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행정학박사 학위논문

A Study on the Environmental Management
Capacity of China's Local Governments
— Focused on the Case of Qinghai Rivers
Source Region and Shandong Peninsula

중국 지방정부의 환경관리능력에 관한 연구
- 청해 강유역과 산둥반도를 중심으로 -

지도교수 김 상 구



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한국해양대학교 대학원

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A Study on the Environmental Management Capacity
of China's Local Governments
— Focused on the Case of Qinghai Rivers Source
Region and Shandong Peninsula

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Abstract

The year 2016 marks the start of the implementation of the “Thirteenth Five-Year Plan” (十三五規劃) and a new phase of development which will see the formulation of a well-off society. It marks a profound change in China's overall development strategy which focuses on innovative, coordinated, green/eco-friendly, open and shared development. Green development, as one of the new philosophy, is a prerequisite for sustainable development. To achieve sustainable development as a guiding strategy for national or regional economic and social development, it is essential to adhere to the basic state policy of resource conservation as well as environmental protection. Since the entry of the new century, as China's rapid economic growth has deteriorated environment, environmental management plans has come to the fore as a new breakthrough. It has become a significant part of

national macro strategies to raise the strategic position of environmental protection. As an important means of environmental management, environmental policy has become one of the core issues at all levels of decision-makings of the party and governments. To construct “a resource-saving and environmental-friendly” society, China’s central and local governments have adopted a variety of environmental policy measures to strengthen environmental management.

Focusing on Qinghai(青海) Three Rivers Source Region(三江源區) and Shandong Peninsula as the research objects, this thesis examines the currents status of environmental management and suggests prescriptions to address the problems related to environmental management of the regions. The Three Rivers Source Region of Qinghai province is the largest area of water supply and ecological conservation in China. Known as the “Chinese Water Tower” (中華水塔), it is not only the place where China’s three major rivers(Changjiang River/Yangtze River, Yellow River and Lancang River/Mekong River) originate, but also a significant ecological barrier and natural resource reserve of China. In recent years, owing to the global climate change and irrational use of resources, the Three Rivers Source Region has suffered from serious degradation of ecosystems as well as deterioration of ecological environments. To protect the “Chinese Water Tower” and reverse the trend of ecological environmental deterioration, the central and local governments and relevant departments have done lots of work in Qinghai Province. All the policies aim to protect “Three Rivers Source Region” and “Chinese Water Tower” in a way to ensure “A River of Water Flow to the East” (一江清水向東流), to construct “Lucid Waters and Lush Mountains” (綠水青山) of Qinghai, and to establish the concept of ecological conservation priority.

Shandong Province is a big marine city with a large sea area and a

long coastline. With a continuous production expansion and population growth in coastal areas, the economy in Shandong Peninsula has been increased rapidly. However, due to the unreasonable aspect of the policy actions during the development process, more and more problems concerning the marine environment have emerged in this place, which severely restricts the Peninsula's economic and social sustainable development and destroys the coordinated relationship between human and nature. Improving the integrated management system of marine environment can not only promote the development of marine economy and marine ecological sustainability, but also safeguard the national marine rights and interests. Marine environment management should adhere to the theory of sustainable development, which is in accordance with the contemporary needs and while securing the well-being of future generations.

Under the guidance of the “Thirteenth Five-Year Plan” , this thesis analyzes the present situation of the environmental management of Qinghai Three Rivers Source Region and Shandong Peninsula in terms of system and the human resources construction. Through analyses, this thesis found that the current environmental management systems of the local governments in the regions have the various problems including lags in relevant laws and regulations, conflicts among environmental laws and regulations, and deficiency in environmental management systems, etc. As countermeasures against these problems of environmental management, this thesis suggests the followings: modification of related laws and regulations, completing the cooperation mechanism of “Belt and Road” (一帶一路), application of the lessons drawn from foreign successful experience, and reinforcement of human resources management construction.

KEY WORDS: China's Local Government 중국 지방정부; Environmental Management 환경관리; Environmental Policy 환경정책; Capacity 능력; Qinghai Rivers Source Region 청해 강유역; Shandong Peninsula 산동반도; Thirteenth Five-Year Plan “13-5” 계획; Belt and Road 일대일로; System Construction 제도수립; Human Resources Construction 인적자원양성; Sustainable Development 지속 가능한 발전.



Chapter 1 Introduction

1.1 Research Purposes

1.1.1 Research Background

In March of 2016, the Fourth Annual Session of the 12th National People's Congress (NPE) was held, and the "Thirteenth Five-Year Plan" for the economic and social development of the People's Republic of China (PRC) was outlined. (Fig. 1 The "Thirteenth Five-Year Plan") It not only builds on the last twelve iterations of such Five-Year Plans, but brings new innovation and forward thinking. Indeed, innovation, coordination, being green/eco-friendly, openness and sharing have become the hallmarks of the new development philosophy. The year 2016 will mark the start of the implementation of the "Thirteenth Five-Year Plan" , and a new phase of development which will see the formulation of a well-off society. It marks a profound change in China's overall development strategy which focuses on innovative, coordinated, green/eco-friendly, open and shared development. Innovation fosters motivation; effective coordination is an inherent requirement for sustainable and healthy development; green/eco-friendly practices are a necessary condition of sustainable development and an important embodiment of people's pursuit for a better life; national prosperity can only be increased through openness; and sharing is of course an essential requirement of Chinese socialism.¹⁾ All must adhere to the fundamental

1) The Fourth Annual Session of the 12th National People's Congress(2016.3.16.),

state policies of resource conservation and environmental protection; sustainable development will be insisted upon. The Chinese government is determined to promote further production development, and provide a more affluent life style for its citizens, as well as a sound ecology and development path. To speed up the formulation of a resource-saving and environment-friendly society, new patterns of modernization and harmonious development between human and nature needs to be formed, pushing forward the construction of a beautiful country, and making new contributions to global ecological security.

The “Thirteenth Five-Year Plan” is a Five-Year plan made by China “Standing in Front of the World Map” . By promoting the construction of the “Belt and Road” (一帶一路), China will become a positive force of globalization construction, making greater contribution to the global development. At the same time, China will continue to act as the locomotive of global economic growth, provide the world’s largest trading market and become an important foreign investor to strengthen the world’s macro-economic stability. Moreover, it will undertake the responsibility of reducing the global greenhouse gas emissions in a way to make green contributions to the world and to lead the world’s economic governance as well as the global economic order to a more fair and reasonable direction.²⁾

The Three Rivers Source Region is the birthplace of the Changjiang/Yangtze River (長江/揚子江), Yellow River (黃河) and Lancang River/Mekong River (瀾滄江/湄公河). Known as the “Chinese Water Tower” , the ecological status of the region is very important. According to the Chapter 45 of the “Thirteenth Five-Year Plan” , the protection

The Thirteenth Five-Year Plan for National Economic and Social Development of the People’s Republic of China.

2) <http://www.hbzhan.com/news/detail/105557.html>

and restoration of ecology should be strengthened, and the priority should be given to the conservation and recovery of nature. Specifically, the plan sets the following goals: preservation and restoration of natural ecosystems, construction of ecological corridor and the biodiversity protection network, improvement of the stability of various natural ecological systems and ecological service functions, and enhancement of ecological security barrier. To achieve these goals, system recovery and a comprehensive policy are needed to strengthen the integrated management of desertification as well as soil erosion and to promote the ecological protection in rivers such as the Three Rivers Source Region.³⁾

On March 10, 2016, Xi Jinping(习近平), the General Secretary, particularly highlighted in the Qinghai(Province) delegation review delivering the following address, “in terms of the ecological environmental protection, a long-term vision should be established and the protection should be regarded as the top priority. At the same time, the basic state policy of conserving resources and protecting the environment should be adhered to. The ecological environment should be protected in the way our eyes are protected and treated in the way our life is treated, so as to promote a green life and development mode.”⁴⁾ This highlights the high attention from the Central Committee of the Communist Party of China (CPC) to the ecological environment problems.

In China, the Three Rivers Source Region is an extremely significant ecological barrier, accounting for irreplaceable strategic position in the maintenance of national ecological security. Over the past few years, due

3) The Fourth Annual Session of the 12th National People’s Congress(2016.3.16.), The Thirteenth Five-Year Plan for National Economic and Social Development of the People’s Republic of China.

4) Qinghai Daily(2016,3.28), Like Eye Protection to Protect the Ecological Environmental.

<http://www.qh.gov.cn/ztl/system/2016/03/28/010209465.shtml>

to the effects of global climate changes and human activities, the Three Rivers Source Region ecological environment continuously deteriorates. Hence, protecting “Three Rivers Source Region” as well as “Chinese Water Tower” , for the purpose of ensuring “A River of Water Flows to the East” , constructing “Lucid Waters and Lush Mountains” of Qinghai, and establishing the concept of ecological conservation priorities. In May of 2000, the provincial Three Rivers Source Region Nature Reserve of Qinghai Province was set up. Moreover, General Secretary Jiang Zemin(江澤民) wrote “Three Rivers Source Region Nature Reserve” monument. The ecological environment restoration in The Three Rivers Source Region has kicked off since then.

The expansion of the Blue Economic Zone is highlighted in the “Thirteenth Five-Year Plan” . The Chapter 41 of this plan proposes that, the coordinated growth of the land and sea should be adhered to, the marine economy should be developed and the marine resources should be exploited scientifically. Besides, the plan aims at the following goals: protection of marine ecological environment and safeguard of marine rights and interests; optimization of the marine industrial structure, development of the offshore fishing industry marine services; development of marine science and technology along with the construction of wisdom marine engineering; innovation of the market-oriented distribution of sea island; and the establishment of national marine economic development pilot zones in Shandong(山東), Zhejiang(浙江), Guangdong(廣東), Fujian(福建), Tianjin(天津) should be further promoted. Furthermore, according to the plan, Hainan(海南) should be supported in developing its distinctive marine economy with the advantage of resources in South China Sea, and marine economic development demonstration areas like the Qingdao(青島) Blue Valley should be established.⁵⁾

Shandong province with a long coastline and broad sea area is a big marine province, which has natural advantages to develop marine economy since its marine environmental quality is of great significance. However, along with the changes in politics and economy, many problems emerge in the original marine environmental management system for sustainable development. In fact, the environmental management system is not simply a implementation unit for environmental protection and economic development policies but a mechanism for integrated services operations for sustainable development. Therefore, improving marine environmental integrated management system not only promotes marine economy and marine ecological sustainability, but also preserves national marine rights and interests while safeguarding national sovereignty. Marine environmental management should adhere to sustainable development to meet the contemporary needs without influencing the pursuit of the future generations to meet their own needs. During the inspection in Shandong Province in April 2009, Hu Jintao(胡錦濤), the former General Secretary, put forward the development of the marine economy, the scientific exploitation of marine resources and the cultivation of marine advantage industries. Creating the Shandong Peninsula Blue Economic Zone has become a major strategy to promote Shandong economic development in January 2011. According to the Development Plan of the Blue Economic Zone in Shandong Peninsula, its main goal is to build a blue economic zone with prosperous marine economy, optimized industrial structure and harmonious relationship between human and nature.

Since China's reform and opening up, China's national economy has

5) The Fourth Annual Session of the 12th National People's Congress(2016.3.16.), The Thirteenth Five-Year Plan for National Economic and Social Development of the People's Republic of China.

maintained rapid and sustained growth, but its environmental problems increasingly grow. Moreover, environmental degradation not only inhibits Chinese economic growth, but also endangers social stability and harmonious development. As a consequence, Chinese environmental policies and management started to address various environmental problems. While the central government is so vital to formulate and implement the environmental policy, and the local governments are also crucial to implement in the overall environment.



Fig. 1 The “Thirteenth Five-Year Plan”

The “Thirteenth Five-Year Plan” proposed the concept of development including the following five elements: innovation, coordination, green/eco-friendly, open, and sharing. Green development is one of them, which will become the main tone of development in the next five years. The economic and social development has embodied the concept of green development during the process of “Thirteenth Five-Year Plan” which also points out speeding up the ecological environmental improvement and providing better ecological products through enhancing the core of environmental quality, solving key problems in the ecological environmental fields, intensifying protection of the ecosystem and the environment and improving resource utilization efficiency. It is also pointed out in the “Thirteenth Five-Year Plan” that China will continue to advance people’s well-being and improve national prosperity and strength, so as to build a Wild China. The chapter 44 points out the followings: strengthening environmental management; innovating the concepts and methods of environmental governance; implementing the most stringent environmental protection system; strengthening primary responsibility for the polluters; forming the shared environmental management systems for government, enterprises and the public; and achieving the overall improvement of environmental quality.⁶⁾

China has entered a new journey towards the improvement of ecological environment quality. Different from the environmental goals in the previous five-year plan, the “Thirteenth Five-Year Plan” has firstly stressed that the ecological environmental quality will enhance the overall goals and has emphasized the concept of green development and the indicators of improving the quality of air and surface water. Thus, China

6) The Fourth Annual Session of the 12th National People’s Congress(2016.3.16.), The Thirteenth Five-Year Plan for National Economic and Social Development of the People’s Republic of China.

will enjoy sustainable prosperity and build a beautiful ecological environment once the most stringent environmental protection systems is established and low-carbon economy and ecological security barrier are developed.⁷⁾

It is valuable and has practical significance to research on environmental management being responsible for implementation of environmental protection and construction planning using the scientific concept of development. Building a moderately prosperous society in an all-round way should take the economic development as the driving force. However, the economic development will inevitably lead to the destruction of natural resources and ecological environment. It also forces the irrational mode of production and way of life to change. Therefore, research on population, resources, and environment has become the three major themes in the world, and more and more attention has been put on natural resources and eco-environmental changes. As an important part of the comprehensive, coordinated and sustainable scientific development, the rational use of resources and the protection of ecological environment have been put forward in the China's 17th National Congress. This is in accordance with the "Agenda 21" and other relevant international conventions. As is known to all, resources and ecological environment have an important influence on socio-economic development. Environmental pollution and ecological destruction have become important factors of sustainable development of regional economy.

Protecting the environment is protecting the productivity while improving the environment is developing the productive forces, so adhering to the road of sustainable development is crucial. Meanwhile, the interaction and the restriction of the mutual influence and

7) <http://www.hbzhan.com/news/detail/105557.html>

understanding of the human beings and the nature should be deeply understood. In addition, the economic and social development should be promoted through establishing the overall and long-term views, putting the ecological civilization construction in an important position, and adhering to the priority of environmental protection. The healthy and sustainable development of the whole society should be promoted through further enhancing major environmental projects, deepening the reform of the environmental system, strengthening the comprehensive improvement of the environment, and making enormous efforts to promote green lifestyle and green development society. ⁸⁾ Environmental protection is an important content of sustainable development, therefore, it is of great importance for economic development to exploit, utilize and protect the environment.



8) Qinghai Daily(2016,3.28), Like Eye Protection to Protect the Ecological Environmental.

<http://www.qh.gov.cn/ztl/system/2016/03/28/010209465.shtml>

1.1.2 Research Purposes

In the 21st century, global warming, excessive energy consumption and pollutant emissions represent the main problems. Under the active advocacy and promotion of international society, the environmental protection is put on the agenda in many countries. Many countries make efforts to reform the existing environmental management system and/or create better systems to address environmental problems. As pointed out by advocates of international organizations, a scientific and rational environmental management system is not only a prerequisite for environmental management, but also the basic guarantee to achieve environmental protection objectives. It is an effective way to achieve the sustainable environmental development by improving environmental legislation and strictly enforcing environmental law. Environmental management system reform in relation to political and economic systems is also a key research problem in the field of environmental legislation.

In recent years, research into economic development in China and its effect on the environment has increased. However, China's rapid economic development has not been balanced among different regions. The development in the western region has been relatively slow when compared with coastal cities. There have been few comparative analyses conducted on China's East-West environmental management systems, contrasting the rapid economic development in the eastern coastal cities with the slow rate of development in the western region. Eastern China boasts an efficient and convenient transportation network, high levels of scientific and technological development, strong economic foundations, and a high population density. Conversely, the western region of China covers a vast area and its development is limited by the terrain and traffic conditions. It has a low population density and a relatively backward scientific and technological development level, and subsequently, a slower

rate of economic growth. However, from the small population and economic development level of the source region of Qinghai Three Rivers in western China, to the densely populated and relatively rapidly developing economy of the Shandong peninsula in eastern China, serious environmental problems have arisen.

Therefore, local governmental environmental management issues are not directly related to local population density or levels of scientific and technological development. In the final analysis, it was concluded that the problem of environmental management is a policy-oriented issue. Environmental policy is the basis for addressing such environmental problems, and is the guiding factor of any nation's environmental and economic development. As a government's awareness of environmental issues gradually increases, environmental policy making becomes the focus for solving environmental problems. Environmental policy is the foundation of environmental law, and the implementation of environmental policies cannot be separated from supporting environmental laws. The core role of environmental policy in the environmental management process makes it irreplaceable.

This thesis sets Qinghai Three Rivers Source Region and Shandong peninsula of China as the research objects to analyze Chinese local government environmental policies and to explore the new ways for improve environmental management system. Through the analysis on environmental policies of Chinese local governments, this thesis stresses a need to learn lessons from foreign developed countries. Furthermore, suggestions for China's environmental management policy are put forward so as to promote the sustainable development of regional economy and environment of China.

1.2 Research Contents and Techniques

1.2.1 Research Contents

Being regarded as a serious problem in the human development, environmental problems have already turned into the focus of the world problems. While environmental issues require integrated management of the central government, the significance of local government can not be neglected. Typically speaking, the environmental problems will be tackled by a local government or local organizations under the guidance of central government.

This thesis conducts case study of Qinghai Three Rivers Source Region and Shandong Peninsula environmental management, proceeding from the system construction to the human resources construction. The local government environmental managements are analyzed from the angle of sustainable development to explore the role of local government in environmental management. Problems existing in the environmental management and corresponding countermeasures and suggestions are proposed.

This thesis conducts a case study of Qinghai Three Rivers Source Region and Shandong Peninsula environmental management, proceeding from the system construction to the human resources construction. The local government environmental managements are analyzed from the perspective of sustainable development to explore proper roles of local government in environmental management. Countermeasures and suggestions are proposed to address the problems existing in the current environmental management in the region.

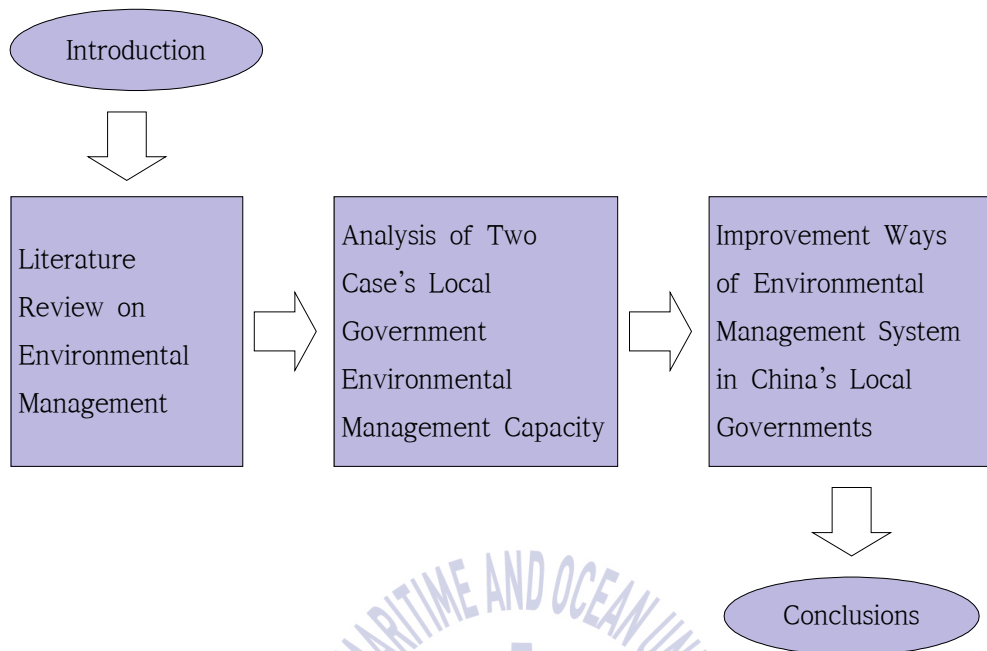


Fig. 2 Thesis Structure

This thesis is divided into 5 chapters:

Chapter 1 includes major topics of research background, research purposes, research contents and research techniques, and research methods.

