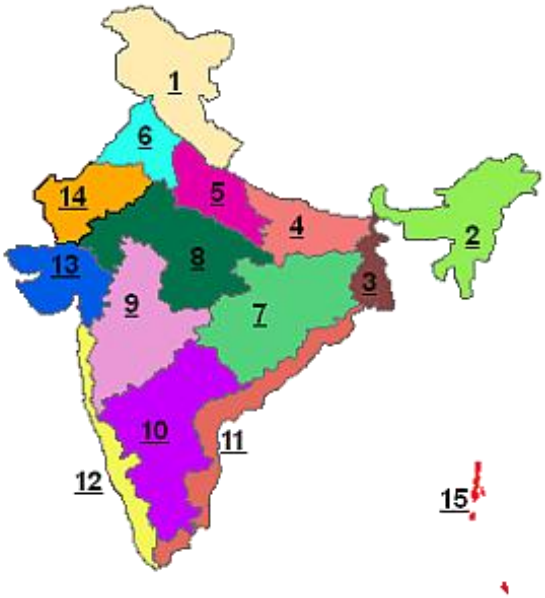
Agro climatic regions of India



Agro climatic regions of India: Planning Commision

Agro climatic region of India (Planning Commission of India)
During the year 1989, the planning commission made an attempt to delineate India in to different agro climatic regions. Based on the similarity in rainfall, temperature, soil topography, cropping, farming system and water resource, India has been divided to 15 agro-climatic regions. This was mainly done to identify the production constraints and to plan future strategies with the involvement of academicians, scientists, administrators, planners, field staff, voluntary agencies, banks and others.

Region 1: Western Himalayan – This region comprises Jammu and Kashmir, Himachal Pradesh and hills of U.P. Soil types are skeletal soils of cold region, mountain meadow and hilly brown soils. The soils are generally silty loam. The cropping intensity is the lowest in Jammu and Kashmir and highest in Himachal Pradesh. The productivity level is lower than all India level.

Region 2: Eastern Himalayan - Sikkim and Darjeeling hills, Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Tripura, Mizoram, Assam and Jalpaiguri and Coochbehar districts of West Bengal – The region has high rainfall and high forest cover. The soils are degraded due to heavy runoff and heavy soil erosion. The rainfall is very high with severe intensity causes the major problem. This area has a high potential for agriculture, forestry and horticulture. This area offers plenty of scope for development of integrated farming system.

Region 3: Lower Gangetic plains – This region includes the West Bengal. Lower Gangetic plains consisting of four sub-regions viz., Basind plains, central alluvial plains, alluvial coastal plains and rack plains. Ground water utilization in this region is more than 35 per cent. This zone accounts for about 12 per cent of countries rice production. Frequent floods often destroy the crops. There is a lot of scope for development of minor irrigation projects.

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Region 4: Middle Gangetic plains – This zone comprises of 12 districts of eastern U.P. and 27 districts in Bihar plains. This zone has a geographical area of 16 million hectares. The rainfall is high and 61 per cent of the area is under rainfed farming. The cropping intensity is 142 per cent. In Bihar plains, the flood prone area is estimated about 17 lakh hectares. Productivity of rice is low. This zone has a scope for integrated farming systems like dairying fisheries, etc.

Region 5: Upper Gangetic plains – This zone consists of 32 districts of U.P. divided into 3 sub zones. There are nine lakh hectares of problem soils. The zone has 31 per cent irrigation intensity and 144 per cent cropping intensity. A good potential for ground water use exists the productivity of wheat and rice is fairly high. This zone offers scope for development of horticultural crops.

Region 6: Trans-Gangetic plains – This region includes Punjab, Haryana, Union Territories of Delhi and Chandigarh and Sriganga Nagar of Rajasthan. The major characteristics of this zone are: highest net sown area, highest irrigated area, high cropping intensity and high ground water utilization. This area has witnessed a remarkable agricultural revolution. Still there are possibilities to increase the productivity levels at per with advanced countries.

