

Climate of Port Blair With Special Reference to Temperature and Rainfall Between 1949 and 2008 - An Overview

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Introduction

Very recently people have begun to realize that their daily activities have environmental consequences national or global. The climate of the earth is maintained by the interaction between the atmospheric gases, the oceans, the polar ice caps, the earth's orbit and living organisms. Increase in temperature, variation in rainy days and rain falls are some of the common factors discussed during discussions on climate change. In this article an attempt is made to assess possible changes in the climate of Port Blair, the capital of the Union territory of Andaman & Nicobar Islands.

Port Blair

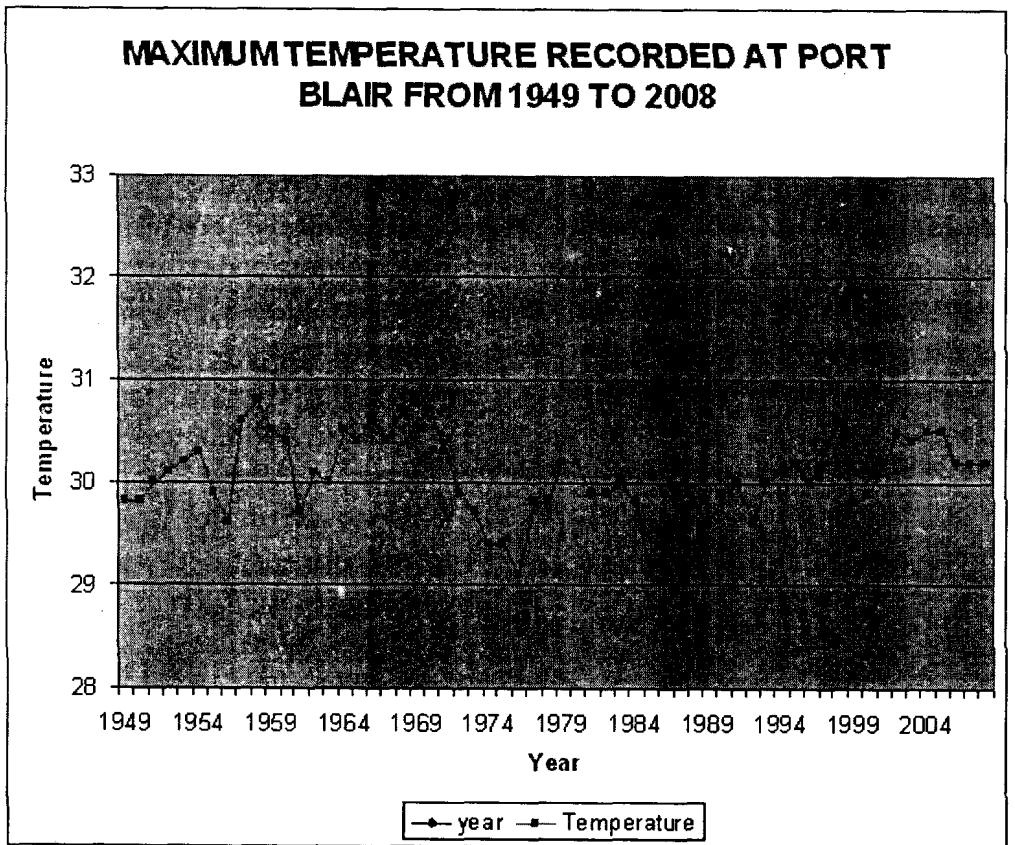
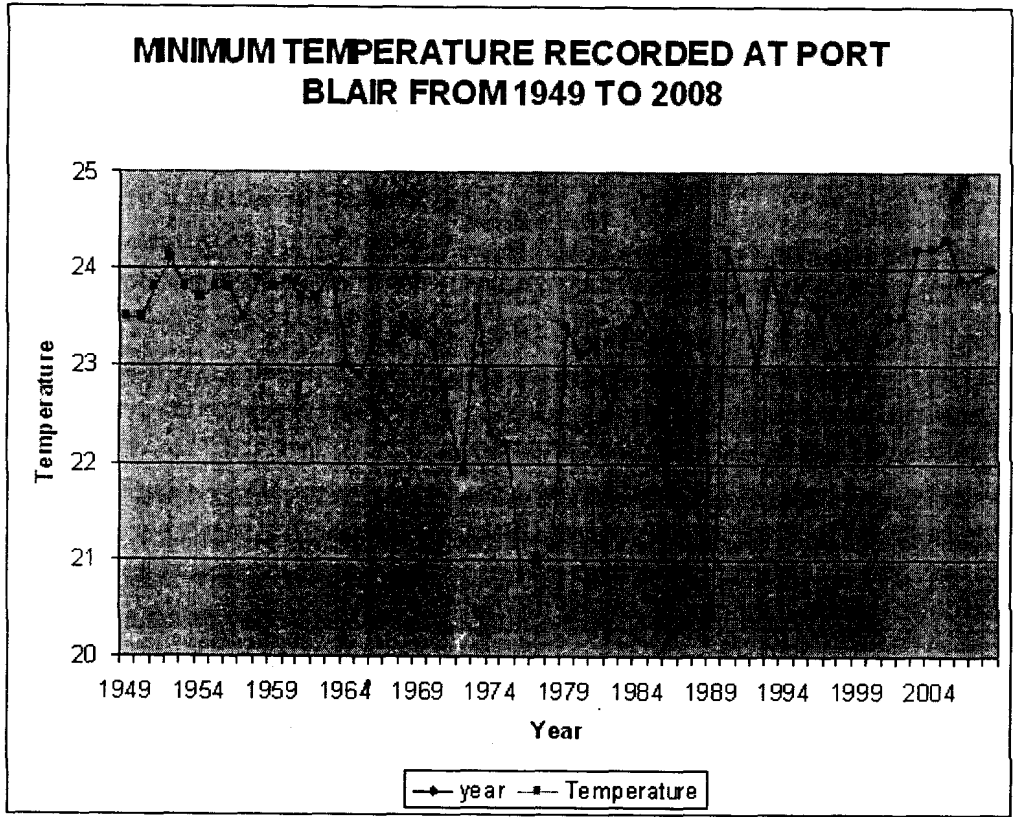
The Andaman and Nicobar islands are located in the Bay of Bengal between 92 to 94 E and 6 to 14 N. There are about 530 islands, of which 38 (25 in Andaman group and 13 in Nicobar group) are inhabited with a population of 3,56,152 (as per 2001 census). The islands were occupied by the British between 1858 and 1942 and by the Japanese between 1942 and 1945. Port Blair is the capital. Due to its proximity to the equator, the climate of this group of islands is tropical, hot and humid. There is medium to heavy rain during the

