

Consideration to the resiliency of protective structures against tsunami by using High Performance Computer

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The Committee for Technical Investigation on Countermeasures for Earthquakes and Tsunami Based on the Lessons Learned from the "Great East Japan Earthquake" (2011) of the Central Disaster Management Council has responded to the Great East Japan Earthquake by proposing that basically, two levels of tsunami must be hypothesized to build future tsunami countermeasures. One is a tsunami hypothesized to build comprehensive disaster prevention countermeasures centered on evacuation of residents. It is set based on a survey of tsunami deposits formed over an ultra-long period and observations of crustal movement, and it is a maximum class tsunami which, although it occurs extremely rarely, causes devastating damage when it does occur. One more is a tsunami which is hypothesized to build coastal protection facilities such as breakwaters and other structures which prevent tsunami from inundating inland regions. It is a tsunami which occurs more often than the maximum class tsunami, and although it is a low type of tsunami, it causes severe damage. At such times, technological development of structures which are capable of resiliently providing effects even under tsunami height which is the object of the design must continue for coastal protection facilities etc. to be improved. So, in this research, the protective effectiveness is considered by using STOC-CADMAS(Arikawa and Tomita, 2005).