Chapter 2 reviews literature on environmental management and it is divided into three sections. The first section discusses major concepts related to environmental policy and management including environment and policy, development, and principles of environmental policy. It also briefly outlines the current research status of environmental policy. The second describes Qinghai Rivers Source Region environmental management by looking at including Changjiang River(Yangtze River), Yellow River, and Lancang River(Mekong River). The third section

explains Shandong Peninsula marine environmental management by looking at Peninsula, Shandong Peninsula Blue Economic Zone, and Shandong Peninsula marine environmental management.

Chapter 3 discusses the results of analysis on local government environmental management capacity using two criteria. This chapter is divided into five sections. The first section presents an analytical frame of environmental management capacity. The second section discusses the results of case analyses on the current status of environmental management of Qinghai Rivers Source Region and Shandong Peninsula. The third section discusses the problems of environmental management in Qinghai River Sources Region, including the problems related to the environmental management system and human resource construction, such as legislation lag of relevant laws and regulations; content conflict of environmental legislation; imperfection of environmental management system, etc. The fourth discusses the problems of marine environmental management in Shandong Peninsula, which includes legislation lag of marine environmental relevant laws and regulations; content conflict of marine environmental legislation; imperfection of marine environmental management system, etc. The fifth section compares environmental policies of the two regions.

Chapter 4 suggests ways to improve environmental management capacity in China's local governments in terms of both environmental management system and human resource construction. Those include modification of related laws and regulations, completing the cooperation mechanism of "Belt and Road", application of the lessons drawn from foreign successful experience, and reinforcement of human resources management construction.

Chapter 5 summarizes major findings of the analysis with discussion on the limitations of this thesis and further research tasks.

1.2.2 Research Techniques

Lester(1990) categorizes a state's response to the new federalism (as well as action on state and local environmental issues) using two different but nevertheless complementary factors: (a) its commitment to environmental protection activities (as measured by the Green Index) and (b) its institutional capabilities.⁹⁾

The first factor, local government commitment is divided into two sub-factors including “high” or “low” according to the levels of commitment. The second factor, institutional capacity on system and human resource construction, is also divided into two sub-factors including “strong” or “weak” according to the capacity. Using factors, Lester divided 50 states of the U.S.A into four groups—progressives, strugglers, delayers, and regressives.¹⁰⁾

Based on Lester's four classification criteria, as shown in Table 1, this thesis categorizes Chinese local governments in Qinghai and Shandong provinces. Using Lester's criteria as an analytical frame for, this thesis examines the current status of environmental management of the local governments in the regions.¹¹⁾ (See Table 1)

9) Bowman and Kearney(1988), Dimensions of State Government Capacity, The Western Political Quarterly, Vol. 41.

10) Tae Hoon Moon(2003), A Study on the Development and Application of Evaluation Model for the Local Government's Environmental Administration Capacity, Journal of South Korea Policy, Vol.12, pp.201-221.

11) Sung-Doo Choi, Eun-Sook Kang, Sang-Goo Kim, Sang-Hee Part, Young-Chae Song, Kyung Eun Lee, Self-Governing Capacity of Ocean Environmental Management of Busan Metropolitan City(2008), Journal of Navigation and Port Research, Vol. 32, pp.515-519.

Table 1 Analysis Techniques of This Study

Differentiate		Institutional Capacity (System / Human Resources Construction)	
		Strong	Weak
Local Government Commitment	High	Progressives	Strugglers
	Low	Delayers	Regressives



1.3 Research Methods

To analyze the current status of the environmental management in the local governments in the regions, this study conducts research through the following several methods.

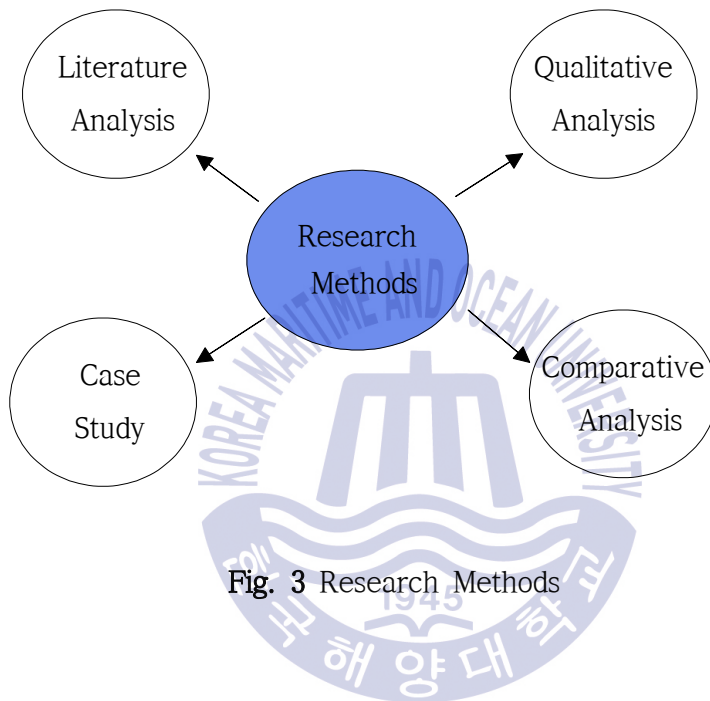


Fig. 3 Research Methods

1.3.1 Literature Analysis

Literature analysis refers to collect, identify, and review information through the study on existing literature to form a scientific understanding of the facts. A literature is a written, drawn, presented or recorded representation of thoughts. In the past it was usually used as a term for a written proof used as evidence. In the computer age, a literature is usually used to describe a primarily textual file, along with its structure and design, such as fonts, colors and additional images. Literatures are sometimes classified as secret, private or public. They may also be described as a draft or proof. When a literature is copied, the source is referred to as the original. There are accepted standards for specific applications in various fields, such as:¹²⁾

- 1) Academic: thesis, paper, and journal.
- 2) Business and accounting: Invoice, Quote, Proposal, Contract, Packing slip, Manifest, Report detailed & summary, Spread sheet, Waybill, Bill of Lading(BOL), Financial statement, Nondisclosure agreement(NDA) or sometimes referred to as; Mutual nondisclosure agreement (MNDA).
- 3) Law and politics: summons, certificate, license, and gazette.
- 4) Government and industry: white paper, application forms, user-guide.
- 5) Media and marketing: brief, mock-up, and script.

The literatures on international and domestic environmental management and policy research were collected through the internet, online electronic databases, and library and other means. Those include theory books, academic papers, government documents, investigation reports, statistics, and summaries of experience and so on.

12) <https://en.wikipedia.org/wiki/Document>

1.3.2 Qualitative Analysis

Qualitative analysis, also known as a “non-quantitative analysis method”, intends to find underlying reason and motivation. To obtain a qualitative understanding, the study object is the “quality” aspect of the analysis. In this thesis, qualitative analyses are used not only to explore the environmental management of local government from in terms of “what, where and when”, but also to discuss it in terms of “why and how”.

1.3.3 Case Study

Based on certain theoretical knowledge, a case study analyzes the existing problems of a specific case. This thesis, focused on Qinghai Three Rivers Source Region and Shandong Peninsula, point out the problems of environmental management in local governments and puts forward corresponding countermeasures. Many well-known case study researchers such as Robert E. Stake, Helen Simons, and Robert K. Yin have written about case study research and suggested techniques for organizing and conducting the research successfully. The case study research draws upon the work and proposes six steps that should be used.¹³⁾

- 1) Determine and define the research questions;
- 2) Select the cases and determine data gathering and analysis techniques;
- 3) Prepare to collect the data;
- 4) Collect data in the field;
- 5) Evaluate and analyze the data;

13) Robert K. Yin(2003), Case Study Research: Design and Methods, Third Edition. Includes Bibliographical References Methods Series, Vol.5.

6) Prepare the report.

1.3.4 Comparative Analysis

A comparative analysis is used to find information by comparison. It can provide important theoretical support and practical reference. Any reform of the management system usually includes comparison of the history and present situation and domestic and foreign development experience, etc. The method of comparative analysis was especially useful as each example serves as a great guide or template for understanding the other.¹⁴⁾ The method of comparative analysis is widely use in various fields of science and in different modifications:¹⁵⁾

1) Criminology and forensics.

Comparative contextual analysis - criminology.

Comparative bullet-lead analysis - forensics.

2) Sociology.

Qualitative comparative analysis.

Using the methods mentioned above, this thesis analyzes the current status of environmental management of the local government in the regions. Several countermeasures against the problems found in the system and human resource construction are proposed in a way to improve the environmental management of the local governments in the regions.

14) <http://www.businessdictionary.com/definition/comparative-analysis.html>

15) https://en.wikipedia.org/wiki/Comparative_analysis

Chapter 2 Literature Review on Environmental Management

2.1 Environmental Policy

2.1.1 Environment and Policy

1) Environment

The term “Environment” is derived from the verb “environ” , which by extension, is derived from the French word “environer” , an amalgamation of the Latin “en” (meaning in) and “viron” (meaning circle). Hence this term carried the meaning “around” or “surround” . In the context of the word “environment” , this “surrounding” refers to the primary life-supporting substances of water, land and air, as well as the climate. Article two of the Environment Protection Law of the People’s Republic of China makes clear that “environment in this legal context refers to the effects of human survival and development regarding all kinds of natural and artificial modifications of the totality of natural factors. Including the atmosphere, water, the ocean, land, minerals, forests, grasslands, wildlife, natural sites, cultural relics, scenic areas, nature reserves, urban and rural areas, etc.” ¹⁶⁾

The simplest form of “environment” is the universe of biotic and other physical material, as organized into dynamic systems. These systems

16) The 12th Session of the 8th Meeting of the Standing Committee of the National People’s Congress(2014.4.24.), The Environmental Protection Law of People’s Republic of China(revision).

are ecological systems or ecosystems, which represent the integration of living (biotic) and nonliving elements in the environment.¹⁷⁾ This classification outlines the general scope of the term “environmental”, but subcategories relating to different environmental elements, and the environment can be created on the basis of their properties. The human environmental habitat can be divided into the natural and social environments. The natural environment, also known as geographical environment, refers to the natural surroundings of a human population. This includes the atmosphere, water, soil, biology, as well as all kinds of mineral resources. The natural environment is the material basis for human survival and development. The natural environment necessary to support human life, mainly includes: the atmosphere, hydrosphere, biosphere, pedosphere (i.e. soil) and lithosphere, each of the five forming their own natural cycles. Since the second half of the 20th century, due to human industrial and agricultural development, the large scale exploitation of water resources, and the overuse of fossil fuels has resulted in large amounts of waste being emitted into the water table and the atmosphere, resulting in a deterioration in the quality of the atmosphere and hydrosphere. This environmental crisis has attracted worldwide attention, leading to the concept of environmental protection gaining much traction.

The human social environment depends fundamentally on the natural environment. In order to continuously improve people’s material and spiritual lives, long-term plans have been adopted with the purpose of developing and gradually improving existing artificial environments, such as urban and rural areas, as well as industrial and mining areas, etc. Social and environmental development is dominated by natural laws,

17) Schnaiberg, Allan.(1980), *The Environment, From Surplus to Scarcity*, New York Oxford: Oxford University Press, pp.9.

economic laws and social laws regarding disposal of waste and other restrictions. Its quality is one of the hallmarks of human material civilization, as well as the spiritual quality of a civilization.

2) Policy

Political parties representing a country are tasked with creating policies in order to achieve their aims regarding politics, economics and cultural factors, and will be shaped by their historical locus, and the principles of the state organ or party organization in question. The essence of such policies are determined by the class interests of conceptualisation, subjectification, and practical reflection.

Public policy is therefore the means of social, economic and political development in the contemporary world. Social problems create public pressure on the government, which is required to manage the country in accordance with the needs of the people. Hence, political science developed in response to the growth of the discipline of public policy creation. Public policy is mainly concerned with the laws, regulations, decisions and actions of a government. The creation of public policy is the main means through which government exercises its function, and is generally considered a kind of public good. Public policy is the public authority through which the political process of the selection and formulation of problem solving strategies works. Such policy is designed solve public problems, and meet their needs, and to do so, programmes are designed with the aim of enacting changes which are in the public interest. Through public policy and social public affairs management, resources are allocated, social behaviour is regulated, social problems are solved, and the further development of society is promoted.

There are many definitions of public policy, one of the original orchestrators of public policy, US scholar Woodrow Wilson believed that

public policy was for legislators to make and for administrators to implement.¹⁸⁾ Another foreign scholars: Thomas R. Dey believed that public policy which the government choose to do or not to do things. Harold D. Lasswell and Abraham. Kaplan believed that public policy should as a goal, provide value, be practicable and offer a design plan. David. Easton believed that public policy was the authoritative allocation of values of the society. Stuart S. Nagel said that public policy was the decision of the government to address a variety of issues. Carl J. Friedrich asserted that public policies in the context of a particular individual, group or government involves planned activities, pointing out that the intention is to take advantage of chance opportunities, to overcome obstacles and to achieve a given goal.

Chinese scholars, Chen Zhenming defines such policies are the creations of state organs, political parties and other political organizations during a specific time period. They constitute services implemented in a certain socio-political, economic and cultural context to meet the goals outlined in the political provision of the specific act or the code of conduct. Wang Fusheng believes, that a code of conduct must be outlined in order for a goal and strategy to be achieved, and that policy is the result of a party's governing rules and strategies. Sun Guang's defines policy as the efforts of states and political parties to achieve certain goals through outlining guidelines for action. Such policy is said to be in the interests of the people, and the process of distribution and regulatory measures are complex.¹⁹⁾

Public policy is positioned as being the authoritative distribution of social benefits, which reflects the interests of society. Therefore, public policy must reflect the interests of the majority in order to achieve

18) Qian Zaijian(2006), New Public Policy, East China Normal University Press.

19) Tao Xuerong(2009), Public Policy (Second Edition), Dongbei University Press.

legitimacy. Public interest should serve as the value orientation of public policy and its logical starting point. Public interest is therefore at the essence of public policy and its ownership, the starting point and its ultimate goal.



2.1.2 Development and Principles of Environmental Policy

Environmental policy is major policy area, covering environmental protection policies for an entire nation, and it constitutes the principles of action adopted or proposed by the government. Environmental policy is geared towards promoting the harmonious development of human beings and the environment, and it attempts to guide the development of human beings in both material and spiritual aspects. Environmental policy is a means of harmonizing the conflicts which can arise from the exploitation of resources and the environment. It is also an important extension of sustainable development strategies, and key to the achievement of sustainable development objectives.

In general terms, environmental policy refers to all actions and statements made by the State regarding environmental protection. Environmental policies should include environmental laws and regulations. In narrower terms, environmental policy is a concept with parallels with environmental laws and regulations, it refers to the outside of environmental legal regulations and policy arrangements. Therefore, environmental policy is designed to protect the environment through a series of controls, management strategies and adjustment measures taken by a given country. It represents the state power system during a certain period, or reflects the will of decision makers in the field of environmental protection orientation and capacity.²⁰⁾

Environmental policy can also refer to the commitment of an organization to the laws, regulations, and other policy mechanisms concerning environmental issues. These issues generally include the prevention or mitigation of air and water pollution, solid waste management, ecosystem management, the maintenance of biodiversity,

20) Yang Honggang(2009), Research on the Effect and Selection of Chinese Environmental Policy Tools, Fudan University.

and the protection of natural resources including wildlife and endangered species. Policies concerning energy production or the regulation of the use or disposal of toxic substances including pesticides and many types of industrial waste all form a part of environmental policy. Such policy can be deliberately used to direct and oversee human activities and thereby prevent harmful effects to the biophysical environment and natural resources, as well as to ensure that any changes to the environment which do occur will not have a harmful effect on humans.²¹⁾

State environmental protection general environmental policies including policies, measures, rights limits, punishment rules and so on. Environmental policy has mandatory policy and non-mandatory policy, policy is divided into the central and local policies. There are long-term policies and phased policy, environmental pollution control and ecological environmental protection policies, etc. Public authorities in the formulation of environmental policies, the order of the economic development and environmental protection is the primary problem in policy arrangement. Government must be based on environmental protection as the starting point, formulate relevant policies to promote economic development.

1) The Development of Environmental Policy

Environmental policy as a national macro-environmental objectives through the following development.

Government delegation was sent for attending UNHEC in 1972(Stockholm). Environmental protection group was founded in China in 1973. The improvement of industrial “three wastes” (waste water, waste gas, waste offscourings) was promoted nationwide. The policy(32 words), “comprehensive in plan, rational in distribution, comprehensive in

21) McCormick, John(2001), Environmental Policy in the European Union, The European Series, Palgrave, pp.21.

utilization, harm-benefit transferring, people depended, everybody works, environmental protection, benefit to people” , was established in the first national environmental protection conference. The second national environmental protection conference was held at the end of 1983, it clearly put forward: protection for environment is a strategy task and a basic state policy in Chinese modernization construction” . The seventh session of the 11th meeting of standing committee of the National Congress passed “PRC Environmental Protection Law” on 26th December, 1989. Article one, this law has been legislated for the protection and improvement for the surrounding and ecological environment, prevention the pollution and other public hazard, protection for the people’s health, promotion for the development of socialism modernization construction. Three polices (“primary in prevention and assistant in treatment” , “one’s pollution, one’s treatment” , “reinforcement for environmental management”), and eight principles (“evaluation for environmental impact” , “three contemporary” , “pollution discharge license” , “obligation for environmental protection task” , “check-up system for city environmental treatment” , “declaration and permission for pollution discharge” , “limitation for treatment” , and “centralized control for pollution”) were established in the 3rd national environmental protection conference in 1989. In 1992, China announced ten countermeasures on environmental and development. In 1996, “sustainable development” was established for the basic state strategy for the first time in “The Ninth Five-Year Plan for national economic and social development and the vision 2010 objectives” , and “scientific development” was proposed in the third plenary session of the 16th CPC Central Committee, it had further improvement and promotion for the environmental policy ideas. In 2005, the State Council issued the decision on Implementing the Scientific Concept of Development to Strengthen Environmental Protection. The policy,

environmental protection under the new situation and realization of “Three Transformation” , it was made in the sixth national environment protection conference on 17th April, 2006.²²⁾

2) Basic Principles of Environmental Policy

(1) The principle of sustainable and combination development of environment, economy and society.

The combination of “the harmonious developmental principle of economic development and environmental protection” and “the principle of sustainable development” is the basic starting point and strategy for China’s environmental resources.

(2) The principle of environmental responsibility.

It is the principle generalization of “one’s development, one’s protection” ; “one’s destroy, one’s restore” ; “one’s utilization, one’s compensation” ; “one’s responsibility, one’s obligation” ; “one’s contract, one’s responsibility” , environmental protection is supervised by party and government with complete responsibility.

(3) The principle of comprehensive prevention and control.

(4) The principle of environmental democracy.

It is the principle of development and utilization of the environmental resource, it is the combination of protection and improvement of environmental resources(or the combination of policy of development, utilization of resources, energy, and saving resources, energy), it is the principle of comprehensive plan and rational distribution, protection environment relied on science and technology, reinforcement in environmental management and environmental law, etc.

22) Meng Jia(2009), Research on the Legislation of Chinese Environmental Policy, Northeast Forestry University.

2.1.3 Research Status of Environmental Policy

Chinese scholars Gao Deyao points out in Discussion on the Environmental Protection Policy that the environmental policy in China refers to the guidance principle and conduct standard of protecting and improving environment made by our Party and the State according to the environment situation, technical level and the national condition of economic and social development. At the same time he thinks that environmental policy and environmental law have similarities and obvious differences. The relationship between the environmental policy and environmental law is firstly making environmental policy and then putting it into laws when the environmental policy has matured.²³⁾

Some other scholars think that environmental policy merely refers to the national macro political objective. For example, in Analysis of the Difficulties of the environmental policy in our Country and Prediction of Transformation, Tang Jun and Xie Yifan thinks that the environmental policy in our country includes three aspects. The first one is the three basic environment policies of “focusing on prevention and combining prevention and treatment”, “keeping pollution controlled by people who makes it” and “strengthening environment management”; The second one is the core environmental policies such as “evaluation of the influence of the environment”, “three simultaneous”, “charges of discharging”, “centralized control”, etc.; The third one is different professional environment polices implemented by industrial departments and comprehensive management departments.²⁴⁾

Professor Ren Chunxiao thinks in the article Paradox and Rectification

23) Gao Deyao(2007), Discussion on the Environmental Protection Policy, Social Sciences Journal of Colleges of Shanxi, Vol.19.

