly inhospitable surroundings amongst rocky slopes and jagged gullies, the citizens of Dazhai had nevertheless efficiently increased their agricultural output to the point of self-reliance through landscaping efforts such as slope-terracing, irrigation systems and leveling of ridges to make for plains. In June 1964 Dazhai officially became the national model for agriculture, local secretary Chen Yonggui was pictured side by side with Mao on the front page of *The People's Daily*, songs were sung about Dazhai and the slogan "In Agriculture, Learn from Dazhai" was on everyone's lips.<sup>36</sup>

Dazhai's legacy lead to farmers being exhorted to use the landscaping model of the Dazhai brigade regardless of the landscape, ignoring factors such as climate, rainfall, soil conditions and topographic circumstances. Whatever the people of Dazhai did, the rest of the nation was urged to copy: the policies during the 60's and 70's were basically a return to Mao's grain zealotry that had been a defining aspect of the Leap.<sup>37</sup> Hills were terraced for grain in imitation of Dazhai's topography, to the extent that hills were raised

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<sup>35</sup> Maxwell, Neville. 1975. "Learning from Tachai."

<sup>36</sup> Dazhai's industrial counterpart is Daqing in Heilongjiang province, similarly extolled by Mao.

<sup>37</sup> Slogans come up with at that time continue where left off from the Leap. A few examples are: 'Destroy pasturelands, open wastelands [*doupo kai huang*], 'on flat-lands construct terraces' [*pingyuan zao titian*], 'plant sprouts in lakes' [*chayang cha dao huxin*], and 'destroy forests, open grasslands' [*huilin kaihuang*] Shapiro 2001, p107.

on flat land to be terraced.<sup>38</sup> To make way for agriculture, deforestation (having subsided somewhat after the confusion and fanaticism of the Leap had worn off<sup>39</sup>) resumed in the same vein as with the Leap with aforementioned, long-term consequences. In areas with poor topsoil the removal of forest cover and manipulation of what little soil there was first lead to soil degradation, then erosion and desertification. Vaclav Smil describes the cycle as “set[ting] in soon after the slopes were deforested to make way for grainfields: after a few years, the accumulated organic matter was sharply reduced and the thin soil rapidly eroded, yields on the newly claimed land plummeted and more land was destroyed just to maintain the harvests. The abandoned, barren land then succumbed to soil erosion, often with the irreparable result of all soil being removed to the bedrock.”<sup>40</sup> With increasing industry and construction came increased demand for raw materials and energy, exacerbating the cutting even further. Lakes were filled to make arable land, a practice that had existed for hundreds of years but never on the same scale as in the Maoist years. Examples abound: in Hubei province the total lake surface area of its 1065 lakes were reduced by three fourths, down to a number of 326.<sup>41</sup> Dongting lake in northern Hunan saw a surface reduction from 435,000 ha to 282,000 ha through land reclamations, even Ulansuhai Nur in Inner Mongolia was reduced by two-thirds to 22,000 ha<sup>42</sup> and the list goes on. To get a feel for the manpower involved and the massive scale of landscaping, statistics on irrigation are particularly descriptive: From the time of the implementation of the Dazhai model the whole country saw massive construction, well-digging and irrigation, by 1977 reservoirs constructed during and since the Leap had already exceeded 70,000; in 1965 – 1978 irrigated farmland had increased by 60%, to over 500,000sq km.<sup>43</sup>

Another aspect of the late 60’s and early 70’s that had a severe, secondary impact on the environment were the ‘war preparation’ campaigns pursued by the CCP that followed cooling relations with the Soviet and the Western powers. Fearing that a war was about to break out, Mao and the CCP exhorted the masses to further convert the

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<sup>38</sup> Shapiro 2001. p 101.

<sup>39</sup> Edmonds 1994. p 48

<sup>40</sup> Smil, Vaclav. 1984. p16

<sup>41</sup> Shapiro. 2001. p 115.

<sup>42</sup> Smil, Vaclav. 1984. p 63.

