



## Environment Protection In China

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## Abstract

The problem of environment and pollution in China is receiving inconsiderable attention from people all around the world. With the new era of consumerism as a social and economic order, it's an ideology encouraging the acquisition of goods and services in ever-increasing amounts, the development of industrialisation has been increasingly accelerated without considering its consequence on the environment and people's health.

While it is known that pollution effectively damaged not only upon people body and mind, but also on the environment, this problem are still ignored by many people even it is believed to be damaging human health, air and water quality, agriculture and ultimately the economy. On the surface level, as its contribute to people's perception mostly through Western media, Chinese government seem to react to it through policy. However, its efficiencies are still highly questioned in a Global affair as today Chinese people, million of them, still suffered from the pollution problem that is not seem go to away anywhere soon. Furthermore, the environment crisis in China is not only creates bad effects upon Chinese people, but rather through out the world. This is because of the size of China demography and the amount of Chinese population itself.

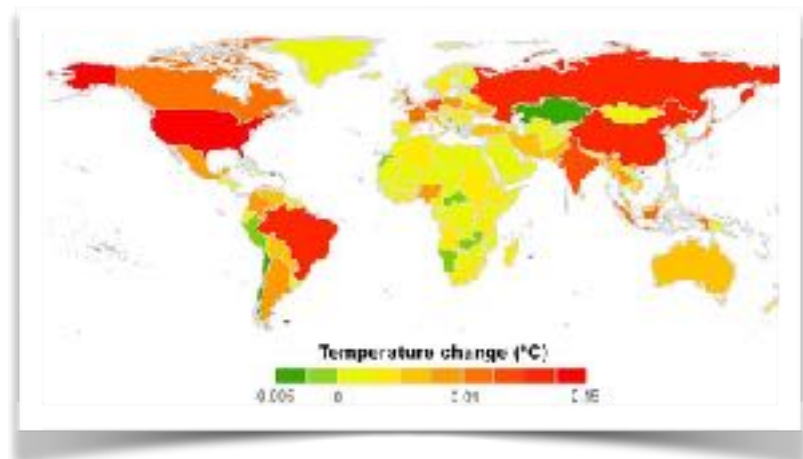
This research will further investigate the issue that was build on the problem of environment crisis in China by analysing how Chinese government react to the issue by comparing and contrasting the existed data in four aspects of the energy-environment problem including I). air pollution, II). water pollution, III). the emission of CO<sub>2</sub> in the atmosphere that causes global warming, mainly from the burning of coal, and IV). shortage of future energy supply that relies on exhaustible resources.

As a result, the extent information of China environment crisis will be shown as a result of this research to explore and extend the problem that will help contribute to the solution of the problem in the future. However this is just an simple research that mainly to prove the point of the hypothesis, as it collecting only small amount of example due to the limited amount of time and resources.

## Introduction

“ Smog is affecting larger parts of China, and environment pollution has become a major problem, which is nature's red-light warning against the model of inefficient and blind development.” Li Keqiang, current Premier of the State Council of the People's Republic of China. This phrase indicates that the pollution in China is one of the major problems that China is facing today. The term pollution means the presence in or introduction into the environment of a substance or thing that has harmful or poisonous effects. ([dictionary.com](http://dictionary.com)) While China's economic boom has increasingly lifted up the devastation of its environment in terms of pollution and

resources, the roots of the problem stretch back since the economic reform toward industrialisation centuries ago. Economic reforms in the late 1970s support the development not only in urban areas but also in rural industries further



exacerbated the problem. It wasn't until the 1972 United Nations Conference on the Human Environment that China began to develop environmental institutions, but by then the country's air and water had been already poisoned. As a result, China became the world's largest producer of greenhouse gases, surpassing the United States in 2007, and was responsible for 27 percent of global emissions in 2014 as a result of the country's energy consumption skyrocketing.

