## Abstract

Natural disasters can occur everywhere, causing geological and complex problems. One of the devastating natural disasters is the water wave disaster. Several factors can form a water wave disaster, one of them is due to the bottom motion of the water surface. This paper presents the simulation of numerical modeling waves due to the bottom motion using the 1D nonlinear SWE. Here, the staggered grid is used to help to discretize the model. Experiments are carried out eleven times to produce data for making wave simulations. The results of experiments and simulation results are compared and analyzed using the formula Root Mean Square Error (RMSE). This study aims to prove whether the nonlinear SWE model can simulate experimental waves accurately. The results showed that the shallow water equations model could represent the experimental results well with an error value of 0.000058.