<sup>43</sup> Li Hanyong 2009. “大寨传奇”. (“Dazhai Chuanqi)

wilderness into arable land, ‘to prepare for war-induced famine’<sup>44</sup> under the slogan “prepare for war, prepare for famine, for the sake of the people” [*bei zhan, bei huang, wei renmin*] that appeared in the second edition of Mao’s Red Book in 1967.<sup>45</sup> Following further pressures on grain yields were relocations of people into the wilderness, most of which was comprised of fragile ecosystems to establish industrial and military bases. Beginning with the Third Front [*sanxian*] campaign in 1964 (following the third Five-Year Plan) that peaked in 1969, somewhere between 18 to 20 million youths were sent from the east coast to distant provinces, eg. Yunnan, Sichuan Heilongjiang, Inner Mongolia, etc. During this campaign, industry was further relocated into pristine ecosystems as witnessed during the Leap, roads and railways laid and wilderness deforested for grain supply for the relocated cadres, all leading to devastating air- and water pollution.<sup>46</sup> By 1971, 380 factories had been moved inland, accounting for one-fifth of all large third front plants.<sup>47</sup>

Another unfortunate legacy that persisted from the time of the Leap was the continued persecution of intellectuals and the educated elite: this effectively shut out the possibility of people educated in environmental protection exerting the slightest influence or helping to rectify the situation.<sup>48</sup> Although protection efforts were virtually inconceivable at the time due to lack of strong infrastructure and interest in these efforts, a platform for the educated to bring attention to the growing need for awareness might nevertheless have changed things in the long run, even stopped the effects brought on by the Leap.

### 1.3 Economic reforms, ’78 -:

With Mao’s death in ’76, the large-scale, frantic mobilizations and implementations gradually subsided, but it didn’t take long for the consequences of the Dazhai model to present themselves. As early as 1979 efforts were made to stop unsustainable slope

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<sup>44</sup> Shapiro 106

<sup>45</sup> The full paragraph is from a response from Mao to Liu Shaoqi, 11th March 1966, on the topic of mechanization in agriculture. Letter available at <http://www.mzdthought.com/html/mxzz/mzdjswj/6/2005/1024/7118.html>

<sup>46</sup> Shapiro 2001. p 142-143. Shapiro gives the Panzhihua steel mill in Sichuan as an example of the devastation.

<sup>47</sup> Shapiro 2001. p 147

<sup>48</sup> Economy 2004. p 56-57

cultivation: the Grassland Management Act of 1982 called for a ban of cultivating slopes over 25 degrees and restricted agrarian expansion in grassland areas to counteract growing desertification. Farmers caught breaking these laws have been fined, and subsidies for taking land out of cultivation have been given out, but these have also been problematic as the areas were poor and peripheral to start with. For instance, if all slopes exceeding 25 degrees that have been converted to agriculture were to be abandoned in Guizhou province, “households would lose 50 to 80 percent of their crop land.”<sup>49</sup>

While these erroneous policies that had started with the Leap were beginning to be rectified under Chairman Deng Xiaoping, and Maoist policies were gradually discredited from the late 70’s onward, the degradation took a different turn. In place of mass line and mobilization of uniform, unsustainable agricultural methods, the emphasis moved on to promotion of unabated and intense industry of a different nature than the centralized, heavy industry from before. Tangible wealth has replaced the the idealist utopia at the end of the tunnel, and with growing consumerism the masses don’t need a political incentive as mobilization to partake in China’s growth. Maoist implementations may have left *no room* for environmental policies, but the economic era *lacks interest* in efficient environmental protection. To blame a government for lack of environmental forethought in the landscape of the 50’s and 60’s is somewhat ludicrous, to blame a government for still not acting efficiently after the situation had already become palpable post-80’s is not entirely unjustifiable.

As of ’72, environmental awareness first entered the political sphere with *The United Nations Conference on the Human Environment* held in Stockholm, after which environmental legislations started to be passed for the first time on, but all of these went unheeded and unenforced till only recently. For the first time, China had the means to take notice of and tackle its environmental degradation, but chose not to so as to not impede economic growth.

