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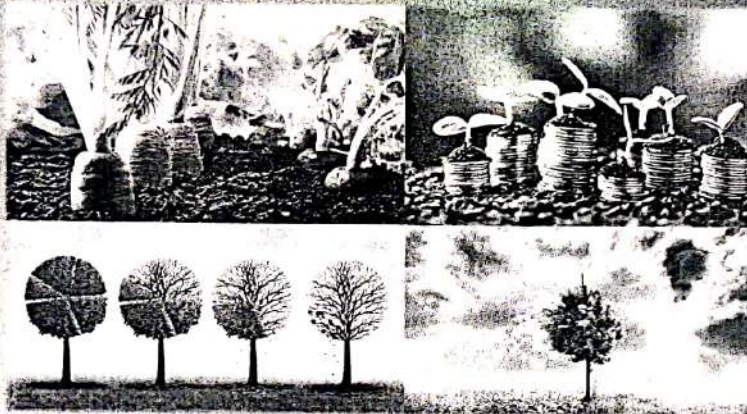
Climate Change and It's Impact on Agriculture Development in India

Indian Council of Social Science Research

Organized By

Department of Geography

Ujwal Gramin Mahavidyalaya, Ghonsi, Tq- Jalkot, Dist. Latur



Editor

Prin. Dr. Sadanand H. Gone

Dr. Devidas S. Kendre

Dr. Prakash K. Morkhande

Dr. Padmakar B. Gone

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28th September 2018**Prin. Dr. Sadanand H. Gone**

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Rainfall Variability In Osmanabad District A Geographical Survey

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Abstract

Rainfall play very vital role in human life, especially in agriculture. Human activities also depend upon the rainfall. The present paper consists with the rainfall variability in Osmanabad district. The study area comes under the drought prone area. Agriculture in Osmanabad district is depend upon the rainfall specially Manson. Rainfall variability adversely impact on agriculture.

Keywords: - rainfall variability, drought prone area, agriculture

Introduction

Indian is known as agricultural country. India's economy is still depending upon the agriculture activities. Agriculture is depending upon the Manson. The famous quote about Manson says, India's agriculture is gamble of Manson. Rainfall is irregular and diverse in the all over country.

Osmanabad is one of the districts of marathwada region of Maharashtra. District comes under the rain shadow area. In the study area rainy season start from middle of the June to the September. Climate of the district is hot as compared to other district. The average annual rainfall is about 730mm. The continuously of rainfall is rare phenomena in the district. The dry spells in the rainy season are very common phenomena in the district.

Objectives

The main objective of the study is rainfall variability in Osmanabad district.

Database and Methodology

The present study is based on the secondary data collected from the district socio economic review, agricultural office and meteorological department. For the present study comparative methodology is adopted. The rainfall data from the 2008 to 2017 is shown by the graph with Tahsil wise. The rainy days used for analysis from the year 2008 to 2017 with Tahsil wise. The trend and pattern of rainfall shows by graph gives clear picture of rainfall variability.

Study area

Osmanabad district is located in Maharashtra state. It is located on east side of marathwada region. The latitudinal extent of study area is 17° 35' to 18° 40' north and longitudinal extend between 75° 16' to 76° 40' east. The total area of district is 7512.4sq.km. it is situated about 600 m above mean sea level. Manjra and Terna are major arc seasonal river mainly flow in rainy season. Temple of goddess Tuljabhavani at Tuljapur is famous in India. There are eight Tahsil in the district. The Osmanabad district comes under drought prone area. Average annual rainfall in within the district is 730mm. The total population of study area is 1,486,586.

Rainfall variability in Osmanabad district

The rainfall variability play very important role in the agriculture and allied activities. Rainy days and rainfall is closely related to each other. In the Manson period amount of rainfall is depend upon the number of rainy days.osmanabad district comes under drought prone area. The rainfall is less compare to other part of state and country.