monsoon months, from May to mid-September and again from November to mid-December. There is no extreme variation in the climate except in the rains and tropical storms in last summer. For shipping operations in the Bay of Bengal, a weather reporting station has been in operation since 1868. The data for humidity is available for the period between 1966 and 2008 and for wind speed for the period between 1975 and 2008. Month-wise data on temperature and rainfall is available for the period between 1949 and 2008. Information on the climate is collected by the meteorological department of the Andaman and Nicobar administration. Island-wise data is not available for analysis.

Temperature

The lowest mean maximum temperature was 29.1 C at Port Blair, reported in both 1976 and 1985. The highest mean maximum was 30.8 C, reported in both 1958 and 1969. The lowest mean minimum temperature was 20.4 C during 1989 and the highest mean minimum temperature was 24.3 C in 2005. In most of the year the maximum temperature was recorded during April (Graph 1).

Graph 1 - Temperature Recorded at Port Blair from 1949 to 2008



Rainfall

The islands receive both the Southwest and Northeast monsoons. Maximum rain fall is between May and December. These islands receive about 180 days of rain in a year. The normal rainfall in Port Blair is 3180 mm. Great Nicobar receives more rain than the other islands. Between 1945 and 2008, the highest rain fall was 4362 mm in 1961 and the lowest was in 1541 mm in 1979. The data on the number of rainy days in Port Blair is also available from 1961 onwards. The number of rainy days varies between 117 and 209: the former was in 1979 and the latter in 1999. Except the years 1966, 1968 and 1979, the number of rainy days in all other years was above 130 (Graph 2).

Humidity

Due to the sea breeze the humidity level is about 80% throughout the year. The relative humidity has been recorded at Port Blair from 1966 to 2008. Readings were taken at 8.30 hrs and in 17.30 hrs. The morning data indicates that the mean lowest relative humidity was 75% in 1993 and the highest was 80% in 2008. The evening data indicates that the lowest was 78% during 1976, 1979, 1983 and 1993 and the highest was 82% in 1966, 1967, 1970, 1996, 1999 and 2008 (Graph 3).