From 1978 on, the Chinese market system was decentralized to a market economy: a form in which the market rather than the state drives the economy. China has been an economic marvel with a growth percentage averaging on 9% over the last decade – this successful policy of devolved authority for unchecked, unhampered race to wealth driven

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<sup>49</sup> Edmonds, Richard Louis 1994. p 71-72

by the industrial sector, universally lauded as miraculous, in turn efficiently drowned out environmental interests during the 80's and the 90's – a pattern that Beijing has increasingly been trying to reverse since the beginning of the new century.<sup>50</sup> With it the burgeoning industrial sector has, at the same time as population pressure increases, called for an increasing consumption in natural resources such as water, land and energy, exacerbating already existing problems of desertification, pollution and unsustainable use of raw materials,<sup>51</sup> further aggravated by ignorance about sustainable use of resources in rural areas along with poverty and lingering, unsustainable agricultural practices.<sup>52</sup> Like Mao's utopian end justifying its means, can Beijing's quest for riches justify its environmental apathy, even with its ensuing health and social problems?

### 1.3.1 The environmental consequences to the economic reforms

By the dawn of the 90's, the environmental problems that were to become China's migraine had already reached a disturbing degree. The demand for raw materials sharply increased with the economic reforms, largely as China's production opened to international markets the demand for timber in goods production (furniture, paper, etc). Made worse by economic incentives and gaps in lax regulations and enforcement thereof, logging consequently increased by 25 percent between '78 and '86, and in some areas the ratio of trees cut to planted was as high as 10 to 1. Sichuan, reputedly China's 'greenest' province saw a drop in forest cover from 28 percent in the 70's to 14 percent in the 1980s, and to 8 percent in the 90's. Between the late 50's until 1998, the upper Yangtze valley saw a drop in forest cover from 30-40 percent to a mere 10 percent. By the mid-90's, out of 140 forest bureaus 25 had exhausted reserves and 61 claimed trees were being felled at an unsustainable rate – in 2004, coverage in China was suggested to be at 16.55 percent.<sup>53</sup>

Exacerbated by degradation of grasslands and overcultivation of cropland, the desertification China faces is a problem that Beijing seems helpless against – even the most optimistic numbers show over 2.6 million sq km of land area seeing soil degraded to

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<sup>50</sup> Economy, Elizabeth C. 2004. p 60.

<sup>51</sup> Economy 2004. p60

<sup>52</sup> He Jianlin and Chen Guixiang 2005.

<sup>53</sup> Economy 2004 p 64. Note that US coverage is 24.7 percent, world average is 27 percent. (Ibid).

various extents at the beginning of the 00's, thereof over 1.7 million sq km had succumbed to desertification, both numbers growing cumulatively.<sup>54</sup> Soil erosion, owing to the agricultural practices from the Leap along with population pressures, have lead to relocations and extensive loss of arable land in the north and northwestern provinces – more than one quarter of China is now desert, and reports of sandstorms sweeping over Beijing are becoming more frequent.<sup>55</sup>

Another problem that saw a sharp increase after the 70's was water scarcity and pollution, owing largely to the blind emphasis on economic growth, exacerbated by lax pollution control and lack of interest in the environment, with industry (as well as agriculture) unsustainably draining water, already largely subsidised by the state to fuel economic growth, and poisoning the rest. The statistic for water pollution in China can only be described as horrid. Most of China's already scarce water resources are directed towards agriculture; in northern China for example up to 85 percent of arable land is irrigated. In the State Environmental Protection Agency's (SEPA, now Ministry of Environmental Protection) annual report for 2003, over 70 percent of the water in five of seven major river systems the Huai, Hai, Songhua, Liao and Yellow was grade IV out of V ('not suitable for human contact') or worse. In the three most important lakes, the Tai, Hu and the Dianchi, same statistics show that more than 70 percent of the water in Tai lake has water quality of grade V (suitable only for irrigation) or even worse, while *all* the monitoring stations of Dianchi and Hu denote grade V. Out of the 27 largest cities, only 6 meet state standards on drinking water.<sup>56</sup> And excessive use of chemical fertilizers has more than quadruppled during the reform period, from 8,840,000 tons in 1978 to 42,538,000 in 2001, leading to eutrophication in many of China's most important lakes. Dams construted during the Leap on the major river systems are also majorly problematic. The Huai river, one of many prominent examples, was dammed in 195 places since the 50's – consequently it's unable to flush out pollutants, and whenever local authorities see fit to open the various sluice gates, the water in the reservoirs pollutes large areas downstream. In 1994 over a period of only two weeks, factories simultaneously released wastewater saturated with chemical compounds, altogether amounting to almost 200