Table 1.1 Tahsil wise Rainy Days in Osmanabad district (2008-2017)

Year	Paranda	Bhum	Washi	Kalamb	Osmanabad	Tuljapur	Lohara	Omerga
2008	38	56	61	49	62	57	45	47
2009	37	46	47	46	51	51	43	46
2010	80	80	73	68	86	71	62	74
2011	59	70	64	69	76	73	59	65
2012	31	41	44	41	45	50	38	41
2013	41	58	66	52	70	63	51	53
2014	43	53	46	49	57	55	51	50
2015	41	58	66	52	70	63	52	53
2016	23	29	34	31	34	30	36	35
2017	37	42	41	37	45	52	43	49

(Source- Socio economic review of Osmanabad district)

Table 1.2 Tahsil wise total Rainfall in Osmanabad district 2008-2017(rainfall in mm)

Year	Paranda	Bhum	Washi	Kalamb	Osmanabad	Tuljapur	Lohara	Omerga
2008	586	754	779	717	965	734	649	624
2009	615.5	905.9	715.6	715.6	751	937.4	799	799
2010	698	886	896	748.5	694	767	611	619
2011	846.4	1035.4	984.6	1041.8	996.1	977	1132.5	986.8

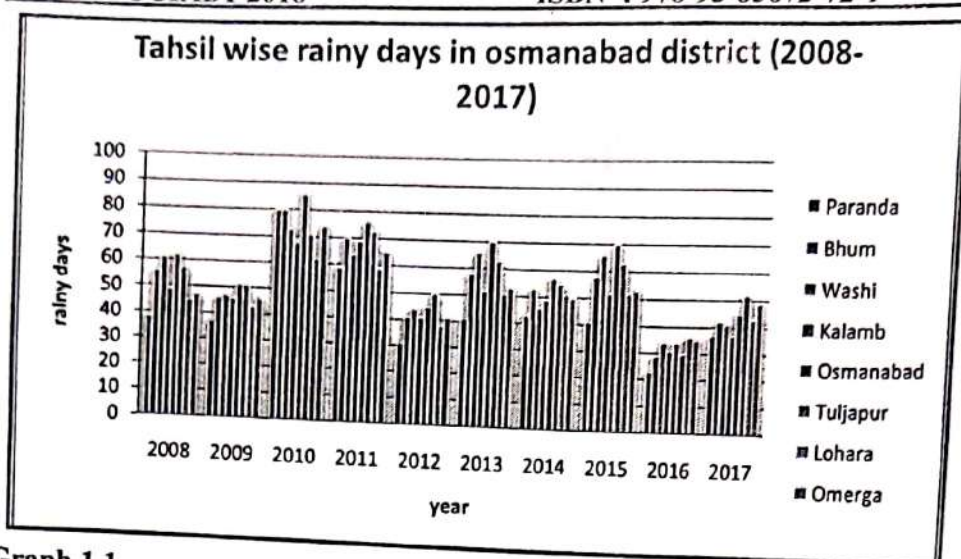
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2012	530.8	475.5	668.9	459.8	538.1	568	530.7	534.5
2013	615.5	905.9	715.6	715.6	751	837.4	799	799
2014	540.4	540.9	604.9	643.2	661.3	780.3	776.3	693.4
2015	615.5	905.9	715.6	715.6	751.7	837.4	799	799
2016	329.4	329.4	364	338.35	397.4	394.1	439.3	425
2017	677.20	677.20	809.30	723.80	835.30	843.80	851.90	1142.20

