Scalling Of Ndian Monsoon Seasons

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Abstract: Many researches are being conducted by him 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 Monsoons, Regional Monsoons, Sub-Regional Monsoons and Country-wise local Monsoons, Northern, Southern, Summer and Winter wise Monsoons to predict the weather changes and natural calamities in advance and to take mitigation measures. In 1991, he submitted a research report on the world global monsoon systems along with a special report on Indian Monsoon Time Scale to Sri G.M.C. Balayogi, Member of Parliament (Lok Sabha). Sri G.M.C. Balayogi recommended the research report to the India Meteorological Department for implementation in the services of the people. In 1994, the Cabinet Secretariat of India recommended the Global Monsoon Time Scales to the Ministry of Science & Technology, Govt of India for implementation. In 1996, many consultations were made with the Parliament House, President of India and other VVIPS. In 2005, consultations were made with the India Meteorological Department about the Global Monsoon Time Scales for further research and development in the services of the people. In 2009, the Secretary, Minister of Science and Technology was also recommended the Global Monsoon Time Scale to the Indian Institute of Tropical Meteorology for research and development. We can make separate monsoon time scales per each and every individual country. Country monsoon are not separate monsoons just like North American Monsoon etc, its means a scale for study the local winds of a country. I have conducted many scientific researches on the Global Monsoon Time Scales and as a part these researches, i invented the Indian Monsoons Monsoon Time Scale which can help to study the past, present and future movements of the Indian Monsoons Monsoon.
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Key Words: Global Monsoons Time Scales, Regional Monsoons Time Scales, Sub-Regional Monsoons Time Scales, Country-wise local Monsoons Time Scales, Northern Monsoons Time Scales, Southern Monsoons Time Scales, Summer Monsoons Time Scales, Winter Monsoons Time Scales, Indian Monsoons Monsoons Time Scale.

Introduction: Monsoon means a seasonal reversing wind accompanied by its corresponding weather changes and natural calamaties in precipitation. We cannot be said that a monsoon especially to be relevant to a particular continent, region or country. Each and every continent or region or country has its own monsoon winds. By establishing the Monsoon Time Scale and maintain, a country can be estimated the impending weather conditions and natural calamities such as rains, floods, landslides, avalanches, blizzard and droughts, extreme winter conditions, heavy rainfall, mudflows, extreme weather, cyclones, cloud burst, sand storms, hails and winds etc all climatological, meteorological and weather related weather conditions & natural calamities in advance. Surface water resources can still be found.

Global Monsoon Time Scales: I have conducted many researches on the world global monsoon systems and invented the Global Monsoons Time Scales, Regional Monsoons Time Scales, Sub-Regional Monsoons Time Scales, Country-wise local Monsoons Time Scales, Northern Monsoons Time Scales, Southern Monsoons Time Scales, Summer Monsoons Time Scales, Winter Monsoons Time Scales including the Indian MonsoonsMonsoons Time Scale which can help to study the past's, present and future movements of Global Monsoons and its relationship with rainfall and other weather problem and natural calamitiesy. We can make separate monsoon time scales per each and every individual country.

Indian Seasons: The India Meteorological Department (IMD) designates four climatological seasons;

- **Winter**, occurring from December to March. The year's coldest months are December and January, when temperatures average around 10–15 °C (50–59 °F) in the northwest; temperatures rise as one proceeds towards the equator, peaking around 20–25 °C (68–77 °F) in mainland India's southeast.
- **Summer** or **pre-monsoon** season, lasting from April to June (April to July in northwestern India). In western and southern regions, the hottest month is April; for northern regions of India, May is the hottest month. Temperatures average around 32–40 °C (90–104 °F) in most of the interior.

Monsoon or **rainy** season, lasting from July to September. The season is dominated by the humid southwest summer monsoon, which slowly sweeps

across the country beginning in late May or early June. Monsoon rains begin to recede from North India at the beginning of October. South India typically receives more rainfall.

- **Post-monsoon** or **autumn** season, lasting from October to November. In the northwest of India, October and November are usually cloudless. Tamil Nadu receives most of its annual precipitation in the northeast monsoon season.

