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T1.5-P41. Study on tsunami in relation to the earthquakes

Thick sedimentation, high density of sea water, anticlockwise oceanic current, frame shaped Bay of Bengal, shallow continental shelf, near tectonic subduction zone all together increased the tsunami vulnerability in Bangladesh coast. The relation between earthquake magnitude M and tsunami magnitude m is m = 2.30 M-16.20. The magnitude of the earthquake M is 6.3 to 6.8 only small tsunami with height of less than 0.5 m is observed on the coasts and no damage comes out (m= -1). Magnitude M is nearly 7.0 Tsunami height on the coast would be 0.5 to 1.0 meter and damage occur slightly (m = 0) and M is greater than 7.3 tsunami height on the coast would be 1.0 to 2.0 meter or some coasts may heavily suffer (m=1). When M is nearly 8.0 tsunami height on the coast would be 2.0 to 6.0 meter and damage occur severely (m = 2) and M is nearly 8.5 tsunami height on the coast would be 10.0 to 20.0 meter and more than 400 km greatly damaged (m=3). Tsunami magnitude m=4 or earthquake magnitude more than 9.0 tsunami height of the coast would be 30 meter or more along the coastal areas.

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