Wind speed

Data on wind speed is available for the period between 1975 and 2008. The lowest was 5.8 km/ hrs in 2005 and the highest was 11.6 km/hr in 1976 (Graph 4).

Climate change and the impact on the Island ecosystem

The climate of these islands, especially its temperature and rainfall, does not show

significant variation while comparing the changes in other parts of the world. This may be due to the lesser human interventions in the natural environment. However, various studies suggest that the raise in temperature will affect the mangrove forests and coral reefs of the islands. In another fifty years, more than 60% of the coral reefs will disappear due to the increasing water level and temperature. Coastal pollution in and around these islands is also minimal.

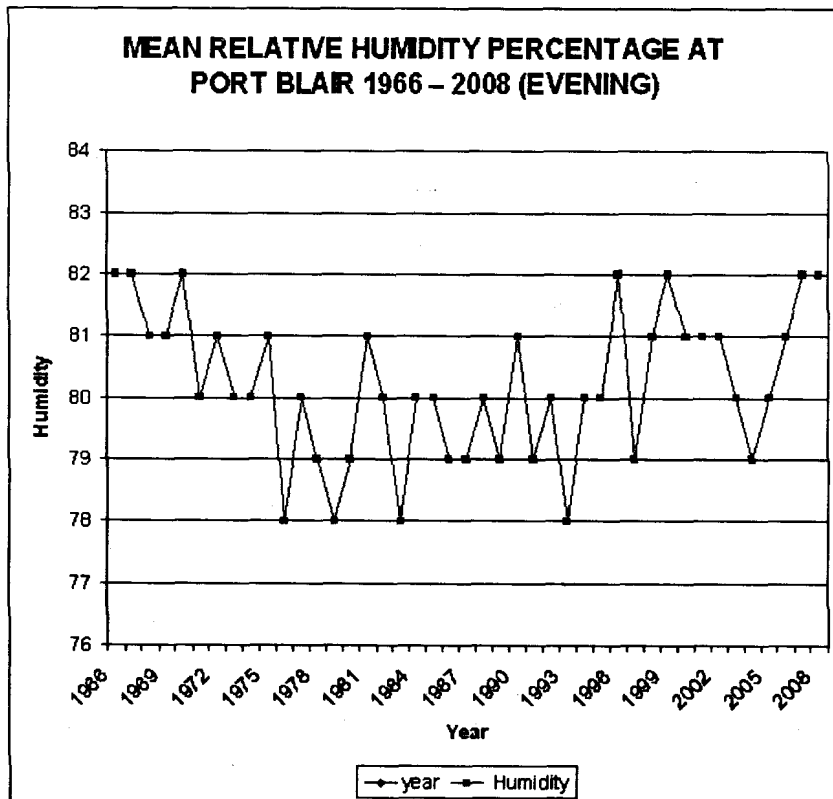
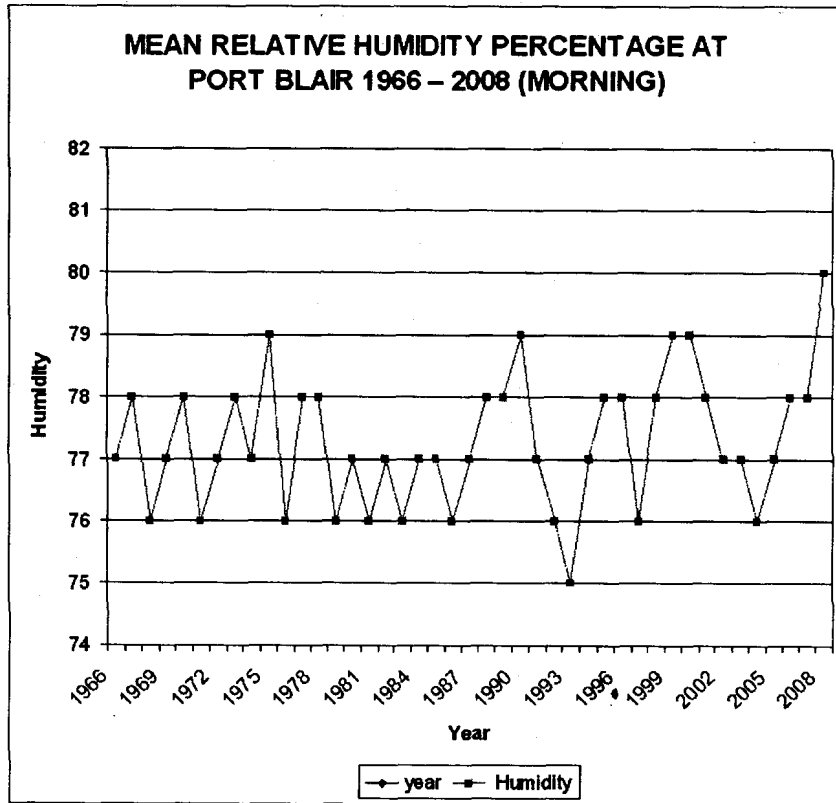
However, degradation of the coral reef ecosystem has been reported by national and international organizations. Intensive studies of the coastal and marine ecology of the islands are essential to know the impact of global environmental changes on the coastal biodiversity of the islands. Studies of the terrestrial ecosystem of the islands also indicate that except for the ecology of a few endemic species, there are not many changes in the ecology. Heavy storms may affect the population of the Norcondam Hornbill. Similarly, repeated volcanoes may affect the feral goat population of Barren Island. Reduction of sea grass beds due to the variations of coastal ecology will affect the dugong population.

