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**Research Progress Report on Developing Regulatory
Measures for Marine Litter Management
in Weihai City of PR China**

**—Present Situation and Countermeasures of Marine Litter
Treatment in Weihai**

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Introduction

In recent years, marine litter pollution has become a major economic, political and environmental issue. Most marine litter contains substances that degrade very slowly, including oil and its products, domestic waste, heavy metal substances and radionuclides, and so on. Incessantly discarded waste will gradually accumulate in the sea, it might cause hinder maritime traffic, damage ships, and cause serious harm to marine life. In addition, persistent and cumulative pollutants in marine waste can harm humans through biological chains.

Marine litter is not only a cross-boundary global problem, but also a local problem with multiple sources. Litter pollution in marine and coastal areas is a challenging recovery and management issue. Like many environmental problems, marine litter pollution is trans-boundary, so the solutions to governance are complex.

The UNDP Regional Seas Governance Project seeks to develop management practices in pilot sites for monitoring, disposal, reuse and recycling of marine litter in order to invest in the recovery economy. This project is expected to contribute to the knowledge building of the scientific knowledge system.

1. Recovery and Treatment Situation of Marine Litter

1.1 Policies on Marine Litter Management

1.1.1 Current situation of Marine Environment and Ecology in China

The present situation of marine environment and ecology in China is as follows: the water quality has been improved generally, but the pollution situation is still not optimistic. The sediment in some areas of our country is polluted, the marine is polluted by Litter. The coastal zone ecology is destroyed, the typical ecosystem is damaged seriously, the fishery resources decline, the biodiversity decreases, and the invading of marine life is seriously. It has produced the great harm to the native organism and the coastal zone ecosystem of our country. Ecological disasters appear frequently and tend to increase. The pollution of persistent organic pollutants (POPs) is becoming more and more serious.

1.1.2 Current Situation of Marine Environmental Pollution Control Project

(1) Implementation of Total Emission Reduction of Land-based Pollutants

In order to alleviate the marine environmental pressure, China implements the project of reducing the total amount of land-based pollutants in the following two aspects. Firstly, the total amount of land-based industrial and point source pollutants has been reduced. Three measures have been taken, including project emission reduction, structural emission reduction, and management emission reduction. Secondly, agricultural non-point source pollution reduction project. In order to control agricultural non-point source pollution, the best nutrient management in farmland, the control of livestock and poultry breeding quantity and the establishment of ecological agricultural model were carried out.

(2) The Development Marine Litter Pollution Control Project

The United Nations, the International Maritime Organization (IMO) and China have successively formulated “the Convention on the Law of the Sea” to prevent litter pollution of the marine environment, as well as laws and regulations, mainly the “United Nations Convention on the Law of the Sea”, “the United Nations Convention on the Law of the Sea”. The MAPPOL73/78 Convention of the IMO, “the United Nations Convention on the Prevention of Marine pollution” by dumping of wastes and other matter, “the Law of the people's Republic of China on the Protection of the Marine Environment”, “the regulations on the Prevention of Marine Pollution” and “the Discharge Standard of Marine Pollutants” are relatively comprehensive and specific and can cover the main sources of marine waste. Meanwhile, there were six marine-related departments in China to carry out marine litter pollution monitoring, prevention and control according to their management responsibilities.

(3) Actively and Securely Control Pollution of Persistent Organic Pollutants

In order to effectively prevent the harm of persistent organic pollutants to human health and ecological environment, China actively supports and participates in the international control action of the relevant United Nations agencies on persistent organic pollutants. Strengthen environmental protection publicity and education to enhance the public awareness of the harm of persistent organic pollutants. The whole process of persistent organic pollutant reduction management policy system is

established through physical remediation technology, chemical remediation technology, bioremediation technology and other technologies.

1.1.3 Current Situation of Development of Marine Ecological Protection Project

China has initially formed a network system of marine protected areas and implemented the ecological rehabilitation in coastal zones. By the end of 2011, a typical coastal zone management system had been established, 221 marine reserves, including rare and endangered marine life, marine natural historical sites and natural landscapes. In addition, 35 marine national aquatic germplasm reserves have been established. Meanwhile, the State Oceanic Administration began construction of the National Ocean Park and approved 7 national marine parks in 2011. In 2005, the first national marine special protected area was established, and the number has reached 21 until now.