In the past recent decades, Chinese people have witnessed the fastest and the most acceleration of industrial technologies that facilitated factory and manufacturing processes to be more advanced. Thus, the economic activities of production under the era of consumerism and with the advancement of the manufacturing process, it requires the use of energy, which affects the environment

in the forms of, according to Gregory C Chow, Princeton University, water pollution, air pollution and emission of CO<sub>2</sub> that causes global warming. It can be said that without having said that China is in a process of economic development, it's nevertheless one of the most polluted place on Earth as we can see from the information below,

- I. First, China's water pollution. China water is polluted by the trash of waste. According to CFR report, there have been large volume of organic and toxic waste from not only households, but also from the agriculture and industry as a result of urbanisation. Also Deforestation has caused the flow of waste along the rivers and affects water supply and quality. People's Daily, June 12, 2007 reports that 'Lake Taihu was covered with a foul-smelling algae and freshwater was shut off for more than 2 million people in Wuxi due to the blue-algae infestation of the lake.' (eople's Daily, June 12, 2007)
- II. Second, According to a report of the World Health Organisation (WHO) in 1998, The air and water in China, especially in the urban areas, are among the most polluted in the world. 7 out of 10 cities in China became one of the top ten most polluted cities in the world. CFR stated that 'Sulphur dioxide and soot caused by coal combustion are two major air pollutants, resulting in the formation of acid rain, which now falls on about 30% of China's total land area. Industrial boilers and furnaces consume almost half of China's coal and are the largest sources of urban air pollution. The burning of coal for cooking and heating in many cities accounts for the rest.' (China's Environmental Crisis, CFR, 2016)
- III. Third, CFR also report that according to "China country analysis brief" published by the US Department of Energy (2001) China accounted for 9.8% of world energy consumption which can be divided to total primary energy consumed of (China's Environmental Crisis, CFR, 2016)
  - 63% was coal,
  - 26% was oil,
  - 7% hydroelectricity,
  - 3% natural gas.

The largest gains in these energy consumption were from the industrial sector in which by 2025, there are predication indicate that China will be responsible for approximately 14.2% of world energy consumption.

- IV. Forth is CO<sub>2</sub> emissions, which can be result in climate changes, affecting through out the world physical and biological systems. In 2001, 13 percent of China accounted, Western European 16 percent and the US 24 percent of the world's energy related carbon emission. However, in 2007, China has taken over the US for the first time in term of the world's largest producer of greenhouse - gases. As China is a non-Annex I (not sign in Kyoto Protocol) country under the United Nations Framework Convention on Climate Change, CFR shown that it has not agreed to binding emissions reductions in the Kyoto Protocol, which it ratified in August 2002 as it stated 'China's policies aim at cutting energy costs and reducing local pollution, rather than reducing carbon emissions for the benefit of the world.'
- V. CFR also concluded that 'while China ranks second in the world behind the United States in total energy consumption and carbon emissions, its per capita energy consumption and carbon emissions are much lower than the world average.' In the book called China's Economic Transformation By Gregory C. Chow, 2015 gave the information that In 2001, the United States had a per capita energy consumption of 341.8 million Btu, greater than 5.2 times the world's per capita energy consumption and slightly over 11 times China's per capita consumption. (Per capita carbon emissions are similar to energy consumption patterns, with the United States emitting 5.5 metric tons of carbon per person, the world on average 1.1 metric tons, and China 0.6 metric tons of carbon per person.) which although China per capita energy use is relatively low compare to United state, China's total consumption of energy and the resultant carbon emissions are solid, due to the large amount of population and the heavily use of coal.

Therefore, it is unarguable that the development of China economic growth, including the rapidly growing in consumption market, exporting and manufacturing rate, are contributed and responsible for not only within China environment, but also the world.

