HEAVY METALS DISTRIBUTION ON SURFACE SEDIMENTS AND SEDIMENT ACCRETION RATE IN MATANG MANGROVE FOREST, PERAK

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Lihat sebelah

HEAVY METALS DISTRIBUTION ON SURFACE SEDIMENTS AND SEDIMENT ACCRETION RATE IN MATANG MANGROVE FOREST, TAIPING, PERAK.

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ABSTRAK

Kajian yang telah dilakukan di dalam projek in telah bertumpukan terhadap taburan logam berat di permukaan sedimen paya bakau dan juga kadar sedimentasi permukaan serta ciri-ciri sedimennya. Kajian yang dilakukan ke atas paya bakau adalah kurang terutamanya terhadap aspek geokimia. Oleh itu kajian ini telah dilakukan di Hutan Paya Bakau Matang di Taiping, Perak. Transek telah dilakukan dalam mengambil sampel-sampel sedimen bagi kajian logam berat terpilih daripada 32 stesen penyampelan. Kadar sedimentasi dan ciri-ciri sedimen juga telah dikaji dan penyampelan telah diadakan untuk empat kali, dua di dalam musim panas dan dua di musim hujan. Data untuk kadar sedimentasi telah diambil untuk sembilan bulan.

Daripada kajian didapati bahawa kepekatan bagi logam berat tertentu pada transek A adalah Mn (60.35 ± 107.64 ppm), Zn (13.48 ± 32.27 ppm), Cu (2.97 ± 7.29 ppm), Pb (9.22 ± 27.33 ppm). Kajian logam berat pada transek B pula memberikan kepekatan Mn (35.16 ± 85.87 ppm), Zn (9.33 ± 22.99 ppm), Cu (9.42 ± 13.91 ppm), Pb (4.81 ± 25.34 ppm). Kadar sedimentasi pada hutan paya bakau yang telah dikaji memberikan kadar sebanyak 3 $mm.yr^{-1}$. Kajian ciri-ciri sediment pula telah menunjukkan bahawa purata saiz min sediment pada transek A adalah 6.82 Ø dan transek B adalah 6.80 Ø.

ABSTRACT

The study done in this project has focused on the distribution of selected geochemical elements on the surface sediments of mangroves and also the accretion rate. Not much research has been done in the geochemical aspect on mangrove surface sediments. Thus this research is carried out in Matang Mangrove Forest in Taiping, Perak. Transects were set up in the study area and surface sediments in 32 sampling stations were obtained and the distribution of selected geochemical elements (Mn, Zn, Cu and Pb) were analyzed on. Sediment accretion rate and also the sediment characteristics were also analyzed from the samples. Sampling for sediment characteristics has been done in 4 months involving two months in dry seasons and two in wet seasons while the accretion data was obtained in 9 months of sampling.

From the study it has been seen that the concentrations of selected geochemical elements in transect A were Mn (60.35 ± 107.64 ppm), Zn (13.48 ± 32.27 ppm), Cu (2.97 ± 7.29 ppm), Pb (9.22 ± 27.33 ppm). Selected geochemical elements in transect B meanwhile were Mn (35.16 ± 85.87 ppm), Zn (9.33 ± 22.99 ppm), Cu (9.42 ± 13.91 ppm), Pb (4.81 ± 25.34 ppm). The total accretion rate for both transect was found to be at 3 $mm.yr^{-1}$ for both transect. In other aspects the particle mean size obtained from transect A was 6.82 Ø and transect B with 6.80 Ø.