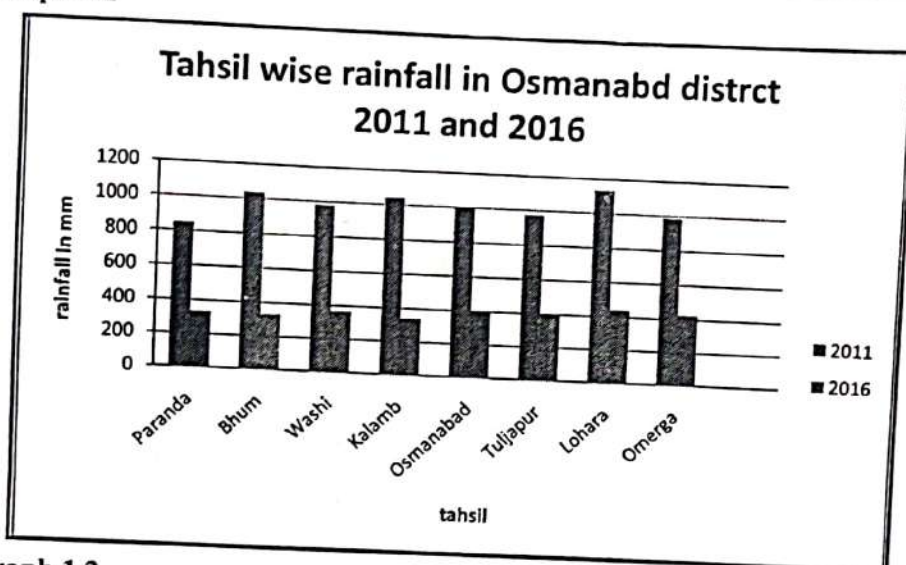
(Source- Socio economic review of Osmanabad district)

Tahsil wise rainy days of Osmanabad district are very common in the drought prone area but as compare to rainy area, it is very low. The highest rainy days in Paranda Tahsil observed in the year 2010 with 80 days and lowest in the year 2016 with only 23 days. In Bhum Tahsil high rainy days registered in 2010 with 80 days and lowest in 2016 with 29 days. In the washi Tahsil highest rainy days recorded in the year 2010 with 73 days and lowest in 2016 with 34 days. The highest rainy days observed in kalamb Tahsil in 2011 with 69 days and lowest in 2016 with 31 days. In Osmanabad Tahsil high rainy days recorded in 2010 with 86 days and lowest in 2016 with 34 days. The highest rainy days registered in Tuljapur Tahsil in 2011 with 73 days and lowest in 2016 with only 30 days. In Lohara Tahsil highest rainy days observed in 2010 with 62 days and lowest in 2016 with 36 days. In Omerga Tahsil high rainy days observed in 2010 with 74 days and lowest in 2016 with 35 days.

Tahsil wise rainfall shows diverse nature. The rainy days impact on amount of rainfall in Osmanabad district is closely associate with each other. The high rainfall recorded in Paranda Tahsil with 846.4 mm in 2011 and lowest in 2016 with 329.4 mm. In Bhum Tahsil highest rainfall recorded in 2011 with 1035.4 mm and lowest in 2016 with 329.4 mm. The high rainfall registered washi Tahsil in the year 2011 with 984.6 mm and lowest in 2016 with only 364 mm. In kalamb Tahsil high rainfall was observed in 2011 with 1041.8 mm and lowest in 2016 with 338.35 mm. The highest rainfall recorded in Osmanabad Tahsil in the year 2011 with 996.1 mm and lowest in 2016 with 347.4 mm. In Tuljapur Tahsil high rainfall observed in 2011 with 977 mm and lowest in 2016.in the Lohara Tahsil highest rainfall recorded in 2011 with 1132.5 mm and lowest in 439.3 mm in 2016. The high rainfall observed in Omerga Tahsil in 2011 with 986.8 mm and lowest in 2016 with 425 mm.



Graph 1.1



Graph 1.2

Conclusion

Rainfall variability is common in the all over the world. But its intensity and difference is very high in the drought prone area and rain shadow area.

1. Most of the high rainy days observed in the year 2010.
2. The lowest rainy days observed in the year 2016.
3. The average highest rainfall observed in the year 2011.
4. The lowest rainfall is recorded in the year 2016 in the whole study area.
- 5.

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