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<sup>54</sup> Xinhua Beijing State Council Information Office 2006. “中国的环境保护（1996—2005）”

<sup>55</sup> Economy 2004. p 66

<sup>56</sup> Economy 2004. p 70

million tons of polluted water.<sup>57</sup> Fisheries saw close to 12,000 tons of fish killed and thousands of people were consequently treated for dysentery, diarrhea and vomiting.<sup>58</sup> In 2002 the river ranked 3rd of China's most polluted rivers.<sup>59</sup>

Beijing's measures to tackle this degradation will be explained in part 2, but they can only be described as too little, too late. General consensus is that the CCP only responds after the situation has become exceedingly terrible, and even then its measures are ineffective and its threats are empty. People are gradually growing more pessimistic as to if the communist government can reverse this degradation at all, to the extent that environmentalism has started to tie in with calls for democracy in China. With its growing problems, despite its rocketing GDP, the CCP's position can hardly be envied by other governments.

## Part 2: Environmental Politics in Contemporary China

### 2.1 Environmental laws passed since 1972:

In the spring of 2000, touring through the north and northwestern provinces of China, then premier Zhu Rongji broke from the Communist norm and unflinchingly blamed Mao's 'ambitious but short-sighted agricultural practices' for the dreadful state of desertification and subsequent sandstorms. The practices in question were the terracing and growing of rice and wheat on hills, urged by Mao during his reign, now specifically forbidden by a new edict, "reportedly accompanied by handouts of free grain to enable farmers to plant acres of trees rather than food crops, and free coal to stop them from burning trees and shrubs for fuel."<sup>60</sup>

The CCP can't be said to have been completely inactive when it comes to implementing laws in environmental interests, but it is guilty of doing it ineffectively, even refraining from successful implementation to keep from cutting in on economic

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<sup>57</sup> Tyler, Patrick E. 1994. "A Tide of Pollution Threatens China's Prosperity."

<sup>58</sup> Tyler, Patrick E. 1994.

<sup>59</sup> Tyler, Patrick E. 1994.

<sup>60</sup> Murray, Geoffrey and Cook, Ian G. (2002) *Green China*. p 3.

growth. The first notable, co-ordinated effort by the CCP towards environmental protection made by the government after the chaos of the Cultural Revolution had waned was in 1972:<sup>61</sup> that year saw the founding of Heilongjiang environmental research institute as well as the odd environmental programs beginning in Beijing, Zhongshan and Qinghua. Regardless of whether any of these were actually of any consequence it should be kept in mind that their initiation does nevertheless point to a germination of effort towards environmental protection, at the same time hinting at the deteriorating state of the environment. The following year a definite progress was made with the founding of the National Environmental Agency and the First National Conference on Environmental Protection. A clause on environmental planning was then included in the national plan, which lead to similar conferences being held on provincial levels.<sup>62</sup> In 1978 the National Environmental Protection Research Conference in Taiyuan gave research priority for extensive pollution prevention and called for setting up of environmental research institutes at all provincial levels (excluding Tibet). 1979 then saw the trial implementation of the Environmental Protection Law.

This trial implementation can unfortunately not be lauded as progressive. The industry responded with indifference, claiming a *trial* implementation meant precisely what was implied: that the law was of no consequence.<sup>63</sup> Beijing responded with indifference, thus confirming the law's pointlessness, at the same time defining the attitude that would come to be characteristic of its relationship with the industry through the 80's and 90's, in spite of the increasingly horrid state of the environment. The environmental law in its current form was eventually passed ten years later.<sup>64</sup>

In 1982 the Ministry of Urban and Rural Construction and Environmental Protection founded an environmental protection bureau, but regardless of good intentions, these efforts were once again practically inconsequential: understaffed and underfunded, this bureau was more often than not seen as a mere nuisance to growth. If their assessments were found inconvenient or costly to an industry then they were simply ignored, resulting in further exacerbated degradation by the growing industry. The

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<sup>61</sup> See note no 32 on the Stockholm meeting in '72.

<sup>62</sup> Edmonds, Richard Louis. 1994. p 228-235.

<sup>63</sup> Ibid 1994. p 228-235

<sup>64</sup> Ibid 1994. p 231-233.