Global Monsoon Time Scales	Regional Monsoon Time Scales	Sub-Regional Monsoon Time Scales
Indian MonsoonsMonsoon Time Scale	North American Monsoon Time Scale	South Asian Monsoon Time Scale
North American Monsoon Time Scale	North Indian MonsoonsMonsoon Time Scale	Maritime Continent Monsoon Time Scale
Asian Monsoon Time Scale	Indian Monsoon Time Scale	East Indian MonsoonsMonsoon Time Scale
Australian Monsoon Time Scale	Western North Pacific Monsoon Time Scale	West Indian MonsoonsMonsoon Time Scale
Indian MonsoonsMonsoon Time Scale	South American Monsoon Time Scale	Indo-Australian Monsoon Time Scale
	South Indian MonsoonsMonsoon Time Scale	Asian-Australian Monsoon Time Scale
	Australian Monsoon Time Scale	Malaysian Australian Monsoon Time Scale
	East Asian Monsoon Time Scale	Northern Australian Monsoon Time Scale
		Arizona Monsoon Time Scale
		Mexican Monsoon Time Scale
		South-West Monsoon Time Scale
		North-East Monsoon Time Scale
		South East Asian Monsoon Time Scale

The Himalayan states, being more temperate, experience an additional season, *spring*, which coincides with the first weeks of summer in southern India. Traditionally, Indians note six seasons or *Ritu*, each about two months long. These are the spring season (*Sanskrit: vasanta*), summer (*grīṣma*), monsoon season (*varṣā*), autumn (*śarada*), winter (*hemanta*), and prevernal season[26] (*śiśira*). These are based on the astronomical division of the twelve months into six parts. The ancient Hindu calendar also reflects these seasons in its arrangement of months.

Winter: Once the monsoons subside, average temperatures gradually fall across India. As the Sun's vertical rays move south of the equator, most of the country experiences moderately cool weather; temperatures change by about per degree of latitude. December and January are the coldest months, with mean temperatures of in Indian Himalayas. Mean temperatures are higher in the east and south.

In northwestern India region, virtually cloudless conditions prevail in October and November, resulting in wide diurnal temperature swings; as in much of the Deccan Plateau, they register at 16–20 °C (61–68 °F). However, from January to February, "western disturbances" bring heavy bursts of rain and snow. These extra-tropical low-pressure systems originate in the eastern Mediterranean Sea.[27] They are carried towards India by the subtropical westerlies, which are the prevailing winds blowing at North India's range of latitude. Once their passage is hindered by the Himalayas, they are unable to proceed further, and they release significant precipitation over the southern Himalayas.

There is a huge variation in the climatic conditions of Himachal Pradesh due to variation in altitude (450–6500 metres). The climate varies from hot and subtropical humid (450–900 meters) in the southern low tracts, warm and temperate (900–1800 metres), cool and temperate (1900–2400 metres) and cold glacial and alpine (2400–4800 meters) in the northern and eastern elevated mountain ranges. By October, nights and mornings are very cold. Snowfall at elevations of nearly 3000 m is about 3 m and lasts from December start to March end. Elevations above 4500 m support perpetual snow. The spring season starts from mid February to mid April. The weather is pleasant and comfortable in the season. The rainy season starts at the end of the month of June. The landscape lushes green and fresh. During the season streams and natural springs are replenished. The heavy rains in July and August cause a lot of damage resulting in erosion, floods and landslides. Out of all the state districts, Dharamsala receives the highest rainfall, nearly about 3,400 mm (134 in). Spiti is the

driest area of the state, where annual rainfall is below 50 mm.[28] The five Himalayan states (Jammu and Kashmir in the extreme north, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh) along Northern West Bengal experience heavy snowfall, Manipur and Nagaland are not located in the Himalayas but experience occasional snowfall; in Jammu and Kashmir, blizzards occur regularly, disrupting travel and other activities.