24) Tang Jun, Xie Yifan(2007), Analysis of the Difficulties of the Environmental Policy in our Country and Prediction of Transformation, Exploration, Vol.2.

of Expectation and Performance of Chinese Environmental Policies that the making and issuing of environmental policy mainly have four layers from the perspective of its subjects: a. The National People's Congress and the Standing Committee of the National People's Congress make Constitution, basic laws and laws and administrative regulations about protection of environmental resources that are issued by the national organs; b. All kinds of outlines, decisions and notifications about the environmental protection made by the leadership organ of the Communist Party of China according to the right regulated by the Party Constitution; c. Non-legal normative document or normative document named as "Policy" made by the central government and local government according to the environment situation of each stage and different condition of different places; d. International legal and policy documents such as the international convention, agreement, protocol, declaration, statement and memorandum about environmental protection signed or attended by China. ²⁵⁾

Xia Guang thinks, "Environmental policy is the summation of a series of controlling, managing and adjusting measures adopted by the state to protect the environment. It represents the will, orientation and ability of the national right system or decision maker in environment protection in a certain period." In content, he thinks that environmental policy includes, "the general principle, basic principle, specific measures, right boundary, rewards and punishment rules of the national environmental protection, and the specific performance forms have calling, decision, laws, regulations, systems, promise, etc." It is visible that his understanding to the environmental policy is accordance with the former two people.²⁶⁾

25) Ren Chunxiao(2007), Paradox and Rectification of Expectation and Performance of Chinese Environmental Policies, Administrative Tribune, Vol.3, pp.51-55.

26) Xia Guang(2001), On Environmental Policy Innovation —An Economic Analysis

Li Kang thinks in the book of Environmental Policy, “Environmental policy is the extension and specification of sustainable development strategy and environment protection strategy, it is the standard of concept and conduct of inducing, restraining and coordinating the control objective of environmental policy and it is the oriented management method of realizing the objective of the sustainable development strategy.” Although this book does not point out the differences between environmental policy and environmental law, the writer makes analysis and comparison to the differences and relevancy among “strategy”, “policy” and “tactic” and thinks that in the field of environmental protection, “sustainable development strategy, environmental policy and environmental regulation are control methods to realize harmony between people and nature and coordination between the development and resources environment.” That is, professor Li Kang thinks that the relationship among sustainable development strategy, environmental policy and environmental regulation is “trinity”, and “they can display their different roles in the interactive function of trinity, produce a series of chain response and synergistic effect from high layer to low layer and display their own different values and irreplaceable functions in the target of realizing sustainable development.”²⁷⁾

Professor Cai Shouqiu has published three monographs: Introduction of Chinese Environmental Policy(Wuhan University Press, Version 1988), Study on the Legal Problems of Environmental Policy(Wuhan University Press, Version 1999), Study on EU Environmental Policy and Laws(Wuhan University Press, Version 2002). Among which the first two books mainly focus on the basis problems of environmental policies in our country, while Study on EU Environmental Policy and Laws is the main research

for Environmental Policy, Beijing: China Environmental Science Press.
27) Li Kang(2000), Environmental Policy, Beijing: Tsinghua University Press.

result of the project “Study on the environmental policy and environment plan” . It has 13 chapters totally and it introduces the current situation and recent result of EU environmental policies and laws. Professor Cai Shouqiu has specially discussed environmental policy as early as 1980s, which is the earlier systematic discussion in the environmental law filed. He thought, Chinese environmental protection policy that is the environmental policy is the key component of the national policy in China. It is the general term of working principle, path, doctrine as well as other countermeasure that are determined and implemented by the Party and the State according to the Marxism, Leninism and Mao Zedong thought combining the actual condition of economy, society and the environmental protection career to protect and improve the environment. It is also the standard of the actual behavior of environmental protection work in China. Later with the development of the situation of environmental protection, he made further supplementary and modification to this discussion in 1999. He thought that Chinese environmental policies should specifically include: Laws and regulations about environment and resources protection; Policy documents made by Chinese Communist Party about environment and resources protection; Document of environment resources protection made by China State Organs and Chinese Communist Party; Policies about environment and resources protection made by Chinese State Organ; International laws and policies about environment and resources protection; Major comments, articles, leaders’ instruction, leaders’ speech issued in main magazines of the Party and the State(especially report, speech, instruction, article and monograph of the leaders of the Chinese Communist Party and the State). It is visible that the environmental policy understood by Cai Shouqiu includes three aspects: First of all, environment laws and regulations; Secondly, policy documents issued by different subjects; Thirdly, the national macro environment objectives.²⁸⁾

2.2 Qinghai Rivers Source Region Environmental Management

The Three Greet Rivers Source Region is located in the western part of China and the Qinghai-Tibet plateau hinterland in the south of Qinghai province.(Fig. 4, 5) With an average elevation of over 4000 meters, the Qinghai-Tibet plateau hinterland is known as “The Roof of the World” . Its administrative areas including Yushu(玉樹), Guoluo(果洛), Hainan(海南), Huangna(黃南) four Tibetan autonomous prefecture of 16 counties, and Geermu(格爾木) city of the Tanggulaxiang(唐古拉鄉). The total land area of about 36.3 square kilometers, 43% per cent of total area of Qinghai province. The Qinghai province is the birthplace of the Yangtze River(長江), Yellow River(黃河) and Lancang River/Mekong River(瀾滄江/湄公河), known as the “Three Rivers Source Region” , and known as the “Chinese Water Tower” . (Fig. 6 Three Rivers Source Region of Qinghai Province) It conserves and supplies water with around 60 billion cubic meters flowing out annually. Moreover, as a key national wildlife refuge, the Three Rivers Source Region is the most sensitive to the global climate, which is also the birthplace of Chinese “Mother River” . What’s more, it is an ecological barrier of the ecological security and the regional sustainable development in China.

28) Meng Jia(2009), Research on the Legislation of Chinese Environmental Policy, Northeast Forestry University.

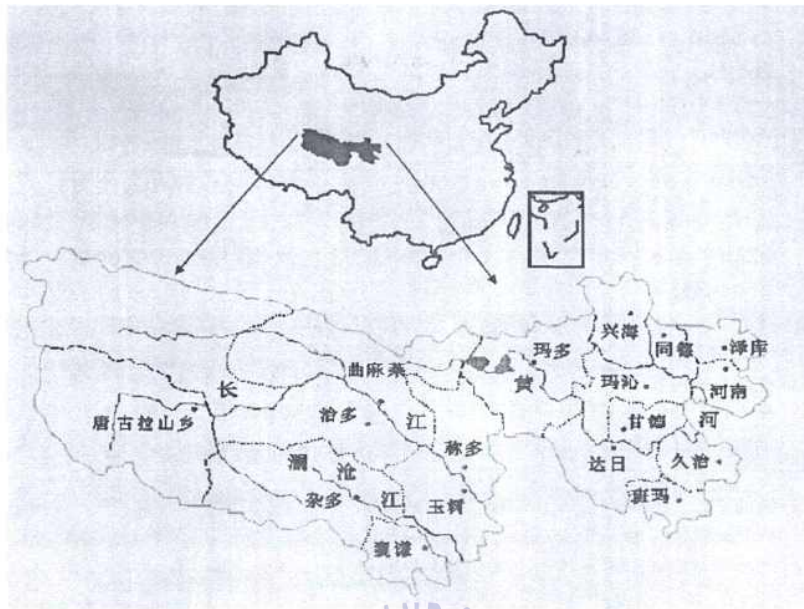


Fig. 4 The Location of the Three Rivers Source Region

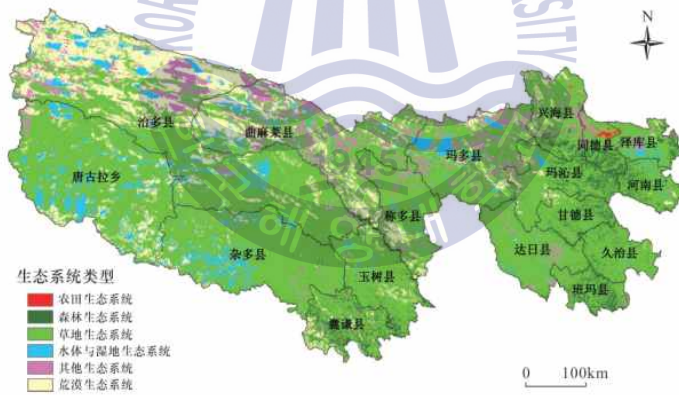


Fig. 5 Spatial Pattern of Ecosystem Type in the Three Rivers Headwaters Region



Fig. 6 Three Rivers Source Region of Qinghai Province



2.2.1 Changjiang River/Yangtze River

Located in the territory of China, Changjiang River (Yangtze River) originates from Qinghai province with more than 6300 km, which is the longest river in Asia and ranks the first in the size of basin area, the length and water quantity. (Fig. 7 Changjiang River / Yangtze River) Changjiang has numerous tributaries, about 3200 km from the west to the east of Changjiang basin and about 966 km from the north to the south. Changjiang flows through 11 provinces (autonomous regions and municipalities), include Qinghai(青海), Tibet(西藏), Sichuan(四川), Yunnan(雲南), Chongqing(重慶), Hubei(湖北), Hunan(湖南), Jiangxi(江西), Anhui(安徽), Jiangsu(江蘇), Shanghai(上海), and finally into the east China sea in Shanghai. (See Fig. 8) The Changjiang River is the third longest river in the world, basin with a total area of 1.8 million square kilometers, 1/5 per cent of the total land area in China. The Changjiang River and the Yellow River known as the nation's "Mother River" . (The Basic Information of Changjiang Rive, See Table 2)

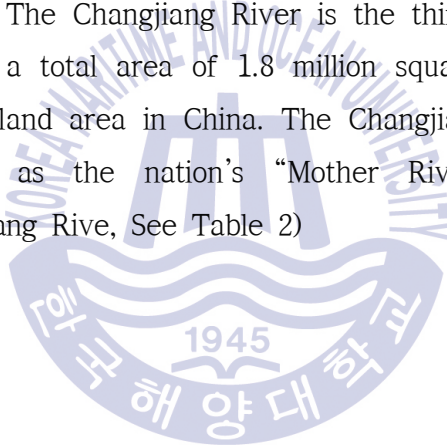




Fig. 7 Changjiang River / Yangtze River



Fig. 8 Changjiang River Flows Through 11 Provinces (Autonomous Regions and Municipalities)

Table 2 The Basic Information of Changjiang River, Yellow River, Lancang River

Basic Information		Changjiang River(長江)/ Yangtze(揚子江)	Yellow River(黃河)	Lancang River (瀾滄江) / Mekong River(湄公河)
Country		China	China	China, Myanmar, Laos, Thailand, Cambodia, Vietnam
Source		Geladaindong Peak(各拉丹冬峰)	Bayan Har Mountains(巴顏喀拉山脈)	Lasagongma Spring(拉賽貢瑪)
Source Location		Tanggula Mountains(唐古拉山), Qinghai	Yushu Prefecture, Qinghai	Yushu Prefecture, Qinghai
Source Elevation		5,042 m (16,542 ft)	4,800 m (15,748 ft)	5,224 m (17,139 ft)
Source Coordinates		33° 25' 44" N 91° 10' 57" E	34° 29' 31" N 96° 20' 25" E	33° 42' 5" N 94° 41' 7" E
Mouth		East China Sea, Shanghai and Jiangsu	Bohai Sea, Shandong	Mekong Delta (South China Sea)
States (China)		Qinghai(青海), Tibet(西藏), Sichuan(四川), Yunnan(雲南), Chongqing(重慶), Hubei(湖北), Hunan(湖南), Jiangxi(江西), Anhui(安徽), Jiangsu(江蘇), Shanghai(上海)	Qinghai(青海), Sichuan(四川), Gansu(甘肅), Ningxia(寧夏), Inner Mongolia (內蒙古), Shaanxi(陝西), Shanxi(山西), Henan(河南) and Shandong(山東)	Qinghai(青海), Tibet(西藏) and Yunnan(雲南)
Tributaries	- left	Yalong, Min, Tuo, Jialing, Han	Fen River (and many smaller rivers)	Nam Khan, Tha, Nam Ou
	- right	Wu, Yuan, Zi, Xiang, Gan, Huangpu	Tao River, Wei River	Mun, Tonle Sap, Kok, Ruak
Length		6,300 km (3,915 mi)	5,464 km (3,395 mi)	6,122 km (2,703 mi)
Basin		1,808,500km ² (698,266 sq. mi)	752,000km ² (290,349 sq. mi)	795,000 km ² (307,000 sq. mi)
Discharge-Average		30,166 m ³ /s (1,065,302 cu ft/s)	2,571 m ³ /s (90,794 cu ft/s)	16,000m ³ /s (570,000 cu ft/s)

From source region to the Yibin(宜賓) section of Changjiang River has its own name. From source region to Dangqu(當曲) estuary called the Tuotuo(沱沱) River; from Dangqu(當曲) to yushu(玉樹) Batang(巴塘) estuary called the Tongtian(通天河) River; from Yushu to Yibin called the Jinsha(金沙) River. Yibin below is “Changjiang River” in its narrow sense, main section have its own nickname. From Yibin to Yichang is also called the Chuanjiang(川江) River; from Zhijiang(枝江) to Chenglingji(城陵磯) is also called the Jingjiang(荊江) River; In Anhui(安徽) province is also called Wanjiang(皖江) Rive; from Nanjing to the Changjiang River estuary is also called Yangtze(揚子) River.

During the period of the late Ming(明末) and the early Qing(清初) dynasties, the Europeans came from the upstream of Changjiang estuary through the Yangtze River. As a result, “Yangtze” from the European language was gradually entitled as the name of the whole Changjiang.²⁹⁾ (Fig. 9 Changjiang River / Yangtze River Basin) In recent years, the industrial pollution, river sand sedimentation exacerbated the frequent occurrence of seasonal floods. Therefore, parts of Yangtze River have been designated as conservation areas.

29) Sun Zhongming, Zhao Weihang(1980), A Study on the Name of Changjiang River and Yangtze River, Knowledge of Place Names, Vol.3.



Fig. 9 Changjiang River / Yangtze River Basin



2.2.2 Yellow River

The Yellow River originates in Qinghai province, it is the second longest river in China and the fifth largest river in the world. (Fig. 10 Yellow River) The Yellow River about 5464 km, the basin area is about 79.5 square kilometers, it is China's largest water area and the importance of water conservation. (Fig. 11 Yellow River Basin) The Yellow River is “几(幾)” glyph, it flows through 9 provinces (autonomous regions and municipalities) from China's west to east, includes Qinghai, Sichuan, Gansu(甘肅), Ningxia(寧夏), Inner Mongolia(內蒙古), Shaanxi(陝西), Shanxi(山西), Henan(河南) and Shandong, and flows into the Bohai(渤海) sea in the end. (Fig. 12 Yellow River is “几” Glyph) Dominated by mountains in the upper reaches of the Yellow River, in the middle and lower reaches is given priority to with plains and hills. The Yellow River is the main source of Chinese civilization and Chinese call it the “Mother River” . (The Basic Information of Yellow River, See Table 2)

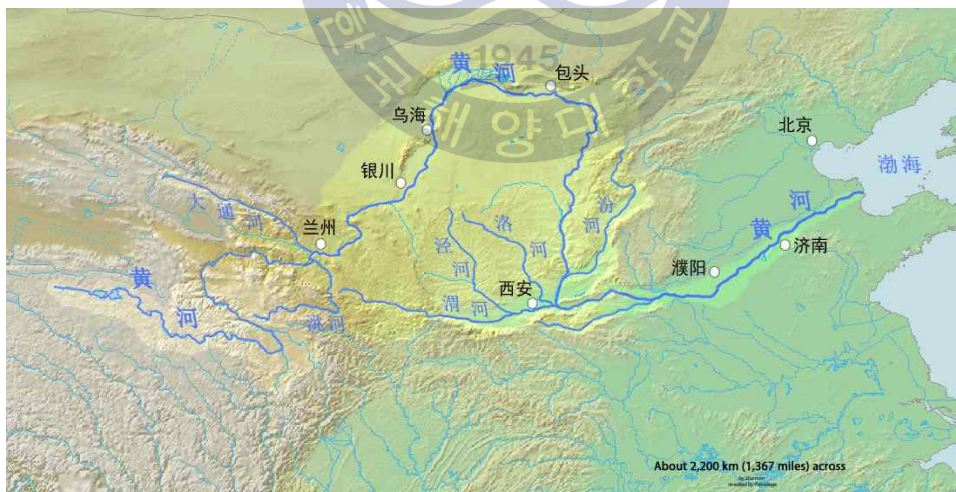


Fig. 10 Yellow River

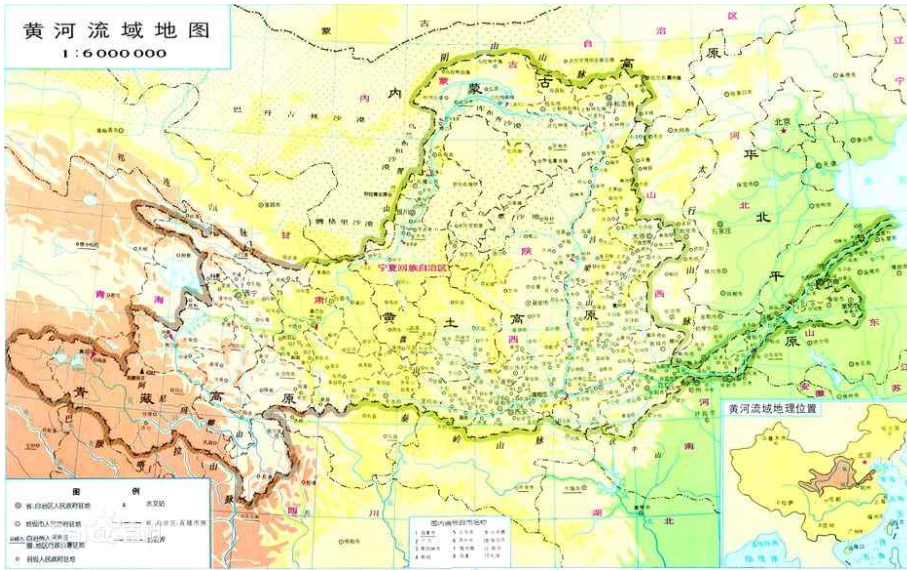


Fig. 11 Yellow River Basin

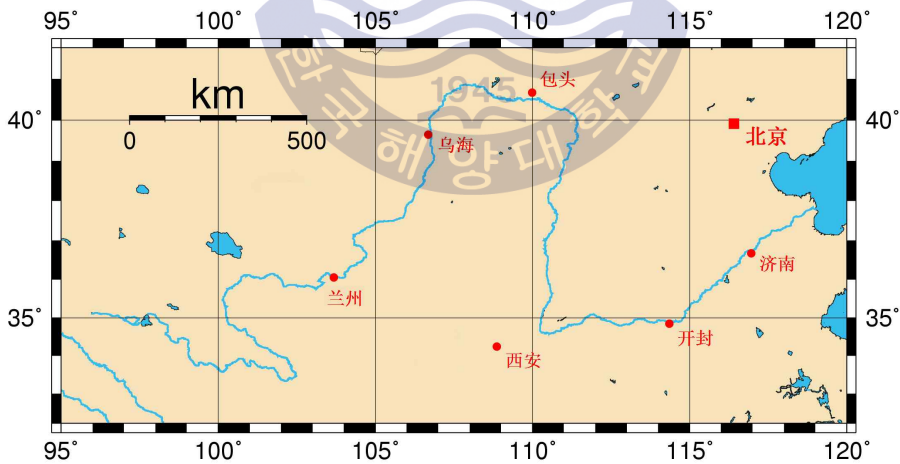
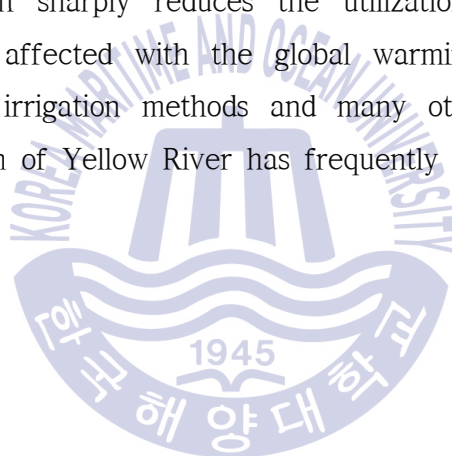


Fig. 12 Yellow River is “几” Glyph

Traditionally, it is believed that Chinese civilization originated from the Yellow River basin which is regarded as “the Mother River” and “the Cradle of the Chinese Civilization” . With a long history in China, Yellow River has been considered as a blessing and a curse as well that it nicknamed both “China’s Pride” (中國的驕傲) and “China’s Sorrow” (中國的痛).³⁰⁾ With social development, the industrial and the urban water consumption along Yellow River is increasing, thus the irrigation area of Yellow River is expanding. However, with the low ability of reservoir regulation and without unified water resources management, the environmental pollution sharply reduces the utilization rate of Yellow River, which is also affected with the global warming, destruction of vegetation, backward irrigation methods and many other factors. Since 1972, the disconnection of Yellow River has frequently occurred.



