

QUANTITATIVE ANALYSIS OF TIDE EMBANKMENT CONSTRUCTION AND RESIDENT'S SELECTING ACTION

Ai TASHIRO

Abstract

The outbreak of the effect of the Great East Japan Earthquake on March 11th 2011 caused serious disasters. The damaged by Tsunami has still left in many disaster areas. In most of those areas, as one of the restoration, Plans of giant sea wall (tide embankment) construction are pushed forward by governments and administrations.

In Kesennuma City, Miyagi prefecture, over the Sea wall construction, movements against giant seawall construction have happened in disaster districts. To avoid conflict, most of people accept the current construction plan. However, in Koizumi district in Kesennuma, some people against seawall construction propose alternative construction plan to protect landscape and ecosystem of the beach. This consequently causes conflicts between administration and residents. Most residents avoid to touch upon that subject.

In this study, household survey was conducted in this city. Based on this collected data, at first, by using outranking method, I focus on the cost benefit of the giant seawall construction and clarify the problem of the conflict. Then, I inspect validity from the aspect of environmental protection. It can propose what kind of plan is most preferable choice for parties under the assumed plan. This analysis showed ecofriendly model plan is the most optical plan. Second, I conduct covariance structure analysis, find out what kinds of factor lead to agree or disagree to the sea wall construction. That result showed two factors, having interested in the construction project and consciousness of environment preservation, influence on object to construction. This tangency in Koizumi is stronger than in total Kesennuma district.

This study can suggest, in fact, people have strong awareness of environmental conservation and wish eco-friendly construction plan. From this survey, it reveals that by enhancing consciousness of environment preservation and interest in the project, they can achieve agreement formation. It can be concluded that after all, it depends on their own decision making.

In this survey, much amount of data couldn't be collected. Cost of alternative plan is also just assumption. So, as the future challenges, in order to verify the universality of this survey, collecting much more data should be needed.