3. Description of the Study Area

The Vellar estuary (Lat. 11° 29' 4.07 N; Long 79° 45' 36.02 E) is a well-known and is always open with the Bay of Bengal and it said to be a "true estuary" as there is no complete closure of the mouth (Fig. 1). The estuary is subjected to semi-diurnal tides with maximum tidal amplitude of about 1 meter, the influence of nereitic water with estuarine environment. Promotes perfect exchange of both biotic and abiotic variations and the tidal influence is extending over the distance of 10 km upstream of the estuary. Average depth of the estuary is 2.5 meter and the maximum depth at high tide is 5.3 metre. The estuary is about 600 meter wide at its mouth and prone for both dial and short-term oscillations, especially in the northeast monsoon. The Vellar estuary has been demarcated into marine, gradient, tidal and freshwater zones based on the salinity characteristics. This is linked with a variety of biotopes, such as coastal waters, backwaters and mangroves. They also play a major role in supporting commercial fisheries.