1.1.4 Marine Environment Management and Protection Project

The Marine Environment Management and Protection Project have achieved initial results in the following areas: (1) Marine functional regionalization of Sea. In the late 1980s, China put forward and organized the basic work of ocean management to provide scientific basis for sea area using management and environmental protection, and to provide marine security for national economy and social development. (2) Marine environmental monitoring. China's marine environment monitoring capacity has been greatly developed, and a relatively complete marine environment monitoring system has been initially built up. And a large number of marine environment and ecological monitoring equipment research and development work has been carried out. (3) Marine environment and ecological risk prevention and emergency capacity construction. China has gradually started marine environment and ecological risk prevention and emergency capacity building, carried out risk source identification and monitoring, and preliminarily established the marine environment emergency response mechanism.

1.2 Characteristics of Marine Litter Treatment Policies in China

1.2.1 Establishment of Legal System for Marine Litter

In recent years, China has gradually formed a legal system for pre-prevention of Marine litter. The system is led by “the Environmental Protection Law”, guided by

“the national marine functional regionalization” and “the outline of the National Marine Development Plan”. And at the meantime, it is matched with some related laws and regulations, such as “the Marine Environment Protection Law”, “Environmental Pollution Prevention and Control Law of Solid Wastes”, “Cleaner Production Promotion Law”, “Circular Economy Promotion Law”, “National Marine function zoning”, “Environmental Impact Assessment Law”, “Environmental Management Regulations for the Prevention and Control of Ship Pollution in Inland Waters”, “Regulations on the Prevention and Control of Marine Pollution by the Marine Environment”, “Interim Provisions on the Administration of Environmental Impact Assessment of Marine Engineering”, “Regulations on the Prevention and Control of Marine Environmental Pollution from Coastal Engineering Construction Projects”, etc.

1.2.2 Policies Position is Gradually Clear

Since the establishment of the column "Marine litter" in the China Marine Environmental Quality Bulletin in 2007, its position has been in the process of being changed. It is taken as the eighth chapter separately in the 2007 China Marine Environment quality Bulletin, a separate chapter nine in 2008, the fourth section of chapter five “Major pollution sources into the sea” in 2009, the fourth section of chapter four “Major pollution sources into the sea” in 2010, the fourth section of chapter three “Major pollution sources into the sea” from 2011 to 2015. Thus, the "marine litter " column has evolved from a standalone chapter to a "major source of pollution into the sea" section, and has remained unchanged since 2009. That is to say, since 2009, China has reached a consensus on the understanding of marine litter, and has made clear the position of marine waste in the whole marine environmental protection system.

1.2.3 Lack of Comprehensive Adjustment of Marine Litter Specific Laws

The contents of the national marine litter law are still scattered in the relevant marine environmental protection, solid waste prevention, environmental impact assessment and other regulations. However, this does not mean that marine litter law is still in its infancy in China. The special law is not the mark of whether the law is mature or not, but depends on the needs of the society. Moreover, this great leap-forward legislative model does not conform to the current trend of social development.

1.2.4 Lack of Economic Incentives

Although the Chinese and Weihai municipal governments have formulated relevant policies in accordance with relevant laws and regulations, such as environmental protection, which relate to marine litter collection and disposal. However, these policies are relatively fragmented. These policies are mainly for mandatory and inadequate for economic incentives. The litter recycling mainly depends on the public sector. Because of the lack of economic means, the involvement of the proprietary sector has been weakened, resulting in the formation of litter recycling industry difficult.

1.3 The Current Situation of International Policies on Marine Litter Treatment

From initial local governance to national governance, then current international cooperative control, more than 20 international conventions, agreements and action plans on marine litter pollution control have been signed and formulated. Such as “United Nations Convention on the Law of the Sea (UNCLOS Convention)”, “Convention on the Prevention of Marine pollution by dumping of wastes and other matter (London Convention)”, “International Convention for the Prevention of pollution from ships (MARPOL Convention)”, “Basel Convention on the Control of Transboundary movements of Hazardous wastes and their disposal” and “the Action Plan for Environmental Protection, Management and Development in the Marine and Coastal areas of the Northwest Pacific Ocean”, etc.

1.4 Analysis on Current Situation of Marine Litter Control in Weihai City

1.4.1 Better Results in Marine Litter Prevention and Control

(1) Strengthen river basin management for preventing and controlling the litter into the sea.

