4. DESCRIPTION OF THE STUDY AREA

In the present study, the collection of eel specimens were made from Parangipettai coastal waters (lat 11°29’N and 79°46’E) which are one among the potential fishing zones of Tamilnadu along the south east coast of India. Parangipettai coastal water comprises ecologically important biotopes such as Vellar estuary, Killai backwaters and Pichavaram mangroves. They play an important role in supporting the commercial fisheries since many of them use these biotopes as nursery ground. The Vellar originating from Shervarayan hills of Salem district of Tamilnadu meanders over a distance of approximately 480 km and forms the estuarine complex at Parangipettai. Before its confluence with the Bay of Bengal, it joins another estuary called Coleroon estuary on the southern side and both of them open into the sea. The position of the mouth of the estuary changes frequently due to tidal effect and water flow and also due to flooding during monsoon season, resulting in erosion of sand bars formed during summer months.

The Vellar estuary is a true estuary subjected to various degrees of fluctuations in physic-chemical features depending upon the seasons, tidal amplitude which ranges from 0.75 to 1 m. Freshwater influx results in continuous exchange of organic and inorganic plant and animal matters. Hence, these areas proved to be the best for observing the seasonal variation in biochemical compositions of the fishes.
Fig. 1. Map showing Annan Kovil and Mudasalodai landing centres.

The Vellar estuary has an intricate system of rivers, channels, Killai backwaters, Pichavaram mangrove water ways and near shore waters. Pichavaram mangroves are one of the typical mangroves swamps of India, with high productivity of about 8 tones of organic plant detritus/half year. It consists of small and large islets covering an area of 1,100 ha. Annan Kovil is the fish landing centre along the coast of Parangipettau, where large quantity of fish and crustaceans which includes sardine, cat fish, mackerel, tuna, eel and also crabs and shrimps are highly caught by the fisherman using motor boats and catamaran and also hook and line.