

# Investigation of Rainfall Trend in Jorhat Town, Assam

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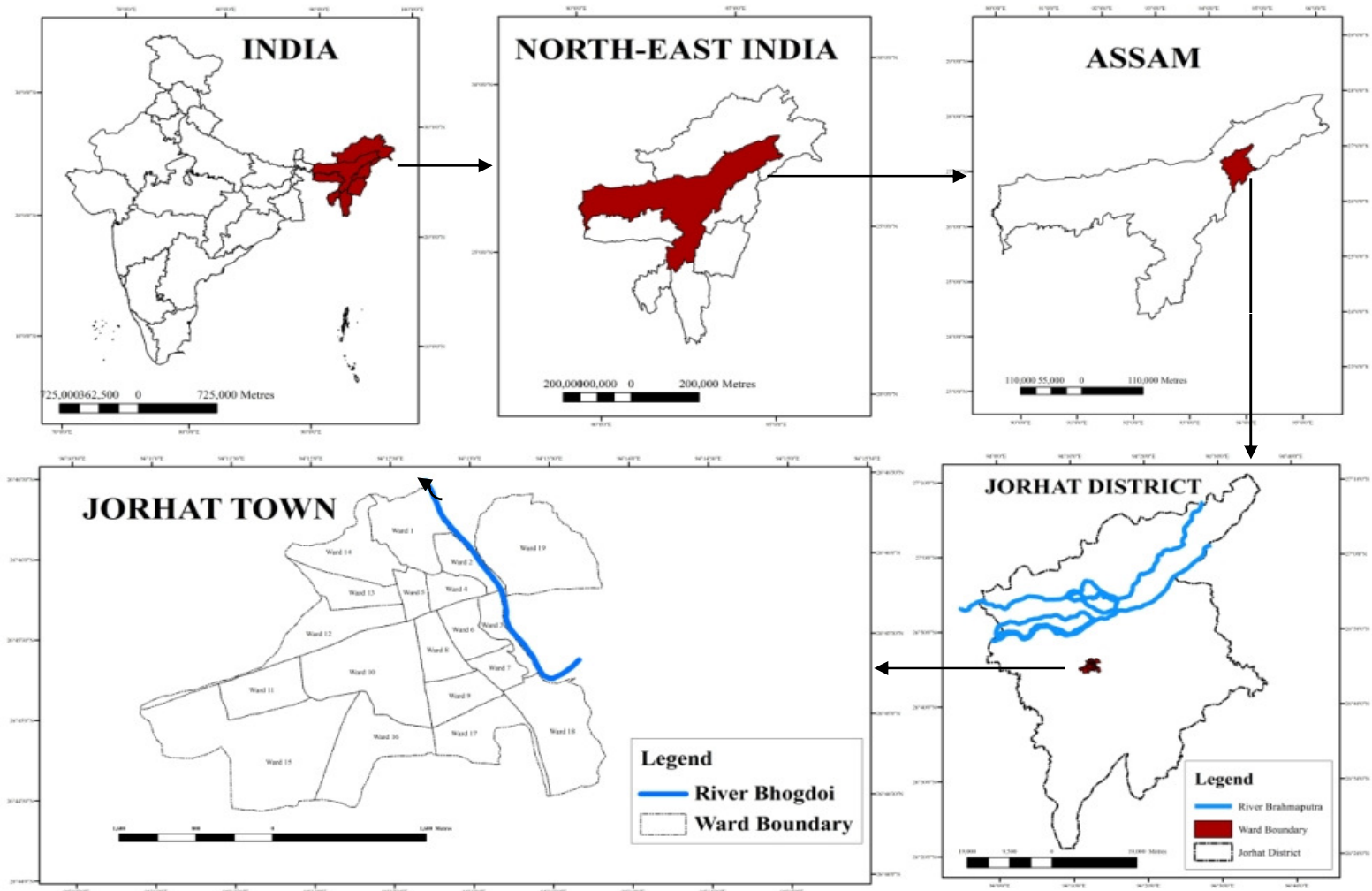
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# Generalities

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- Rainfall is the Prime Source
  - Jorhat experiences South-west Tropical Monsoon
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- Importance of rainfall Analysis

# Study Area



Source: Modified Map Based on Google Earth and Map of Jorhat Municipal Board

# Data Base and Methodology

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- Secondary data of Rainfall (1958-2007)
- Tocklai Experimental Station, Jorhat
  