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 concensus of its members it too was, for the most part, entirely trivial. In '88, the National Environment Protection Agency was put under the state council and validified as a department of itself.<sup>65</sup>

China's handling of the environmental laws prior to 2000 is characterised mostly by compromise, "a prolonged bargaining process among different interest groups",<sup>66</sup> as the interests of the industry wins perpetually over the environmental interests. Regardless if the laws were designed with genuiniely good intentions, the laws passed were continuously attenuated in the interests of economic and industrial growth, a case in point being the noble but worthless Environmental Impact Assessment, which was void both of directive and protocol prior to 2002 and quite obviously served very little purpose. It's this lack of reaction on Beijing's half that is exceptionally exasperating – it cannot be said that Beijing did nothing, and at the same time it can only be said that they did nothing as their actions were so blatantly void of authentic incentive. In 1999, the National Environmental Protection Agency was elevated to a ministerial level government department. It would take another ten years for the agency to reach ministerial level, when the Chinese Environmental Ministry was founded in 2008.

After 2000, these laws have gradually become stricter and more efficiently enforced – a trend which is partly attributable to concerns with the continuously faltering state of the Chinese environment, partly because of international interest as well as the growing voices of dissent amongst its citizens. But the nature of the problems with enforcements still remains the same – local protectionism is a prevailing sentiment, with local authorities still showing more interest in economic growth than environmental protection. Considering the size of the country, Beijing's task of surveying the enforcement on all levels of all governance in all localities is practically impossible: besides protectionism and indifference, the case is more often than not that pollution is prominent in townships where the locals' livelihood is directly dependent on the polluting industry, regardless if

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<sup>65</sup> Note that department and ministry are very different things. Edmonds, Richard Louis. (1994) p 232.

<sup>66</sup> van Rooij, Benjamin 2006. "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns."

they're directly affected by it.<sup>67</sup> A prevailing sentiment is also that of people linking economic growth directly to environmental degradation; that the latter must follow the former by natural law.

## 2.2. Implications of enforcing environmental law in China

The economic and industrial growth ties in in more ways than muting protest with simple protectionism. One of the most prominent problems with the Environmental Protection Bureaux is that the local governments are accountable for the budgets, staffing and resource allocation of the environmental agencies, making them entirely dependent on the same authorities that regulate industry. This renders the bureaux ripe for nepotism, practically making the local government the real decision-makers, which are continuously more supportive of industrial growth over environmental protection.<sup>68</sup> Incidentally, the rest of the EPBs resources spring from pollution discharge fees – ergo, not only do the EPBs sway to the whims of the governments, they're actually dependent on continued pollution.<sup>69</sup>

The government hasn't been entirely mute on the subject. True to Chinese form, campaigns have been held to rally environmental sentiment: between 2001 and 2004 the focus of these campaigns ranged from stricter inspection of industry to public health concerns and saw 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 a report and a possible solution to the local issues that the campaign pertains to, a schedule of inspections of the violating companies and the setting up of a complaint hotline for people to report incidents of violations. The EPBs will then, after having inspected and deemed a company guilty of violations, exert punitive measures which extends to fining and closing down obsolete industries or repeated offenders, and lastly report the summaries to higher authorities.<sup>70</sup> The campaigns exhorted 2001 to 2004 lead to an increase in

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<sup>67</sup> van Rooij, Benjamin 2006.

<sup>68</sup> Jahiel, Abigail R. 1998. "The Organization of Environmental Protection in China".

<sup>69</sup> van Rooij, Benjamin 2006.

<sup>70</sup> van Rooij, Benjamin 2006.

inspections and sanctions passed: numbers of inspections went from 142,121 in 2001, to 316,000 in 2002 to 496,000 in 2003, whereas sanctions passed went from 18,804 in 2001 to 21,000 in 2003. That being said, sanctions were made in only 4% of inspections in 2003, serving as a reminder at how integrated protectionism is in Chinese governance.<sup>71</sup> Another sad fact 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.<sup>72</sup> In 2009 China Greenpeace put up a list online of 10 ways that companies resorted to conceal their violations, a few examples include joining pipelines with other factories so there's no way of telling whose discharge is unlawful; feigning ignorance; setting up state of the art equipment without actually using it and making discharge pipes lead far off so that they're untraceable to their industry.<sup>73</sup> Examples also abound of companies not heeding sanctions that call for closing down the industry and resuming production on the same scale after a short interval. Relapse of violations calls 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.