The rest of North India, including the Indo-Gangetic Plain and Madhya Pradesh almost never receives snow. Temperatures in the plains occasionally fall below freezing, though never for more than one or two days. Winter highs in Delhi range from 16 to 21 °C (61 to 70 °F). Nighttime temperatures average 2–8 °C (36–46 °F). In the plains of Punjab, lows can fall below freezing, dropping to around −3 °C (27 °F) in Amritsar. Frost sometimes occurs, but the hallmark of the season is the notorious fog, which frequently disrupts daily life; fog grows thick enough to hinder visibility and disrupt air travel 15–20 days annually. In Bihar in middle of the Ganges plain, hot weather sets in and the summer lasts until the middle of June. The highest temperature is often registered in May which is the hottest time. Like the rest of the north, Bihar also experiences dust-storms, thunderstorms and dust raising winds during the hot season. Dust storms having a velocity of 48–64 km/h (30–40 mph) are most frequent in May and with second maximum in April and June. The hot winds (loo) of Bihar plains blow during April and May with an average velocity of 8–16 km/h (5–10 mph). These hot winds greatly affect human comfort during this season. Rain follows.[30] The rainy season begins in June. The rainiest months are July and August. The rains are the gifts of the southwest monsoon. There are in Bihar three distinct areas where rainfall exceeds 1,800 mm (71 in). Two of them are in the northern and northwestern portions of the state; the third lies in the area around Netarhat. The southwest monsoon normally withdraws from Bihar in the first week of October.[31] Eastern India's climate is much milder, experiencing moderately warm days and cool nights. Highs range from 23 °C (73 °F) in Patna to 26 °C (79 °F) in Kolkata (Calcutta); lows average from 9 °C (48 °F) in Patna to 14 °C (57 °F) in Kolkata. In Madhya Pradesh which is towards the south-western side of the Gangetic Plain similar conditions prevail albeit with much less humidity levels. Capital Bhopal averages low of 9 °C (48 °F) and high of 24 °C (75 °F).

Frigid winds from the Himalayas can depress temperatures near the Brahmaputra River. The Himalayas have a profound effect on the climate of the Indian subcontinent and the Tibetan plateau by preventing frigid and dry Arctic winds from blowing south into the subcontinent, which keeps South Asia much warmer than corresponding temperate regions in the other continents. It also forms a barrier for the monsoon winds, keeping them from travelling northwards, and causing heavy rainfall in the Terai region instead. The Himalayas are indeed believed to play an important role in the formation of Central Asian deserts such as the Taklamakan and Gobi. The mountain ranges prevent western winter disturbances in Iran from travelling further east, resulting in much snow in Kashmir and rainfall for parts of Punjab and northern India. Despite the Himalayas being a barrier to the cold northerly winter winds, the Brahmaputra valley receives part of the frigid winds, thus lowering the temperature in Northeast India and Bangladesh. The Himalayas, which are often called "The Roof of the World", contain the greatest area of glaciers and permafrost outside of the poles. Ten of Asia's largest rivers flow from there. The two Himalayan states in the east, Sikkim and Arunchal Pradesh, receive substantial snowfall. The extreme north of West Bengal centred on Darjeeling experiences snowfall, but only rarely.

In South India, particularly the hinterlands of Maharashtra, parts of Karnataka, and Andhra Pradesh, somewhat cooler weather prevails. Minimum temperatures in western Maharashtra and Chhattisgarh hover around 10 °C (50 °F); in the southern Deccan Plateau, they reach 16 °C (61 °F). Coastal areas—especially those near the Coromandel Coast and adjacent low-elevation interior tracts—are warm, with daily high temperatures of 30 °C (86 °F) and lows of around 21 °C (70 °F). The Western Ghats, including the Nilgiri Range, are exceptional; lows there can fall below freezing.[33] This compares with a range of 12–14 °C (54–57 °F) on the Malabar Coast; there, as is the case for other coastal areas, the Indian Ocean exerts a strong moderating influence on weather.[12] The region averages 800 millimetres (31 in) per year, most of which falls between October and December. The topography of the Bay of Bengal and the staggered weather pattern prevalent during the season favours the northeast monsoon, which has a tendency to cause cyclones and hurricanes rather than steady precipitation. As a result, the coast is hit by what can mildly be termed as inclement weather almost every year between October and January.

