

Indian Monsoon Time Scale

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Abstract: Many researches were being conducted by me on the global monsoon systems from 1980 to till date with an ideal to invent the mysteries of the world global monsoon system and formulating the basics of the global monsoon time scales to study to the past's, present and future movements of global monsoons. Indian monsoon is a key system in global monsoon systems. I have conducted many scientific researches on the global monsoon systems and as a part these researches I invented the Indian Monsoon Time Scale which can help to study the past, present and future movements of the Indian monsoon.

Key Words: Global Monsoon Time Scales, Indian Monsoon Time Scale.

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I. Introduction:

Indian monsoon, the most prominent of the world monsoon systems, which primarily affects India and its surrounding countries and its water bodies. It blows from the northeast during cooler months and reverses direction to blow from the southwest during the warmest months of the year. The Indian summer monsoon is characterized by south westerly flow in the Arabian seas and south Bay of Bengal and the East Asian monsoon by southerly or south easterly or south easterly flow in the lower troposphere. The onset of summer monsoon takes place over the main land of India by 1st June. It gradually proceeds northward and by the middle of July whole of the India comes under the grip of monsoon currents. The normal date of withdrawal of south-west monsoon from a station is taken as middle date of 5day period. The onset of northeast monsoon normally takes place over South Peninsula (Tamil Nadu, South Costal Andhra Pradesh, Rayalaseema and interior south Karnataka) at about 15 October. The onset does show some variability from year to year. Withdrawal of northeast monsoon from south peninsula is almost complete by Mid-December. Northeast monsoon . Keeping in view of study of the aforesaid Indian monsoon thoroughly, I have designed the Indian Monsoon Time Scale.

II. Material and method:

Keeping in view of the above, I have prepared Indian Monsoon Time Scale having 365 horizontal days from March 21st to next year March 20th or from 1st April to next year March 31st of 139 years from 1888 to 2027 or a required period comprising of a large time and weather have been taken and framed into a square graphic scale.

The monsoon pulses in the form of low pressure systems over the Indian region have been taken as the data to construct this scale. For this, a lot of enormous data of low pressure systems, depressions and cyclone have been taken.

Management:

The monsoon pulses in the form of low pressure systems over the Indian region have been entering on the scale in stages by 1 for low, 2 for depression, 3 for storm, 4 for severe storm and 5 for severe storm with core of hurricane winds pertaining to the date and month of the each and every year. If we have been managing the scale in this manner continuously, we can study the past, present and future movements of monsoon of India.

III. Results;

Keep track Indian Monsoon Time Scale carefully. During 1871-1900's the main path-way of the Indian Monsoon was rising over June, July, August. During 1900-1920's it was falling over August, September. During 1920-1965's, it was rising again over July, August, September. During 1965-2004's it was falling over falling over September. From 2004 it is now rising upwards and estimated traveling over the months of June, July, August by the 2060.

IV. Study & discussion:

Let's now study and analyze the information available on the Indian Monsoon Time Scale with the rainfall data available from 1871 to till date. During the period 1871-2015, there were 19 major flood

years:1874, 1878, 1892, 1893, 1894, 1910, 1916, 1917, 1933, 1942, 1947, 1956, 1959, 1961, 1970, 1975, 1983, 1988, 1994. And in the same period 1871-2015, there were 26 major drought years: 1873, 1877, 1899, 1901, 1904, 1905, 1911, 1918, 1920, 1941, 1951, 1965, 1966, 1968, 1972, 1974, 1979, 1982, 1985, 1986, 1987, 2002, 2004, 2009, 2014, 2015. Depending on the data mentioned above, it is interesting to note that there have been alternating periods extending to 3-4 decades with less and more frequent weak monsoons over India.

For example, the 44-year period 1921-64 witnessed just three drought years and happened good rainfall in many years. This is the reason that when looking at the Indian Monsoon Time Scale you may note that during 1920-1965's, the passage of the Indian monsoon had been rising over July, August, September in the shape of concave direction and resulting good rainfall in more years..

During the other period that of 1965-87 which had as many as 10 drought years out of 23, This is the reason that when looking at the Indian Monsoon Time Scale you may note that during 1965-2004's the path of the Indian monsoon had been falling over the September in the shape of convex direction and causing low rainfall and droughts in many year.

Principle:

The year to year change of movement of axis of the earth inclined at $23\frac{1}{2}$ degrees from vertical to its path around the sun does play a significant role in formation of clusters, bands & paths of the Indian Monsoon and stimulates the Indian weather. The inter-tropical convergence zone at the equator follows the movement of the sun and shifts north of the equator merges with the heat low pressure zone created by the rising heat of the sub-continent due to direct and converging rays of the summer sun on the India Sub-Continent and develops into the monsoon trough and maintain monsoon circulation.

V. Conclusion:

We can make many more modifications thus bringing many more developments in the Indian Monsoon Time Scales.

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References(subject):

- [1]. Mooley DA, Shukla j(1987); Characteristics of the west ward moving summer monsoon low pressure systems over the Indian region and their relationship with the monsoon rainfall.
- [2]. Wiki:Indian Monsoon (n.d.). Retrieved from http://en.wikipedia.org/wiki/.com/wiki/Indian_Monsoon_Current..