30) Cheng, Linsun and Brown, Kerry(2009), Berkshire Encyclopedia of China, Berkshire Publishing Group, pp.1125.

2.2.3 Lancang River/Mekong River

The Lancang River(Mekong River) originates in Tanggula(唐古拉) mountains in Qinghai province, it flows through the three provinces of Qinghai(青海), Tibet(西藏) and Yunnan(雲南), in the exit of Yunnan province it become the boundary between the Laos(老撾) and Myanmar(緬甸), and then called the Mekong River(湄公河). (The Basic Information of Lancang River, See Table 2) The Mekong River flows through Laos(老撾), Myanmar(緬甸), Thailand(泰國), Cambodia(柬埔寨) and Vietnam(越南), Ho Chi Minh City(胡志明市) in Vietnam into the Pacific Ocean in the south China sea. (The Lancang River / Mekong River, See Fig. 13) By Vietnam out of the South China Sea that it has 9 sea outlet, so the Vietnam called it Jiulong(九龍) River. The Lancang River total length about 6122 kilometers, that 2161 kilometers long in China, 265 kilometers long in Myanmar, 1988 kilometers long in Laos, 976 kilometers long in Thailand, 502 kilometers long in Cambodia, and 230 kilometers long in Vietnam. (Fig. 14 Lancang / Mekong River Length) Lancang River basin area of 81 square kilometers, it is the largest river flows through the Asian countries, and known as the “Danube River in the East” . (The Lancang River / Mekong River — “The Danube River in the East” , See Fig. 15) Lancang River is one of the biggest river in the southwest of China, which is the sixth longest river in the world, the third longest river in Asia, and the first longest river in the southeast of Asia. The changeable flow of Mekong River in the dry season and the rainy season and many primary rapids and waterfalls leads to the poor shipping capacity of Mekong River. However, only 550 kilometers along the downstream of the Mekong River is navigable at present.



Fig. 13 Lancang River / Mekong River



Fig. 14 Lancang / Mekong River Length



Fig. 15 The Lancang River / Mekong River—“The Danube River in the East”

2.3 Shandong Peninsula Marine Environmental Management

2.3.1 Shandong Peninsula

The Shandong peninsula also called Jiaodong(膠東) peninsula, it is the largest peninsula in China. (Fig. 16 Shandong Peninsula Geographical Position) Shandong peninsula, Liaodong(遼東) peninsula and the Leizhou(雷州) peninsula collectively known as “China’s Three Big Peninsula”, the Shandong peninsula is the biggest peninsula in China. Shandong peninsula is located in the eastern Shandong province, it includes all of Qingdao, Yantai(煙台) and Weihai(威海), and it includes most or part of Weifang(濰坊), Rizhao(日照) and Dongying(東營). (Fig. 17 Shandong Peninsula) Bounded by Yangkou(羊口)-Show Jane(秀珍) River in Shandong peninsula, and parted by Jiaodong peninsula. Three of Shandong peninsula faces the sea that the peninsula protrudes between the Yellow Sea and the Bohai(渤海) Sea, faces the Liaodong(遼東) peninsula in the north, and South Korea in the east. With an area of 66000 square kilometers, it is traditionally demarcated by Gluelai(膠萊) river and contains Zibo(淄博), Weifang(濰坊), Dongying(東營) and Rizhao(日照) of Shandong peninsula currently. Twisted and turned the coast of Shandong peninsula with numerous ports, it is not only a coastal harbor area of the north of China, but also an economic region for foreign trade. With a warm temperate humid monsoon climate, about 60% of annual precipitation in Shandong peninsula is concentrated in summer which is so intensive often with heavy torrential rains. (Table 3 The Basic Information of Shandong Peninsula)

Owing to geographical location, Shandong peninsula closely connects the northeast of China and South Korea. In the History, a large number of people in the northeast of China immigrated by boats, then forming and creating a rich and mixed culture of Beixin(北辛) culture, Baishi(白石)

culture, Dawenkou(大汶口) culture, Longshan(龍山) culture and Yueshi(嶽石) culture. In 1861, Yantai became the first opening port in Shandong. In 1992 after the establishment of diplomatic ties between the People’s Republic of China and South Korea, there are a large number of Korea companies set up factories in the area.³¹⁾ There are a lot of the Korean who lived in the Shandong peninsula, and a large number of Korean travel to the peninsula every year. The important cities in Shandong peninsula have Qingdao, Yantai, Weihai, Weifang, Rizhao, etc.



Fig. 16 Shandong Peninsula Geographical Position

31) http://baike.so.com/doc/5351044-5586501.html#5351044-5586501-4_2

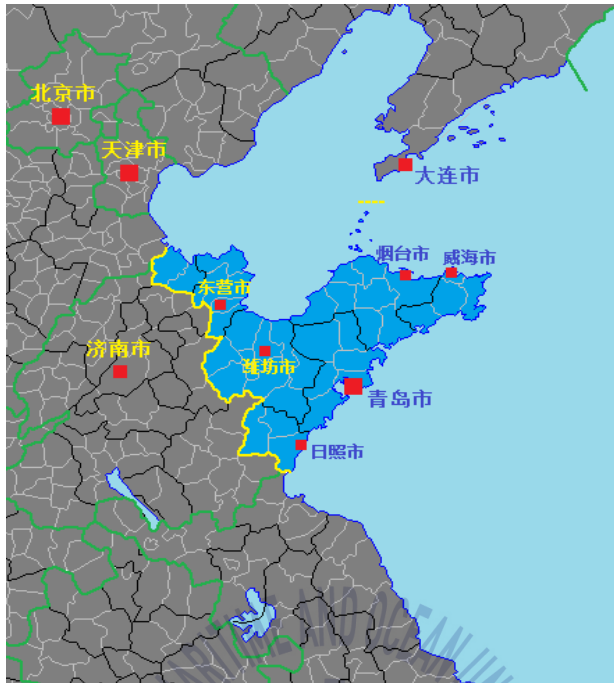


Fig. 17 Shandong Peninsula

Table 3 The Basic Information of Shandong Peninsula

Alias	Jiaodong peninsula(膠東半島)	Under the Jurisdiction of District	Qingdao(青島),Yantai(煙台),Weihai(威海)
Geographical Position	Weifang(濰坊) diesel plains east of shandong peninsula	Area	66000 square kilometers
District	Shandong province of China	Port	Qingdao(青島),Yantai(煙台),Weihai(威海), Longkou(龍口)
Climate	Warm temperate humid monsoon climate	Famous Attractions	Penglai(蓬萊) Pavilion, Liugong(劉公) island, Laoshan(嶗山), etc.

In addition, Shandong peninsula has abundant tourist attractions, including one national holiday resort, three national key scenic areas, four national-level scenic spots of 5 A-class, five national nature reserves, seven national tourist towns(villages), and four national museums. Besides, two national historical and cultural cities, two Chinese historical and cultural villages, three Chinese famous historical and cultural streets, one national cultural ecological reserve, one key Buddhist monastery, one key Taoist temple, 28 national key cultural relics protection units(including the Great Wall of Qi), and 181 provincial-level cultural relic protection units are located in Shandong peninsula. The economy of Shandong peninsula developed very early. In the 8th century BC of the Spring and Autumn period of, fisheries and salt industry had gradually developed in Shandong peninsula. Since the year 1949, Shandong peninsula has taken the advantage of its conditions to become a national famous base for the production of peanuts, fruits, aquatic products and silk.³²⁾ Nowadays, the economic and technological development zone of Qingdao and Yantai are constructed.

32) <https://zh.wikipedia.org/wiki/%E5%B1%B1%E4%B8%9C%E5%8D%8A%E5%B2%9B>

2.3.2 Shandong Peninsula Blue Economic Zone

On January 4, 2011, the State Council approved the “Shandong Peninsula Blue Economic Zone Development Plan” that belongs to the first batch of national development strategies in the initial year of “Twelfth Five-Year”, and besides, it is also the first on the subject of marine economy development strategy in China. The approval and implementation of the “Plan” reflect that China’s regional development extends from land economy to the Marine economy, and promote the major strategic initiatives in the land and sea as a whole. In addition, the plan marks that the pilot project on national marine economic development enters the implementation phase, and also shows that the Shandong Peninsula Blue Economic Zone construction has been officially considered as a national development strategy, and has become the important part of national marine development strategy and regional coordinated development strategy.

Centering on Shandong peninsula area that including Qingdao, Yantai, Weihai, Rizhao, Weifang, blue economic zone in Qingdao of Shandong peninsula as the center. (Fig. 18, Fig. 19 Shandong Peninsula Blue Economic Zone; Fig. 20 Shandong Peninsula Blue Economic Zone Layout Diagram) The whole plan included all the waters area of Shandong, and included six cities such as Qingdao(青島), Dongying(東營), Yantai(煙台), Weihai(威海), Weifang(濰坊), Rizhao(日照), and Wudi(無棣) and two counties of Zhanhua(沾化). Its land area is 6.4 square kilometers and the sea area is 15.96 square kilometers.³³⁾ (Table 3 Basic Information of Shandong Peninsula Blue Economic Zone)

33) <https://zh.wikipedia.org/wiki/山東半島藍色經濟區>



Fig. 18 Shandong Peninsula Blue Economic Zone



Fig. 19 Shandong Peninsula Blue Economic Zone



Fig. 20 Shandong Peninsula Blue Economic Zone Layout Diagram

Table 4 Basic Information of Shandong Peninsula Blue Economic Zone

Establish Time	On January 4, 2011	District	Shandong Province of China
Land Area	6.4 Square Kilometers	Sea Area	15.96 Square Kilometers
Climate	Warm Temperate Humid Monsoon Climate	Coverage	6 Cities: Qingdao(青島), Dongying(東營), Yantai(煙台), Weihai(威海), Weifang(濰坊), Rizhao(日照). 2 Counties: Wudi(無棣), Zhanhua(沾化).
Landforms	Hills and Plains	Culture	Qilu(齊魯) Culture

Shandong Peninsula Blue Economic Zone includes subject areas and nine large core areas. (Fig. 21 Nine Large Core Areas of Shandong Peninsula Blue Economic Zone; Fig. 22 Construction Areas of Shandong Peninsula Blue Economic Zone) The subject areas include coastal land area of 36 counties and adjacent sea area. The core areas of Shandong Peninsula Blue Economic Zone includes Dingzi(丁字) Bay Marine New Town, Weifang(濰坊) Marine New Town, Haizhou(海州) Bay Heavy Industry Agglomeration Area, Qiandao(前島) Machinery Manufacturing Industry Agglomeration Area, Longkou(龍口) Bay Marine Equipment Manufacturing Industry Agglomeration Area, Binzhou(濱州) chemical industry cluster district, Dong mouth(董家口) Marine High-tech Industries Agglomeration Area, Laizhou(萊州) Marine Renewable Energy Industry Agglomeration Area, Dongying(東營) Petroleum Industry Agglomeration Area. Shandong Peninsula Blue Economic Zone involving seven cities, Qingdao(青島)-Weifang(濰坊)-Rizhao(日照), Yantai(煙台)-Weihai(威海), Binzhou(濱州)-Dongying(東營). In the form of group development, make the Peninsula Blue Economic Zone of the radiation to the entire area in Shandong province. (See Table 5 Shandong Peninsula Blue Economic Zone)



Fig. 21 Nine Large Core Areas of Shandong Peninsula Blue Economic Zone

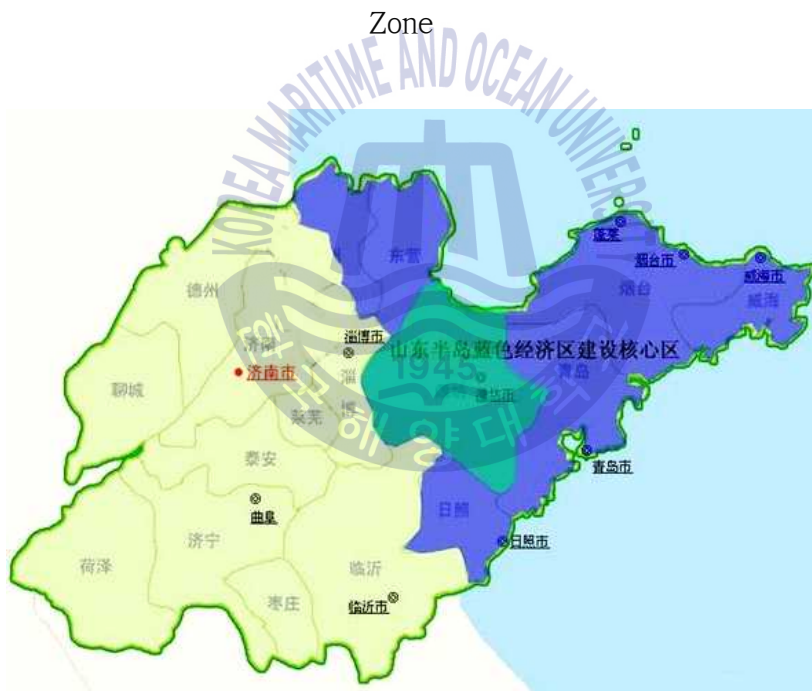


Fig. 22 Construction Areas of Shandong Peninsula Blue Economic Zone

Table 5 Shandong Peninsula Blue Economic Zone

Economic Zone	Areas Include
Subject Area	Coastal land area of 36 counties and adjacent sea area
9 Large Core Areas	Dingzi(丁字) Bay Marine New Town, Weifang(濰坊) Marine New Town, Haizhou(海州) Bay Heavy Industry Agglomeration Area, Qiandao(前島) Machinery Manufacturing Industry Agglomeration Area, Longkou(龍口) Bay Marine Equipment Manufacturing Industry Agglomeration Area, Binzhou(濱州)chemical industry cluster district, Dong mouth(董家口) Marine High-tech Industries Agglomeration Area, Laizhou(萊州) Marine Renewable Energy Industry Agglomeration Area, Dongying(東營) Petroleum Industry Agglomeration Area.

By 2015, the modern marine industry system had been basically established, and meanwhile, comprehensive economic strength had been significantly strengthened. Besides, marine science and technology innovation capacity had been enhanced, and at the same time, the ecological environmental quality of sea and land had been improved significantly. As for marine economy pattern, opening to the outside world has constantly improved, taking the lead to achieve the overall goal of building a moderately prosperous society in an all-round way.³⁴⁾ By 2020, by promoting the marine economic development, optimizing industrial structure and building the human and the nature harmonious

³⁴⁾ Shandong Peninsula Blue Economic Zone Construction Office(2011.3.2), Shandong Peninsula Blue Economic Development Goals.

blue economic zone, modernization can be achieved basically. ³⁵⁾

The Shandong Peninsula Blue Economic Zone has four strategic positioning, firstly, the construction has stronger international competitiveness in modern marine industry agglomeration area. Secondly, the construction reaches the world's advanced level of the core area concerning marine science and technology. Thirdly, the construction includes the national marine economic reform and opening to the prior area. Fourthly, the construction covers the nationally important marine ecological civilization demonstration areas. Generally speaking, the Shandong Peninsula Blue Economic Zone is featured with the comprehensive development of the green economy, the marine economy and the blue economy. Moreover, the principle of marine and land integration should be followed and environmental protection should not be neglected. Different from “pollution first, treatment later” mode, the marine environment protection should be put in the first place, which is the inevitable choice of the local government in marine environmental protection.

According to the strategic positioning of the Shandong Peninsula Blue Economic Zone, its resources and environmental bearing capacity, and the existing infrastructure and development potential, and meanwhile, in accordance with the principle of “land promoting the sea, and the sea driving land, sea and land as a whole” , and optimizing the layout of marine industry, the core status of high-end marine industry clusters in Shandong peninsula can be enhanced. Optimizing the protection pattern of coastal and marine development, the three development protection zones namely coastal protection zone, offshore protection zone and high

35) China Economic NET(2014.6.8), Shandong Peninsula Blue Economic Zone Development Planning and Implementation of More Than Three Years, Enters Into a Strategic Vision.

seas protection zone are constructed. The distribution of coastal towns will be optimized to form three town groups including Qingdao-Weifang-Rizhao, Yantai-Weihai, and Dongying-Binzhou, form an overall development framework, known as “one core, three development protection zones and three groups.”³⁶⁾



36) Shandong Peninsula Blue Economic Zone Construction Office(2011.3.2.), Shandong Peninsula Blue Economic Zone Space Layout.

2.3.3 Shandong Peninsula Marine Environmental Management

Shandong Peninsula marine environment refers to a total of sea and ocean water on the earth, which includes marine water, dissolved and suspended substances in the water, the seabed sediments and organisms living in the marine, the marine climate as well as other marine natural elements that form the interdependent ecosystems. To put it simply, the marine environment is a complex system. Even though humans do not live on the marine, the marine is still an indispensable source of material and energy for human's consumption and production. Along with the development of science and technology as well as the increasing scale of human exploitation for marine resources, people depend more on the marine. Also, the effect of the marine on the human is on the increase. As the marine programs develop continuously, the marine environment is influenced by human activities and pollution. At present, one of the main tasks of the marine environmental research is to explore the methods and ways of protecting marine ecosystems.

The marine management is done by marine administrative organ and their personnel are in accordance with the law of self and social organizations involved in the management of marine activities, mainly includes command, coordination, control, and execution of the marine exploitation and protection of restriction or non-restriction functions.

"China's Ocean Agenda 21" about comprehensive marine management is defined that comprehensive marine management should begin from the national overall interests of maritime rights, marine resources and marine environment. Through guidelines, policies and regulations, zoning, planning, formulation and implementation, as well as organization and build coordinated, comprehensive and balanced relations of related sectors are carried on in the development and utilization of marine, in order to guarantee maritime rights and interests, realize the reasonable

development of marine resources and protection of the marine environment and promote sustained, stable and coordinated development of the marine economy. ³⁷⁾

Marine environmental management for the purpose of marine environmental natural balance and sustainable use, the government as the main body of the marine organization should coordinate the relationship between social development and marine environment. By integrated use of economic, legal and administrative means, as well as international cooperation, science and technology, and other effective means, the destruction and degradation of the marine environment can be prevented and controlled to maintain its excellent condition. The protection of the marine environment mainly includes three aspects, namely the planning management of marine environment, the marine environment quality management and the technical management of marine environment.

Management of the marine environment has two characteristics, namely comprehensive coordination and adapting to the region. The marine environment is an interconnected whole, and its management involves a wide range of environmental factors such as water quality, biological species, atmosphere and many various management activities. In this case, comprehensive measures should be taken to solve the problems of the marine environment. The marine environment of the natural background, human activities, and environmental quality standards has a significant regional variation. The decision-making and action concerning the marine environmental management must take the specific characteristics of different regions into consideration.