River basin is one of the main sources of marine litter. And the specific measures taken in Weihai City included the implementation of river basin greening projects to increase vegetation coverage, the increased investment in river sanitation infrastructure to ensure timely collection and centralized transportation of litter, and the organization of river course regulation. These measures play a significant role in optimizing the

watershed environment, preventing and controlling litter entering the river, reducing the amount of litter entering the river basin, and ensuring the smooth flow of the river in flood season.

(2) Remediation of Coastal Environment

Measures of wetness of the receding pool, rehabilitation of the beach, restoration of vegetation and cleaning up of illegal buildings along the shoreline are taken to strengthen the renovation and repair of beaches, and raise the green rate of the shoreline. And thus the littoral litter accumulated all year round has been cleared to a greater extent, and the overall coastal environment has been greatly improved. And furthermore, “the measures of Beach Protection and Management” and “the implementation Plan of Coastal Beach Management” have been formed to strengthen the systematic management of beach environment in Weihai city.

(3) Strict Control of Litter Discharge from Ships

Specially-assigned person is required implement “the Litter Management Plan” on ships, while the written procedures must be provided for collection, storage, processing and disposal of litter as well as the use of equipment on ships. In addition, a "garbage Recorder" is required to keep a detailed record the date, time, and position of domestic litter disposal operations, type of litter and the estimate of incineration or discharge. In the course of daily law enforcement, strict inspection is carried out on the implementation of the above system, and the violation of the regulations is punished, which effectively reduces the disposal of litter by ships in violation of laws and regulations.

1.4.2 Prevention and Treatment of Marine Litter is Still Difficult

(1) Problems in The Treatment of Shoreline Litter

The ecological environment is beautiful with a clean city appearance and effectiveness waste prevention in Weihai region. However, in some industries and living activities intensive coastal areas and remote coastal areas, there are still different levels of litter pollution phenomenon, marine litter prevention and control cannot achieve the whole shore cover. For example, the beach of Xiaoshi Dao with less human activities around it, piles up a large amount of domestic waste all year round because

of its failure to clean it up in time. Its sources include tourists traveling to the sea and leaving behind, and light landmass litter is blown into the sea by the wind, as well as the marine transport of fishing boat droppings.

(2) Litter Pollution in Coastal Waters is Difficult to Eradicate

Due to the influence of coastal tourism, fishery and shipping industry, littoral litter in Weihai coastal area is in the condition of pollution while controlling for a long time. Coastal marine litter mainly comes from shipping and fishing, coastal recreational activities, as well as random disposal of beach refuse and river refuse. Under the influence of industrial activities and the lack of environmental awareness among people, these litter are difficult to eradicate completely and are extremely harmful. They not only affect marine and coastal natural landscapes, but also have negative effects on marine ecosystems and marine economy. The safety of navigation may also be threatened in serious cases.

(3) The Situation of Undersea Litter is Unclear

The beach and sea surface litter in most sea areas of Weihai City can be cleared in time because of the naked eye. However, the source, migration route and distribution problems in the near-shore submarine area are still unknown and lack of corresponding investigation and research.

1.4.3 Marine Litter Prevention and Control Faces Important Opportunities

(1) Weihai City Becomes the First National Demonstration Area of Marine Ecological Civilization

In 2013, Weihai was selected as the first batch of national marine ecological civilization demonstration zone construction list, which is an affirmation of its long-term effectiveness in marine ecological environment protection. At the same time, it is expected to further promote marine ecological environment protection through the establishment of long-term mechanism in the future. The construction of the National Marine Ecological Civilization Demonstration Zone provides the target requirements and operational guidelines for the promotion of marine litter control in Weihai City, as well as necessary policy and financial support, so that Weihai City has a good marine litter prevention environment. The marine ecological environment has been optimized

and developed with marine litter prevention and treatment as the starting point, and the construction of marine ecological civilization will make new achievements.

(2) Weihai and New York Establish "Sister-Cities" Partnership in Marine Litter Control

In March 2016, the State Oceanic Administration issued the "sister city" work plan for marine litter control between China and the the United States. According to this, Weihai City started its cooperation with the "sister city" of marine litter control in New York City, USA. Thus, the opportunity to promote marine litter prevention and control and to strengthen the protection of the regional marine ecological environment through international cooperation has been obtained, which will improve the capability of marine litter prevention and control in Weihai City. Promoting the construction of marine ecological civilization demonstration area and promoting the status of city will have an important impact.