Summer

Summer in northwestern India starts from April and ends in July, and in the rest of the country from March to May. The temperatures in the north rise as the vertical rays of the Sun reach the Tropic of Cancer. The hottest month for the western and southern regions of the country is April; for most of North India, it is May. Temperatures of 50 °C (122 °F) and higher have been recorded in parts of India during this season. Another striking feature of summer is the Loo

(wind). These are strong, gusty, hot, dry winds that blow during the day in India. Direct exposure to these winds may be fatal.[16] In cooler regions of North India, immense pre-monsoon squall-line thunderstorms, known locally as "Nor'westers", commonly drop large hailstones. In Himachal Pradesh, Summer lasts from mid April till the end of June and most parts become very hot (except in alpine zone which experience mild summer) with the average temperature ranging from 28 °C (82 °F) to 32 °C (90 °F). Winter lasts from late November till mid March. Snowfall is generally common in alpine tracts that are above 2,200 metres (7,218 ft), especially those in the higher- and trans-Himalayan regions.[34] Near the coast the temperature hovers around 36 °C (97 °F), and the proximity of the sea increases the level of humidity. In southern India, the temperatures are higher on the east coast by a few degrees compared to the west coast.

By May, most of the Indian interior experiences mean temperatures over 32 °C (90 °F), while maximum temperatures often exceed 40 °C (104 °F). In the hot months of April and May, western disturbances, with their cooling influence, may still arrive, but rapidly diminish in frequency as summer progresses.[35] Notably, a higher frequency of such disturbances in April correlates with a delayed monsoon onset (thus extending summer) in northwest India. In eastern India, monsoon onset dates have been steadily advancing over the past several decades, resulting in shorter summers there.[22]

Altitude affects the temperature to a large extent, with higher parts of the Deccan Plateau and other areas being relatively cooler. Hill stations, such as Ootacamund ("Ooty") in the Western Ghats and Kalimpong in the eastern Himalayas, with average maximum temperatures of around 25 °C (77 °F), offer some respite from the heat. At lower elevations, in parts of northern and western India, a strong, hot, and dry wind known as the loo blows in from the west during the daytime; with very high temperatures, in some cases up to around 45 °C (113 °F); it can cause fatal cases of sunstroke. Tornadoes may also occur, concentrated in a corridor stretching from northeastern India towards Pakistan. They are rare, however; only several dozen have been reported since 1835.

Construction: Keeping in view of study of the aforesaid Keeping in view of study of the aforesaid Indian Monsoons Monsoon thoroughly, I have prepared the Indian MonsoonsMonsoon Time Scale Indian MonsoonsMonsoon Time Scale is a Chronological sequence of events arranged in between time and weather with the help of a scale for studying the past's, present and future movements of Indian Monsoons monsoon and its relationship with rainfall and other weather problem and natural calamities. Prepare the Indian MonsoonsMonsoon Time Scale having 365 horizontal days from March 21st to next year March 20th of a required period comprising of a large time and weather have been taken and framed into a square graphic scale.

Collection Of Data: The monsoon pulses in the form of low pressure systems main weather events if any of the Indian Monsoons monsoon region have been taken as the data to prepare this scale.

Maintanance: The main weather events if any of the Indian Monsoons monsoon have been entering on the Indian Monsoon Time Scale as per date and month of the each and every year. If we have been managing this scale in this manner continuously, we can study the past, present and future movements of Indian Monsoons monsoon..

Indian Monsoon Time Scale: Keeping in view of the aforesaid facts and circumstances, I have prepared a model Monsoon Time Scale for the Indian monsoon to study and analysis of the Indian Monsoons monsoon.

Construction: Keeping in view of study of the aforesaid Indian Monsoon thoroughly, I have prepared the Indian Monsoon Time Scale. The Indian Monsoon Time Scale – a Chronological sequence of events arranged in between time and weather with the help of a scale for studying the past's, present and future movements of monsoon of a country and its relationship with rainfall and other weather problems and natural calamities. From where to wherever to be taken the time and weather to analyse, the researcher can decide on his discretion according to available data. I have prepared the 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 of/or a required period comprising of a large time and weather have been taken and framed into a square graphic scale. An accurate scale is available if we can collect and analyse the exact weather data. For example, I did not get complete data from the year of 1964. However, I will try to collect the weather data hardly and complete the scale.

Fixed Type Scale: Prepare the 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 of/or a required period comprising of a large time and weather have been taken and framed into a square graphic scale. All 365 days and 189 years to be analysed in a single and fixed type scale. It can be fixed on a wall or Table.

Parts Type Scale: The fixed type scale is to be long. So that it is divided into four parts easy to carry and keep and suitable for publication. I designed to make it into 4 parts and then pasted it into one scale.

