**Macro and micro nutrients in sediments of mangrove forests along Sungai Tiram Laut, Perak**

ABSTRACT

Mangroves dominate the tropical and subtropical beaches of the world. Similar to other plant communities, nutrient availability is one of the main factors influencing mangrove forest structure and productivity. Nutrient-conserving processes in mangroves are very well developed and include evergreen, resorption of nutrients prior to leaf fall, the immobilization of nutrients in leaf litter during decomposition, high root/shoot ratios and the repeated use of old root channels. The assessment of nutrients has been done at many places but there is a lack of information on sediment nutrient in mangrove forests. Therefore, a study to assess the macro and micro nutrients was carried out at Sg Tiram Laut in Matang Mangrove Forest, Perak. The objectives of this study are to provide fundamental information on sediment physiochemical properties and to compare the physiochemical properties between mangrove zones and depths. One transect line is established along the river and divided into 3 zones (Upstream, Middlestream and Downstream). A total of 45 soil samples were collected during this study using peat auger in 3 different depths from 0-15, 10-30 and 30-50 cm and the samples were kept in labelled zip lock plastic. All soil samples were air dried and standard procedures are used in soil preparation and laboratory analysis. The obtained data were analyzed using Statistical Analysis System (SAS) Version 9.2. to find mean comparison between the zones and depths. The sediments are categorised into sandy loam, soil moisture range from (1.55-1.90), soil bulk density range from (0.98-1.22), soil pH range from (3.53-4.97) which are acidic and the electrical conductivity range from (33.04-33.73us/cm). The availability of nutrients (N, Mg and Mn) was significantly different between zones except for K, Ca and Mn. As a conclusion, higher concentration of nutrients at Sungai Tiram Laut was at downstream than upstream and middlestream and at depth of 30-50 cm.

**Keyword:** Macro nutrients; Micro nutrients; Sediment; Mangrove forests; Perak