(3) Weihai City Has Laid a Good Foundation for Marine Litter Disposal.

The Weihai Municipal Government has carried out fruitful work aimed at litter pollution in coastal waters. It has issued the "implementation Plan for Marine Litter Prevention and Control," and the government has invested in and attracted a large amount of social capital. It has laid a good foundation for the disposal of marine litter in Weihai City.

2. International Experience and Technology of Marine Litter Control

2.1 International Experience in Marine Litter Control

In order to deal with marine litter pollution and protect the marine ecological environment and build a clean ocean, some developed coastal countries have taken a series of effective policy measures and preventive actions, and achieved remarkable results. It is useful for Weihai City to carry out marine litter pollution prevention and control.

2.1.1 Policy and Regulation Construction

The practice of the United States, Japan and South Korea showed that they attach great importance to formulating laws and regulations to prevent and control marine

litter pollution according to law. The relevant laws and regulations of the United States include “the Marine Protection, Research and Conservation Areas Act” of 1972, “the Marine Dumping Prohibition Act” and “the Marine Plastics Pollution Control Act” amended in 1977 and formed in 1987. In 2009, Japan issued “the Coastal floatation and Promotion Law”, which endangers the marine environment. In 2000, Korea issued the basic marine development plan (2000-2030), which made more detailed regulations on the protection of the marine environment.

2.1.2 The Role of Social Forces

Private volunteers in the United States are very active in environmental protection and are actively involved in marine litter management through such opportunities as the International Beach cleaning Day (ICC). There are many non-governmental environmental groups in Japan, which have made great contributions to the preservation of the coastal environment. South Korea attaches great importance to the participation and cooperation of the masses in the management of the marine environment and has supported the development of a number of non-governmental marine organizations and has become an important marine litter prevention forces.

2.1.3 Development Scientific Research Activities of Marine Litter Prevention and Control

The National Oceanic and Atmospheric Administration (NOAA) has launched the Marine Waste Program (MDP), which focuses on research and solutions to the problems posed by marine litter, protecting the country's marine environment, natural resources, and industry, economy and human beings. The Oceanic and Atmospheric Administration (NOAA) Marine waste Project funds New York to evaluate, remove and prevent shrimp farming gearing in long Island Bay.

2.1.4 Raising Public Awareness of Environmental Protection

The Marine waste Project in the United States aims to promote and improve public behavior through information and education. Japan's higher education institutions carry out comprehensive ocean-related science education by strengthening "understanding the ocean", "protecting the ocean" and "using the ocean".

2.2 International Technology of Marine Litter Management

2.2.1 Marine Litter - Incineration Power Generation

Marine litter is mainly plastic, foam and wood chips and other high-calorific value substances, and it can be converted to fuel. Therefore, offshore litter after the salvage collection, classification and treatment can be mainly used as coastal urban waste incineration power generation fuel. At present, the international waste incineration technology has been relatively mature, especially in Tokyo, Japan, where waste incineration station with beautiful art gallery style in large quantities built in the coastal and urban areas. In addition, Japan's cement plants are also heavily used plastic, wood chips and other high-calorific value waste as fuel.

2.2.2 Onshore Litter - Recycling

There is a large amount of waste in marine litter that can be recycled and reused. And coastal provinces and cities should focus on strengthening waste recycling management in the region. Japan is an island country, while Japan did a good job on waste sorting and recycling all over the world, and the experience of Japan is worth to learn.

2.2.3 Litter Ash - Reclamation Island

In 1998, the island nation of Singapore built 1 km of rocky long embankments between the two offshore islets, Malaysia and Xikang. And 11 interconnected bay units were divided. Firstly, the seawater was drained from the unit and a thick layer of plastic film was put. And then the ash was dumped from the waste burning in these units for sealing to prevent leakage. As for the materials in the litter that cannot be burned and recycled, such as asbestos, they are also sealed by plastic and buried in the soil. Since then, sampling and testing of seawater around the unit has been detected every month. And so far no units have been found to leak and contaminate seawater. Every time a unit of litter is filled at a height of two or three meters, sand planting grass is carried out, and then the litter continues to be buried. So repeatedly, the litter can be buried up to 30 meters. Finally plants were put on it and litter was no longer pile up.