## Thesis

This crisis sparked a fierce debate about China economic development policies without considering the effects upon its own people and environment, and also its lack of enthusiasms of government to fix the problem. In recent years, there are numerous sign of political instability movement that are causing by the environment crisis as CFR reported that 'Environmental damage has cost China dearly, but the greatest collateral damage for the ruling Communist Party has likely been growing social unrest.' as there are rising of demonstrators that have proliferated as 'citizens gain awareness of the health threats' which they are organised protest, mostly through social media.

In addition, there are an information from Moreover, Matus, K., K.-M. Moreover, Matus, K., K.-M. Nam, N.E. Selin, L.N. Lamsal, J.M. Reilly and S. Paltsev (Global Environmental Change, 2012) also support the hypothesis that he pollution crisis in China contribute to the imbalance of economy. They stated that "air pollution and health impacts are relating with the Chinese economy." Their research estimated the marginal welfare impact to the Chinese economy of ozone which is increased from 1997 US\$22 billion in 1975 to 1997 US\$112 billion in 2005, despite improvements in overall air quality.

Moreover, CFR's Economy points out that one of the most important changes in China's environmental protest movement has been a shift. They reported that 'beginning in the late 2000s, from predominantly rural-based protests to urban-based movements. The issue has worried the top leadership, which views the unrest as a threat to the party's legitimacy. "Air pollution in China has turned into a major social problem and its mitigation has become a crucial political challenge for the country's political leadership," wrote, the Centre for Strategic and International Studies's Jane Nakano and Hong Yang. In May of the same year the government strengthened the country's Environmental Protection Law for the first time in twenty-

five years. Such moves reflect “a changing understanding within China about the relationship between economic development and societal wellbeing and economy”

For this reasons, it can be concluded that environment crisis in China have significant relationship upon not only people health, but also economy and political instability.

## Literature review

There are diverse studies and evidences suggested the negative impact of advertisement on human health. To begin with, we have to investigate the multitude



aspects of bad effects of pollution in China and how such a problem reflected itself through many aspects of not only our life but also our society. For example, Kebin He, Hong Huo, and Qiang Zhang (Department of Environmental Science and Engineering, (Tsinghua University, Beijing 2015) concluded that China is rapidly industrialising as evidenced by urbanisation, along with the rapid increased in energy consumption.

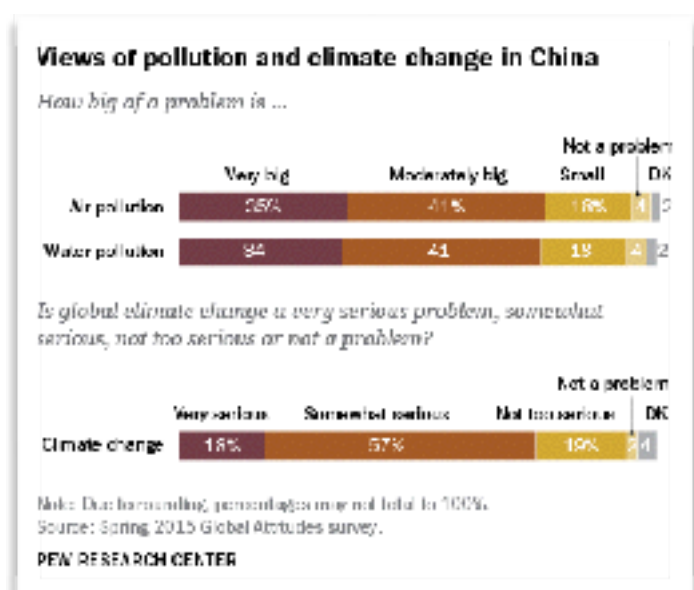
However, these fought many Chinese cities into urban air pollution problems in recent decades. During the 1970s, industrial black smoke characterised of Chinese industrial cities. In their research, they said that ‘in the 1980s, many southern cities began to suffer serious acid rain pollution; and recently, the air quality in large cities has deteriorated due to nitrous oxides (NO<sub>x</sub>), carbon monoxide (CO), and photochemical smog, which are typical of vehicle pollution. Some cities now have a mixture of these. In conclusion, they concluded that Urban air pollution influences both the health of citizens and the development of cities. To control air pollution and protect the atmospheric environment, the Chinese government must have implemented a variety of programs.’

