A decision support system for proper cleanups of coastal oil-spill = 建立海岸油污染適當清理之決策支援程序

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ABSTRACT

Oil-Spills can cause severe and long-term biological, economic, political, cultural, and social impacts. While it is not possible to predict the exact happening time of those spilled-oil impacts with any certainty, we can evaluate in advance the vulnerability of an area to a defined spill scenario based on the risk resources present in the coastal area. One of the approaches is to assess environmental sensitivity to oil spills. In this study a model is described for the design and development of a GIS-base decision support system (DSS) application which is developed with Borland Delphi 2005 program and titled Vietnam Oil-spill Aid Management (VOAM). This model provides an easily understandable assistance for non-technical decision makers to be able to find suitable management methods in a short time to take optimization work in preventing and mitigating the impacts of oil spill in the coastal area. To assess environmental sensitivity to oil-spill, we usually use an Environmental Sensitivity Index (ESI) map on which many sensitive ecosystems and human activities are pre-defined. This ESI Map will be integrated with the VOAM model. By using VOAM, non-technical decision makers are able to decide a suitable management method to easily deal with the impacts of oil spilled in the coastal area.

Keywords : Oil-spills, DSS (decision support system), Environmental Sensitivity Index (ESI) map, Borland Delphi 2005, Cleanup.

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