



## CLIMATIC CONDITION IN ICHALKARANJI CITY

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### ABSTRACT

*The present research papers detailed study of climatic condition in Ichalkaranji city. The study purpose used of Indian metrological department data. The objective of present paper is study microclimate condition in the city. Climate of city is generally temperate - Dry climate. This paper it's describe wind direction, maximum-minimum temperature, sunshine hours, humidity and precipitations as a monthly average. The spatial types of climate are responsible for spread some dangerous infectious diseases and impact on textile industry, impact groundwater level decreases and water shortage, Density and size of vegetal patches is very thin. Climatically changes responsible of environmental degradation. It is direct impact global warming. The present paper tries to find out effect climatic condition on study region.*

**Key word :** Climatic condition, Microclimate, Seasons

### INTRODUCTION

Climatology is the discipline that is concerned with the identification, analysis and interpretation of spatial phenomena as they occur on the earth surface. Today's human development and Environmental resources impact of climatic condition. The study of climatic element of precipitation and temperature in Ichalkaranji city describe the paper present. In a study region main occupation is textile industry. Impact a climatic condition on textile industry and human health. The study of climactic condition for solved problem of textile industry and human disease. This study is based on secondary data. The present research paper for detailed study few indicators are selected. The Indian metrological department has identified the four seasons to distinguish the annual weather changes over India.

- 1) Winter season from mid December to mid March
- 2) Hot dry season from mid March to May.
- 3) Wet or rainy season June to September
- 4) Post monsoon from October to mid December

The Indian metrological department developed model of 'power regressions' on the basis of the 10 indicators. In 15<sup>th</sup> April and 15<sup>th</sup> June forecast the climatic condition in Indian subcontinents on the basis of regressions model.

### OBJECTIVE

The objective of present paper is study microclimate condition in the region.



## DATA BASE AND METHODOLOGY

Present research paper a micro level case study of Ichalkaranji city in Maharashtra. This study is based on secondary sources of data from different governmental report, research articles from journals and books and internet sources. Use reference Indian and Pune metrological department data on internet sources. Data collected from PH.D. and M.PHIL.thesis. Collected data is processed and presented in the forms of tabular and graphical methods through various cartographic techniques. A climatically changes is calculated by quantitative techniques.

## STUDY AREA

Ichalkarnji city is situated on the left bank of river Panchaganga .It is located in Hatkangale tahasil. It is under prominence Kolhapur district in Maharashtra, India. It is extending to the 16° 40' North latitude and 74°25' East longitudes. The geographical area of city is 29.84 km<sup>2</sup> with elevations of 539mt. Geologically this area is a part of the basaltic plateau of Maharashtra. Climate of city is generally temperate - Dry climate with 650 m.m. rainfall.

## DISCUSSION

Climatic condition study is important for any meaningful analysis. They give an ideal condition about the economic and social condition of in a specific region. The city is climatically classified as by the Koppen – Geiger system. The climate is tropical in Ichalkaranji. In winter, there is much more rainfall in city than in summer. The average annual rainfall is 721 mm. The driest month is January. There is 0 mm of precipitation in January. Most precipitation falls in July, with an average of 182mm. Warmest month is April with an average of 29.5°C. In December, the lowest average temperature is 22.4°C. There are important characteristic discussed.

### Local and seasonal wind

The city center is characterized by highest temperature and the temperature gradually decreases outward in the outer periphery of the city. Due to the heat island becomes most pronounced at night. In summer seasons mechanism of urban wind cell developed. At city region monsoon season start in June to September. In city high pressure system, where as average pressure in winter season is 1015mb and average pressure in summer are 1006mb over city. Seasonal changes in wind direction. Generally wind flow from northwest direction to south east direction in wet or rainy season June to September and adverse in Post monsoon from October to mid December. Seasonal changes in wind velocity. The average velocity of wind is 5-6 km per hours, but stormy winds adversely affect velocity of wind. Velocity is reduce from 1 to 2 km per hours in December to mid march and increases velocity in mid March to May from 6 to 8 km per hours. At some time stormy condition due to velocity increases. At city region in winter season is smog formation. Mostly smog developed is morning time 5am to 8.30am. It is not long duration time so that's visibility not affected.

### Monthly important characteristic as the follow

**January** - The average high temperatures rise to 30.6°C here in January and fall to 14.3°C with an average 0 mm of rainfall. Enjoy 9.7 hours of sunshine daily on average. The average humidity is 57%.



**February** - The average high temperatures rise to 32.8°C here in February and fall to 15.5°C with an average 2 mm of rainfall. Enjoy 10.1 hours of sunshine daily on average. The average humidity is 52%.