- Mean
- Moving Average
- Least Square Method
- Co-efficient of Variation

# Results and Discussion

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- Mean Annual Rainfall
- Decadal Rainfall Variability
- Seasonal Variability of Rainfall

# Mean Annual Rainfall

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- 198.76 cm per annum
- 126.34 cm in summer monsoon
- 15.95 cm in winter season

# Mean Monthly Rainfall

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- 1.91 cm (January)
- 25.50 cm (May)
- 73.15 cm in August, 1963 (Highest)
  - 37 per cent of the total rainfall

# Annual Rainfall

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- 270.77 cm (1977)-Highest
- 139.44 cm (2001)-Lowest
  
- 82 per cent of total annual rainfall-May to October
- 18 per cent of total annual rainfall-December to April



# Trend of Annual Rainfall

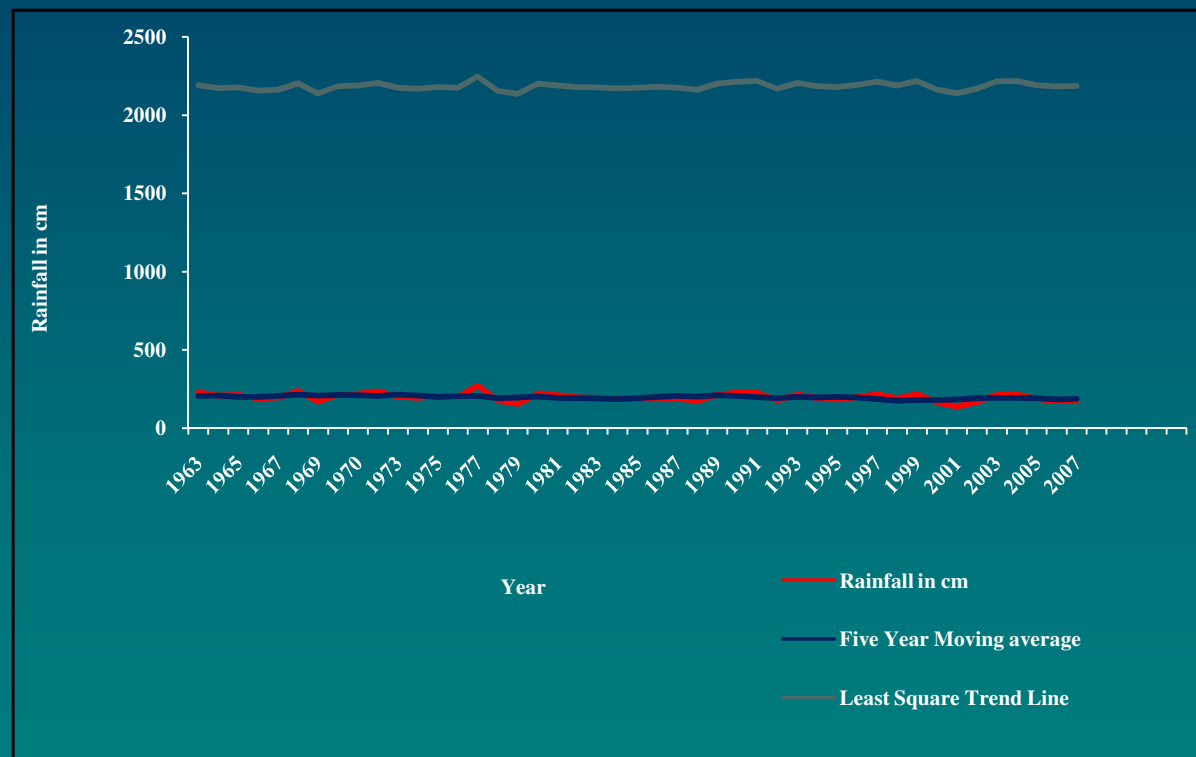


Fig. 1: Trend of Annual Rainfall (cm) in Jorhat Town

# Trend of Annual Rainfall

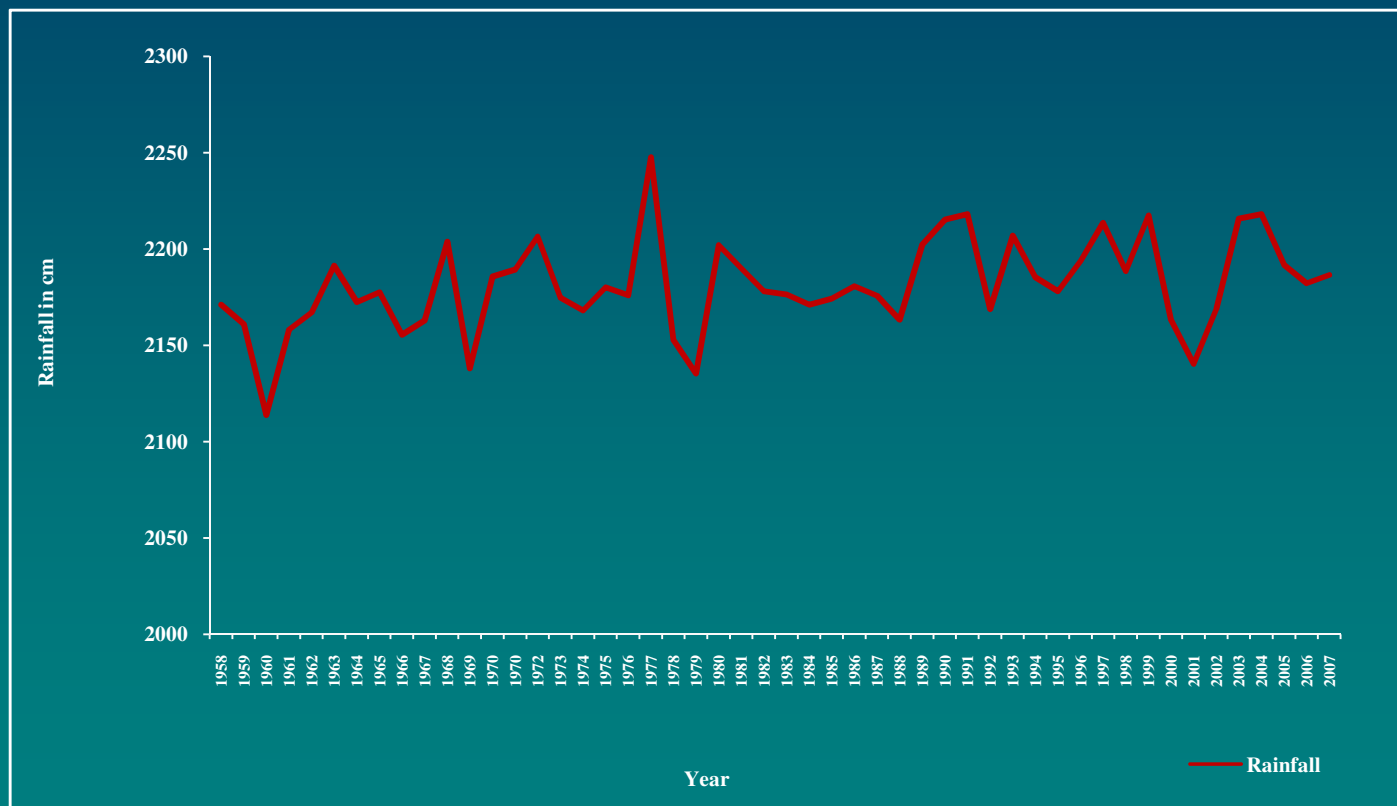


Fig. 2: Trend of Annual Rainfall in Jorhat Town (1958-2007)

# Decadal Rainfall Variability

Table 1: Decadal Rainfall Variability (cm) in Jorhat Town (1958 -2007)

Decades	Total	Average	Standard Deviation	Coefficient of Variation
1958-1967	2007.01	167.25	148.48	88.78
1968-1977	2146.98	178.92	145.77	81.47
1978-1987	1913.00	159.42	135.86	85.22
1988-1997	2021.76	168.48	133.27	79.10
1998-2007	1849.06	154.09	122.05	79.21

(Source: Rainfall in Jorhat 1958-2007)

