

Trewartha's classification of climate

Prof Gilbert T. Trewartha of the University of Wisconsin in the U.S.A. modified and simplified Koppen's classification and presented his own classification in his book entitled "An Introduction to Climate".

① The climatic classification system devised by Trewartha represents a compromise between purely empirical and genetic methods. Besides being simple and explanatory, it combines the basic fundamentals of the empirical as well as the genetic classification schemes.

He has recognised six (6) major climates of the world. They are:—

① A: Tropical Humid climates: This type of climate is found in the low latitudes on either side of the equator in an irregular belt 20° to 40° wide. There is no winter season in this climatic group. On the basis of variations in precipitation this A climates are sub-divided into (i) Af, (ii) Aw and (iii) Am climates.

① Af climate is tropical wet climate which extends upto 5° to 10° latitudes on either side of the equator. It is characterised by adequate rainfall throughout the year. This is also known as tropical rainforest climate.

② Aw climate is a tropical wet and dry climate characterised by uniformly high temperature throughout the year but at the time of the low sun, two months are dry. This climate is also known as a savanna climate.

③ Am climate is monsoon climate which receives more

then 80% of annual rainfall during four summer monsoon months.

(b) B: Dry climates: The boundaries of the dry type of climatic group are fixed by precipitation values. B climates are characterised by high evaporation, loss of moisture through evapotranspiration exceeding the annual receipt of water gain from precipitation, large annual and daily range of temperature, abundant sunshine and clear sky etc.

On the basis of annual average precipitation this climate have been classified into two types:

- ① BW = the arid, or desert type and
- ② BS = the semi-arid, or steppe type.

On the basis of temperature variations ~~and~~ arid and semi-arid climates have been divided into following types:

- ① BWh climate: Tropical-subtropical hot deserts,
- (ii) BWK: Temperate-boreal cold deserts.
- (iii) BSh: Tropical-boreal steppes
- (iv) BSk BSK: Temperate and boreal steppes.

(c) C: Middle latitudes wet climates: The isotherm of 15°C of the coldest month forms the equatorward boundary of C climates. Occasional frosts occur in its continental parts, but the marine locations are frostless.

On the basis of seasonal distribution of precipitation, climates are divided into following types:-

(i) Cs climate: Sub-tropical sub-humid climate with dry summer, also known as Mediterranean climate.

(ii) Ca climate: Sub-tropical humid climate.

(iii) Cb climate: middle latitude marine climate.

(4) D: Microthermal or Temperate climates: These climates

are found in the areas of high middle latitudes which are affected by westerlies in summers and by polar wind in winters. Its poleward and equatorward boundaries are formed by average temperatures of 10°C for 4 and 8 months respectively.

On the basis of temperature variations 'D' climates have been sub-divided into 4 types:-

(i) Da climate: continental humid climate with temperature of the warmest month above 25°C .

(ii) Db climate: continental humid climate with temperature of the warmest month below 22°C .

(iii) Dc climate: sub polar climate, short summer season.

(iv) Dd climate: temperature of the coldest month less than -38°C .

(5) E: Boreal climate: Boreal climate is located in the higher middle latitudes and is characterised by short and cool summer season, long and very cold winter season, one to three months of a year having

average temperature of 10°C or more etc.

(6) F :- Polar climate :- Summer less, polar winds dominate throughout the year. These climates are found in the northern hemisphere only. On the basis of temperature variations - 'F' climate is divided into (1) Tundra climate (FT) and Icecap climate (FF climate)

Criticism :- Trewantha's classification uses only two weather elements i.e. precipitation and temperature. climatic elements such as air pressure, air mass, humidity, have not been considered despite effective role in the characterisation of climate.

Despite ^{this weakness,} ~~it is~~ ~~it~~ it can be said that.

Trewantha's classification is very simple, unambiguous and mixture of both empirical and genetic methods of climatic classification. His scheme became more popular among geographers due to its simplicity.