**March** - The average high temperatures rise to 35.8°C here in March and fall to 18.6°C with an average 3 mm of rainfall. Enjoy 9.6 hours of sunshine daily on average. The average humidity is 48%.

**April** - The average high temperatures rise to 37.3°C here in April and fall to 21.1°C with an average 17 mm of rainfall. Enjoy 9.9 hours of sunshine daily on average. The average humidity is 50%.

**May** - The average high temperatures rise to 36.0°C here in May and fall to 22.3°C with an average 54 mm of rainfall. Enjoy 10.0 hours of sunshine daily on average. The average humidity is 58%.

**June** - The average high temperatures rise to 30.2°C here in June and fall to 22.2°C with an average 387 mm of rainfall. Enjoy 5.4 hours of sunshine daily on average. The average humidity is 77%.

**July** - The average high temperatures rise to 27.6°C here in July and fall to 21.7°C with an average 394 mm of rainfall. Enjoy 3.7 hours of sunshine daily on average. The average humidity is 84%.

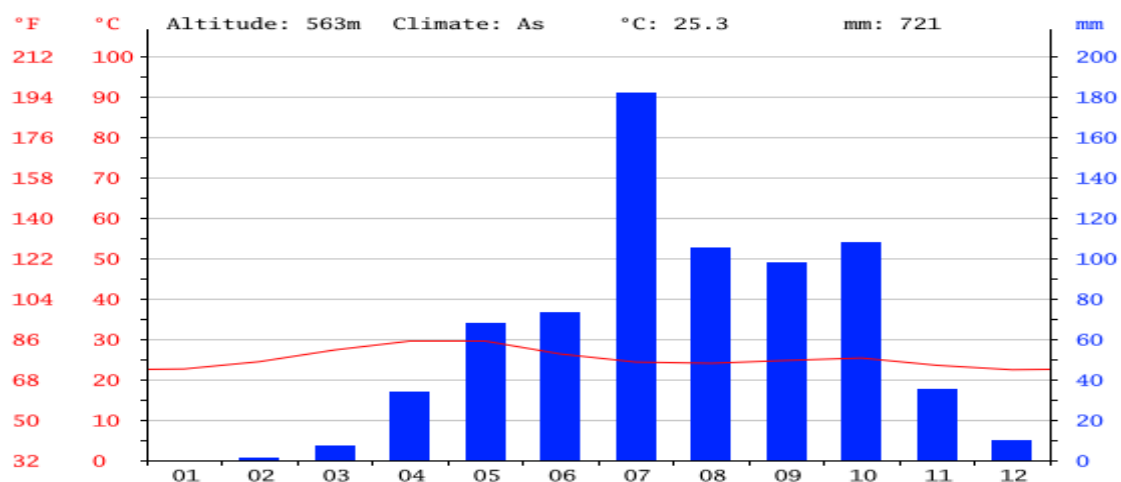
**August** - The average high temperatures rise to 27.2°C here in August and fall to 21.3°C with an average 288 mm of rainfall. Enjoy 3.8 hours of sunshine daily on average. The average humidity is 85%.

**October** - The average high temperatures rise to 30.8°C here in October and fall to 19.6°C with an average 85 mm of rainfall. Enjoy 8.0 hours of sunshine daily on average. The average humidity is 70%.

**November** - The average high temperatures rise to 30.1°C here in November and fall to 17.1°C with an average 32 mm of rainfall. Enjoy 9.0 hours of sunshine daily on average. The average humidity is 62%.

**December** - The average high temperatures rise to 29.6°C here in December and fall to 14.9°C with an average 3 mm of rainfall. Enjoy 9.5 hours of sunshine daily on average. The average humidity is 59%.

Temperature and Precipitation: Ichalakaranji



Source: [www.ichmunicipalco.com](http://www.ichmunicipalco.com)



## CONCLUSION

In winter, there is much more rainfall in city than in summer. The driest month is January. Most precipitation falls in July, Warmest month is April. In December, the lowest average temperature. Wind flow from northwest direction to south east direction in rainy season. In October, the average humidity is highest. In city region in winter season is smog formation. Mostly smog developed is morning. They are largely impact of human lifespan is very low. High speed of evaporation in summer season is very vastly. Rainfall is scanty and uncertain impact groundwater level decreases and water shortage. Density and size of vegetal patches is very thin and some trees can be densely observed. When the climatic condition changed that time the impact of human health and environment. In harsh climate emerging human diseases. Controversial climatic condition and dirty, unclean social environmental impact spread some dangerous infectious diseases like Dengue and malarial. On the other hand production of cloth decreases, directly impact in textile industry. Agriculture sector are very low but last few years production of agriculture yield reduce. Shortly in city climatic condition degradation.

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