The first part is beginning from 1st April to July 12th.

The second part is from 13 July to October 23rd.

The third part is from 24th October to February 3rd.

And the fourth part is 4th February to March 31st ending.

These separate scales can be pasted into one scale as explained below.

Cut along the edges of dates on the rightside of the first part and paste it to along the edges of date of 13th July on leftside of the second part.

Cut along the edges of dates on the rightside of the second part and paste it to along the edges of date of 24th October on leftside of the third part.

Cut along the edges of dates on the rightside of the third part and paste it to along the edges of date of 4th February on leftside of the fourth part.

When paste this manner, we get long full scape Indian Monsoon Time Scale.

Further the scale has been prepared in three types. .

Basic Scale: The first one is preliminary basic scale, it explains the structure of the scale.

Filled Scale: The second one is filled by data scale, it explains how to fill or manage the scale.

Analyzed Scale: And the third one is filled and analyzed by data, it explains monsoon patterns of the scale.

Computer Graphic Scale: Besides the above manual scale, I have prepared a computer graphic scale generated by the system from the year 1888 to 1983 for the period of 1st June to September 30th. If we are able to create this scale by computer which to be the most obvious scale.

Collection Of Data: The monsoon pulses in the form of low pressure systems over the Indian region have been taken as the data to the construction of this scale. For this, a lot of enormous data of low pressure systems, depressions and cyclone has been taken from many resources just like Mooley DA, Shukla J (1987); Charecteristics of the west ward-moving summer monsoon low pressure systems over the Indian region and their relationship with the monsoon rainfall. centre for ocean-land atmospheric interactions, university of Maryland, college park, MD., and from many other resources.

Maintanance: 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 of a country in this manner continuously, we can study the past, present and future movements of monsoon of a country.

Analysis: The Indian Monsoon Time Scale reveals many secrets and mysteries about the relationship in between the Global monsoons and astronomical bodies just like movement of axis of the earth around the sun in the universe & its influences on the earth's geophysical atmosphere. Let's study the mystery of the south-west monsoon and discuss the rest of other features of the Indian Monsoon Time Scale later.

Monsoon Path-Lines: When examine the scale notice that several passages or path-ways of monsoon pulses it have been some cut-edge paths and splits passing through its systematic zigzag cycles in a systematic manner in parallel and stacked next to each other in ascending and ascending order clearly seen on the Indian Monsoon Time Scale. By reason of travel of these passages, heavy rains & floods in some years and droughts & famines in another years according to their travel. The path of monsoon when travelling over four months from june to september good rainfall or heavy rains and floods can occur. And the path when travelling over last months i.e july or august or sepetember, low rainfall and droughts can occur. Particularly, there are two main passages. The first one is main path or passage of the south-west monsoon and the second one is path or passage of the north-east monsoon. The first one is on the left side over the months of june, july, august, september (South-west monsoon) and another path on the rightside over the months of october, november, december (north-east monsoon) are visible in the Indian Monsoon Time Scale

Description; Keep track the 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 September. From 2004 it is now rising upwards and estimated traveling over the months of June, July, August by the 2060.

By 1888 the line of path of the Indian Monsoon was started over the month of june and travelled to 1900's in steep descending direction. During this 4 months period of (june, july, august, september) of indian monsoon season. the line of path of the monsoon was travelled over all these four months. As a result, there were heavy rains and floods in most years.

From 1900 to 1920, the line of path of the indian monsoon was travelled over the months of August and September in the shape of concave direction. In this 4 months monsoon season, the line was travelled just over two months only. That means june and july rain was lost during the period, as a result it rained only

two months instead of four months monsoon season and causing low rainfall in many years.

From 1920 to 1965, the line of path of the indian monsoon was travelled over the months of july, august and september in the shape of convex direction. In this 4 months monsoon season, the line was travelled over three months. That means one month june rain was lost during the period, as a result it rained only three months instead of four months monsoon season. and resulting good rainfall in more years.

From 1965 to 2004, the passage of the indian monsoon was travelled over the months of august to mid-august in the shape of deep sloping direction, In this 4 months monsoon season, the line was travelled just over two months for a shord period only. That means two months i.e june and july rain was lost during the period, as a result it rained only two months instead of four months monsoon season. and causing low rainfall and droughts in many years.

