

Mudflats to marvel: soil health of a successfully restored mangrove coastline in Sungai Besar, Selangor

ABSTRACT

Mangrove forest plays an important part in our ecosystems. Mangroves functions include coastline protection, marine produce, firewood, charcoal production and for the conservation of floral and faunal species. This unique ecosystem is under tremendous stress due to erosion, excessive anthropogenic activities and natural disasters such as tsunamis. The coastlines of Malaysia have witnessed drastic decline in the recent years whereby 29% of the Malaysian coastal areas were reported to be vulnerable to serious erosion (Wan Rasidah et al., 2015). In order to restore this vulnerable ecosystem, efforts have been undertaken by replanting of mangrove seedlings and placing geotubes to control soil erosion and accretion. Geotubes are intended to slow erosion along coast line, breakwater and to provide some protection to mangrove seedlings. It consists of permeable geotextile fabric folded and sewn together and hydraulically filled with dredged sand (Shin et al., 2002). Since the installation of geotubes, we monitored the soil physical and chemical properties of an old growth mangrove forest and a newly regenerating mangrove stands over the years. This paper highlights the important changes that took place from 2007 to 2017 in an established mangrove and a newly regenerating mangrove plots which have been restored.