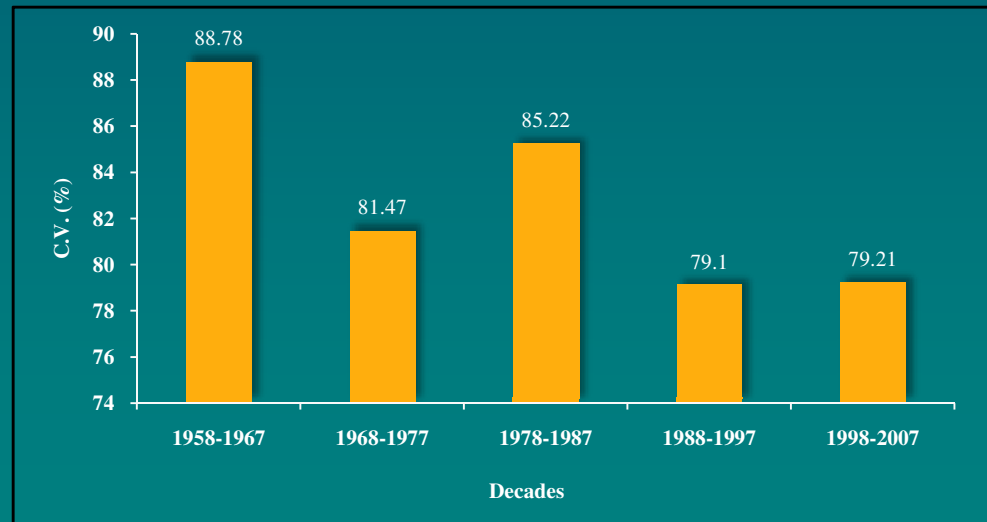


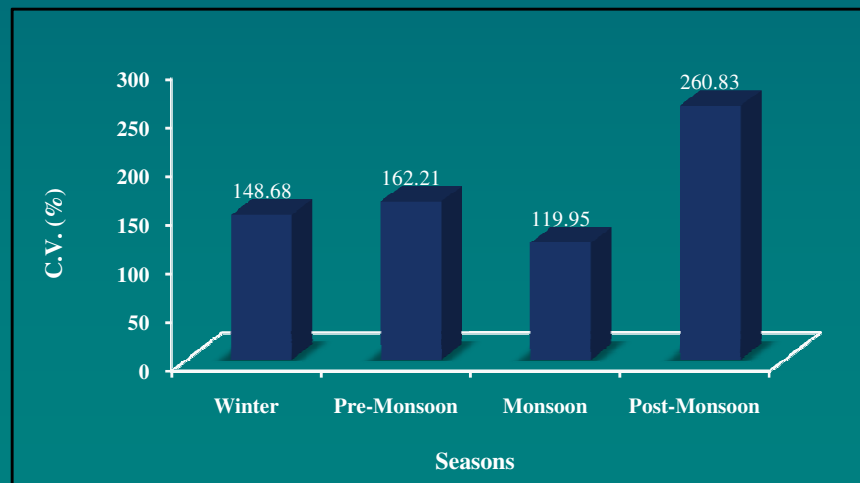
Fig. 3: Decadal Rainfall Variability (cm) in Jorhat Town

# Seasonal Variability of Rainfall

**Table 2: Seasonal Variability of Rainfall (cm)in Jorhat Town (1958-2007)**

Seasons	Months	Total	Average	Maximum	Mini-mum	Standard Deviation	Coefficient of Variation
Winter	Jan	95.69	1.91	5.63	0	1.49	77.65
	Feb	198.05	3.96	13.06	0	2.81	71.03
Pre-monsoon	Mar	320.74	6.41	20.74	0.18	4.46	69.49
	Apr	957.58	19.15	44.32	1.93	9.38	48.99
	May	1275.21	25.50	62.56	8.92	11.15	43.73
Monsoon	Jun	1506.69	30.13	49.73	8.53	9.05	30.02
	Jul	1911.08	38.22	64.31	17.75	10.07	26.35
	Aug	1670.05	33.40	73.15	18.06	10.26	30.72
	Sep	1229	24.58	41.38	11.25	8.08	32.86
Post-monsoon	Oct	590.63	11.81	26.63	2.83	6.89	58.32
	Nov	116.85	2.34	8.2	0	2.06	88.36
	Dec	66.24	1.32	6.38	0	1.51	114.15
Total		9937.81	198.7562	416.09	69.45	77.21	691.67

(Source: Rainfall in Jorhat 1958-2007)



**Fig. 4: Seasonal Variability of Rainfall (cm) (1958-2007)in Jorhat Town**

# Conclusion

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- Decreasing trend of rainfall
- Post-monsoon Season has suffered
- Highest decadal rainfall variability (1958-67)



Thank You