

## Dredged spoils from access drill slots contributes to the depletion of the mangrove ecosystem of the Niger Delta, Nigeria

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Dredged spoils or excavates from canalization, drill slot excavation and dredging associated with oil exploration and production activities dots the swampy wetland ecozone of the Niger Delta, Nigeria. This study investigated four selected dredged spoil sites measuring about 750m long and 1-5m high (above sea level), and averaged 10 years old. The study was aimed at assessing the impact of this anthropogenic activity on the near homogenous mangrove ecozone of the Niger Delta. The study revealed that these dredged spoils caused the fragmentation of the mangrove forest by creating new microhabitats that were characterized by altered hydrological (tidal) and pH regimes. The height of these spoils prevented the usual regular tidal inundation of saline water necessary for sustenance of mangrove vegetation. The pH which tended towards acidity (5.3 - 6.1) further complicated the altered conditions of the substrata. These new physicochemical conditions might have contributed in displacing the original vegetal cover of predominantly mangrove species and thereafter allowed the establishment of the new non-mangrove flora. The non-mangrove species identified on the dredge spoils were mostly lowland rainforest species dominated by *Alchornea cordifolia*, *Acioa* sp., *Christoballanus orbiculare*, *Szygium guineensis*, *Musanga cecropiodes* *Raphia vinifera*, *Anthocleista vogelii*, *Sterculia tragecantha*, *Pandanus candelabrum* and *Diplazium sammattii*. These observations and results are discussed in the light of current threats to mangrove species, the general depletion of biodiversity of wetlands, and the IUCN/Oil Industry International Exploration and Production Forum requirements for oil exploration and production activities in mangrove areas.

### Biography

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