2.2.4 Marine Litter Resource Conversion

As more than 80% of marine litter is plastic, that can be used to production of manufacture fuel and waterproof anti-freezing glue, the preparation of multifunctional

resin glue and so on. At present, the use of waste plastics to manufacture fuel technology in some countries has been a breakthrough.

2.2.5 Microbial Treatment Technology of Oil Spill Pollution

Some progress has been shown in some of the research and development projects to eliminate marine litter funded by Seventh Framework Programme (EP7). For example, a research and development project called Kill-Spill found that the use of biodegradable dispersants can quickly improve the progress of marine oil bacteria digestion and leakage of oil. With this technology, the oil absorption process, which can only be completed by the ocean for several years, can be completed in just a few weeks.

3. Weihai Marine Litter Treatment Suggestions

Marine litter prevention and control is a long-term project, which needs to strengthen capacity building from social environmental protection actions, system and law enforcement construction, industrial development, environmental remediation, capital investment, scientific and technological innovation, international cooperation and other aspects. A long-term mechanism for the prevention should be promoted to be established, and of and the source prevention and control of marine litter should be strengthened to greatly reduce litter into the sea.

At present, marine litter management in China involves many departments, such as environmental protection, marine, agriculture, housing and other departments. However, the relevant existing laws of marine litter management have no clear definition and supporting provisions, and cannot carry out sustained and effective financial investment. Thus, there are many issues in the process of marine litter management, including multi-head management, unclear powers and responsibilities, insufficient investment, etc. It is urgent to further promote the pollution prevention and control of marine litter.

3.1 Further Improving the Policy System of Marine Litter Pollution Prevention and Control

3.1.1 Promot Policy Regulation and Law Enforcement Capacity Building

(1) “Weihai Coastal Protection Regulation” is to be formulated, to integrate the

prevention and control of marine litter into the comprehensive protection of coastal zones, and to realize the transformation from single governance to comprehensive management of marine litter.

(2) “Weihai Marine Litter Prevention and Control Plan” is to be issued, to establish standards for the monitoring, evaluation, collection and disposal of marine litter at a high level.

(3) Strengthen training assessment, improve the professional quality of law enforcement personnel, improve administrative supervision and law enforcement technical equipment, and implement a normalized inspection and supervision system, timely handling of illegal violations.

(4) Strengthen the punishment for the destruction of the marine environment by using various means, such as legislation, administration and economy.

(5) Revise and improve the existing technical procedures for marine litter monitoring, carry out in-depth investigation of marine litter pollution in coastal provinces and municipalities, establish key monitoring areas for marine litter, and develop a long-term monitoring system for marine litter.

The monitoring and evaluation of marine litter should provide effective basic data for guiding coastal local governments and relevant departments to develop targeted prevention and control measures to solve the problem of marine litter pollution.

3.1.2 Introduce Economic Policy to Incentive Marine Litter Disposal

Through the establishment of government leading, enterprise subject, market-oriented operation management model, the government introduces economic policies conducive to enterprise participation, including tax relief, deposit return, subsidies, fees and other policies, and actively attract the participation of social capital, the formation of enterprises as the main body of investment, construction and operation, to promote marine litter disposal.

3.1.3 Construct Marine Environmental Quality Benchmark System in Line with the Characteristics of Marine Environment in China

According to the characteristics of the near marine living flora and the need of pollution control in China, this paper studies the corresponding law of marine

ecological toxicology and marine environmental quality, and constructs the marine environmental quality benchmark system in line with the characteristics of marine environment in China, so as to strengthen the monitoring, evaluation and supervision and management of marine environmental quality in China. It provides the basis for formulating technical policies and standards for marine environmental protection, maintaining and improving the quality of marine environment and controlling marine environmental pollution. And measures for supervision and management of marine litter pollution should be formulated as soon as possible.

3.1.4 Implement Estuary plan

Combining with the actual situation of Weihai, four main tasks to implement the Weihai estuary plan are as follows. (1) Carry out the investigation and evaluation of the ecological environment condition of the estuary, including the evaluation of the health condition of the estuary, the diagnosis of the cause of degradation and the forecast of the development trend of the future situation. (2) Implement total pollutant control of estuary in the estuary district. (3) Construct the ecological environment protection and restoration project of estuary according to local conditions. (4) Construct the ecological environmental monitoring network in estuary district.

