

# Study on Environmental Protection and Institutional Innovation in China

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**Abstract:** The sustainable use of natural resources and good eco-environment is the important indicate of sustainable development. The economic and social development can not surpass the bearing capacity of natural resource and environment, so the serious situation of environmental pollution urges human beings to deal with the environment problems well during the economic and social development and coordinate the relationship between the economic development and eco-environment. Thus it is necessary to improve the existing system of environmental protection and promote environmental protection through institutional innovation so as to realize the coordinated development between economic development and environmental protection.

**Key words:** Environmental protection; Environmental pollution; Institutional innovation; Advices

## 1 Introduction

It is necessary to demonstrate an innovative alternative to traditional regulatory management of environmental deterioration problems. The impetus for the work came from evidence that existing presumptions of environmental management theory and practice were increasingly ineffective. Innovation was needed. The work was to achieve CO<sub>2</sub> reduction consistent with the objectives of international global climate change concerns (David L. Hawk, 1999). In order to settle the conflicts between economic development and environmental protection, it is urgent to implement institutional innovation except government regulations and technological progress. Only have the rational arrangements established, people's future expectation and traditional lifestyle can be guided and changed. Due to the inefficiency of traditional environmental protection ways, it is necessary to rethink the rationality and moderateness of human being's activities and implement instructional innovation on the environmental protection.

This paper examines the necessity of institutional innovation on environmental protection through expounding the serious situation of environmental deterioration. It argues that the traditional ways of environmental protection can not meet the needs of environmental sustainable development, thus the environment should be better protected by institutional innovation.

## 2 Environmental Deterioration

Environmental degradation is defined as a process wherein the natural environment of the planet is degenerated to such an extent, that the biodiversity and the general health of the planet is subjected to drastic reduction. In other words, this phenomenon can be defined as deterioration of the Earth's natural surroundings as a result of excessive exploitation of the available resources. The rapid growing population and economic development is leading to a number of environmental issues because of the uncontrolled growth of urbanization and industrialization, expansion and massive intensification of agriculture, and the destruction of forests.

Global warming of the climate system has become an unequivocal fact. The global average sea level has been constantly rising too. Our lifestyles, economies, health and social well-being are all affected by climate change, and although the consequences of climate change will vary on a regional basis, all nations and economic sectors will have to contend with the challenges of climate change through adaptation and mitigation. Tourism is no exception and in the decades ahead, climate change will become an increasingly pivotal issue affecting tourism development and management (Wenhong Yang, 2010). The climate change problem continues to flourish, and there is now no country exempt from experiencing its effects. The economic, environmental, social, and political implications of climatic change are widely recognized and documented, providing a basis for the negotiation of national, regional, and global mitigation efforts (Stern, Nicholas, 2007; Lynas, Mark, 2007). The world has already begun to experience the devastations of such environmental phenomena: floods, typhoons, and droughts of catastrophic proportions impact millions around the globe annually. In fact, the conclusions

of many scientists show that climate change has already had a significant impact on humans and the environment. One hundred fifty thousand have lost their lives, many more have lost their homes and over five million people—most of whom live in the poorest nations—have become sick with serious illnesses (such as malaria) that spread more quickly due to global warming (Michael G. Faure & Andre Nollkaemper, 2007). The most salient example of climate change is probably global warming, resulting from global climate change: the phenomenon will be spread over decades, and will result in a wide range of different effects in different regions of the world. Global warming is an environmental phenomenon that will affect global ecosystems in countless and unknown ways. A major effect presently discussed is the rise of sea levels due to melting glaciers and ice caps (World Vision, 2008). It is now widely recognized that global warming over the past 50 years is largely due to human activities that have released greenhouse gases into the atmosphere. The seemingly small rise of mean temperature is already showing adverse effects. One of the consequences has been a rise in the global average sea level. Another effect has been more frequent and intensified droughts in recent decades in parts of Asia and Africa. As a result, global surface temperature is expected to increase by 1.4 to 5.8 degrees Celsius from 1990 to 2100 (UNEP, 2002).

Climate change is a normal part of the Earth's natural variability, which is related to interactions among the atmosphere, ocean, and land, as well as changes in the amount of solar radiation reaching the earth. These impacts of climate change affect the availability of resources of the country of origin and the basic elements of life, e.g. food, water, health, as well as culture. The impacts of climate change undermine livelihoods and security, exacerbate income differentials and deepen inequalities. Temperature rise and less productive land will accelerate urbanization, which will generate additional competition for scarce resources in cities; cost of food and energy will increase; vector-borne diseases will be on the rise; increased social tension and political conflict within and between States is likely. Recently, the Global Humanitarian Forum has stated that climate change is currently responsible for 300,000 deaths per year and will in the future reach half a million by 2030 (Global Humanitarian Forum, 2009). Thus Climate change is without doubt one of the foremost and most profound threats to environmental security and basic human rights, and its effects are already being observed across the globe. For human populations, the impacts are considerable and is deteriorating environmental conditions and compromising the most basic human rights to life, food, shelter, health, and water. The short and long-term effects of climate change will compound existing poverty levels and obstruct social and economic development (EJF, 2009).