. From 2004, the line of path of the indian monsoon seems likely rising over the months of july and june in future in the shape of upper ascending direction and will be resulting heavy rains & floods in coming years during 2004-2060.

Studies: 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 during the 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 periods like 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.

The Indian Monsoon Time Scale reveals many secrets of the monsoon & its relationship with rainfall & other weather problems and natural calamities. Some bands, clusters and paths of low pressure systems clearly seen in the Indian Monsoon Time Scale, it have been some cut-edge paths passing through its systematic zigzag cycles in ascending and ascending orders which causes heavy rains & floods in some years and droughts & famines in another years according to their travel. And also we can find out many more secrets of the Indian monsoon such as droughts, famines, cyclones, heavy rains, floods, onset & withdrawals of south west monsoon and north-east monsoon etc. by keen study of the Indian Monsoon Time Scale. The passages clearly seen in the Indian Monsoon Time Scale are sources of monsoon pulses. The tracking date of main path & other various paths such as south-west monsoon and north-east monsoon etc., of the Indian Monsoon denotes the onset of the monsoon, monsoon pulses or low pressure systems. These observations can mean that pulses of the monsoon are repeatedly determined by the number of repeats.

These are just some of the analyzes in the study of the indian monsoon. There are many more secrets in the indian monsoon. Indian scientists should get rid of them.

Principle: This is an Astrogeophysical/Astrometeorological phenomenon of effects of astronomical bodies and forces on the earth's geophysical atmosphere. The cause is unknown however the year to year change of movement of axis of the earth inclined at 23½ 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.

Climate Detection Methods: The tracking date of main path & other various paths such as south-west monsoon and north-east monsoon etc., of the Indian Monsoon denotes the onset of the monsoon, monsoon pulses or low pressure systems, storms and its consequent secondary hazard Sand Storms etc.. And also we can find out many more secrets of the Indian monsoon such as droughts, famines, cyclones, heavy rains, floods, real images of the Indian Monsoon, and onset & withdrawals of south west monsoon and north-east monsoon etc. by keen study of the Indian Monsoon Time Scale.

For example, the date of tracking ridge of path is the sign to the impending cyclone and its secondary consequent hazard floods, storm surges etc.

Another example, the thin and thick markers on the upper border line of the Indian monsoon time scale

are the signs to the impending heavy rains & floods and droughts & floods. The thick marking of clusters of low pressure systems on the Indian monsoon time scale is the sign to the impending heavy rains and floods and the thin marking of clusters of low pressure systems on the Indian monsoon time scale is the sign to the impending droughts and famines.

Furthermore example, the main passage of line of monsoon travel from June to September and September to June are also signs to impending weather conditions of a country. For example, during 1871-1990's the main path of the Indian Monsoon was rising over June, July, August and creating heavy rains and floods in most years. During 1900-1920's it was falling over August, September and causing low rainfall in many years. During 1920-1965s, it was rising again over July, August, September and resulting good rainfall in more years. During 1965-2004's it was falling over September and causing low rainfall and droughts in many years. At present it is rising upwards over June, July, August, and will be resulting heavy rains & floods in coming years during 2004-2060 in India.

These are some examples only. We can find out many more secrets of a country weather conditions by keen study of its monsoon time scale.

Uses: Indian MonsoonsMonsoon Time Scale used to foecast the weather changes and natural hazards of the Indian MonsoonsMonsoon in advance. All other weather related natural hazards such as avalanches, cyclones, damaging winds, droughts and water shortage, floods, thunderstorms, tornodoes, tropical cyclones, typhoons etc pertaining to this Indian MonsoonsMonsoon can be predicted.

By establishing the Indian MonsoonsMonsoon Time Scales can help to study the movements of the one's country's monsoon and its monsoon related weather changes and natural hazards.

Conclusions: We can make many more modifications thus bringing many more developments in the Indian MonsoonsMonsoon Time Scales.

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I have received some information in this research paper in the inventing of Global Monsoon Time Scale. Acknowledgements to them. In order to break the mysteries of the monsoons, Global Monsoon Time Scales shoud be designed for each and every global, regional & sub-regional monsoon winds for welfare of the world people. Give co-operation to my commitment in creating the Global Monsoon Time Scales.

The Figures are shown in the end of this issue.

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