To illustrate more evidence of the effects of environment crisis upon people's health, JL Mumford, XZ He, RS Chapman, Cao SR, DB Harris, XM Li, YL Xian, WZ Jiang, CW Xu, JC Chuang, (1987) found that In Xuan Wei County, Yunnan Province, lung cancer mortality is among China's highest (especially in females) and its effects is almost like indoor burning of "smoky" coal, as opposed to wood or "smokeless" coal, than with tobacco smoking. These studies suggested an etiologic link between domestic smoky coal burning and lung cancer in Xuan Wei which is an example of how bad the environment issue in China is.

Finally, unfeng(Jim) Zhang and Kirk R. Smith (Environmental Health-Perspectives, 2007) said that Nearly all China's rural residents and a some fraction of urban residents use solid fuels (biomass and coal) for household cooking and/or heating. As a consequence, a global meta-analyses of epidemiologic studies indicate that indoor air pollution from solid fuel use in China is responsible for approximately 420,000 premature deaths annually, more than the approximately 300,000 attributed to urban outdoor air pollution in the country. They concluded that health effects include respiratory illnesses, lung cancer, chronic obstructive pulmonary disease, is weakening of the immune system, and reduction in lung function as a result of environment crisis in China. Their measurements indicate that pollution levels in households in China is exceed China's indoor air quality standards.

## Hypothesis

From out of literature review, since there are various studies suggesting that the pollution has a large impact on human health, but however, it's still debatable that whatever the government environment protection policy is involve with. In short, the hypothesis of this research is that the pollution





- crisis in China contribute to the imbalance of economy and political instability.

Thus, this research will find further evidence of environment protection policies of Chinese government in order to approach to the answer.

## Result

China's accelerated economic development combined with the country's relaxed environmental oversight has caused a number of ecological problems, which have been fairly discussed in the first part of the research. It draw unparalleled public attention as it is causing the damage to both people living standard and natural damaged.

In response to public pressure, the national government has attempted in many ways to curb pollution in China and improve the country's environmental situation. However, the government's response has been criticised as inadequate. However, the point of this essay is to find the link between environment crisis with economic and political instability through government environment protection policies. Nevertheless, In April 2014, the government amended its environmental law to better fight pollution.

To begin with, Environmental policy in China began with the National People's Congress and managed by the Ministry of Environmental Protection. It's seen as a similar policy of the United States before 1970 by the Centre for American Progress as the central government issues fairly strict regulations, but the actual monitoring and enforcement is largely undertaken by local governments which have greater interest in economic growth. The environmental in China work as of non-governmental forces, such as lawyers, journalists, and non-governmental organisations, is, for some reason, limited by government regulations.

The government section that deals with this issue is The Ministry of Environmental Protection (MEP), formerly the State Environmental Protection Administration (SEPA), is a cabinet-level ministry in the executive branch of the Chinese Government that is responsible for implementing environmental policies, as well as the enforcement of environmental laws and regulations. (News.sina.com.cn.

11 March 2008.) The Ministry task covers from protecting China's natural resources such as air, water, and land to controlling pollution and contamination. It is empowered directly under the State Council. Thus, it required by law to implement environmental policies and enforce environmental laws and regulations. Since 2006, there have been five regional centres to help with local inspections and enforcement.

In addition to prove the hypothesis, this research will show the Current environment law that is being used, but there are some of the pre-concern period that concerned on the environment issue such as,

- In 1979, China passed the Environmental Protection Law for Trial Implementation.
- And also the 1982 Constitution included important environmental protection provisions.