37) The State Oceanic Administration(1996), China Ocean 21st Century Agenda.

Chapter 3 Analysis of Two Case's Local Government Environmental Management Capacity

3.1 Analysis Frame of Environmental Management Capacity

Local autonomy group environmental self-control strength, according to the Lester(1990) can be divided into the following four types. The first type contains strong institutional capacity and high commitment of progressives, the second is weak institutional capacity but high commitment of strugglers, the third is full of institutional capacity but low commitment of delayers, the fourth is lack of institutional capacity and low commitment of regressives.³⁸⁾

As shown in Table 6 and Table 7, there are four types of local government environmental management capacity in Qinghai province and Shandong province. This study is based on the four classification criteria of Lester(1990), and the system construction (Table 6) and human resources construction (Table 7) of environmental management are analyzed. According to the high/low of commitment and strong/weak institutional capacity of autonomy group, using four types and comprehensive analysis of the environmental management capacity in local governments.³⁹⁾

38) Tae Hoon Moon(2003), A Study on the Development and Application of Evaluation Model for the Local Government's Environmental Administration Capacity, Journal of South Korea Policy, Vol.12, pp.201-221.

39) Sung-Doo Choi, Eun-Sook Kang, Sang-Goo Kim, Sang-Hee Part, Young-Chae Song, Kyung Eun Lee(2008), Self-Governing Capacity of Ocean Environmental

Table 6 Analysis Framework of This Study (System Construction)

Differentiate		Institutional Capacity (System Construction)	
		Strong	Weak
Local Government Commitment	High	Progressives	Strugglers
	Low	Delayers	Regressives

Table 7 Analysis Framework of This Study (Human Resources Construction)

Differentiate		Institutional Capacity (Human Resources Construction)	
		Strong	Weak
Local Government Commitment	High	Progressives	Strugglers
	Low	Delayers	Regressives

Promotion of the environmental management capacity of local government, on the one hand requires high environmental management of local government commitment, on the other hand need local government strong system construction and human resources construction.

1) Progressives

If local governments have a high commitment, and the system

Management of Busan Metropolitan City, Journal of Navigation and Port Research, Vol.32, pp.515-519.

construction and the human resources construction is strong, so the local government in environmental management is progressive. Party and State leaders have instructed to strengthen ecological environmental protection and construction in China. In order to protect and restore the ecological environment in the Three Rivers Source Region, the provincial government approved in May 2000 to build the Qinghai Three Rivers Source Region nature reserve, then in September 2001 the establishment of the administration of the Qinghai Three Rivers Source Region Nature Reserve was approved. In order to protect and restore the ecological function, improve the regional ecological environment, promote the harmonious development between man and nature, the state council approved the “Master Planning for the Ecological Protection and Construction in Qinghai Three Rivers Source Region Nature Reserve” (corresponding project called “the first project”) in 2005, which marks a new stage for the Three Rivers Source Region of constructing and protecting the ecological environment in a large scale.

2) Strugglers

If local governments have a high commitment, but the system construction and the human resources construction is weak, so the local government in environmental management is struggler. The Three Rivers Source Region develops without legal protection and support, due to its remote geographical locations, the harsh climate, as well as the backward economic, social and cultural, legal construction. Meanwhile, its mass media are single, its legal education is not ubiquitous, and its local economic and social development are relatively low. A series of laws completed the legal system of environmental protection to guarantee the sustainable development of the Three Rivers Source Region at the legal context, which, of course, still needs to be improved. Marine environmental management in Shandong Peninsula lacks of macro

planning and regulatory standards, for instance, the conception of marine environmental management is obsolete and the target position is not clear.

3) Delayers

If local governments have a low commitment, but the system construction and the human resources construction is strong, so the local government in environmental management is delayer. In the aspect of legislation, Qinghai province first tried and ended in September 2015. It also made local laws and regulations for the ecological protection of the Three Rivers Source Region, and the draft of “Qinghai Province Ecological Protection Measures” had finished but had not yet formally promulgated. The awareness of the education and training of human resources is not enough. Due to lack of human resource management in the authorities, effective incentives, rewards and punishments are not clear in marine environmental management. Since incentive mechanism is not flexible, the enthusiasm and initiative of human resources are affected, which results in inefficiency in marine environmental management.

4) Regressives

If local governments have a low commitment, and the system construction and the human resources construction is weak, so the local government in environmental management is regressive. The industrial structure there is unreasonable, and its incentive mechanism is not perfect. In return, the backward economy, the less capital investment and the low-level human resource lead to the backwardness of its human resource management concepts, the imperfect of its configuration mechanism, the unreasonable recruitment system and the imperfect selection mechanism.

3.2 Case Analyses

3.2.1 Qinghai Rivers Source Region Environmental Management Capacity Analysis

With the largest area and the most abundant wetland types, the Three Rivers Source Region in Qinghai province has the highest elevation in the world, covering with rivers, lakes, swamps, many mountain glaciers. The source area likes a huge water tower, while the Changjiang River, Yellow River, Lancang River likes a “Water Pipe” , conveying endless water to the lower reaches, which is the key area of water conservation in Three Rivers Source Region as well as the ecological source of Chinese agricultural sustainable development. As the “ecological barriers” for regional sustainable development, the Three Rivers Source Region greatly impacts the Chinese ecology and the national economy. The important ecological value of Three Rivers Source Area has drawn great attention by the national and local governments. They establish the Three Rivers Source Region nature reserve to protect the distribution of ecological system in the Three Rivers Source Region, which is of great significance.

The Three Rivers Source Region is restricted by natural conditions with simple ecosystem community structure and fragile ecological environment. In recent years, the natural and man-made disasters, the improper human activities as well as many other factors deteriorates the ecological environment of the Three Rivers Source Region. Besides, with global warming, the mountain glaciers shrink annually and many rivers, lakes and wetlands dries gradually. As the source of water production declining, the desertification, soil erosion, and grassland degradation have become increasingly deteriorated. (Fig. 23 Patterns of Grassland Degradation in Three Rivers Source Region) Meanwhile, the deterioration of the

ecological environment in the Three Rivers Source Region seriously affected and restricted the survival and development of all ethnic groups on land.

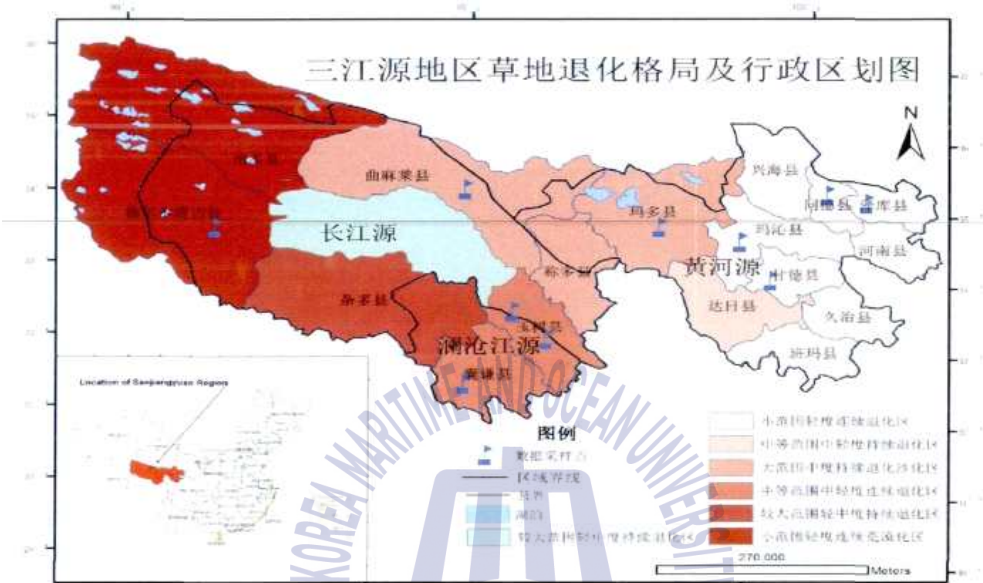
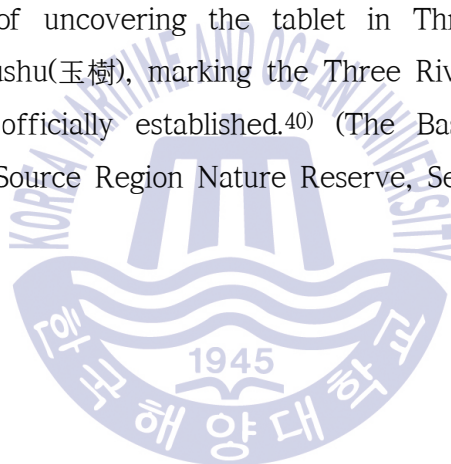


Fig. 23 Patterns of Grassland Degradation in Three Rivers Source Region

1) Progressives

Chinese state leaders have instructed to strengthen ecological environmental protection and construction. In 1999, a comprehensive survey on the Lancang River was conducted to investigate the “Development of Big Northwest Region, Protection of the Three Rivers Source Region” proposal. On March 21, 2000, the State Forestry Bureau, the Chinese Academy of Sciences and the Qinghai provincial government

attended a meeting in Chinese “Water Tower” to be faced with a serious threat, considering the establishment of the Three Rivers Source Region national nature reserve as the western development strategy to protect the ecological environment. In order to protect and restore the ecological environment in the Three Rivers Source Region, the provincial government approved in May 2000 to build the Qinghai Three Rivers Source Region nature reserve, then in September 2001 the establishment of the administration of the Qinghai Three Rivers Source Region Nature Reserve was approved. On July 22, 2000, Jiang Zemin(江澤民), Chinese previous president, wrote for “Three Rivers Source Region National Nature Reserve” of Qinghai province. (See Fig. 24, 25) On August 19, 2000, the ceremony of uncovering the tablet in Three Rivers Source Region was hold in Yushu(玉樹), marking the Three Rivers Source Region Nature Reserve was officially established.⁴⁰⁾ (The Basic Information of Qinghai Three Rivers Source Region Nature Reserve, See Table 8)



40) Li Junqiao(2002), Study on Countermeasures for Rehabilitation of Ecological Environment in the Source Area of Three Rivers, North West Agriculture and Forestry University.

Table 8 The Basic Information of Qinghai Three Rivers Source Region Nature Reserve

Approval Time	On July 22, 2000	Set up Time	On August 19, 2000
Geographical Position	Qinghai-Tibet plateau hinterland	Reserve Levels	national nature reserve
District	Qinghai province of China	Area	36.6 square kilometers
Protection Object	Tibetan antelope, snow leopard, orchid, etc.	Famous Attractions	Nature reserve monument of three rivers' sources, the Tongtian(通天) river.
Climate	Plateau continental climate	Altitude	3335~6564 m
Features	China's largest nature reserve	Type	Wetland types



Fig. 24 Qinghai Three Rivers Source Region National Nature Reserve



Fig. 25 The Three Rivers Source Region National Nature Reserve

In January 2003, the Three Rivers Source Region upgraded to the State-level nature reserve, becoming the largest nature reserve in China. (Fig. 26 The Distribution of Three Rivers Source Region Nature Reserve in Qinghai Province; Fig. 27 Qinghai Three Rivers Source Region Nature Reserve Ecological Construction Plan) Besides, in order to protect and restore the ecological function, improve the regional ecological environment, promote the harmonious development between man and nature, the state council approved the “Master Planning for the Ecological Protection and Construction in Qinghai Three Rivers Source Region Nature Reserve” (corresponding project called “the first project”) in 2005, which marks a new stage for the Three Rivers Source Region of constructing and protecting the ecological environment in a large scale. In July 2005 the management bureau of Qinghai Three Rivers Source

Region national nature reserve was established. In September 2008, the Ministry of environmental protection issued the “National Program for Protecting Ecological Fragile Area” in Qinghai-Tibet plateau.

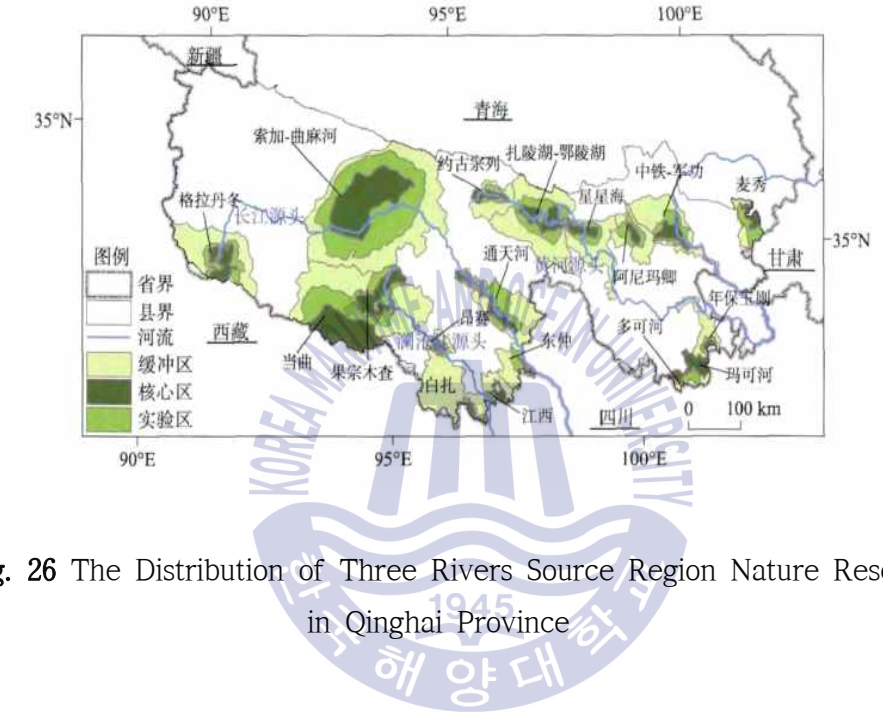


Fig. 26 The Distribution of Three Rivers Source Region Nature Reserve in Qinghai Province



Fig. 27 Qinghai Three Rivers Source Region Nature Reserve Ecological Construction Plan

On November 16, 2011, the Executive Meeting of the State Council approved the implementation of the national comprehensive pilot area of the ecological protection in Qinghai Three Rivers Headwaters, marking the new stage of the ecological protection and economic development in Qinghai Three Rivers Headwaters. This project is in accordance with the principle of respecting the culture, protecting the ecological system and safeguarding people's livelihood. Meanwhile, it also conforms to the combination of green development and the improvement of people's living standards. The scientific planning, reform and innovation in the protection of Qinghai Three Rivers Headwaters have accumulated experience and provided guidance for the ecological civilization protection

in similar areas. 41)

The functional zoning of the Three Rivers Source Region nature reserve can be divided into three main areas, they are core areas, buffer areas and experimental areas. (The Three Rivers Source Region Nature Reserve Function Zoning, See Table 9) In specific, core reserve 18 divisions with an area of 31218 square kilometers, accounting for 20.5% of the total area. The buffer area covers 39242 square kilometers, occupying 25.8%. And the experimental area with 81882 square kilometers takes up 53.7%.

Table 9 The Three Rivers Source Region Nature Reserve Function Zoning

Function Zoning	Area	Accounted for (%) of the Total Area of Nature Reserves
Core Zone	31218 square kilometers	20.5 %
Buffer Zone	39242 square kilometers	25.8 %
Experimental Zone	81882 square kilometers	53.7 %

On January 8, 2014, the NDRC (National Development and Reform Commission) officially issued “the Ecological Protection and Construction of the Second Phase Project Plan in Qinghai Three Rivers Headwaters” , putting forward the reinforcement of protecting the wetland and lake ecosystem in Qinghai Three Rivers Headwaters. In order to further

41) <http://www.carbontree.com.cn/NewsShow.asp?Bid=6259>

promote the construction of ecological civilization, Qinghai province issued the “Regulations on Promoting the Construction of Ecological Civilization in Qinghai Province” on January 13, 2015, which would take effect as of March 1, 2015. This is not only the province’s first provincial legislation concerning the ecological civilization construction in Qinghai province, but also the China’s first provincial legislation concerning the ecological civilization construction in Tibet.

2) Strugglers

On March 5, 2016, the State Council issued “The Three Rivers Source Region State Park System Pilot Program” . Then, on April 13, 2016, Qinghai provincial government hold mobilization meeting, officially launching Three Rivers Source Region pilot national park system. What absorbed the world’s attention is that the Three Rivers Source Region would adopt the mode of “one park three areas” , including Changjiang River source(Kekexili), Yellow River source and Lancang River source. Meanwhile, as a major measure to construct Qinghai ecological civilization, the officially launching of the national park system rose to national strategy, which is also a great event in the history of Qinghai province and is the No. 1 project of Qinghai ecological protection. Therefore, Qinghai province will realize the goal of “making solid foundation in one year, completing the pilot tasks in two years, and building a national park in five years.” The park will provide a model for similar areas in the country for economic and social sustainable development, cultivating ecological civilization and maintaining nature harmonious with the leading areas.⁴²⁾

The Party Central Committee and the Central Government has paid so

42) Innovation Mechanism of Adherence to the Red Line, Three Rivers Source Region Show Beauty Style.

<http://www.hbzhan.com/news/Detail/106317.html>

much attention to the “Three Rivers Source Region Nature Area” because its nature reserve is the largest in China. As a vital strategy for western development in China, establishing “Three Rivers Source Region Nature Reserve” is also an important approach and a most effective measure to protect the ecological environment. Its ecological preservation and construction phase of the project started in 2005, which has been implemented for 10 years by the end of 2015. Eco-Environmental construction is urgent for regional economic and social sustainable development in the Three Rivers Source Region.

3) Delayers

On September 11, 2015, the central committee of the communist party of China passed the plan named “the Overall Scheme of Reform of Ecological Civilization System” which put forward “Six Stick” for the reforming and the needs to encourage pilot system and the significance of overall coordination. In the aspect of legislation, Qinghai province first tried and ended in September 2015. It also made local laws and regulations for the ecological protection of the Three Rivers Source Region, and the draft of “Qinghai Province Ecological Protection Measures” had finished but had not yet formally promulgated. With legal force, the promotion of the ecological construction would be guaranteed and the current environmental governance directly controlled by Chinese government would be effectively improved.⁴³⁾ Legislation to protect Three Rivers Source Region in Qinghai Province, regulate the behavior of the government implementation of ecological protection.

4) Regressives

With a vast source area, low degree of industrialization, and relatively

43) Legislation to Protect Three Rivers Source Region in Qinghai Province, Regulate the Behavior of the Government Implementation of Ecological Protection.

<http://qh.people.com.cn/n/2015/1019/c346783-26847784.html>

poor material conditions of the Three Rivers Source Region result in a shortage of high-level human resources, the lack of investment in knowledge, backward educational conception low average educational level. The industrial structure there is unreasonable, and its incentive mechanism is not perfect. In return, the backward economy, the less capital investment and the low-level human resource lead to the backwardness of its human resource management concepts, the imperfect of its configuration mechanism, the unreasonable recruitment system and the imperfect selection mechanism. Meanwhile, the unreasonable human resources configuration in Three Rivers Source Region severely restricts the sustainable development of the local economy.



3.2.2 Shandong Peninsula Marine Environmental Management Capacity Analysis

The marine environment as an important part of the global ecological system is an important space for human's production activities and living. Development and utilization of abundant marine resources present a huge economic value. The maritime economy as an important part of the national economy, will promote the overall development of the national economy along with the development and utilization of marine resources and development of marine economy. The marine environment as the typical public existence is non-competitive and non-exclusive. As long as human beings maximize the use of marine resources, it results in excessive exploration of marine public products. In the meantime, development of marine economy and marine environmental protection are often in contradiction. Since humans directly or indirectly discharge pollutants or waste to the ocean more than its self-purification ability, the marine environment is challenged with great damage. Moreover, such behaviors have led to the degradation in marine environmental and biological diversity and conversely impact on the survival and development of mankind. In this case, marine economic development will inevitably incur the destruction of marine environment while marine hazards will impact on human beings in return. Marine environment is an important support of marine ecosystem, and sustainable development of marine resources will be more crucial.