As of 2002 the results of the EPBs on violators have been made publicly available, with a hugely positive response from notable environmental organization. In response to the Trial Implementation of Open Environmental Information passed in 2008, SEPA's Prime Minister Pan Yue is quoted as having said that the new demand for public environmental information on violations "would empower the people to participate in environmental management."<sup>74</sup> Ma Jun, the director of IPEA (Institute of Public and Environmental Affairs) and developer of China Water Pollution Map has efficiently pointed out the importance in Chinese society of involving the public in environmental surveillance, perhaps because it is the closest thing to democracy, clamoured for by

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<sup>71</sup> van Rooij, Benjamin 2006.

<sup>72</sup> van Rooij, Benjamin 2006.

<sup>73</sup> Anonymous. Greenpeace.org, 2009. "Playing Dirty: How Factories Hide Their Pollution in China."

<sup>74</sup> Jun, Ma. 2008. "Ni youquan zhidao: yi ge lishixing shike." (Your Right to Know: A Historic Moment.)

environmental activists. Indeed, most of these activists name it as the prime requisite for authentic environmental protection and their point is valid, in that without democracy the people are unable to vote for environmentally-oriented personas into governance, which would in turn be likely to lead to much quick progress in environmental protection.

Ma Jun's aforementioned Water Pollution Map<sup>75</sup> is a prominent example of public involvement in environmental awakening. It's an interactive online map of China, with industries that have been caught as violating environmental laws (ie. discharging waste unlawfully) marked out. The public can notify the administrators of violating industries, which in return get marked out on the map, thus enabling consumers to look up their supplier, and with that, pressing companies to maintain a clear reputation.

It remains to be seen if the Open Environmental Information Law will be of any consequence, judging from the White Paper on Environmental Protection in China, 1996-2005, 《中国的环境保护（1996—2005）》<sup>76</sup> made public in 2006, one can only approach it with caution – the report is heavily censored and the statistics are lofty compared to other sources. As an extreme example, the report details that “178 towns and townships have been awarded the “beautiful township award” as of '05,”<sup>77</sup> without hinting at the standards for these award, other than that they involve environmental awareness. Note that authentic examples of beautification can portray an exasperating lack of real awareness, with “officials in Yunnan Province in southern China beautif[y]ing] Laoshou Mountain, which had been used as a quarry, by spraying green paint over acres of rock.”<sup>78</sup>

### 2.2.1 The role of environmental NGOs and the media

Understandably, Beijing is ever harder pressed at a national and international level to tackle its environmental problems more efficiently. The growing economic costs and social instability directly attributable to environmental degradation have not escaped its attentions: in 2001 the CCP's organization department published a 308-page report on

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<sup>75</sup> Jun, Ma. “Gongzhong yu huanjing yanjiuzhongxin zhongguo shuiwuran ditu.” (China Water Pollution Map.)

<sup>76</sup> Xinhua Beijing State Council Information Office 2006.

<sup>77</sup> Xinhua Beijing State Council Information Office 2006.

<sup>78</sup> Tyler, Patrick E. 1994.

public protesting connected to social and economic issues, noting that “protesters frequently seal off bridges and block roads, storm party and government offices, coerc[e] party committees and government, and there are even criminal acts such as attacking, trashing, looting and arson.”<sup>79</sup> National Geographic noted that in 2005 there were over 51,000 cases of pollution-related protesting.<sup>80</sup> Environmental degradation (including resource scarcity) amounts to 8-12 percent of China’s yearly GDP, costs for urban air pollution are estimated at over 20 billion USD and general consensus is that increasing water pollution and scarcity will be among China’s most difficult problems to solve over the next century.<sup>81</sup>

