

Research Trends and Results

Issue of Guideline to Tsunami Evacuation Measures for Ports and Harbors and Guideline to Design of Tsunami Evacuation Facilities for Ports and Harbors

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(Key words) Tsunami evacuation measure, outer levee area, tsunami evacuation simulation, tsunami evacuation facility

1. Background

Ports and harbors play important roles as centers of industry, logistics and maritime transport, where many kinds of stakeholders, such as workers, passengers etc., are active in their respective roles. But many of the areas in ports face the shoreline on the ocean side of the protection line (sea wall etc. that protects the landside area from storm surges and tsunamis). These areas, so-called outer levee areas, are at high risk of inundation by tsunami, where measures must be taken to ensure the victims safe and prompt evacuation.

So tsunami evacuation measures must be taken considering the characteristics of ports and harbors. In the same manner, the tsunami evacuation facilities must be constructed so they are effective for emergency or temporary evacuation of evacuees from areas where evacuation is difficult.

The guideline, as a reference to establish the tsunami evacuation measures for individual ports, stipulates basic concepts concerning the roles of port administrators, related members and organizations, and related and coordinating regional disaster prevention plans and tsunami evacuation plans of surrounding local governments. The guideline also shows tsunami evacuation methods, including extracting methods for areas where evacuation is difficult and methods of laying out tsunami evacuation facilities.

Our divisions provided information about the results of research on the evacuation activities in ports and harbors and the application of tsunami evacuation simulation.

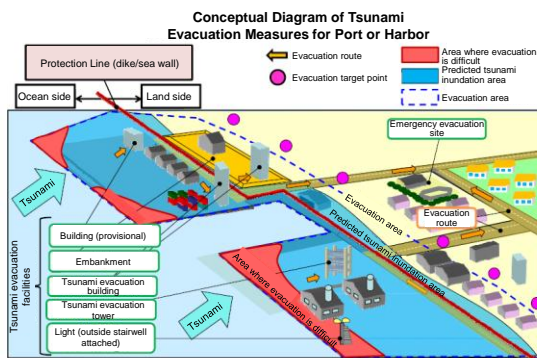
3. Guideline to Design of Tsunami Evacuation Facilities for Ports and Harbors

Since March 2013, a working group has held four meetings to issue the guideline established by the Ports and Harbours Bureau, Ministry of Land, Infrastructure, Transport and Tourism, (Chairman: Professor KIYOMIYA Osamu, Waseda University)

The guideline shows basic concepts for design of each item of tsunami evacuation facilities for ports and harbors: representative conditions required by tsunami evacuation plans (e.g. identifying areas where evacuation is difficult, estimating the number of people to be evacuated, arranging the layout of tsunami evacuation facilities, etc.), conditions required for evacuation, required structural conditions, and required administrative conditions. The guideline is intended to support the proper design of tsunami evacuation facilities for ports and harbors under evacuation measures applied by the Guideline to Tsunami Evacuation Measures for Ports and Harbors.

Our divisions have shown the basic concepts of objects of tsunami evacuation facilities in ports and harbors, with reference to related laws, regulations, and standards. We have also provided technical

Figure. Conceptual Diagram of Tsunami Evacuation Measures for Port or Harbor



2. Guideline to Tsunami Evacuation Measures for Ports and Harbors

Since February 2013, a study committee has held five meetings to issue the guideline, established by Ports and Harbours Bureau, Ministry of Land, Infrastructure, Transport and Tourism, (Chairman: Professor ISOBE Masahiko, Vice President, Kochi University of Technology).

support for the establishment of tsunami evacuation facilities design methods.

4. To Promote Tsunami Evacuation Measures

Our divisions will hereafter provide lectures for a training course to help port administrators understand the guideline, and provide technical assistance to help them establish specific tsunami evacuation plans or tsunami evacuation facility plans, and to promote tsunami evacuation measures for ports and harbors.

[Sources]

1) Guideline to Tsunami Evacuation Measures for Ports and Harbors, September 2013

http://www.mlit.go.jp/kowan/kowan_tk7_000013.html

2) Guideline to Design of Tsunami Evacuation Facilities for Ports and Harbors, October 2013

http://www.mlit.go.jp/report/press/port05_hh_000054.html