2. STUDY AREA

The present investigation was carried out in an area of 150 km$^2$ (approximately) encompassing a 5 km (approximately) radius around A.V.C. College, Mannamapndal, Mayiladuthurai (11°18’ N, latitude 79°5’ E longitude) in the Cauvery Delta of Tamil Nadu, South India (Fig. 1). The area is dominated by wet agricultural lands with Paddy (*Oryza sativa*) being the predominant crop cultivated. Other crops cultivated include sugarcane, groundnut, plantain and various cereals and pulses. Plantations of *Casuarina*, *Casuarina equilatifolia* and *Bamboo, Bamboosa arundinacea* are also sparsely distributed in the study area. Coconut *Cocos nucifera*, Palm *Borassus flabellifer*, Iluppai *Madhuca indica*, Mango *Mangifera indica*, Rain tree *Enterolobeum saman*, Tamarind *Tamarindus indicus*, Banyan *Ficus benghalensis*, Peepul *Ficus religiosa*, Neem *Azadirachta indica*, Poovarasu *Thespesia populnea*, Karuvai *Acacia arabica* are the common woody species and Kattukaruvaial *Prosopis julifera*, Kattamani *Jatropha glandulifera*, Aduthoda *Adhathoda vasica* are the common shrubby vegetation of the study area.

Four seasons could be recognized at the study area based on rainfall viz., Monsoon (October-December), Post-monsoon (January-March), Summer (April-June) and Pre-monsoon (July-September). Mean
monthly maximum and minimum air temperatures at the study area for the period 1995-2006 are shown in fig. 2. Generally, January is the coolest month and May is the warmest month in the study area. Mean monthly rainfall from 1990 to 2006 in the study area is graphically represented in fig. 3. The Northeast monsoon during October-November normally brings in heavy rainfall, contributing more than 60% of the annual rainfall to the study area and is the deciding factor of the nature and extent of various seasons.
Fig. 2: Variations in the monthly mean minimum and maximum temperature (°C) during 1999 to 2006 in the study area

Fig. 3: Variations in the monthly mean rainfall (mm) during 1999 to 2006 in the study area