

Providing information to the Port and Harbor Subcommittee of the Transport Policy Council

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1. Introduction

Data representing damage to ports and harbors by the Great East Japan Earthquake was organized and the information was provided for use in deliberations by a Council and a Study Committee established by the Ministry of Land, Infrastructure, Transport and Tourism.

2. Disaster Prevention Section of the Port and Harbor Subcommittee of the Council for Transport Policy

The Division provided information, mainly an outline of port and harbor damage and damage mechanisms, to the Disaster Prevention Section of the Port and Harbor Subcommittee of the Council for Transport Policy, and participated in a general detailed examination at the interim report compilation¹⁾ stage.



Photo 1. View of Damage to a Seawall (by the Backwash)

Taking damage to seawalls (and other shoreline protection structures) as an example, it provided photos taken during field surveys, hypothesized damage mechanisms, and presented problems with stability during backwash and the severe impact of scouring by the flow during overflow and return flow.

For breakwaters, it proposed presentations based on photos captured from videos, permitting the presentation of the state of functions of a breakwater when the first wave stuck.

It also proposed concepts and study directions for “tough structures”.

3. The Study Committee for Tsunami Countermeasures for Coastlines

The Study Committee for Tsunami Countermeasures for Coastlines organized information about damage to

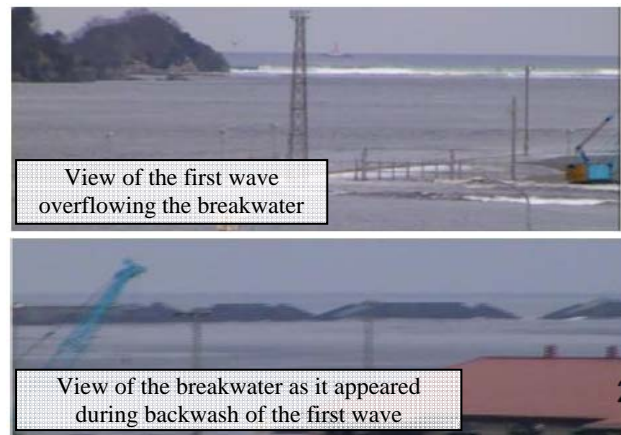


Photo 2. Presentation Using Photos Captured from a Video

breast walls at the same time as it pointed out the importance of countermeasures for stability, scouring, and suction during backwash, and of drainage measures as future study challenges, and reflected these in the Study Committee’s report²⁾.

Aim is to design a tough structure which, even after damaged by a tsunami high enough to overflow the breakwater, is not breached and continues to display disaster relief effects.

Figure 1. Image of a Tough Structure

[Reference]

- 1) Necessary comprehensive tsunami measures for ports and harbors (interim report), July 6, 2011, Disaster Prevention Section of the Port and Harbor Subcommittee of the Council for Transport Policy
- 2) Basic concepts of restoration of coastal dikes etc. damaged by the Great East Japan Earthquake and Tsunami of 2011, November 16, 2011, Study Committee for Tsunami Countermeasures for Coastlines