

Investigating the Storm Surge Due to Tropical Cyclone Ashobaa in the Coastal Areas of Bushehr and Chabahar

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Abstract

Tropical cyclones develop over oceans as low pressure phenomena. They could be developed further when the conditions are met and cause storm surge. The devastating consequences of these storms in coastal areas reveal the importance of investigation on such subjects. In this research therefore, the variation in the height of water level due to the Ashobaa cyclone has been studied using Flow module of the MIKE 21 software. The study has been conducted at two stations; one near the port of Bushehr and another near the port of Chabahar. The model first was calibrated and validated using field data. After the model validation, two simulations were carried out; one with and one without the effect of Ashooba cyclone. Positive storm surge was observed due to the Ashobaa cyclone in Chabahar station (about 50 cm). The effect of the storm was negligible in Bushehr water level. It was also observed that the storm affected the current speed and direction in Chabahar station. Such an effect was not observed in Bushehr station.

Keywords: *Ashobaa cyclone, Storm surge, MIKE21 software, Flow simulation, Bushehr, Chabahar.*