In current time, the new environmental protection provisions go into effect in January 2015, the government's environmental agencies will be allowed to enforce strict penalties and seize property of illegal polluters. According to Rachel E. Stern, *Environmental Litigation in China: A Study in Political Ambivalence* (Cambridge University Press, 2013) and Xia Jun, "C China's Courts Fail the Environment," *China Dialogue*, January 16, 2012 concluded that "Companies that break the law will be "named and shamed", with company executives subject to prison sentences of 15 days. There will be no upper limit on fines; previously, it was often cheaper for companies to pay the merger fines provisioned by the law than install anti-pollution measures. In all, the new law has 70 provisions, compared to the 47 of the existing law. More than 300 different groups will be able to sue on the behalf of people harmed by pollution. It remains to be seen whether these changes to the law will overcome some of the traditional problems with environmental litigation in China, such as difficulty getting cases accepted by the court, trouble gathering evidence and interference from local government."

New laws establishing comprehensive regulations have begun to stabilise the economy as a whole. On the national level, policies are formulated by the State Environmental Protection Administration (SEPA) and approved by the State Council. The role of SEPA, which was established in 1998, in order to support national environmental policy and regulations, collect data and provide technological advice

on both national and international environmental issues. This also encourage the economy one way or another. It can be said that, China became a more stable nation in term of manufacturer as a whole.

This show the obvious relationship between the environment and the economy as it said, "Under the new law, local governments will be subject to discipline for failing to enforce environmental laws. Regions will no longer be judged solely on their economic progress, but instead must balance progress with environmental protection. Additionally, local governments will be required to disclose environmental information to the public. Individuals are encouraged to "adopt a low-carbon and frugal lifestyle and perform environmental protection duties" such as recycling their garbage under the law." (Voice of America. 25 April 2014) It indicated that environment issue is related to the economic progress. Bad environment is a consequence of the imbalance of economic out put.

In June 2002, China issued the demonstration programs for pollution regulation in ten major Chinese cities called the Cleaner Production Promotion Law. It help redesigned several river valleys as priority areas. So far the laws are mainly of the area and economic regulation, rather than market-based policies such as taxing the polluters. This on the other hand, equip china with even better economic strategy in a more sustainable way. It cane be concluded that according to China's Energy and Environmental Problems and Policies research, "environment protection polices in involve into economy inseparately in term of policies for environment protection by regulation and economic incentives, China has set up a system for monitoring the discharge of pollutants but it is far from perfect because it relies on local government officials to implement the system." (Gregory C Chow, Princeton University O13, P28, Q5)

CO2 emission also remain one of the most important issue for Chinese government as the policies for reducing the emission of CO2 per se are still under negotiation among nations. According to China's Energy and Environmental Problems and Policies research, "A recent expression of China's policy of limited involvement in the prevention of global warming is a statement of President Hu Jintao on Thursday June 7, 2007, during the G8 meetings in Germany that calls for upholding the

principle of "common but differentiated responsibilities" for developing countries in tackling climate change. "We should work together to make sure the international community upholds the goals and framework established in the United Nations Framework Convention on Climate Change and its Kyoto Protocol [in 1997] and the principle of common but differentiated responsibilities" while developing countries should also carry out "active, practical and effective cooperation...Considering both historical responsibility and current capability, developed countries should take the lead in reducing carbon emission and help developing countries ease and adapt to climate change... For developing countries, achieving economic growth and improving the lives of our people are top priorities. At the same time, we also need to make every effort to pursue sustainable development in accordance with our national conditions." (Gregory C Chow, Princeton University O13, P30, Q5)

Another positive aspect of the policies is that unlike other developing countries such as India, South Korea and Brazil, China was able to reduce both the amount of energy and carbon consumed per dollar of GDP somewhat over the past two decades. (Gregory C Chow, Princeton University O13, P30, Q5). They can manage to reduce the energy intensity by the Chinese government to conserve energy, and the adoption of more modern industrial plant and equipment.

As a result, China's Energy Conservation Law came into effect on January 1, 1998. It indicate government attempt to increase overall energy efficiency including reduction of coal and petroleum subsidies. Which was seen as an attempt of government to boot its instability and to please the protester at same time.

