

## Basics Of Global Monsoon Time Scales Semi Arid Climate Region & Semi Arid Climate Time Scale

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**Abstract:** A semi-arid climate or steppe climate is the climate of a region that receives precipitation below potential evapotranspiration, but not extremely. There are different kinds of semi-arid climates, depending on such variables as temperature, and they give rise to different classes of ecology. A more precise definition is given by the Köppen climate classification, which treats steppe climates (*BSk* and *BSh*) as intermediates between desert climates, (*BW*) and humid climates in ecological characteristics and agricultural potential. Semi-arid climates tend to support short or scrubby vegetation, with semi-arid areas usually dominated by either grasses or shrubs. To determine if a location has a semi-arid climate, the precipitation threshold must first be determined. Finding the precipitation threshold (in millimeters) involves first multiplying the average annual temperature in °C by 20, then adding 280 if 70% or more of the total precipitation is in the high-sun half of the year (April through September in the Northern temperate zone, or October through March in the Southern), or 140 if 30%–70% of the total precipitation is received during the applicable period, or 0 if less than 30% of the total precipitation is so received. If the area's annual precipitation is less than the threshold but more than half the threshold, it is classified as a *BS* (steppe climate). Furthermore, to delineate "hot semi-arid climates" from "cold semi-arid climates", there are three widely used isotherms, Either a mean annual temperature of 18°C, or a mean temperature of 0°C or –3°C in the coldest month, so that a location with a "BS" type climate with the appropriate temperature above whichever isotherm is being used is classified as "hot semi-arid" (*BSh*), and a location with the appropriate temperature below the given isotherm is classified as "cold semi-arid" (*BSk*). Many studies have been conducted on the climatic conditions of the zone and invented the Global Monsoon Time Scales and Semi Arid Climate Time Scale which can help to estimating the past, present and future eather conditions of the zone. Researchers in the zone have to make Global Monsoon Time Scales and Semi Arid Climate Time Scale.

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**Key Words:** Semi Arid Climate Region, Semi Arid Climate Time Scale, Indian Monsoon Time Scale, Global Monsoon Time Scale.

### Introduction:

I have conducted many studies and researches on the world monsoon systems and invented the basics of the Global Monsoon Time Scales. Particularly I have conducted many studies on the climate of Semi Arid Climate Region. Every climate zone has a separate monsoon winds. 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 country or zone or region. In every country or zone or region, every year, in a certain order seasonal winds are repeating. Each and every country or zone or region has its own monsoon winds and weather conditions. Keeping in view of all above geographical facts and circumstances, after studying the weather conditions and natural disasters in the Semi Arid Climate Region, I have proposed a time scale to measure the seasonal winds weather conditions of the zone that is the Semi Arid Climate Time Scale.

Here is a very important point to be grasped. That is, a scale set to study the weather conditions in the zone. The frequent weather events that occur in the zone will be taken to analysis the climate of the zone. In what sense that the low pressure systems are used as a data in the monsoon climate zone and how can low pressure systems affect the weather in monsoon climate zone, in the same manner there are other weather events that affect the weather in other different zones. So when creating a Climate Zone Time Scale, take the weather events that affect the weather of that zone as data.

Further it is informed that Semi Arid Climate Time Scale does not mean that there is a single scale of the entire Semi Arid Climate Region. There are a number of different areas in the zone. So called as Semi Arid Climate Time Scale because they are in similar zone or region but these are all only part of global monsoon time scales. The nomenclature have been named according to the zone.

This is very useful to study the weather changes and natural calamities of the Semi Arid Climate Region in advance.

#### **Semi Arid Climate Time Scale:**

The Semi Arid Climate 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 climate in the Semi Arid Climate Region and its relationship with rainfall and other weather conditions and natural calamities of the zone.

#### **Collection Of Data:**

The major or minor weather events of the Semi Arid Climate Region which influence the weather of the zone just like storms, winds, rainy winds, dust storms, monsoon pulses low pressure systems etc over the Semi Arid Climate Region have been entering on the scale in the form of symbols/criteria pertaining to the date and month of the each and every year.

#### **Construction:**

Prepare the Semi Arid Climate Time Scale having 365 horizontal days from March 21<sup>st</sup> to next year March 20<sup>th</sup> of a required period comprising of a large time and weather have been taken and framed into a square graphic scale.

#### **Maintenance:**

The main weather events/criteria if any of the Semi Arid Climate Region 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 in this manner continuously, we can study the past, present and future movements of monsoon of the zone.

#### **Uses:**

By development of the Semi Arid Climate Time Scale and maintain, the can be study and predict the weather changes and its related impending weather conditions and natural calamities just like 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 of the Semi Arid Climate Region.

#### **Basics Of Global Monsoon Time Scales:**

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

#### **Uses:**

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

#### **Conclusions:**

We can make many more modifications thus bringing many more developments in the Semi Arid

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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