Suksan Suesakul, Lieutenant Commander 2009: Wave Display System for the Gulf of Thailand and Andaman Sea. Master of Engineering (Water Resources Engineering), Major Field: Water Resources Engineering, Department of Water Resources Engineering. Thesis Advisor: Associate Professor Suwatana Chittaladakorn, Ph.D. 93 pages.

Ocean wave data can be obtained using wave forecasting models which can yield both hindcasted waves and forecasted waves. In Thailand the wave model called WAM has been studied, utilized and further developed mainly for wave forecasting to support navigation in the Gulf of Thailand and Andaman Sea.

In order to gain more benefit of WAM data, this study developed the wave display system using Visual Basic 6.0 and MapWinGIS. The system was developed to transform hindcasted wave data to wave statistics which are represented in a graphical form of a wave rose and also in a tabular format. These different formats of data presentation give statistic values of wave height, wave period and wave direction, which are essential inputs for study of nearshore wave environments such as wave-structure interaction and nearshore wave transformation and appropriate for decision support for coastal engineer or related. In order to improve decision-making on navigation, the system was also developed to generate wave information along navigation routes using the forecasted wave data. Both graphical presentation and a tabular form of this wave information can be generated.

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