### **3 Environmental Protection through Institutional Innovation in China**

So-called institution refers to a kind of law, customs, usage, organization or other factors which have been established or come into being gradually in the political or social life of a certain ethnic group. The institutional innovation is to realize social sustainable development and innovation of reform through creating new and effective institutions and regulation systems in the existing context of production and live environment. All these innovations have to rely on institutional innovation and continuing stimulation. According to the notion of sustainable development, the laws related to environmental resources have been revised and formulated in China. Some systems such as control system of pollutant, control system of sources of pollution, system of economic incentives for the prevention of environmental pollution, public anticipation system, system for clean production, environment label system, market-driven system of environmental protection industries and so on through reforming or innovating the environmental protection systems (Wu Ling & Li Cuixia, 2008). However, when there are conflicts between environmental protection and economic development, it will be more important to protection environment effectively. Thus how to implement effective innovation on the environment protection and realize environmental protection and sustainable economic development is also the significant social problem for every country in the world to confront with.

#### **3.1 Improving environmental protection system and realize institutional innovation**

Strictly speaking, the environmental protection is a whole system, not only includes technologies of environmental protection, investment of environmental protection and policies of environmental protection, but also involves the establishment and improvement of system of environmental regulation. China has established a system of environmental protection standards at both the national and local levels. National-level environmental protection standards include environmental quality standards, pollutant discharge (control) standards, and standards for environmental samples. Local environmental protection standards include environmental quality and pollutant discharge standards. By the end of

2005, the State had promulgated over 800 national environmental protection standards. The municipalities of Beijing and Shanghai, and the provinces of Shandong and Henan had promulgated over 30 local environmental protection standards (IOSC, 2006). But there are a lot of systematic problems which needs to settle through institutional innovation. These problems include the delimitation of property rights of environmental resources and the development of environmental protection industries. All these systems, alternatives of environmental protection or institutional innovations will basically seek to protect eco-environment effectively.

### **3.2 Implementing the system of government leadership and public participation**

China has implemented an environmental management system, whereby governments at all levels are responsible for the environmental quality of the areas within their jurisdiction, the competent administrative departments in charge of environmental protection have the power of overall supervision and management, while other relevant departments exercise such supervision and management functions according to the provisions of the law. The Chinese government should endeavor to boost public participation in environmental protection. The Environmental Impact Assessment Law requires public participation in the work, and demands appraisal meetings or hearings be held or other forms be taken for any plan or construction project that may cause an unfavorable impact on the environment to collect the opinions of the relevant authorities, experts and the public on the EIA report. In February 2006, the environmental authorities released the Provisional Measures for Public Participation in Environmental Impact Assessment, which clearly stipulates the scope, procedure and form of organization regarding public participation.

Non-governmental organizations and volunteers are an important force in public participation so governments at all levels should fully encourage the development of non-governmental organizations and volunteers and strengthen the function of supervision on environment. Governments also can improve the public environmental awareness, establish system of public supervision.

### **3.3 Protection of the environmental rights of the public**

By the end of 2005, the four municipalities directly under the Central Government, 312 prefecture-level cities, 374 county-level cities and 677 counties had opened hotlines for environmental pollution reports, covering 69.4 percent of the administrative divisions above the county level. Since 2003, the environmental authorities at various levels have received 1.148 million complaints on environmental pollution through the hotlines, 97 percent of which have been dealt with, and 80 percent of the people making such complaints in major cities are satisfied with the results. Along with the public's increasing awareness of the importance of protecting the environment and demand for a better environment, the number of complaints lodged by letter or interview about infringements on the people's environment-related rights keeps increasing (IOSC, 2006).

However, the environmental rights of the public are not accepted generally by most people in China, due to the weak environmental and legal awareness. In a word, the public will protect their own environmental rights if they participate in environmental protection. When the environmental rights are infringed, people can protect their own rational rights through dispute resolution of environmental dispute or law processes (Chen Kun, 2004).

## **4 Conclusion**

It is should be fully aware of the grave situation of environmental protection in China, because the country is now at a stage of accelerated industrialization and urbanization when the contradiction between economic growth and environmental protection is particularly prominent. In some regions environmental pollution and ecological deterioration are still very serious. The discharge of major pollutants has surpassed the sustaining capacity of the environment. Water, land and soil pollution is serious, and pollution caused by solid wastes, motor vehicle emission and not easily degradable organic matter is increasing. In the first 20 years of the new century, China's population will keep growing, and its total economic volume will quadruple that of 2000. As the demand on resources from economic and social development is increasing, environmental protection is facing greater pressure than ever before. The Chinese government will make sure that the tasks to prevent and control water and air pollution is completed. It will strengthen the environmental protection of urban and rural areas and the protection of the eco-environment and ensure the safety of the nuclear and radioactive environments. It should undertake the key tasks of building national environmental protection projects and promote environmental protection work in an all-round way.

The Chinese government should mobilize all forces available to solve the pollution problems that

are causing serious harm to people's health. Its overriding task in the control and prevention of environmental pollution is to ensure that people have access to safe drinking water. It will take the most stringent measures to dispel potential risks of pollution of the sources of drinking water. The Chinese government should actively speed up "three changes": First, change from emphasizing economic growth but ignoring environmental protection to emphasizing both environmental protection and economic growth; second, change from environmental protection lagging behind economic growth to synchronizing environmental protection and economic growth; and third, change from mainly employing administrative measures in environmental protection to comprehensive use of legal, economic, technical and necessary administrative measures to solve environmental problems. Economic, social and cultural systems will be established featuring stable economic growth, minimal cost to environmental resources and high awareness of the environment. As regards spatial distribution, economic growth and the sustaining capacity of the environment will be coordinated to form development patterns with their own characteristics. The Chinese government should make sure that the environment is effectively protected in the course of development, and that protective measures will in turn promote development. It will adhere to a policy of safe, clean and resources-efficient development so as to realize a sustainable development.

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