Region 7: Eastern Plateau and hills – This region include the following sub zones i) Madhya Pradesh eastern hills and plateau ii) Orissa inlands, iii) Northern Orissa and, iv) Chota Nagpur north and eastern hills, v) Chotanagpur south and West Bengal hills, vi) Chattisgarh and south western Orissa hills. The soils of this region are shallow to medium in depth. The topography of the land is undulating with a slope from 1 to 10 per cent. In Kharif, 82 per cent of the area is under rice and in Rabi, 52 per cent is under oil seeds. The productivity of crops is low because rainfall is relatively low. Water harvesting techniques are possible.

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Region 8: Central plateau and hills – This zone comprises of 46 districts of Madhya Pradesh, Uttar Pradesh and Rajasthan. The topography is highly variable. Nearly one-third of the land is not available for cultivation. Irrigation and intensity of cropping is low. About 75 per cent of the area is rainfed with low value cereal crops. There is an intensive need for alternate high productive crops including horticultural crops.

Region 9: Western plateau and hills – This zone comprises the major part of Maharastra, parts of Madhya Pradesh and a district in Rajasthan. It is divided into four sub zones. This region forms the major part of Peninsular India. The average annual rainfall is 904 mm. The irrigated area is only 12.4 per cent. Sorghum and cotton are the major crops. In fact, 50 per cent of the countries sorghum production is produced from this region. This is known for the best quality of oranges, grapes and banana. The scope for growing high value crops is quite good.

Region 10: Southern plateau and hills – This zone comprises of 35 districts of Andhra Pradesh, Karnataka and Tamil Nadu. This is a typical semi arid zone, rainfed farming is practiced in about 81 per cent of the area. The cropping intensity is low (11%). Low value cereals and minor millets are common in the cropping system. There is a lot of scope for crop diversification including more of horticultural crops.

Region 11: East coast plains and hills – This zone consists of sub zones i) Orissa coast, ii) North coastal Andhra Pradesh, iii) North coastal Tamil Nadu, iv) Thanjavur and v) South coastal Tamil Nadu. This zone accounts for 20.3 per cent of all India rice production and 17 per cent of the groundnut. Alkaline and saline soils are found in coastal areas. Nearly 70 per cent of the area is under rainfed farming. The zone have 2000 km of coastline and many inland water ways for fisheries. Roughly 40 per cent of marine potential is in Andhra Pradesh and 46 per cent in Tamil Nadu.

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Region 12: West coast plains and ghats – This zone runs along the west coast covering parts of Tamil Nadu, Kerala, Karnataka, Maharashtra and Goa. This region has variety of soils, rainfall and cropping patterns. This zone offers ample scope for rain water managements, minor irrigation development, crop diversification and fisheries development.

Region 13: Gujarat plains and hills – This zone covers 19 districts of Gujarat. This zone is arid with low rainfall and 22.5 per cent of the area is irrigated. Only 50 per cent of the cultivated area is occupied by food crops. It is an important oil seed zone and nearly 78 per cent of farming is rainfed emphasizing the need for rain water harvesting and management of dryland farming like integrated watershed development.

Region 14: Western dry region – This region comprises of nine districts of Rajasthan and is characterized by hot sandy desert, erratic rainfall, high evaporation. The vegetation is scanty. There is perennial river. Ground water is deep and brackish. Drought and famine are very common features. The average rainfall is only 400 mm with high year to year variation. The forest area is only 1.2 per cent and the lands under pasture is about 4.3 per cent. The cultivable wastelands occupy about 42 per cent. Pearl millet, cluster bean are the lead crops in Kharif while wheat and gram in Rabi. The yield levels are low and the cropping intensity is only 105 per cent. Increasing tree crops is necessary to check desertification and provide fodder to livestock.

Region 15: Islands region – This zone covers the island territories of Andaman and Nicobar islands and Lakshadweep. These islands lie in the equatorial line with an annual rainfall of more than 300 mm spread over 8 to 9 month. It is largely forest zone. The topography is undulating leading to heavy soil loss. Nearly half the cropped area is under coconut. The development of this zone is to be on crop improvement, water management and fisheries.

Agro climatic regions of India: NARP