Abstract

Oil spill negatively impacts man and his environment, thereby affecting human lives, animals and plants. The occurrence of it has increased in Nigeria specifically, Lagos State, bringing grave environmental and economic effects. Thus, this paper assessed the impact and vulnerability of oil spill posed in the study area and the possibility of a management strategy, from satellite imageries (Landsat ETM+7 (2011) and Landsat ETM+8 (2014 and 2015)) to water and soil surveys using Geospatial techniques. The result showed in total, that there was a rise in built-up areas of the land cover classification of about 58.9 % and a decline of 29.1 % in vegetation for 2011, 2014 and 2015. Heavy metal such as Iron (Fe), Lead (Pb), Zinc (Zn) and Phosphate (PO4) tested in water and soil were apparent, with phosphate (PO4) having the highest concentration of 289.370 mg/l in water and 3.750 mg/ in soil. This paper concludes that oil spill affected the study area and thus there is a need for an effective and efficient response management system in Nigeria.

Keywords: Oil Spills, Land Cover Change, Heavy Metals, Emergency Response Model