Precipitation in India and, its effects

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Abstract: Indian climate is uniquely uneven and, this candescent characteristic is what defines India as the land of several occupations, cultures and, economies within a unified country. We very well know about geography playing a pivotal and, significant part in making of occupation followed by culture and, economy. The terrain of India defines the exquisite and, vibrant display of opportunities defying the odds at best and, creating a conducive environment towards prosperity, fraternity and, sufficiency. However, the factors which are unifying in nature have also played their role in increasing divide between peoples from several walks of life encompassing ***caste, class, gender, race, ethnic*** and, ***religious*** grounds.

Keywords: Indian Monsoon, Climate extremes, Indian livelihood, Primary and, Secondary circulation, Precipitation

Cause of the Precipitation: Indian climate is moderately monsoon type and, this single affirmative statement defines everything. Indian climate is uniquely uneven and, this candescent characteristic is what defines

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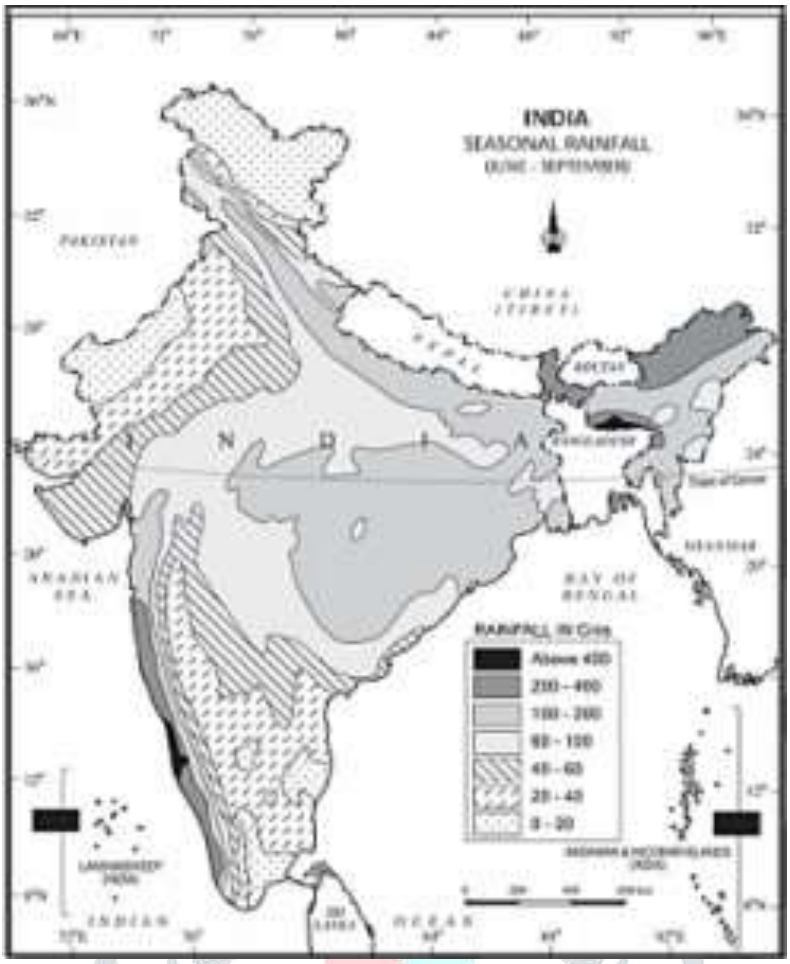
- ***proximity to equator***
- ***majority of the part in tropical area***
- ***significant intervention of Coriolis force***
- ***part of the Indo-Australian plate and,***
- ***lying in the northern and, eastern hemisphere;*** all have played an important part in making India what it is.

The heat surplus tropical area makes the surrounding surface air warm that lets it rise, expand and, subsequently to cool thus due to compression forces, again warming the air, hence repeating the cycle over and, over again, terming it as ***adiabatic change.*** The heat deficit area transports cool winds towards heat surplus and, vice versa in order to maintain a balance on the planet, terming it as ***heat distribution*** in which ***atmospheric circulation*** is responsible for 80% while ***oceanic circulation*** is 20%. However the balanced the cycle may look like, recent

anthropogenic interferences have disturbed the distribution of heat which has further exonerated the whole path.

Planetary circulations comprise of ***Trade Winds, Westerlies*** and, ***Polar Easterlies.*** Often, they tend to balance the imperfects, however, in their absence, Secondary circulations, for instance Monsoon, Cyclones, come over and, balance the heat distribution. Also, the concept of ***Differential Heating*** affects the local conditions, making the full circle of ***Three Cell Model.***

India receives mostly all types of precipitation viz. ***Orographic Precipitation, Convectional and, Frontal.*** Our monsoon type climate explains how the annual variability of the precipitation all over India varies to a great extent thereby producing in large amounts, inequalities of opportunities, livelihoods, economies and, most of all, the security of life.



Indian Malabar Coast receives, ***Monsoon or Incoming Monsoon***, in the first week of June, moving all forward and, spreading precipitation in Indian hinterland. The same ***Incoming Monsoon*** targets Indian Coromondal coast upon its return starting last week of October and, first of November in the form of ***Outgoing Monsoon.*** What happens in between is the formation of leeward areas where the scanty amounts of precipitation results forming less biodiversity and, less scope of livelihoods. Also, the North Western India during ***Incoming Monsoon*** receives a healthy share of precipitation while it also receives during winters due to ***Western Disturbances*** that carry moisture over Mediterranean and, get to deposit here.

Anthropogenic interferences disturbing the pattern of Precipitation:

There are several reports which talk about **increased human consumption rate** over **nature's regeneration of resources time** that has led to tragic exploitation of natural habitats especially when they have been providing ***ecosystem services*** for so long. The

- **Cutting of trees**
- **Inefficient land use management**
- **Increasing dependence on marine resources**
- **Converting agricultural land to industrial**
- **Changing patterns of diet and, lifestyle;**

all, significantly have contributed in degradation of ecosystems which provide invaluable services of maintaining water cycle, carbon cycle and, nitrogen fixation cycle. There is no deniability in the fact that if humans tend to interfere in the natural ecosystems at the same rate, there would not have been any suitable and, sustainable place on the planet to live as there would be huge inequalities and, in large amounts of climatic extremes of which we, as homo-sapiens today do not have any reliable and, strategic answer.

Impacts of extreme precipitation and, climate anomalies in the form of ***cloud bursts, frequent cyclones, tornadoes, flash floods, dust storms, untimely earthquakes and,*** all the other haphazards, demand stricter enforcement of rules framed by national as well as international

stakeholders and, enhanced community awareness that would lead to community participation in protecting the nature from going ***the other way.***

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