Research for Foreign Advanced Ports for Protection and Development Experience

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Abstract. Into the twenty-first century, the process globalization of economic and trade is getting faster and faster, as of 2014, China's annual port trading amount topped the world. But in the port of environmental protection sustainable development approach with foreign advanced port environmental management concept has a big gap. Combined with the present situation of modern ports in China. Drawing lessons from foreign advanced environmental protection idea of port, in order to promote the protection of port environment in our country. The experience of protection and development of foreign advanced port environment will be discussed and discussed.

1. Introduction
In the concept of advanced foreign port environmental protection, primarily, need to understand the environmental significance of the port. The modern international port is not only an economic hub. It is a bridge for international trade exchanges, also a sensitive area for environmental protection. The choice of port construction is in the open sea and deep sea land boundary. Through port construction, the ability of self-purification of sea water has dropped greatly in the harbor area, and it is a weak area of environmental protection. Bearing the mainstay of national economic development, Economic activity cannot avoid human high frequency activities. In the trade activities of port construction, the impact on the natural environment cannot be avoided. Therefore, the sensitive area of environmental protection is the focus of attention both at home and abroad.

Developed countries attach great importance to the harmonious development of man and nature. In the process of project construction, the idea of clinging to the nature, Avoid a wide range of changes in the natural environment to maintain the balance of the ecological environment.

In the construction of the project, the design includes the environmental protection design plan. The use of efficient management programme and measures to minimize environmental damage. The following that we summarize the management policies of advanced port environmental protection in
foreign countries.

1.1. Conforming to the design philosophy the nature
In the concept of advanced port environmental protection, Construction concept aimed at eliminating economic benefits. The idea of "harmony between man and nature" goes deep into every design link of an engineering project. In the construction design of the project, the fully considering the dependence of the first biological group on the original natural environment. Find out the identify the weakest link in the chain, Simulation is done before the construction of the project, A chain reaction caused by the destruction of the weak point.
To reduce the natural environment for the purpose, carry out industrial design and optimize practical materials for engineering construction, Avoid the environmental pollution of toxic substances, Cause a large area of death of the bio group. Base on improve the integrity of the food chain, try to maintain the original ecological environment. By introducing new varieties of aquatic plants, To improve the ecological structure of the ecological environment after the construction of the port.
In the port improvement project used in underwater construction form of trapezoidal multiple section or change the direction of flow of water under the current port. Underwater foundations with different shapes are adopted in underwater engineering. Scatter the base of the uniform character, different structural forms are applied in different regions. For example, in microbial enrichment areas, use square raw materials, slow down the impact of the sea.
In the biota complex area, porous and undulating materials are used for construction, Conducive to microbial attachment and the breeding and foraging of fish stocks. The construction of ecological rocks, the ability to artificially apply appropriate agents, promote the growth and reproduction of benthos, ensure that the diversity of ecosystems is not destroyed, for the survival of marine organisms to create a good growth environment.
At the port of Hemingway in Russia, The construction of ecological Great Barrier Reef, an irregular porous box is put into the corresponding deep water area, method for building ecological wave elimination block, promote the restoration of biological population after construction, ensure that the original ecological environment is not destroyed, it has made great contributions in the field of environmental protection in advanced ports.

1.2. Eliminate sources of pollution
International advanced ports focus on the use of natural resources, Marine ports include tidal energy, sea land, wind energy, solar energy and other pollution-free clean energy. On the utilization of clean energy, modernization is not effective. Make use of the most common Wind Energy. Because the specific heat of land is different from that of ocean, there is a steady flow of wind throughout the day and at night, the use of wind power system to provide lighting, electricity and daily life staff.
In port trade, many diesel powered operating equipment is being replaced by progressively more power driven ones, to eliminate the source of direct pollution, the government put more manpower and material resources into the port green energy.

2. Main methods of environmental protection and management in foreign advanced ports
2.1. Improve the utilization of materials
At the moment of port construction, a great deal of earthwork, A great deal of earth produced during this period can be fully utilized. Hong Kong is a model of success in China, Hong Kong International Airport expansion is the use of engineering construction in the earthwork reclamation way, Improved utilization rate. The effective use of materials is an effective measure to protect the environment, therefore make waste profitable. The waste generated in port trade plays an effective role in protecting the environment effectively in the process of returning to the project.

2.2. Improve the environmental management system
In the environmental protection management system, implement comprehensive monitoring measures, subarea management, implement regional responsibility system, strengthening environmental management, discover pollution sources in time, take corresponding measures to ensure that the environment is effectively protected.

2.3. Adjusting the key functions of environmental in the port
With the development of society, frequent economic activity has damaged the living conditions of the surrounding population. Adjust the number and type of imports and exports to reduce the impact on the surrounding environment.

3. Conclusion
There is a gap between the results of environmental protection and the advanced port environmental protection in developed countries.
Combined with the actual conditions of China’s ports, learn from foreign advanced port environmental protection concepts and methods, promoting the protection of port environment in China.

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