Ecological Port And Navigation Engineering Evaluation Principle And Standard

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Abstract: How to evaluate the ecological port and navigation project? What is the principle of evaluation? What are the criteria for evaluation? This paper discusses the evaluation principle and standard of ecological port and navigation engineering, and puts forward the evaluation principle of ecological port and navigation engineering. Then with the standard, the construction of ecological port and navigation project has certain guiding significance.

1. Introduction
The construction of ecological port and navigation is a world trend. How to evaluate the ecological port and navigation engineering project? What are the principles? What are the criteria for evaluation? These are very important issues in the construction of ecological port and navigation.

2. Principles of ecological port and navigation engineering evaluation
The principles of the evaluation index system of ecological port and navigation engineering are as follows:
(1) The evaluation index system of ecological port and navigation engineering should conform to the development law of ecological port and navigation. When making the ecological evaluation index system of port and waterway engineering, must be combined with the specific situation of the ecological construction of port and waterway, follow the ecological law of the development of port and waterway construction, not only pursue the index system of perfect, against and from the evaluation index system of ecological development rule, even if design looks perfect, also makes little sense.
(2) The selection of indicators should conform to the principle of efficiency. The efficiency principle of the so-called ecological port and navigation engineering index is that the choice of the target should be few but good. Because the structure of the eco-port navigation system is complex and the levels are changeable, the subsystems not only interact with each other, but also have mutual input and output. The change of some levels, some elements and some subsystems may lead to the change of the whole system from superior to inferior or from inferior to superior. Therefore, it is not easy to screen out the most sensitive, easy to measure and essential evaluation index in many indicators. Although there are a lot of indexes to choose when constructing the evaluation index system of ecological port and navigation engineering, the accuracy of the evaluation can be improved to a certain extent by selecting more evaluation indexes, but the list of indexes is too many, which affects the
function of the key factors. Therefore, the selection and setting of the evaluation index of ecological port and navigation engineering must grasp the main aspects and essential characteristics of its development process, highlight the key index of ecological port and navigation engineering, and determine the index with the principle of less but better efficiency.

(3) Scientific nature and operability should be combined. The construction of ecological port and navigation engineering is a systematic engineering with rich contents, which includes the construction of ecological port engineering, ecological waterway engineering, ecological city engineering and ecological village engineering. Therefore, we should pay enough attention to the comprehensiveness and systematicness of the index system when establishing the evaluation index system of ecological port and navigation engineering. At the same time, we should fully pay attention to the scientific nature and operability of the index system. Evaluation index system is scientific requirement for ecological evaluation index system of port and waterway engineering, must conform to the objective law of ecological construction of port and waterway, in addition, science is also reflected in the index system of evaluation conclusion can make the most of the ecological construction of port and waterway engineering efforts can achieve or basic implementation, namely indicators moderate difficulty, operable. If the ecological port and navigation index engineering system is not operable, even if the index is scientific, there is no practical significance.

(4) General indicators and characteristic indicators should be combined. In setting up the evaluation index system of ecological port and navigation engineering, we should set up both general index and some characteristic index. The general index is applicable to all the construction of ecological port and navigation engineering, and the characteristic index is mainly aimed at the construction of characteristic and personalized in the construction of ecological port and navigation engineering.

3. Evaluation standard of ecological port and navigation engineering

Our aim is to establish a set of feasible and maneuverable ecological port and navigation engineering index evaluation system. This index system can promote the policy making of ecological port and navigation. In order to achieve this goal, the selected indicators should be concise and clear. The evaluation criteria of ecological port and navigation engineering are as follows:

(1) Scientific standards. The scientific nature of the evaluation standard of ecological port and navigation engineering requires that the evaluation index system of ecological port and navigation engineering must conform to the objective scientific law of the construction of ecological port and navigation.

(2) Professional standards. This is the professional requirements for ecological port and navigation engineering itself, not other, but closely related to the professional standards of ecological port and navigation engineering.

(3) Stability standard. Ecological port navigation is volatile and will change with time. Therefore, the selection of its indicators should have a certain period of time, to avoid a short period of drastic changes and the impact of the evaluation of the whole system. The types of indicators should also be representative to suit the evaluation range of more regions.

(4) Completeness standard. As an organic whole, the index system of ecological port and navigation engineering should be able to reflect and measure the main development characteristics and status of the evaluated area. In the past, the indicators describing the situation of regional development often have overlapping information among indicators. Therefore, in the selection of indicators, we should try our best to choose the indicators with completeness, so as to increase the accuracy and scientificity of the evaluation.

(5) Comprehensive standards. On the basis of the relative completeness of ecological port and navigation engineering indexes, the system of ecological port and navigation engineering indexes should be simple and representative.

(6) Operational standards. Since the evaluation standard of ecological port and navigation engineering involves the port and navigation of different countries and regions, in order to make the evaluation results of port and navigation of different countries and regions comparable, the indexes
must be comparable first. Accordingly, want to accord with operable standard, this includes: the simplicity of index, the convenience that the data gets, the normalization that the index expresses, the comparability between index, in addition, a few important index should adopt the name that is commonly used on the international as far as possible and computation method, in order to be in line with international data basically.

4. Conclusions
To sum up, we preliminarily answered how to evaluate the ecological port and navigation project? What are the principles of evaluation? What are the criteria for evaluation? These are very important problems in the construction of ecological port and navigation. Four principles of ecological port and navigation engineering evaluation are put forward, and six criteria of ecological port and navigation engineering evaluation are put forward. In a word, when setting and screening the evaluation indexes of ecological port and navigation engineering, we must adhere to the unity of scientific, professional, stable, complete, comprehensive and operable standards, so as to reasonably reflect the development level of ecological port and navigation engineering.

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