Moreover, the successful of china laws and environment protection policies is a strength of the central government itself. If it want, it can enforce any laws and regulation because the operation of an industrial manufacturing in China requires an approval and an assistance from the central government.

In order to protect and improve the economy and to maintains political instability, the government have to provide environmental balance for people for the well being of society, which can lead to the economy.

In conclusion, it can be concluded that the pollution crisis in China clearly contributed to the decline of economy and political instability. It's reflect in the

government policies toward environment in order to prevent political riot and economic scramble due to the lack of land and poor health of its own people.

## Discussion

The purpose of the research is to explore and clarify the given situations of the relationship between Chinese environment crisis with both the government instability and economy instability base on how government enforce their environment protection policies. The aim is to show the extent data in order to provide significant insight information to the problem. However, this research is not useful for decision-making as it provide only small sample of the situation. It's t is unarguable that the development of China economic growth, including the rapidly growing in consumption market, exporting and manufacturing rate, are contributed and responsible for not only within China environment, but also the world.

According to the U.S. Environmental Protection Agency, they told that China has shown great determination to "develop, implement, and enforce a solid environmental law framework" even the impact is not yet to be clear. They described that "The harmonisation of Chinese society and the natural environment is billed" as because, according to the result of this research, it became one of the country's top national priorities. Even some evidence suggests that environment protection in China is mostly is a political attempt to stabilise the politic and economy, International groups observed that the law revision passed in April 2014 is a positive development. However there is one executive interviewed said that China's environmental regulations were "comprehensive" but yet "vague," leaving local officials with large discretion in terms of enforcement. This is because they are likely to adopt proactive practices, such as "developing certifiable environmental management systems," but not basic ones, such as waste recycling.

## Academic Article Reference

- I. "华建敏：组建环境保护部加大环境保护力度—新闻中心—新浪网" (News.sina.com.cn. 11 March 2008.)
- II. Melanie Hart; Jeffrey Cavanagh (20 April 2012). "Environmental Standards Give the United States an Edge Over China". Center for American Progress. Center for American Progress.
- III. "华建敏：组建环境保护部加大环境保护力度—新闻中心—新浪网". [news.sina.com.cn](http://news.sina.com.cn).
- IV. Council on Foreign Relations on China's Environmental Crisis Eleanor Albert, Online Writer/Editor, and Beina Xu ( January 18, 2016)
- V. Policy: Four gaps in China's new environmental law Bo Zhang&Cong Cao (21 January 2015)
- VI. Rachel E. Stern, Environmental Litigation in China: A Study in Political Ambivalence (Cambridge University Press, 2013); Xia Jun, "C China's Courts Fail the Environment," China Dialogue, January 16, 2012
- VII. "China Revises Environmental Law". Voice of America. 25 April 2014. Retrieved 27 April 2014.
- VIII. "How participation can help China's ailing environment". ChinaDialogue. Retrieved 28 July 2013.
- IX. "China is holding a No Car Day in more than 100 cities as it tries to reduce smog ahead of the 2008 Summer Olympics.". BBC News. 22 September 2007. Retrieved 28 July 2013.
- X. "Chinese protesters clash with police over power plant". The Guardian. 22 October 2012. Retrieved 28 July 2013.
- XI. Bloomberg News (14 January 2013). "Beijing Orders Official Cars Off Roads to Curb Pollution". Bloomberg. Retrieved 27 July 2013.
- XII. Edward Wong (March 29, 2013). "Cost of Environmental Damage in China Growing Rapidly Amid Industrialization". The New York Times. Retrieved March 30, 2013.

## Picture's Reference

- I. <http://www.citylab.com/work/2014/01/redrawn-world-map-identified-global-warmings-biggest-offenders/8134/>
- II. <http://www.cfr.org/china/chinas-environmental-crisis/p12608>