Abstract

Identification of potential oil spills on Synthetic Aperture Radar (SAR) satellite images is a complex process. Oil companies, as well as the coast guard have tested a whole range of methods for monitoring and detection of possible oil spills. These methods are found to be expensive, complex and require high processing power and time. In this paper, an oil spill detection method is proposed. The method consists of four main stages, namely: 1) Image enhancement; 2) Image segmentation 3) feature extraction; and 4) Object recognition of the segmented objects as oil spills or look-likes. The algorithm was trained on a large number of Synthetic Aperture Radar (SAR) images. The proposed thresholding algorithm can be considered an alternative to manual inspection for large ocean areas. Promising results and high detection rates for the oil spills have been achieved.
References

- Hafssa A. AbuAyyash. Improving oil spill detection using remote sensing techniques, m. sc. of computer science.
- A. Solberg, C. Brekke, E. Volden, and P. Husoy. Oil spill detection in radarsat and

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