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# Environmental Management

Jin Min



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# Preface

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Environment issue has become a complex issue involving many fields such as politics, economy, diplomacy, society, culture, science and technology with multiple dimensions. International negotiations on key environmental topics such as addressing climate change and conservation of biodiversity increasingly become the hot topic of foreign affairs and focus of interests of many countries in the world. This has something to do with deepening understanding of the international communities in the field of environment and development. In particular, there are four historic leaps of human understanding about eco environment issues. The first leap happened at the First United Nations Conference on the Human Environment in Stockholm, Sweden in June of 1972. This conference gives a warning to the whole world that there is “Only One Earth”. The Declaration on the Human Development adopted by the conference stresses that “Man has constantly to sum up experience and go on discovering, inventing, creating and advancing.” The second leap happened at the United Nations Conference in Environment and Development held in Rio de Janeiro, Brazil in June, 1992. This meeting for the first time considers economic development in the context of environmental protection, identifies the principle of “common but differentiated responsibilities” and puts forward sustainable development strategy. The third leap happened at the World Summit on Sustainable Development held in Johannesburg, South Africa in August of 2002. This meeting identifies that economic development, social progress and environmental protection are the three pillars for sustainable development. The fourth leap occurred at the United Nations Conference on Sustainable Development held in Rio de Janeiro, Brazil in June of 2012. Targeting the theme of “Build Green



Economy to Achieve Sustainable Development and Lift People out of Poverty” and “Institutional Framework for Sustainable Development”, this conference has discussed and adopted the outcome document The Future We Want centering on the three objectives of “Securing renewed political commitment for sustainable development”, “Assessing the progress and implementation gaps in meeting previous commitments” and “Addressing new and emerging challenges”. It has decided to launch the process for achieving the objectives of sustainable development and help developing countries enhance their capacity in sustainable development.

The commencement, growth and development of environmental protection cause of China keep the same pace with that of the world. As the biggest developing country in the world, China makes active contributions to the four leaps in the field of global environment and development. In particular, the Central Committee of Communist Party of China and the State Council put forward a series of new concepts such as the development of ecological civilization, ecological restoration of rivers and lakes, promotion of historic transformations of environmental protection and exploration of new path to environmental protection that protects the environment in the process of development and development in the process of environmental protection; release many major policy measures since the beginning of the “11<sup>th</sup> Five-Year Plan” period to facilitate important changes of environmental protection from understanding to practice.

In view of the difficulties such as still prominent imbalanced, uncoordinated and unsustained development issue, inappropriate industrial structure, increasing resource and environment constraints and evidently more social contradictions in the development of our country, the 18<sup>th</sup> National Congress of Communist Party of China closed in mid November of 2012 for the first time integrates the development of ecological civilization into the five overall arrangements for the cause of socialism with Chinese characteristics. This is a key innovation of the Chinese Government in both concept and practice of development; a

strategic option complying with the new trend of green and low-carbon development of the world; and an effective approach to facilitate our economy and society following the path of comprehensive, coordinated, sustainable and scientific development. The development of ecological civilization is both a key development issue and an important welfare issue. It is conducive to the improvement of eco environment quality, promotion of social harmony and stability and enhancement of sustainable development capacity. We must establish the idea of ecological civilization that respects, complies with and protects nature; put the development of ecological civilization at prominent position, and incorporate it into all aspects and whole process of economic, political, cultural and social development; strive for developing beautiful China, march toward new era of socialist ecological civilization, achieve sustainable development of the Chinese nation and make contributions to global ecological safety.

The Chinese Government firmly adheres to the independent foreign policy of peace, unswervingly follows the path of peaceful development and strives for developing a harmonious world of lasting peace and common prosperity. In international environment cooperation and exchanges, China firmly adheres to the principles of common but differentiated responsibilities, equity and respective capability; proactively lends a helping hand to developing countries, shoulders the obligations and responsibility for foreign aid within our capacity, actively strengthens the unity and cooperation with developing countries, jointly safeguards legitimate rights and interests of developing countries, supports stronger representation and voice of developing countries in international affairs, and will always be a reliable friend and sincere partner of developing countries.

With the Green Envoy Program of China South — South Environment Cooperation, Ministry of Environmental Protection has organized a range of environmental protection training courses for environmental officials and professionals of developing countries over the past few years with participants from the countries of regions like

Africa, West Asia, Oceania, Southeast Asia, Central Asia and Latin America, which have facilitated bilateral and multilateral environmental cooperation; strengthened friendship and mutual understanding and obtained good achievement. To better standardize the management of international environmental training and exchange activities in the future, Ministry of Environmental Protection has organized relevant experts to compile a series of books for environmental training under the Green Envoy Program of China South — South Environmental Cooperation. This series include six books that systematically summarize typical policies, laws and regulations, management skills and professional expertise in environmental protection field of China. With both professional theory and analysis on practical cases, this series of books fill the gap of the textbooks for training overseas participants in the field of environmental protection.

I believe that the publication of this series of books will showcase and publicize new concepts and successful practice of environmental protection of our country, especially important role in publicizing successful experience of our country in the development of ecological civilization and beautiful China.