The marine environment as a natural factor affecting human life and development has many characteristics in holistic and regional levels. Because of the marine environment with the economic characteristics of the resources and the value, its specificity to the marine environmental management becomes necessary. For the sustainable and stable development of the economy, the marine environmental management

should focus on the development and resources, as well as the relationship between human beings and the environment. Sea power in the world continues to rely on the marine environmental management and upgrading national comprehensive competitiveness, which highlights the important status of the marine environmental management in the marine sustainable development.

Marine resources development has been adopted into national strategies since marine environmental pollution often occurs and the system for protecting marine environment has exposed increasing problems. As the global marine environmental problems become increasingly serious, protection of marine environment has been put on the national agenda. The local government has paid more and more attention to actively implement various programmes for conserve marine. However, it is the central government that undertakes the responsibility of marine environmental protection and management while local governments so far have not played their role. Local government as marine environmental protection law enforcement main body, strengthening and perfecting legal responsibility is very important.

At present, marine exploitation and utilization cause serious marine environment problems. Marine pollution has been increasingly serious; marine resources have been severely damaged; and the marine life has suffered a lot, because of pollution. Therefore, in the development of marine economy, the marine environment should be protected without delay to promote the sustainable development of marine economy.

1) Progressives

This thesis researches the legal system of the marine environment in Shandong Peninsula, as well as the role of local government in this research. However, there is a few policy research on the local marine

environment. China has established several marine legal system regulations, including Marine Environment Protection law of the People's Republic of China; Regulations of the People's Republic of China on the Control over Dumping Wastes into the Sea Waters Offshore Petroleum Exploration and Development Environment Protection law; Administrative Measures on the Marine Nature Reserve; the Fishery Law of the People's Republic of China; the Law of Port of the People's Republic of China; Administrative Regulations on the Prevention and Treatment of the Pollution and Damage to the Marine Environment by Marine Engineering Construction Projects; the Regulations on the Prevention of Pollution Damage to the Marine Environment by Land-Sourced Pollutants, etc, emphasizes the marine environment protection.

For the purposes of preventing, treating and alleviating the pollution and damage caused to the marine environment by the marine engineering construction projects, safeguarding the marine ecological balance and protecting marine resources, the “Administrative Regulations on the Prevention and Treatment of the Pollution and Damage to the Marine Environment by Marine Engineering Construction Projects” are formulated in accordance with the Marine Environment Protection Law of the People's Republic of China.⁴⁴⁾ Meanwhile, the Regulations on the Prevention of Pollution Damage to the Marine Environment by Land-Sourced Pollutants are formulated in accordance with the Marine Environment Protection Law of the People's Republic of China and for the purposes of strengthening the supervision and administration of land pollution sources and preventing pollution damage to the marine environment by land-sourced pollutants.⁴⁵⁾

44) State Council of the People's Republic of China(2006), Administrative Regulations on the Prevention and Treatment of the Pollution and Damage to the Marine Environment by Marine Engineering Construction Projects, Article 1.

45) State Council of the People's Republic of China(1900), Regulations on the

Marine Environment Protection Law of the People's Republic of China, article 5, "the environmental protection department under the State Council shall be in charge of the marine environmental protection of the whole country. The state administrative department of marine affairs shall be responsible for organizing investigations and monitoring of and exercising surveillance over the marine environment and conducting scientific research therein; it shall also be in charge of environmental protection against marine pollution damage caused by offshore oil exploration and exploitation and by the dumping of wastes into the sea ." 46) The administrative supervision system of marine environment protection in China adheres to the principle of "unified supervision and management, division of decentralized responsibility." Marine Environment Protection law of the People's Republic of China, article 7, "measures must be taken to protect the aquatic resources when building harbours and oil terminals, as well as water conservancy facilities and tidal power stations in estuaries. Dams to be built across fish and crab migration routes shall be provided with appropriate fish passage facilities." 47) Article 4, "the relevant departments under the State Council and the people's governments of the coastal provinces, autonomous regions, and municipalities directly under the central government may, as the need to protect the marine environment requires, establish special marine reserves, marine sanctuaries and seashore scenic and tourist areas and take corresponding measures to protect them. The designation of special marine reserves and marine sanctuaries shall be subject to the State Council for approval." 48) These rules are not in the true sense of the

Prevention of Pollution Damage to the Marine Environment by Land-Sourced Pollutants, Article 1.

46) Standing Committee of the National People's Congress(1983), Marine Environment Protection Law of the People's Republic of China, Article 5.

47) Standing Committee of the National People's Congress(1983), Marine Environment Protection Law of the People's Republic of China, Article 7.

public participation system. Article 30, “the discharge of hold-washings and other residues by vessels carrying noxious or corrosive goods must be conducted in compliance with the state provisions for vessel sewage discharge and shall be truthfully recorded in the Logbook.”⁴⁹⁾ The relevant administrative departments have the rights to participate and rule out the participation right of the citizens having marine environment decision-making.

The Shandong Province Marine Environment Protection Regulations, article 7, “provincial oceanic and fishery department should coordinate with the provincial environmental protection departments to formulate the province’s marine environmental protection plan, and according to the procedures for approval before implementation. The coastal districts of the city, the county(city, area) of marine and the related regulations formulated by the state fishery department, that in conjunction with the environmental protection departments at the same level, according to the higher level of marine environment protection of special planning, proposed administrative area of marine environment protection plan, and according to the procedure for approval.”⁵⁰⁾

Shandong Marine Environmental Protection Regulations, article 12, clear the marine environmental protection plan as the basis for the development and utilization of marine resources, as well as combining with the marine functional zoning. Article 17, made clear based on marine environmental protection planning for urban drainage pipe, sewage treatment plants or other pollutant treatment facilities

48) Standing Committee of the National People’s Congress(1983), Marine Environment Protection Law of the People’s Republic of China, Article 4.

49) Standing Committee of the National People’s Congress(1983), Marine Environment Protection Law of the People’s Republic of China, Article 30.

50) Shandong Provincial People’s Congress Standing Committee Session(2004), Shandong Province Marine Environment Protection Regulations, Article 7.

construction and the consummation. Article 30, in violation of marine functional zoning, marine environmental protection planning, focus on marine environmental protection of special planning, to develop and utilize marine resources responsible to specify its legal responsibility.⁵¹⁾ From the perspective of local norms, most of them are based on the requirements of the Marine Environment Protection Law of the People's Republic of China, stipulating the marine environment protection plan in the region.

2) Strugglers

According to the Marine Environment Protection Law of People's Republic of China, the department of ocean and fisheries of Shandong Province implement the 2001 provincial nearshore marine environment research, surveillance and evaluation. Besides, in 2001 they were compiled on 2001 Shandong Province Marine Environment Quality Bulletin which was released in April 2002. On the basis of the Marine Environment Protection Law of People's Republic of China, and the Shandong Provincial Marine Environment Protection Regulations, the department of ocean and fisheries of Shandong Province performed their duties earnestly and issued the Shandong Provincial Marine Environment Conditions Bulletin, in March 2015, in order to make the government and the general public to understand the present situation in Shandong province and the main problems of marine environment, protect the marine environment, and promote the economic and social development comprehensively, coordinately and sustainably. This was the 14th annual marine environmental bulletin that was released in Shandong province since 2002, which evaluate and analyze the 2014 nearshore marine

51) Shandong Provincial People's Congress Standing Committee Session(2004), Shandong Province Marine Environment Protection Regulations, Article 12, Article 17, Article 30.

environmental conditions of Shandong province, the environmental hazards and risks, the public service, the environmental supervision and management, the marine ecological civilization construction and so on, so as to enable the community and the general public fully understand the situation of marine environment in Shandong province and to enhance the awareness of marine environment protection, the sense of rational exploitation and the reasonable utilization of marine resources.

3) Delayers

In terms of 2012 Shandong Provincial Marine Environment Bulletin, this year Shandong marine environmental condition is much better. In specific, the pollutant emission in Shandong province had a slight increase in 2012 when compared with that in 2011. However, the excess emissions of sewage outlet along the coast is still relatively common, 4463 square kilometers of outlet water quality is lower than the fourth category of the sea water quality standards which has increased 3737 square kilometers compared with that in 2011.

From the aspect of 2013 Shandong Province Marine Environment Bulletin, the overall condition of Shandong marine environmental quality is good, but the nearshore environmental pressure is still outstanding, the pollution of terrigenous sea is serious, the overall condition of the environmental quality of the nearby sea area is relatively poor. From 2010 to 2013, the sea area in Shandong province has not reached the first category of sea water quality standard. (See Table 10)

Table 10 2010-2013 Shandong Province Sea Area has not Reached the First Category Sea Water Quality Standard of Various Types of Sea Area
(Unit: Square Kilometer)

Year	Second Category Water Quality of Sea Area	Third Category Quality Water of Sea Area	Fourth Category Quality Water of Sea Area	Worse than Fourth Category Quality Water of Sea Area
2013	8672	7364	1480	2577
2012	6811	3328	1693	4463
2011	12997	3408	1033	726
2010	5726	2633	549	554

Data: Shandong Province Ocean and Fishery Hall “2010-2013 Shandong Province Marine Environment Bulletin”

** Notes: Sea Water Quality Standard (GB 3097-1997): 52)*

According to the different uses of the sea and protection goals, the sea water quality is classified into four categories.

First category: applied marine fisheries waters, marine sanctuaries, rare and endangered marine life protected areas.

Second category: suitable for aquaculture, bathing beach, human body directly contact the sea marine sports or entertainment area, and directly related to human consumption industrial water area.

52) State Department of Environmental Protection, State Oceanic Administration (1998.7), Sea Water Quality Standard of the People’s Republic of China (GB 3097-1997).

Third category: suitable for general industrial water zone, coastal scenery tourist area.

Fourth category: applicable to sea port waters, marine development areas.

The 2014 Shandong Province Marine Environment Conditions Bulletin demonstrates that overall condition of marine environmental quality in Shandong province is good, but the environmental pollution of the local coastal sea is still very serious. Besides, the environmental quality of sewage outlet to the sea is much poorer and marine environmental disaster-prone problems are still severe. 2014 (Spring, Summer, Autumn) Shandong province sea water quality standard of various types of sea area. (See Table 11).

Table 11 2014 (Spring, Summer, Autumn) Shandong Province Sea Water Quality Standard of Various Types of Sea Area (Unit: Square Kilometer)

Season	First Category Water Quality of Sea Area	Second Category Water Quality of Sea Area	Third Category Water Quality of Sea Area	Fourth Category Water Quality of Sea Area	Worse than Fourth Category Water Quality of Sea Area
Spring	144132	9771	2966	1417	1314
Summer	147849	5576	3580	1211	1384
Autumn	143785	8088	4784	1979	964

Data: Shandong Province Ocean and Fishery Hall “Shandong Province Marine Environment Bulletin”

In 2014, the scale of the green tide in *enteromorpha prolifera* outbreak area of the Huanghai(黃海) Sea reached the largest, almost 50000 square kilometers in five years, which is nearly 19000 square kilometers larger than the average increase in the last 5 years. The main reason for the larger area of the green tide is owing to the water temperature, water pollution, water flow and the other factors. From 2010 to 2014, the actual coverage area and maximum distribution area of the green tide in Shandong province are large. (See Table 12)

Table 12 2010-2014 Shandong Province Green Tide Actual Coverage Area and Maximum Distribution Area (Unit: Square Kilometer)

Year	Actual Coverage Area	Maximum Distribution Area
2014	540	50000
2013	790	29733
2012	267	19610
2011	560	26400
2010	530	29800

Data: Shandong Province Ocean and Fishery Hall “2010-2014 Shandong Province Marine Environment Bulletin”

The deterioration of the marine environment of Shandong Peninsula not only restricts the development of marine economy in Shandong, but also seriously threatens people’s health and security in the coastal areas. Therefore, the relevant marine environmental management departments should pay much more attention to the emerging marine environmental

problems in Shandong Peninsula and re-examine the coping mechanism of marine environmental management. In recent years, various policies and governance measures for marine development are promulgated, though the effect of the implementation of governance models by individual administrative units is not obvious. Therefore, existing policy mode should be optimized and improved by the marine environmental management department. Besides, developing the marine economy is based on the overall planning and rational distribution. The rational development and the reasonable utilization of marine resources and the comprehensive prevention and the control of marine pollution can be achieved, the marine environmental quality can be improved and the marine ecological balance can be kept through economic, legal, administrative, science and technological means, developing and implementing new marine development strategy, exploring the integration of land and marine, regional joint, multiple social forces to participate in the “Comprehensive Marine Environmental Management Mechanisms” .

4) Regressives

The human resources management of marine environmental management in Shandong Peninsula is not adequate, the investment of which is too small, resulting from the inadequate human resources management system. Meanwhile, the marine environmental management department is equipped with unreasonable recruitment system and mechanism, backward human resources management concepts, inadequate training of human resources and inflexible incentive mechanism, which makes it harder implement competition, appraisal and supervision measures, as well as effective incentives, affecting the enthusiasm and initiative of the employees.

3.3 The Problems of Environmental Management in Qinghai River Sources Region

3.3.1 Problems of System Construction in Qinghai River Sources Region

Environmental management starts with environmental policy. Since China's reform and opening up, Chinese government gradually formed a relative mature environmental policy system through various designed environmental policy instruments, which, however, did not achieve the anticipated goal. The Three Great Rivers Source Region in Qinghai is an important ecological barrier for plateau in China. It is a high-cold and anoxic zone with ecological environmental fragility, frequent natural disasters, weak infrastructure, and poor self-development capacity. Besides, with the socio-economic development, global climate change and the irrational exploitation of water resources further deteriorate the ecological environmental problems, like serious pasture degradation, grassland desertification, soil erosion aggravates, glacier melting, wetland degradation. Despite the remarkable environmental performances, the environmental management of local government still confronts with some environmental problems.

1) Legislation Lag of Relevant Laws and Regulations

From the perspective of existing law, has been basically formed the legal system of environmental protection in the Three Rivers Source Region. China's current Constitution stipulated in article 26, "National protection and improvement of the living environmental and ecological environmental, prevent and control pollution and other public hazards. The state organizes and encourages afforestation and the protection of forests." The 1954 Constitution and the 1975 Constitution does not make special provisions to protect the environmental problems. The 1978 Constitution provisions, "National to protect the environmental and

natural resources, to prevent and control pollution and other public hazards.” The 1982 amendments to the Constitution fully demonstrated the importance of environmental protection for which special provisions has made, regarding as a basic policy of the state. In December 1989, the standing committee of the National People’s Congress passed the environmental protection act and put it into effect, which is a fundamental protection law to Chinese environment. The legal object of environmental protection covers a very wide range, which also establish foundations for the environmental protection work in China and reflect the fundamental issues of the protection system. So the Act is the establishment of a single line of environmental regulations and the direct legal basis of the regulations.⁵³⁾

The local environmental protection laws and regulations is part of China’s environmental legal system. An important basis for environmental protection in the Three Rivers Source Region of Qinghai province, include: Qinghai Province to implement the Environmental Protection Law of the People’s Republic of China; Qinghai Province to implement of the People’s Republic of China Grassland Law Rules; Implementation of the Wild Animal Protection Law of the People’s Republic of China in Qinghai Province, The greening of Qinghai province Ordinance, The Regulation of Mineral Resources in Qinghai Province, Qinghai Lake Basin Eco-Environmental Protection Regulations, Qinghai Province Agricultural Environmental Protection Method and other regulations and regulatory documents. Approved the Tibetan Autonomous Prefecture separate regulations by the Standing Committee of National People’s Congress of Qinghai Province, mainly include: the Forest Management and Protection Ordinance of Huangnan(黃南) Tibetan Autonomous Prefecture, the

53) Article 26 to 30 of the Constitution Interpretation.

<http://china.findlaw.cn/info/guojiafa/xianfa/jieshi/1049642.html>

Ecological Environment Protection Regulations of Guoluo(果洛) Tibetan Autonomous Prefecture, the Wild Animals Protection Ordinance of Guoluo(果洛) Tibetan Autonomous Prefecture, the Wildlife Conservation and Management Regulations of Yushu(玉樹) Tibetan Autonomous Prefecture, the Forest Management Regulations of Haibei(海北) Tibetan Autonomous Prefecture, the Land Management Ordinance of Hainan(海南) Tibetan Autonomous Prefecture, etc.

The regulations on the construction of ecological civilization of Qinghai Province, taking effect on March 1, 2015, which is the first provincial legislation to constructing ecological civilization in Tibetan area. By the end of September 2015, the first regulation to ecological protection of the Three Great Rivers Source Region is “Qinghai province Ecological Protection Measures (Draft)”, which has not formally promulgated yet. On April 13, 2016, National Park System Pilot of the Three Great Rivers Source Region was officially launched in Qinghai province. Then, from April to the second half of 2017, the National Park protection and development plan was completed through the work in three pilot parks. A number of tasks will be finished, like the protection and development planning of the three pilot parks, the public service mechanisms for managing and protecting the ecological environment of the parks, the implementation plan of grassland compensation mechanism and the scheme for herdsmen production and management mode, to name but a few. This shows that Qinghai provincial local legislation theoretical foundation is weak. Environmental governance is mainly dominated by government-controlled, lack of effective supervision, leads to government failure. Due to the relevant laws and regulations lag, lack of related legislation, which restricts the improvement of the Three Rivers Source Region ecological environmental management. Local government must continue to strengthen the legislation, to make the local laws and

regulations of ecological protection as soon as possible.

2) Content Conflict of Environmental Legislation

The Three Rivers Source Region develops without legal protection and support, due to its remote geographical locations, the harsh climate, as well as the backward economic, social and cultural, legal construction. Meanwhile, its mass media are single, its legal education is not ubiquitous, and its local economic and social development are relatively low. Due to various limitations of conditions, the awareness of environmental protection of the locals does not reach the legalization degree. Because of the unreasonable utilization of resources, the ecological environment is deteriorated.

According to the 1982 Constitution, China accelerated the pace of environmental legislation. Environmental protection in the Three Rivers Source Region mainly according to the following laws and regulations. For example, the Environmental Protection Law, the Grassland Law, the Sand Prevention Act, the Soil and Water Conservation Law, the Wildlife Conservation Law, the Air Pollution Control Law, the Environmental Impact Assessment Law, the Forestry Law, the Nature Reserves Ordinance, the Returning Farmland to Forest Ordinance, National Ecological Environment Construction Plan, the Master Planning for the Ecological Protection and Construction in Qinghai Three Rivers Source Region Nature Reserve, the National Program for Ecological Fragile Area Protection, Overall Scheme of Comprehensive National Ecological Protection Zone in Qinghai Three Rivers Source Region, the Ecological Protection and Construction of the Second Phase Project Plan in Qinghai Three Rivers Source Region, Construction of Ecological Civilization and Promote Regulations of Qinghai Province, the Overall Scheme of Reform of Ecological Civilization System, etc. A series of laws completed the legal system of environmental protection to guarantee the sustainable

development of the Three Great Rivers Source Region at the legal context, which, of course, still needs to be improved. For example, relevant laws and regulations conflict, content overlap, lack of uniformity. The same environmental behavior, according to different rules and regulations, have different legal consequences. Legalization of the local level is not high, lack of legal certainty, leading to specific environmental problems remain unsolved.

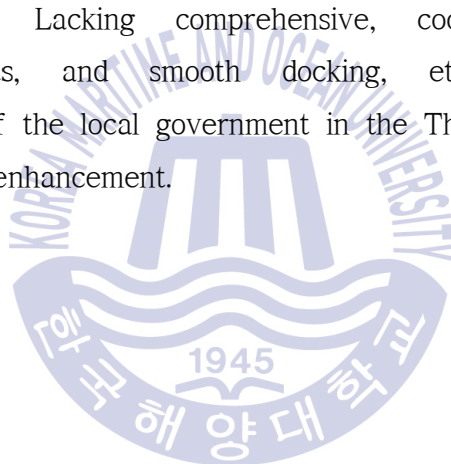
3) Imperfection of Environmental Management System

With the deepening reform of the administrative examination and approval system, the environmental protection is of uppermost priority. Moreover, administrative reform is an important part of the reform of administrative examination and approval system, which is also a major content of the construction of democratic politics, and the key of promoting the transformation of government functions. Environmental management system of local government is not perfect and resulting to environmental problems.