The government is therefore under immense pressure to balance economic growth with environmental protection in order to cut costs and avert public incitement, at the same time that it must deter political currents that might pose a threat to the omnipresent party. The way opted for by the CCP is similar to other Asian (and East-European) governments in that the government has taken to supporting environmental NGOs and media coverage rather than giving agents actual influence in the political sphere. This support is only imparted to a certain extent: where nepotism and protectionism is too dense for the government to have any influence over environmental violators the NGOs are a great help, rallying public sentiment and bringing public attention to violations. At the same time, the potential effect that these NGOs might have in the political sphere has effectively made the government very distrustful of them; The NGOs ostensibly serve to assemble dismayed intellectuals, farmers and other irate citizens. The possibility that the organizations might grow out of its framework and into the political sphere is a very likely plausibility – indeed, many environmental NGOs put democracy as a prerequisite for environmental protection to be effective. Beijing has even been known to imprison activists or notable environmentalists, more often than not on superficial charges.<sup>82</sup>

In turn, the government has set up a number of government-organized nongovernmental organizations (GONGOs), that adhere tightly to the CCP but at the

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<sup>79</sup>Eckholm, Eric. 2001. “China’s Inner Circle Reveals Big Unrest and Lists Causes.”

<sup>80</sup>Larmer, Brook 2008. “Bitter Waters: Can China save the Yellow – its Mother River?”

<sup>81</sup>Economy, Elizabeth C. 2004. p 88.

<sup>82</sup> On notable environmental activists imprisoned, see Dai Qing, author of *Yangtze! Yangtze!*, (available online at [http://www.threegorgesprobe.org/pi/documents/three\\_gorges/Yangtze/index.html](http://www.threegorgesprobe.org/pi/documents/three_gorges/Yangtze/index.html)), imprisoned in 1989 and more recently Tan Zuoren, environmental-human right activist, imprisoned in 2009, both on charges of inciting the public.

same time enjoy considerably more freedom than their NGO counterparts. These are also better funded, and more often than not act as mediators between the environmental NGOs and Beijing – there are even tendencies for the NGOs and GONGOs to form beneficial partnerships. Indeed, the overall evolution seems to be for the GONGOs to get stronger and more independent as time goes by.<sup>83</sup>

The media has played a decisive role for these NGOs to get their voice heard, with 79 percent of Chinese stating in a public poll in 2001 that their source for environmental protection-related information was the media, as opposed to only 42 percent naming government publicity.<sup>84</sup> Radio talk shows have picked up on environmental protection, the most successful one led by Wang Yongchen of Green Earth Volunteers halting construction of the Yangliuhu dam on Min river in Sichuan province by involving the public in criticizing the dam in 2003. The television, often in co-operation with NGOs, has been very successful in bringing attention to violations with coverage, and continues to rouse both environmental awareness in the public and spark grassroots activism on an ever growing level. The role of these NGOs and GONGOs is likely to gradually become more important – at the same time, they do however reveal just how weak Beijing's environmental protection policies in and of themselves truly are.

### Conclusion

Never to be outdone, China is now the biggest investor in renewable energy in the world. In late 2008 the government promised 4 trillion CNY to be used to stimulate growth over the next three years, of which 1 trillion CNY would be used on “developing renewable energy sources, such as wind and solar power, sustainable usage of materials and low-polluting industry.”<sup>85</sup> This is a remarkable shift for the same government that was persecuting intellectuals in favour of unsustainable megaprojects half a century ago, but whether this green approach has sprung from environmental concerns or economic

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<sup>83</sup> Economy, Elizabeth C 2004. p 135.

<sup>84</sup> Note that people weren't made to limit their choices to either one of these, and some use both as their sources. Statistic taken from Ibid.

<sup>85</sup> Anonymous. CIEPC. “Huanjingbaohubu jinhuo sannian xin zeng huanbao chanye touzi 1 wanyi.” (Ministry of Environmental Protection invests 1 trillion in new environmental protection industry.)

concerns is still at question. Perhaps both, with Beijing striving for a way to balance economics with the environment?

It's clear that because of lack of interest and lax infrastructure in environmental politics, the public is going to be decisive in the fight for environmental protection. Like the people previously mobilized by Mao during the Leap and the Cultural Revolution, the citizens will have to recognize the value and the state of the environment, and in turn mobilize the government to act efficiently and seriously. Will the CCP be able to reverse the consequences of its past policies? It remains to be seen, but if Beijing keeps insisting on censoring statistics for appearance's sake in a move similar to the spray-painting officials in Yunnan the outlook is bleak. Moreover, as Mao persecuted the intellectuals in the 20th century, how long will it take for Beijing to stop condemning and start working with environmentalists?

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