

DEVELOPMENT OF A REAL-TIME MONITORING SOFTWARE FOR COASTAL ENVIRONMENT ON GUI

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A real-time monitoring software for coastal environment such as currents, wave and water quality has been developed on GUI. The system, RECEMS (Real-time Coastal Environment Monitoring System), consists of real-time modeling system, real-time monitoring system and displaying system of the modeling and monitoring results. The modeling system includes the depth-integrated 2-dimensional tide model, the transport model of suspended sediment, and the wave model. The system was applied a port construction site in Korea. The main focus in developing the system giving the real-time information on coastal environment is to setup the real-time modeling and graphic system that user can get the environmental factors easily and rapidly. The non-expert user group can run the model and see the results by 3-D graphic. To predict the tide and tidal currents distribution varying with the time, the user has to input only the wanted date on Window. The simulation time takes only few minutes to enable the real-time simulation to observe the results quickly. To simulate the SS transport due to dredging or port construction, the user has to specify the source information such as the coordinate of the pollutant source, the loading rate, and the period of the construction activity on Window. The real-time simulation results was verified for a field data set and showed good agreements. The system will be used to monitor the environmental changes due the coastal development and help us find out the environmental impacts quickly because of obtaining the information of coastal environment in real-time. In conclusion, the system will be a good tool for monitoring, assessing and watching coastal environment and make a great contribution to clean coastal waters.