Environment Protection Law article 16, local people's governments at various levels shall be responsible for the environmental quality of the area and the management, and take measures to improve the regulation of environmental quality. According to article 7, the local people's governments at or above the county level administrative department of environmental protection, implementation of unified supervision and management on the area of environmental protection.⁵⁴⁾ The local government environmental management lack the planned, scale of environmental policy. Lack of unified planning and coordination between different environmental policies. In the Three Rivers Source Region there

54) The 12th Session of the 8th Meeting of the Standing Committee of the National People's Congress(2014.4.24.), The Environmental Protection Law of People's Republic of China (Revision).

is no unified supervision and management of the administrative authorities. Local government focuses on economic development. Even though the source degeneration of the ecological environment is to be improved, the unperfected science and technology cannot support this. Under this situation, the unified supervision and management of local government are hard in ecological environmental protection and the construction of the Three Rivers Source Region. Local government is difficult to play a role in ecological environmental protection and construction of Three Rivers Source Region.⁵⁵⁾ The environmental management systems of the local government are uncoordinated in the Three Rivers Source Region, owing to the imperfection of the system and restraint mechanism. Lacking comprehensive, coordinated, overall management concepts, and smooth docking, etc, environmental management system of the local government in the Three Rivers Source Region needs further enhancement.



55) Ren Youcheng(2012), The New Period of Deterioration of the Three Rivers Ecological Investigation and Analysis, North West Agriculture and Forestry University.

3.3.2 Problems of Human Resources Construction in Qinghai River Sources Region

The “Thirteenth Five-Year Plan” puts forward innovation, coordination, green/eco-friendly, open, shared for five large development philosophy. Innovation is the first motive force in the development, supporting development of the human resource is the first resource. Speeding up system innovation of human resources development and rational allocation of human resources, improve the quality of human resources, optimize human resources structure, is key to achieving economic development in the Three Rivers Source Region. China is rich in human resources, but its human resources have not been effectively used under the impact of the planned economy system. Besides, the shortage of human resources and the lack of talents result from the harsh natural conditions, relatively less population, poor infrastructures, low industrialization and the poor material conditions.

The less investments in knowledge and human resources in the Three Rivers Source Region result in backward educational concepts, low educational levels, single educational structures and less high-level personnel training platforms. Additionally, the industrial structure is also unreasonable with less employment opportunities, unperfected incentive mechanism, and low wages, resulting in losing talents to develop this. However, with the superior living environment and more opportunities for individual development in the east of China, a large number of talents flow to the coastal areas, which strengthen the situation of economic backwardness, capital shortage, low level and less stock of human resource development. Meanwhile, backward concepts of human resource management, unperfected configuration mechanism, the unimproved selection mechanism, the unreasonable system of employment will lead to the hemorrhage of the high-quality talents. As a result, the unreasonable

human resources configuration in Three Rivers Source Region severely restrict the sustainable development of the local economy.



3.4 The Problems of Marine Environmental Management in Shandong Peninsula

3.4.1 Problems of System Construction in Shandong Peninsula

With the economy of Shandong Peninsula developing, its inshore has suffered serious pollutions and the marine environmental problem is becoming increasingly prominent, which seriously affects the sustainable development of society and economy in Shandong Peninsula. In order to strengthen the management on marine environment and solve the problems of marine environment, various control measures have been taken in recent years. Due to historical reasons, the traditional model featured with “Fragmented” and “Decentralized Enforcement” for marine environmental management system does not fundamentally change. Marine environmental management system in Shandong Peninsula has exposed some drawbacks. The effect of single administrative units with independent governance is not obvious. Policy model based on the original exploration of land and marine integrating multiple social forces to participate in the “Comprehensive” model becomes the inevitable choice for marine environmental management.

Marine environmental management in Shandong Peninsula lacks of macro planning and regulatory standards, for instance, the conception of marine environmental management is obsolete and the target position is not clear. Although marine environmental management follows the principle of work division in industry management and hierarchical management and each administration has specific advantages in local conditions and function division of labor, marine environmental management and legal construction are lagging behind and marine management scope and governance division is not clear. The legislation system for marine environmental management is incomplete with no

specific legal provisions for environmental management organizations and ambiguous responsibilities. Consequently, functional institutions for marine environmental management are overlap, causing lapping authority, redundancy and inefficient management and other issues. Because of lack of communications among departments, division of labor becomes more difficult, and then some departments compete for authority. The lack of clear division of labor for tasks has reduced the efficiency of management.

1) Legislation Lag of Marine Environmental Relevant Laws and Regulations

Shandong Peninsula Blue Economic Zone of the marine environmental protection needs the law to support. The Marine Environment Protection Law of China mainly including Marine Environment Protection Law of the People's Republic of China, Use of Marine Areas Law of the People's Republic of China, Island Law of the People's Republic of China, the Fishery Law of the People's Republic of China and so on. Local law in Shandong province including Shandong Province Marine Environment Protection Regulations, Measures for the Protection Fishery Resources in Shandong Province, the Shandong Province Port Regulations, the Shandong Sea Area Use Management Ordinance, Qingdao Marine Environment Protection Regulations, Qingdao Marine Fisheries Management Ordinance, Qingdao Coastal Zone Panning and Management Regulations, the Qingdao Sea Area Use Management Regulations, etc.

In 1983, China promulgated the Marine Environment Protection Law of the People's Republic of China (referred to as the Marine Environment Protection Law). Based on the Marine Environment Protection law, part of the coastal provinces and cities developed their own local rules and regulations. Such as Shandong Province Marine Environment Protection Regulations, taking Shandong province as an example, to make

relevant regulation of Marine Environment Protection system. All related to the marine environment protection system vary. There is no separate regulation of the coastal zone, lead to a confusion between the related local rules and regulations. Such as Qingdao rules have permit system, while others lack of related regulations, and the using range of the marine right is fuzzy.

2) Content Conflict of Marine Environmental Legislation

Even though Marine Environment Protection Law of the People's Republic of China has been established, it has no consistent rules for detail implementation, leading to loopholes or gaps in the existing marine environment protection law. Some principled regulations do not specified detailed rules for the implementation of specific provisions. Local governments in China are not clear of the marine environmental standards in the current marine environment protection law. Under the pressure of laws and regulations, coastal provinces and cities have to make simple rules for plans to protect marine environment. Whether the central or local government, the focus is how to make the planning of marine environmental protection more specific and the content of planning is not the basis. Every kind of administrative subject can be involved in the plan for marine environment protection, such as, provinces, cities and counties, marine and fisheries departments, other competent administrative departments of marine, etc. All in all, hybrid sector institutions are not conducive to the effective implementation of the plan.

The Shandong Province Marine Environment Protection Regulations, article 7, "provincial oceanic and fishery department should coordinate with the provincial environmental protection departments to formulate the province's marine environment protection plan, and according to the procedures for approval before implementation. The coastal districts of

the city, the county (city, area) of marine and the related regulations formulated by the state fishery department, that in conjunction with the environmental protection departments at the same level, according to the higher level of marine environmental protection of special planning, proposed administrative area of marine environment protection plan, and according to the procedure for approval.”⁵⁶⁾ The enactment subject is marine and fishery department, the provincial environmental protection, coastal districts of cities and counties marine and fisheries, environmental protection and other relevant departments at the same level. Thus, China’s marine environmental protection of local government administrative division is complex, because of the various departments and agencies of the specific functions and powers are different, it is difficult to guarantee the effectiveness of the level of the marine environmental protection planning, unfavorable to the unity of the authority and the undertake of the responsibility.

3) Imperfection of Marine Environmental Management System

Development of marine environment protection in Shandong Peninsula is the first step for economy. China’s marine management system has been transited from industry management to integrated marine management. Compared with other marine power, China still has much insufficiency to be improved. One of the most obvious problems is that the marine management system in Chinese law has not received enough attention, which makes the authority for marine law enforcement unclear. As a result, marine law enforcement yields no substantial outcome. In the development process of Shandong Peninsula Blue Economic Zone, it is necessary to combine the governance of land and marine environmental protection. Fundamentally improve the Blue Shandong Peninsula Economic

56) Shandong Provincial People’s Congress Standing Committee Session(2004), Shandong Province Marine Environment Protection Regulations, Article 7.

Zone of the marine environmental, the Blue Shandong Peninsula Economic Zone construction into a new type of environment-friendly and resource-conserving ecological civilization demonstration area. On the one hand, national marine environment protection regulations that provide guidance to marine environmental protection of Shandong Peninsula Blue Economic Zone. On the other hand, the local government formulated specifically related laws provide specific measures for marine environmental protection.

With the development of economy in Shandong peninsula, the growth of the population and the development of coastal aquaculture, the ecological environment in Shandong peninsula area has suffered serious pollution which continues to deteriorate. The Chinese government has attached great importance to marine environmental problems and formulated a series of quality standards related to regulations for marine pollutants and marine environment. Such as “Marine Water Quality Standard” , “Marine Pollutant Emission Standards” and so on. From the reality, the system does not control the worsening of ecological environment, coastal waters on the contrary make pollutant emissions continue to increase and causes great pollution to the marine environment.

3.4.2 Problems of Human Resources Construction in Shandong Peninsula

With the development of marine economy and the advancement in science and technology, human resources management has become the focus of marine environmental management department. Besides, Chinese marine development and management has maintained the model of industrial management, which are quite different from human resources development. However, the marine environmental management department of Shandong Peninsula only focus on the economic efficiency, who despises human resources management and lack the awareness of human resources management. In recent years, talent gap leads to the serious contradiction of talent structure. Moreover, the marine industry lacks comprehensive infrastructures, and the talents of the emerging industries. What's more, the overall efficiency of allocating human resources is low, the distribution of human resources is unreasonable, and the configuration is not scientific.

During marine management, human resource management and development need a long-term process, which covers a wide range of factors with multiple influences while. Effective management in human resources has been restricted. Taking Shandong Peninsula for example, since the knowledge of managing marine environment with human resources management is not enough, then related departments cannot take full advantage of human resources, resulting in the loss of a large number of talents and poor management. Moreover, investment in human resources is far from enough, which gives rise to inadequate human resources management system.

In addition, marine environmental management departments lack of reasonable employment systems and mechanisms. There are other problems such as backward human resources management ideas, laissez-faire methods in human resources management and development,

loose management on talent competition mechanisms and inadequate awareness. All of these bring more difficulties to implement competition, appraisal and supervision measures, thus it is impossible to promote the development of human resources management. Indifference to professional competence and creativity results in shortage of efficient development and utilization of human resources. The awareness of the education and training of human resources is not enough. Due to lack of human resource management in the authorities, effective incentives, rewards and punishments are not clear in marine environmental management. Since incentive mechanism is not flexible, the enthusiasm and initiative of human resources are affected, which results in inefficiency in marine environmental management.



3.5 The Policy Comparison of Two Cases

Regardless of the economic development in the Three Rivers Source Region in western China, or by the faster economic development in eastern China's Shandong peninsula, there is a serious environmental management problem, and there are many problems in the local government in environmental management. Environmental management system construction and the human resources construction exists many problems, including lags in relevant laws and regulations, conflicts among environmental laws and regulations, and deficiency in environmental management systems, etc. (See Table 13)

The governments should take the "Thirteenth Five-Year Plan" as guidance and earnestly implement the Scientific Outlook on Development on the premise of environmentally friendly under the reasonable utilization of natural resources. According to the theory of sustainable development, the ecological environmental construction with a scientific and rational management should be realized. Therefore, the ecological protection mechanism should be innovated, the environmental management system should be strengthened, and the environmental management system should be improved, achieving sustainable and harmonious development between human beings and the nature.

Table 13 Policy Comparison of the Two Cases

Material Basis	Environmental Management Problem
System Construction	Legislation lag of relevant laws and regulations.
	Content conflict of environmental legislation.
	Imperfection of environmental management system.
Human Resources Construction	For lack of investment in knowledge and human resources; knowledge of the education and training of human resources work is not enough; authorities for lack of human resources effective incentives, etc.



Chapter 4 Improvement Ways of Environmental Management System in China's Local Governments

4.1 Improving Environmental Management System Construction

Certain institutional environmental conditions are a necessary precondition for sustainable development. One such condition is the existence of an integrated environmental management system. Sound environmental management requires that effective measures be taken, which in turn depends on effective organization. Therefore, strengthening the system's construction is fundamental to achieving the goals of any environmental management programme; a sound system can guarantee the economic sustainability of an environmental development project. Establishing such a system would involve several actions, including establishing and implementing a scientific concept of development, actively seeking to develop a circular economy, and adhering to a people-oriented model of operation. Ultimately, strengthening environmental management systems should be the primary goal where sustainable development is sought. The environmental management departments overseeing the source region of Three Rivers in the Qinghai province, and the Shandong Peninsula, should give their full attention to liaising with the central and local government departments and other sectors of strength in order to establish a comprehensive and coordinated organizational infrastructure for managing the relevant agencies and directing them in environmental management efforts. This should be done

in accordance with existing national regulations and their own situation. The advantages of developing a national environmental management system should be summarized, and where possible, lessons should be drawn from foreign experiences and references made to the relevant authoritative literature. Improvements to the legal system should also be made, and a tight network of environmental management entities formed. Regional functions should be divided rationally, and finally, a scientific foundation for environmental management efforts should be realized.

The survey on journey of environment control in developed countries tells us the key to solve environmental challenge is: technology, project and management. Thereinto, environmental management is more important and outstanding, which is the summary of developed countries after they experienced grave painful lessons and exercised effective control over environmental pollution. While the key for effectiveness of environmental management lies in efficiency of environmental management system. Different countries have largely different environmental management systems, while the common ground for outstanding achievement in environmental problem in short duration is existence of an environmental management institution which is directly led by the country's administrative president and has strong comprehensive coordination capacity and executive capacity. After giving comprehensive consideration to regional differences of different countries or regions, economic development level, environmental pollution and political setup, etc.⁵⁷⁾ This thesis sorted the development of environmental management system for several typical countries and summarized the trend of reform and development of environmental management system in different countries. Their successful experience in environmental

57) Tie Yan(2010), A Study on the Reform of China's Environmental Administration System, Wuhan University.

management system provides important reference for reform of Chinese environmental management system.



4.1.1 Modifying Related Laws and Regulations

At present, environmental management efforts are tied to the second phase project, which involves Qinghai province carrying out the pilot work on a national park system in the Three Rivers Source Region. This initiative represents an important, innovative management system for the protection of the national ecology. Benefiting from a strict system of legal protection, and the ecological and environmental conditions, green development efforts have been accelerated. The development of this national park system constitutes the seeking of new patterns of harmonious development between man and nature, and it aims to innovate the mechanisms of ecological protection and management.

Legislation regarding the environmental protection of the Three Rivers' source region is an important part of China's local environmental legislation. The onus is on local governments to come together, and pool their resources in a joint effort to solve the environmental protection problems threatening the Three Rivers Source region, and to establish an ethos which prioritizes protection by enacting ecological protection laws and regulations. A public education campaign should also be set up in order to strengthen support for such regulations, and enhance environmental awareness. With advanced environment control technology and perfect environmental policies, Japan and Korea all value civil environmental awareness, and formed a systematic and legalized environmental education mode. The public's awareness of active participation conduces to formulation and implementation of environmental policy, as well as coordinated and sustainable development of environmental economy. The Chinese does not have strong environmental awareness and the atmosphere of environmental protection by all has not been formed. Besides, there is little education and propaganda on environmental protection for citizens. Therefore, we should draw lessons

from experience of Japan and Korea in environmental protection by all. The first is to enhance education on environmental protection, and, to enhance education in childhood in schools to make environmental awareness enjoy popular support. The second is to expand propaganda of environmental policy and measures. In addition to governmental administrative means, local environmental departments or departments related to environmental protection should also do well the propaganda of own department; the third is to do enterprise's environmental protection propaganda well to make enterprises have environmental protection awareness and reduce the probability of pollution.⁵⁸⁾

The important role of Japanese environmental management system for Japan's environmental protection profits from perfect environmental legislation. From a "Great Power of Environmental Hazard" to a "Great Power of Environmental Protection", Japan's success in reform of environmental management system is impressive. All levels of local government in Japan tended to precede the central government to formulate related environmental protection law, statutes and regulations, such as Regulations of Public Pollution Control, Environmental Protection Act and Regulations for Conservation Of Natural Environment, etc. From the 1990s, Japan successively formulated and enacted fundamental environment law (1993), fundamental law for pushing formation of circular society (2000), New fundamental environment law (2000), and revised more than twenty environmental legislation, enforcement orders and enforcement rules such as Law for Censoring and Manufacturing Rule of Chemical Substances, and About Soil Pollution Environmental Criteria Project, etc. Besides, the government also enhanced inspection of law execution and treatment of environmental crime.⁵⁹⁾ After the Second

58) Guo Lin, Gui-huan Liu (2008), Japan and South Korea Environmental Policy Revelation to China, International Outlook.

59) Yang Shuchen(2003), The Japan Current Characteristics of Enterprise

World War, what accompanied booming of Korean economy was severe environmental pollution and environmental disruption. To confront environmental challenge, Korea built an environmental administrative management system dominated by central government, and established relatively perfect environmental law system to finally form a law mechanism for environmental protection, under which, Korea's environment began to present new look, and developed towards harmony of environment and economy of "Low Carbon Green Economic Growth .” 60)

The Ecological Civilization Construction Ordinance of Qinghai Province, effective as of March 1, 2015 was the province's first piece of provincial legislation aimed at aiding in the development of a so-called "ecological civilization" , and was the first piece of such legislation enacted in a provincial area (Tibetan). By the end of September 2015, the first ecological protection laws and regulations designed for the Three Rivers Source Region by the local government, the "Qinghai Province Ecological Protection Measures (Draft)" was completed, though it has not yet been formally promulgated. Local governments should therefore redouble their law making and regulatory efforts, and seek to perfect their industrial policy making systems by introducing innovative policy guidance on how to formulate the "Ecological Environment Protection Law in the Three Rivers Source Region" as soon as possible.

Environmental protection policies should be strictly enforced, and the intensity of the environmental regulation process increased, and through such legislation, strengthen the rule of law. The functions and powers of

Environmental Management, Measures and Countermeasures of Government —On the Enlightenment to China, Studies of Japan, Vol.2.

60) Fan Chun(2010), A Study of the Legal Mechanism of Environment Protection in the South Korea, Asia & Africa Review, Vol.5.

local governments need to be augmented, and specific provisions made for improving management rules and regulations, deepening institutional innovation, and reforming management systems. Coordination and cooperation between government departments should be fostered, and a coordinated management created for this purpose. The Three Rivers Source Region national park system pilot project will create a clear mandate for the ownership and accountability of the ecological protection role, as well as an effective supervision system to oversee it. This, combined with the work of the pilot project, will strengthen organizational leadership, the level of ecological protection of the area, and facilitate the task of regional development and innovation, contributing to green development and scientific progress.

The Shandong Peninsula Blue Economic Zone is primarily the site of development efforts aimed at exploiting the marine economy. However, in order to sustainably utilize this marine value, the development of laws and regulations relating to the marine environment, must adhere to the basic principles of marine environmental protection. Economic development must be guided by these legal environmental safeguards, and local governments must strengthen the administrative legislation relating to the protection of the marine environment by developing new laws and regulations and enforcing them through marine environmental protection management systems. Hence, a comprehensive marine environmental protection system is an important prerequisite for the sustainable management of a marine environment. Thus local governments must improve their systems of marine environmental protection. The Shandong Peninsula Blue Economic Zone is a national marine economic development zone. Legal regulations are needed to ensure that this economic development does not come at the expense of the environment. Therefore, local governments must modify the relevant

laws and regulations, and develop new ones to ensure the healthy and sustainable development of the blue economic zone.

The environmental management departments overseeing the Shandong Peninsula should use legal means to strengthen the legal frameworks for marine environmental management, and formulate a marine economic development and macro policy regarding environmental management. Macroscopic adjustments need to be made in order to control the development of an effective marine environmental management process. Input on the overall management needs to be balanced between various departments, and a decentralized integrated management body set up to oversee development. This body will be tasked with interfacing with the relevant departments. A firm understanding of the relevant regulations and policies is needed, as is the regular exchange of information between the various functional departments. Sound planning must be the first step for any environmental management strategy, next, law enforcement and management regulations will need to be strengthened in preparation for the third step where improvements will be made to the relevant existing rules and regulations. All efforts should be guided by a scientific outlook on development, and the management of maritime economic development and environmental protection need to be coordinated. This will require the establishment of a unified coordinated management mechanism and will guarantee that marine development follows a sustainable pattern of development.

