ABSTRACT

Tsunami waves in the deep ocean has a wavelength that is great but the speed is low, while when it reached the coastal areas of tsunami wave length decreases while the speed increases that are causing high damage and casualties in the coastal areas so it can be reviewed using the shallow water equations. The final task is to make the simulation of tsunami waves around the coastal areas of the island of Flores Wewaria with open boundary condition for changes in the aspect of speed and elevation waves. Numerical solution uses a combination of shallow water equations and smoothed particle hydrodynamics which represents the fluid in the form of particles at SWE-SPHysics program. The simulation results show the open boundary conditions do not affect the change of speed but very influential on the elevation of the waves generated by the tsunami.

Keywords : tsunami, flores, open boundary condition, shallow water equations, smoothed particle hydrodynamics, swe-sphysics