3.2 Progressive Establishment Marine Litter Recycling and Treatment Demonstration

In view of the distribution pattern of marine litter, the management of marine litter in Weihai is promoted from three levels: litter on the beach, sea surface litter and submarine litter. The improvement of the marine environment should be Speeded up, a clean ocean should be actively built, and the construction of marine ecological civilization demonstration areas should be promoted.

3.2.1 Litter on the beach

The principle of "territorial governance" is implemented for the litter on the beach. Formulate action plans for the management of the litter on the beach, and clarify work practices, performance standards, and litter disposal methods. The first person responsible for bank litter control is set as Units or individuals (including district and city governments, port terminals, coastal scenic spots, bathing beaches, marine

aquaculture enterprises, individual farmers, etc.) with ownership or use rights of the beach where the litter is located. And in the meantime, a normalized working mechanism is established. The litter will be cleaned, sent to centralized collection points, classified according to regulations, and unified trans-shipment disposal.

3.2.2 Litter on the Sea

A special cleaning team with the property rights units, individuals, or district and municipal governments is to be established for the "territorial" litter on the sea. It is equipped with marine garbage capture, collection facilities, as well as sea surface litter collection boats and trans-shipment vehicles. The team is responsible for the normalization of the sea area under the jurisdiction of litter, and sent it to the centralized collection point.

3.2.3 Submarine Litter

The cooperative investigation and research with New York will be strengthened around the composition, distribution, nature and disposal countermeasures of submarine litter. And furthermore, promote the establishment of scientific submarine litter management system, strengthen the scientific management of submarine litter, and effectively improve and protect the ecological environment of the seabed. A special actions will be carried out for the management of submarine litter, with the adoption of strong and targeted technical equipment measures. A specialized salvage teams is to be established to carry out the submarine litter disposal salvage and transshipment work.

3.3 Strengthening Science and Technology Investment and Expanding International Cooperation

We should increase investment, develop professional and technical equipment for marine litter collection and disposal, carry out screening technology for marine litter recovery, select some typical beaches, establish demonstration points for the recycling of marine litter, analyze the feasibility of recycling resources for marine litter, and analyze their economic inputs, benefits and environmental benefits and ecological benefits.

The Weihai-New York Marine Waste Prevention and Control Cooperation should be promoted. A Weihai-New York Marine Litter Prevention and Control

Cooperation contact group is to be set up, and the construction of cooperation mechanism is to be promoted. The daily communication and coordination between the two sides should be strengthened. A memorandum of action on cooperation in marine litter prevention and control in Weihai-New York is to be formulated to make provisions on cooperation mode, cooperation content, capital investment, effectiveness evaluation, etc.

We should establish a regular notification system for the prevention and control of marine litter, conduct annual visits and exchange visits, and promote the exchange, sharing and cooperation and innovation of new ideas, new technologies and measures for the prevention and control of marine litter. To build a "Weihai-New York Mayors Forum" "Weihai-New York Marine Waste Prevention and Control Technology Seminar" and other communication mechanisms to promote direct dialogue between the two municipal governments, industries, academia and other fields, and jointly explore the development path.

3.4 Increase Capital Investment

We will actively strive for special funds for environmental protection and environmental remediation of relevant national departments.

To encourage relevant local enterprises and scientific research institutions to apply to the relevant state departments for research funding in the form of topics, and to vigorously carry out scientific research and technological innovation in environmental protection, ecological restoration and marine litter disposal technology and equipment.

We suggest that we should increase the financial investment of local governments, set up special funds in Weihai and the cities of the districts, promote the implementation of a number of special actions and international cooperation projects on environmental protection and marine litter management, and strive to integrate the Weihai-New York marine litter control cooperation into the framework system for international environmental cooperation initiated by international organizations, such as the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), Environmental Non-governmental Organizations

(ENGO) and the Global Environment Facility (GEF), to seek the support of relevant international funds.

3.5 Further Improve the Publicity Efforts for Marine Litter Disposal

We should strengthen publicity and education for residents and tourists in conjunction with the publicity department, including increase notices, strengthen management and make emergency plans for holiday beach environmental hygiene. And at the same time, we will actively cooperate with organizations such as environmental NGOs to further promote marine litter cleaning and beach cleaning activities. Furthermore, we will organize beach cleaning volunteer activities to raise awareness of the prevention and control of marine litter emissions in all sectors of society.