4.1.2 Completing the Cooperation Mechanism of “Belt and Road”

The “Belt and Road” (一帶一路) initiative was formulated in pursuit of large potential profits. (See Fig. 28) The initiative provides mechanisms for bilateral and multilateral cooperation, in order to be perfected it will be necessary to open the “Belt and Road” economic corridors. The “Silk Road Economic Belt” (絲綢之路經濟帶) and the “21st-Century Maritime Silk Road” (21世紀海上絲綢之路) building must also be promoted. (See Fig. 29) These initiatives fall under the prevue of Xi Jinping, who co-ordinates domestic and international situations, in alignment with the trend towards regional and global cooperation, which coincides with the development needs of many countries and regions. Based on the current and long-term predictions of the situation in China and the global community, these initiatives and ideas were put forward. In 2016, the “Belt and Road” work report was proposed to the government, aimed at combining construction and regional development, to strengthen the construction of the New Asia-Europe Continental Bridge, and of the sea port fulcrum. The province of Qinghai constitutes an important node along the path of the proposed “Belt and Road” due to the unique geographic position of the Three Rivers Source region in Qinghai, and hence, in the face of such large-scale development the present situation of the local ecological environment is tenuous. The process of social development in the Three Rivers Source Region must adhere to the principles of circular economics, regional integration and open development.

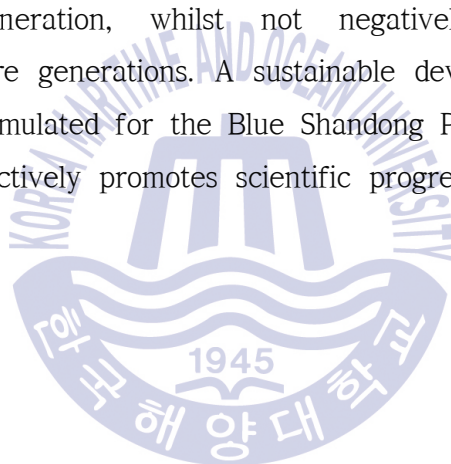
Korea has started early in global multilateral environmental diplomacy. To adapt to the times requirements, Korea took an active part in important international environment conferences. In 1972, as a response to increasingly severe global environment problem, the U.N. held UN Conference on the Human Environment(UNCHE) in Stockholm in Sweden,

which is the origin of world environment protection, and has become a milestone in international environment cooperation. In 1972 the United Nations Environment Program was established, and Korea is one of member states. In June 1992, UN Conference on the Environment and Development, UNCED Development(UNCED) was held in Rio de Janeiro in Brazil. This conference formed an extensive consensus for Environmentally Sustainable and Sound Development Stratagem(ESSDS) to become common development strategy of all human beings. Korean premier Zheng Yuanzhi led a delegation to participate in UNCED in Rio de Janeiro, and signed U.N. Framework Convention on Climate Change and Biological Diversity Convention. In September 2002, World Summit on Sustainable Development(WSSD) was held in Johannesburg in South Africa. During this conference, Korean government delegation, congressmen, nongovernmental organizations and related regional groups, etc. participated in intergovernmental dialogue, international parliament alliance, forum of local 21 century subject and NGO forum, etc. In this conference, two main documents of Executive Plan and Johannesburg Political Statement were passed. Korea also grasped this opportunity to formulate various plans to seek for continual driving force for economic development. In addition to global environmental protection convention held by U.N., the Korea government also took an active part in discussion on environmental challenge by World Trade Organization(WTO), Organization for Economic Cooperation and Development(OECD), Asia—Pacific Economic Cooperation(APEC), United Nations Economic and Social Commission for Asia and the Pacific(ESCAP) and other international institutions.⁶¹⁾

China is one of the world's foremost maritime powers, and has rich

61) Cheng Haiyan(2007), Study of Korean Environmental Diplomacy, Qingdao University.

marine resources. There is a direct relationship between marine and land development activities. Human activities on land will affect the marine environment, and the marine environment will also impact upon the land environment. Marine environmental protection is more complex than efforts undertaken on land. Hence, to facilitate the effective protection of the marine environment, local laws and regulations should be formulated such that they adhere to the principles of an integrated approach to land and marine management, which seeks to regulate land and marine pollution in tandem. For protection efforts to be effective, a correct concept of development must be set up, adhering to sustainable development principles. Sustainable development aims to satisfy the needs of the current generation, whilst not negatively affecting the opportunities for future generations. A sustainable development strategy must therefore be formulated for the Blue Shandong Peninsula Economic Zone, one which effectively promotes scientific progress and sustainable development.



丝绸之路经济带



21世纪海上丝绸之路



Fig. 28 “Belt and Road” (一带一路)



Fig. 29 “Silk Road Economic Belt” and the “21st-Century Maritime Silk Road”

4.1.3 Applying Lessons Drawn from Successful Foreign Experience

Environmental problems have international generality. Most countries should learn from the successful experiences of environmental protection in other countries to solve the domestic and international environmental problems. The environmental management is affected by the government, if the policy implementation is in place, an excellent effect on environmental protection will be produced. Taking “Belt and Road” construction as a guide, Qinghai Three Rivers Source Region should carry out international exchanges and cooperation, actively perform international treaties of environmental protection, comply with the international environmental laws and regulations, enrich the connotation of opening up to the outside world, and improve the level of opening up and sound opening to the new system. Meanwhile, the rule of law and international environment should be improved, a new situation of open and inclusive cultural exchanges should be created, the publicity and education in the Three Rivers Source region to strengthen international cooperation in science and technology should be increased, the transformation of resource advantages into economic advantages should be promoted. In addition, the strategy of opening to the layout should be enhanced, the intergovernmental science and technology cooperation channels should be adopted, the efficient allocation of domestic and international resources should be promoted, the new international competition advantage should be cultivated, the institutional mechanisms should be facilitated conducive to international cooperation and win-win situation, the lessons from foreign successful experience should be learned, in order to speed up the economic, social and environmental sustainable development in China.

China should draw lessons from the experience of America, Japan and Britain, improve current environmental taxation system and levy

environmental tax uniformly. The environment taxation policy is an economic policy measure for ecological environmental protection, which possesses strong regulatory function in environment control. The levied environmental tax should belong to direct act tax, with subject to taxation being consumers, i.e. the principle of “levy tax on those who consume, levy more tax if consuming more, broad tax base and light scot.”⁶²⁾ China should learn from successful experience of America, improve system of environmental impact assessment. America is the forerunner of system of environmental impact assessment. In 1969, America formulated National Environmental Policy Act(NEPA) to regulate system of environmental impact assessment for the first time, and made this system a must-to-follow in environmental management by federal government. Later, it was adopted by other countries such as Canada, France and Ireland, etc. successively. As a predicative, specialized and enforced law system, the system of environmental impact assessment’s main significance lies in that, first it is an effective measure to implement sustainable development principle, and promote coordinated development of economy, society and environment. Secondly, it is effectuation and implementation of prevention principle.⁶³⁾

Characteristics and experience of Canadian environmental management system is worth learning from. Firstly, the environmental management actions are all based on law of sustainable development strategy. Take Sustainable Development Strategy(SDS) 2007—2009 by Environmental Department of Canada for example, Canada’s amendment to Auditor General Act 1995 required that related professional ministries and

62) Li Weijun(2008), Comparative Study on Environmental Governance United States, Japan, Britain and Its Enlightenment to China —Institutional, Policy and Action, Fudan University.

63) Wang Liye(2007), On the Principle of Sustainable Development in International Environment Law, China University of Political Science and Law.

commissions must prepare and update a Sustainable Development Strategy(SDS) every three years, which guarantees normalization, continuity and practicality of sustainable development strategy of Canadian Environmental Ministry. According to the principle of “Share Responsibility” as stipulated by federal constitution, the labor division among federation, provinces and cities and responsibility are clear. The provinces formulate related environmental legislations according to authorization by constitution, and constitute the subject of legal system of national environmental management. The second is establishing efficient coordination mechanism for environmental management. The coordination mechanism for environmental management among different levels of government is mainly implemented through two platforms of environmental minister conference and resource minister conference. The former is composed of all environmental ministers in all regions. At least one conference is held each year to discuss priority environmental challenge and determine work schedule of next year, etc.⁶⁴⁾

Marine economy developed earlier in many foreign countries, which is in the leading position of marine scientific and technological fields. Many foreign countries attach great importance to the legislation of marine environmental protection, and carry out the legislation of coastal zone management to standardize the development and utilization of marine resources. The successful experience in the foreign countries is worth referencing for China, which provides guidance for Chinese local government. In the process of managing marine, the United States and Japan attach great importance to marine management system, while South Korea and Canada build “Super-Ministries” to strengthen the

64) Yan Nailing, Xia Jianming(2007), The Characteristics of the Canadian Resource and Environmental Management and Its Implications for China, Decision-Making & Consultancy Newsletter, Vol.5.

construction of marine management system. Besides, the marine administration system in Australia is based on a unified goal to protect the biodiversity of marine ecological environment and marine. The United Kingdom establish “Marine Management Organization(MMO)” , whose responsibility is to formulate the marine plan and program. Therefore, Chinese local governments should be in line with the international standards in the marine environmental protection, study successful experience of foreign countries, actively participate in international cooperation, strengthen foreign exchanges, and better promote the development of marine city.



4.2 Reinforcing Human Resources Management Construction

As the international competition is becoming increasingly fierce, the battles of the overall national strength is fundamentally the competition of human resources quality. With the implementation of the “Thirteenth Five-Year Plan” , the central government promulgated the opinion of “Deepening the Reform of Human Resources Development System” (hereinafter referred to as “Opinion”), which is an in-depth study the important speeches of Xi Jinping the General Secretary about series of major institutional outcome, and implement the human resource strategy of the whole party and the whole society in the process of significant theoretical innovation and best practices. The “Opinion” promulgated the marking system of human resources development in the next five years, China will have a significant breakthrough from human resources powers towards reinvigorating herald, then it entered a decisive stage, which is an unprecedented system mechanism reform of talent development. Xi Jinping, the General Secretary, pointed out to take the road of innovation development firstly through attaching great importance to the aggregation of innovative talents, which can not only make full use of the existing human resources, but also open to recruit other human resources in a large scale, attracting international talents, choosing and using excellent human resources in the world.

Human resources is the key to achieve economic development in the Qinghai Three Rivers Source Region which should adopt a variety of ways to create a good employment mechanism and environment. Hence, the administration of the Qinghai Three Rivers Source Region should increase the investment to train various kinds of talents, strengthen the human capital reserves, and realize its sustainable development finally. The relevant departments should also speed up the construction of local

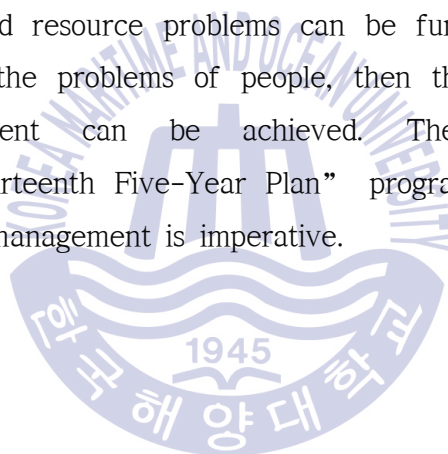
human resources management system, strengthen the training work of the cadres, and increase the training intensity. Besides, strengthening the trainings of professional and technical personnel, improving the management level of grass-roots workers are necessary. At the same time, they should also train local human resources, innovate talent recruitment mechanisms, enhance technological and human resources support capacity, and introduce higher level of human resources to develop the Qinghai Three River Source Area.

The marine environmental management departments of Shandong Peninsula should correctly understand the importance of human resource management, and strategically direct the reform from traditional transactional personnel management to strategic human resources management. Meanwhile, in order to establish the concept of human resources management, strengthen human resources management, enhance the initiative and creativity of the staffs, it is essential to strengthen marine environmental education, popularize the marine environmental science, and raise the awareness of the significance and the policy of marine environmental protection.

All levels of human resources management departments should implement an organized, systematic training for the professionals of environmental management to improve the quality of personnel and provide human resources guarantee to achieve the integrated marine environmental management. Additionally, establishing scientific incentives, employment system and selection system and creating good working environment and learning environment for the staffs can fully mobilize work enthusiasm of the personnel. Optimizing the human resource mechanism, promoting the technologies of marine environmental management, carrying out the technical exchanges and cooperation at home and abroad can strengthen the introduction of talents and the

quality of the talents. The relevant marine environmental management departments should achieve the sustainable development, protect the marine environment and promote the healthy and sustainable development of marine economy in Shandong Peninsula through drawing on the advanced management experience and achieving the purpose in line with the international standards.

The optimal allocation of social resources depends on the reasonable allocation of human resources. Human resource is the first resource for country's development with strong competitiveness, whose essence is people-oriented. It is a new thought and theory to set up the comprehensive, coordinated and sustainable scientific development view. The environmental and resource problems can be fundamentally solved only through solving the problems of people, then the goals of green sustainable development can be achieved. Therefore, seriously implementing the "Thirteenth Five-Year Plan" program and strengthen the human resources management is imperative.



5. Conclusions

5.1 Summary

Under the guidance of the “Thirteenth Five-Year Plan”, this thesis analyzes the present situation of environmental management in Qinghai Three Rivers Source Region and Shandong Peninsula. From the perspective of system construction and the human resources construction, this thesis points out various problems related to the local government environmental management in the regions, which includes legislation lag of relevant laws and regulations; content conflict of environmental legislation; and imperfection of environmental management system, etc. As ways to address those problems, this thesis proposes several countermeasures including modification of related laws and regulations, completing the cooperation mechanism of “Belt and Road”, application of the lessons drawn from foreign successful experience, and reinforcement of human resources management construction.

This thesis is divided into 5 chapters:

Chapter 1 includes major topics of research background, research purposes, research contents and research techniques, and research methods. Literature analysis refers to collect, identify, and review information through the study on existing literature to form a scientific understanding of the facts. Qualitative analysis intends to find underlying reason and motivation. To obtain a qualitative understanding, the study object is the “quality” aspect of the analysis. Based on certain theoretical

knowledge, a case study analyzes the existing problems of a specific case. This thesis, focused on Qinghai Three Rivers Source Region and Shandong Peninsula, point out the problems of environmental management in local governments and puts forward corresponding countermeasures. Using the methods mentioned above, this thesis analyzes the current status of environmental management of the local government in the regions.

Chapter 2 reviews literature on environmental management and it is divided into three sections. The first section discusses major concepts related to environmental policy and management including environment and policy, development, and principles of environmental policy, including the principle of sustainable and combination development of environment, economy and society; the principle of environmental responsibility; the principle of comprehensive prevention and control; he principle of environmental democracy. It also briefly outlines the current research status of environmental policy. The second describes Qinghai Rivers Source Region environmental management by looking at including Changjiang River(Yangtze River), Yellow River, and Lancang River(Mekong River). The third section explains Shandong Peninsula marine environmental management by looking at Peninsula, Shandong Peninsula Blue Economic Zone, and Shandong Peninsula marine environmental management.

Chapter 3 discusses the results of analysis on local government environmental management capacity using two criteria. This chapter is divided into five sections. The first section presents an analytical frame of environmental management capacity. The second section discusses the results of case analyses on the current status of environmental management of Qinghai Rivers Source Region and Shandong Peninsula. The third section discusses the problems of environmental management in

Qinghai River Sources Region, including the problems related to the environmental management system and human resource construction, such as legislation lag of relevant laws and regulations; content conflict of environmental legislation; imperfection of environmental management system, etc. The fourth discusses the problems of marine environmental management in Shandong Peninsula, which includes legislation lag of marine environmental relevant laws and regulations; content conflict of marine environmental legislation; imperfection of marine environmental management system, etc. The fifth section compares environmental policies of the two regions.

Chapter 4 suggests ways to improve environmental management capacity in China's local governments in terms of both environmental management system and human resource construction. Those include modification of related laws and regulations, completing the cooperation mechanism of "Belt and Road", application of the lessons drawn from foreign successful experience, and reinforcement of human resources management construction.

Chapter 5 summarizes major findings of the analysis with discussion on the limitations of this thesis and further research tasks.

5.2 Limitations

This thesis places its focus on analyzing the environmental management capacity of the local governments in Qinghai Three Rivers Source Region and Shandong Peninsula. The local ecological environment is a complex system involving all aspects of social, economic and technological development. Local government efforts to preserve its environment are an integrated part of national environmental management as well, which is very complex and influenced by many factors. Therefore, to conduct research on local environmental management, the researcher must have profound knowledge of the environmental management capacity of the government both at home and abroad as well as sufficient practical ability and experience. Since environmental sustainability is a complex and multidisciplinary topic, the research on the topic needs to be conducted with more sophisticated and integrated methods.

The depth and breadth of information used for analysis has limitations, because it was gathered only through limited ways mainly relying on literature and networks at home and abroad. On the whole, the thesis lacks robust data with inevitable omissions. Furthermore, the macro analysis of environmental management capacities of local governments in China can not be comprehensive enough. Consequently, this thesis may fail to find some important problems of that still need to be explored and addressed to improve environmental management, which would become the starting point for further in-depth research and discussion.

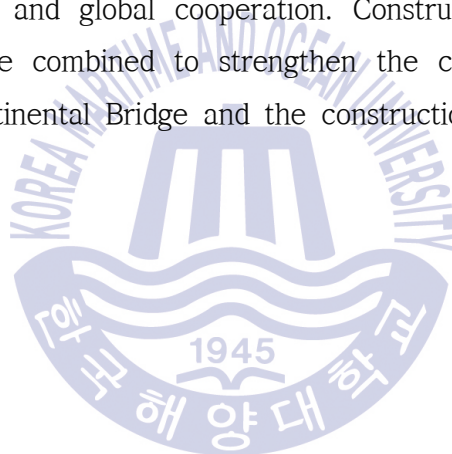
5.3 Further Research Tasks

In order to improve environment overall, not only management capacity of local governments but also management systems need to be improved. The experiences gained and lessons learned whilst exploring environmental management systems in China's national conditions need to be summarized to inform future efforts. The Qinghai Three Rivers and Shandong peninsula regional sustainable development project involved a massive coordination of "natural, economic, and social" systems, including the four-in-one society, resources, and the environment and development. This thesis examined the "Thirteenth Five-Year Plan", highlighting the importance of the new development philosophy which involves a combination of innovative, coordinated, green/eco-friendly, open and shared development.

The perfection of China's local government environmental management system should be sought in order to streamline the scientific process, and contribute to a centralized and unified, clearly positioned, functional, flexible, and efficient and coordinated operation of the environmental management system. In the study of environmental management issues, one must account for the current national conditions, as well as draw lessons from foreign experiences, applying a comprehensive, scientific and sustainable development plan for the development of an environmental management strategy which is in accord with the situation of China's reform. Through such reforms, the challenges of the current environmental management situation can be overcome.

The "Thirteenth Five-Year Plan" is a Five-Year plan to make China "Standing in Front of the World Map". By promoting the construction of the "Belt and Road", China will become a positive force of globalization construction, making greater contribution to the global development. At

the same time, China will continue to act as the locomotive of global economic growth, provide the world's largest trading market and become an important foreign investor to strengthen the world's macro-economic stability. Moreover, it will undertake the responsibility of reducing the global greenhouse gas emissions, make green contributions to the world, and lead the world's economic governance as well as the global economic order to a more fair and reasonable direction. Perfect the "Belt and Road" mechanisms for bilateral and multilateral cooperation, and open its economic corridors. Besides, it is coincided with national and regional development to promote the "Silk Road Economic Belt" (丝绸之路经济带) and the "21st-Century Maritime Silk Road" (21世纪海上丝绸之路), conform the trend of regional and global cooperation. Construction and regional development should be combined to strengthen the construction of the New Asia-Europe Continental Bridge and the construction of the sea port fulcrum.



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