Equatorial Climate Region & Equatorial Climate Time Scale

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Abstract: Many regions close to the equator experience an **Equatorial Climate**. These regions include, the Amazon Basin (South America), the Congo Basin (Africa), Malaysia, Indonesia and some areas in northern Australia. Regions with this climate experience high temperatures all year round. The average monthly temperatures are about 26 – 28 degrees Celsius. The annual temperature range (the difference between the average temperature of the hottest and coldest months) is very small. The annual temperature range may be as low as 3 degrees Celsius. The diurnal or daily temperature range (the difference between the highest temperature in the day and the lowest temperature at night) is usually greater. Humidity is usually very high. Another major characteristic of this climate is the high rainfall. These regions usually experience 2000 mm of rainfall or more in a year. Rainfall is high for most of the year. Many equatorial regions are affected by the ITCZ. As the ITCZ passes over these areas it brings heavy rainfall and thunderstorms. In some areas, the ITCZ causes two periods of very heavy rainfall every year. One occurs when the ITCZ crosses these areas on its way north and another occurs when it crosses these areas again on its way south. The climograph below shows the rainfall and temperature pattern of an area which experiences an equatorial climate.
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Introduction:

Monsoon means a seasonal reversing wind accompanied by its corresponding weather changes and natural calamities 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, the 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 in advance. Surface water resources can still be found.

Construction:

The global 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 problem and natural calamities. we can study the past, present and future movements of monsoon of a country. We can make separate monsoon time scales per each and every individual country.

4. Global Monsoon Time Scales
African Monsoon Time Scale (1991)
North American Monsoon Time Scale
Asian Monsoon Time Scale
Australian Monsoon Time Scale
European Monsoon Time Scale

5. Regional Monsoon Time Scales
North American Monsoon Time Scale
North African Monsoon Time Scale
Indian Monsoon Time Scale
Western North Pacific Monsoon Time Scale
South American Monsoon Time Scale
South African Monsoon Time Scale
Australian Monsoon Time Scale
East Asian Monsoon Time Scale

6. Sub-Regional Monsoon Time Scales
South Asian Monsoon Time Scale
Maritime Continent Monsoon Time Scale
East African Monsoon Time Scale
West African Monsoon Time Scale
Indo-Australian Monsoon Time Scale
Asian-Australian Monsoon Time Scale
Malaysian Australian 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

Construction: The global 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 problem and natural calamities.Prepare the Global Monsoon 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.

Maintanance: The main weather events if any of the country have been entering on the scale as per 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.

Indian Monsoon Time Scale: For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having 365 horizontal days from 1st April to next year March 31st of 128 years from 1888 to 2016 for the required period comprising of 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 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.

Preparation Of Scales: For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having 365 horizontal days from 1st April to next year March 31st of 128 years from 1888 to 2016 for the required period comprising of large time and weather have been taken and framed into a square graphic scale. The scale is to be long. So that it is divided into four parts suitable for publication. 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.

Further the same has been prepared in three scales. The first one is preliminary basic scale, the second one is filled by data scale and the third one is filled and analyzed by data.

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.

Collection Of Data: 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. 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.

If we have been managing the scale in this manner continuously, we can study the past's present's and future's of the India monsoon and its relationship with rainfall and other weather problems & natural calamities in India.

Analysis: The Indian Monsoon Time Scale reveals many secrets of the monsoon & its relationship with rainfall & other weather problems and natural calamities. For example, some bands, clusters and paths of low pressure systems along with the main paths of the Indian Monsoon (South-west monsoon and north-east monsoon) clearly seen in the map of the Indian monsoon it have been some cut-edge paths passing through its systematic zigzag cycles in ascending and ascending order which causes heavy rains & floods in some years and droughts & famines in another years according to their travel. 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 1920-1965's, 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. 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. 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.

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.

Hazard Detection Method: 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.

The Figures and Tables are shown in the end of this issue.

Uses: Global Monsoon Time Scales used to foecast the weather changes and natural hazards of a country 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 can be predicted.

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

Experiments Carriedout:

Many experiments were carried out on the Global Monsoon Time Scales and successfully proved out in practice.

Conclusions: We can make many more modifications thus bringing many more developments in the Global Monsoon Time Scales. We can also make many more changes and development in the monsoon time scales and make separate monsoon time scales in name of each and every region of the world in accordance with the weather circumstances of the region.

Uses:

Eqatorial Climate Time Scale used to foecast the weather changes and natural hazards of a Eqatorial Climate Time Scalein advance. All other weather related natural hazards such as avalanches, cyclones, damaging winds, droughts and water shortage, floods, thunderstorms, tornodoes, tropical cyclones, typhoons etc in the zone can be predicted.

Conclusions:

We can make many more modifications thus bringing many more developments in the Eqatorial Climate Time Scale. We can also make many more changes and development in the monsoon time scales and make separate monsoon time scales in name of each and every region of the world in accordance with the weather circumstances of the region.

History:

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.

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