Studies of the ocean ecology and fisheries catch are very essential to get some more information on the impact of global environmental changes on the Island ecology.

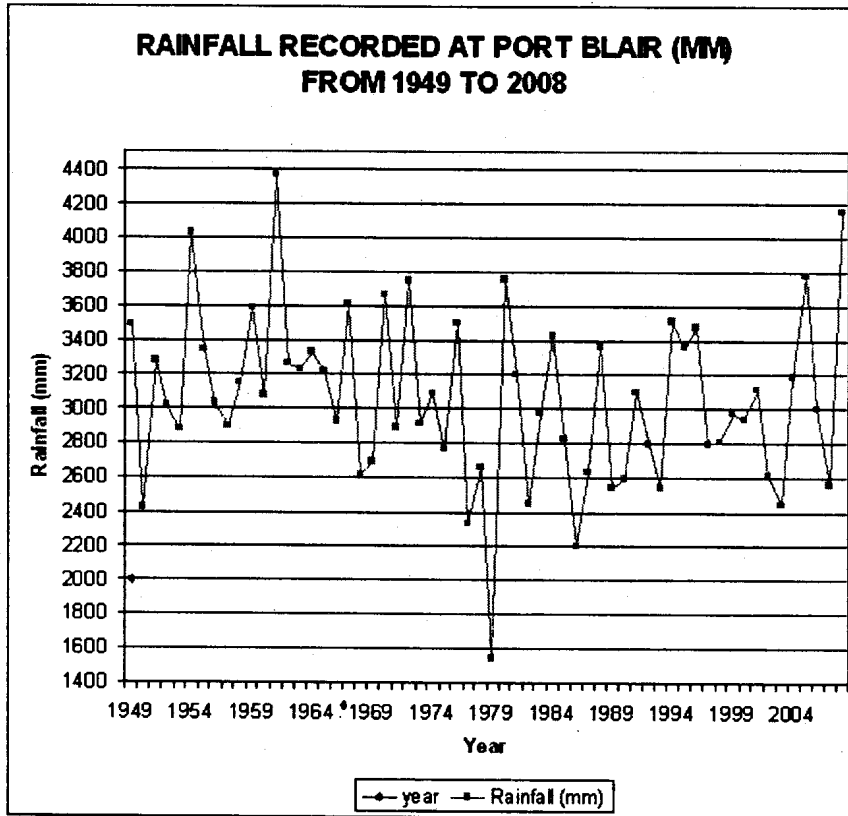
Source

Directorate of Economics & Statistics, Andaman & Nicobar Administration, Port Blair.

Graph 3 - Mean Relative Humidity Percentage At Port Blair 1966 - 2008



Graph 2 - Rainfall Recorded at Port Blair (mm) from 1949 to 2008



Graph 4 - Mean Windspeed at Port Blair (km/hrs.) 1975 - 2008