周生贤

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# **Chapter 1**

## **Overview of Environmental Management**

### **1.1 Definition and content of environmental management**

#### ***1.1.1 Definition of environmental management***

With the purpose of preserving the natural state of environmental order and environmental security, ensuring the regional economy develop in a sustainable way, environmental management is the general name for measures and actions of coordinating the relationship among economy, social development and environmental protection, regulating and controlling human beings' behaviors, and restricting activities that harm the environment according to the national environmental laws, regulations, policies and standards. From this concept of environmental management, we can further infer the following aspects:

##### **1.1.1.1 The core of environmental management is managing human beings**

Human beings, as the main body of the above-mentioned measures and actions, are the root of environmental problems. Therefore, environmental problems can be effectively solved only when human beings' behaviors and activities are well managed and restricted according to the natural rules. However, the present measures and actions in environmental management that mostly focus on various sources of pollutions, in essence, can be called a kind of substantial-oriented management. This kind of environmental management ignores the restriction on human beings' behaviors and activities. The change of the managed objects from the sources of pollution to the restriction on human beings' behaviors and activities significantly marks the innovation and extension of environmental management theory.

### **1.1.1.2 The objective of environmental management is to maintain the natural environmental order and environmental security**

For the survival of human beings, the environmental security is of the first priority. Development is on the second level which means to use the natural resources and environment for further well-beings.

### **1.1.1.3 The emphasis of environmental management is to solve various environmental problems that brought with by human beings' economic activities**

The content includes management of decision-making process and various economic activities, as well as consumption behavior.

### **1.1.1.4 Environmental management is the task of the government**

The content of environmental management involves the complex and board knowledge in the fields of society, economy and natural resources protection, and has close connection, mutual influence on and restriction with other administrative works. So, the environmental management is the essential part of the national administration. The environmental protection strategy, rules and institution depend closely on the national development strategy, as well as the state administration rules and institution.

Besides the above, some scholars define environmental management as: By using administrative/mandatory, economic, educational and technical methods, the environmental protection agency takes measures and actions to coordinate the relationship between social-economic development and environmental protection, and to deal with the mutual relationship among the different administrative authorities, interest groups and individuals, to prevent environmental pollution and preserve the ecological balance in the process of economic development in order to meet human beings' substantial and cultural demand.

## ***1.1.2 Characteristics of environmental management***

Environmental management is supposed to be the government-leading management and the essential of the national administration as the natural environment is public goods. Hereby, the environmental protection management authorities on behalf of the whole nation should take integrated

measures which include making or bettering the related environmental policies, laws, regulations and standards to restrict or control human beings' environmental-unfriendly behaviors in order to preserve the regional environment order and safety. Nonetheless, the environmental problems touch upon the interests of various enterprises and the public, so environmental management should be a kind of government-dominated management together with the participation of various interest groups. Therefore, environmental management is the government-leading and stakeholders-involved management. On this definition, the characteristics of environmental management in China can be explained as below:

#### **1.1.2.1 Authority**

The environmental protection authorities have the power and responsibilities on behalf of the whole nation to protect the natural environment. However, the other authorities are also supposed to cooperate and share the responsibilities of environmental protection according to the obligations and duties regulated in the national laws.

#### **1.1.2.2 Mandatory management**

In order to protect the environment, the environmental authorities are allowed to take compulsory measures on the basis of the related environmental protection laws. For example, the environmental protection authorities have the power to close some small-scale thermal power plants and paper mills or issue orders for these enterprises to rectify the pollution behaviors within a time limitation in order to prevent the environmental pollution according to the related environmental protection regulations and policies, and industrial technology policies as well.

#### **1.1.2.3 Regional management**

The natural environment is various in different regions due to geographic location, climate, population density, the endowment of natural resources, the stage of economic development, distribution of production and environmental carrying capacity. The regional differences of environmental problems, economic development, resources allocation, technological development and industrial structure determines the regional differences of environmental management. Therefore, administrators should set targeted environmental protection goals and take adaptive environmental management measures according to the different environmental conditions in different regions.



#### **1.1.2.4 Comprehensive management**

The environment involves many environmental elements such as soil, water, atmosphere and organism on the earth and so on. The environmental management involves the economy, society, politics, nature, science and technology and so on. Moreover, the environmental protection authority shares responsibilities with the other governmental authorities. All the above means that the environmental management need to take integrated and comprehensive measures. The government must make comprehensive decision to coordinate environment and development, to establish an institutional mechanism to share the environmental protection responsibilities among the governmental authorities. In practice, environmental protection authorities should not only play a key role to protect the environment but also cooperate with the other relative governmental authorities to share the environmental protection responsibilities.

#### **1.1.2.5 Social management with public participation**

The society also has the responsibility to protecting the environment which has close relationship with everyone's safety and health. So the public should be taken part in the environmental management besides the authorities, expertise and professional agencies. Two major factors are helpful to take the public part in environmental management. On the one hand, the government should strengthen the environmental education to arise the public's environmental awareness and their participation abilities. On the other hand, it's necessary to establish and strengthen the mechanism for the public participate in the environmental management.

#### **1.1.2.6 Non-programmed decision-making management**

Non-programmed decision-making refers to the make decision for those unexpected or rather complicated issues. Every environmental problem appears in unusual conditions with changes, complex and uncertainty. People can't program the solution in advance. Therefore, the decision-making in environmental management is obviously non-programmed process on the basis of changes, complex and uncertainty of the environmental problems.