

Abstract

Nowadays, climate change caused by global warming has raised the possibility of storm surges in the Gulf of Thailand, especially the area in Samut Prakarn province that may be severely suffered from catastrophic events of storm surge. This study's objectives are 1) to study and analyze a safety area by using geographic information system (GIS) 2) to study between people's perception and preparing an evacuation plan and 3) to suggest an evacuation and preparation plan. This quantitative research was conducted in two fields: quantitative research and spatial analysis. Questionnaires were distributed to 309 samples to study people's perception related to storm surge, evacuation behavior and people's expectation to authorities' provision. The spatial analysis section was analyzed by using GIS to categorize safety areas and locate potential evacuation spots. This part analyzed 1) river flood area 2) storm surge hazard risk area 3) flood inundation area 4) characteristic of major road 5) characteristic of local road 6) major road service area 7) local road service area and 8) evacuation spot

The result on spatial analysis by GIS has shown that areas with moderate level of safety are located near transportation routes. The results of people's attitude towards storm surge risk level and intensity were at a moderate level, the understanding of storm surge were at a low level. People tend to evacuate immediately when they receive warning from authorities and they will evacuate out of Samut Prakarn province using their own vehicles.

The suggestion in this study can be classified into two phases: short term and long term. For the short term, the suggestion plan will expedite giving knowledge to people, changing their attitude and perception to storm surge disaster by using a set of media, for instance, gaming simulation, local radio, announcements and organizing people consultation. In the long term, the suggestion plan will encourage cooperation between authorities, people and local government, and keep communicating storm surge disaster knowledge, perception and awareness to people. However, enlightenment of storm surge

perception and knowledge among people is the high priority task to achieve sustainability in storm surge mitigation.