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PG Department of Geography, Patna University

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Niharika Narayan

Assistant Professor (Guest)

Email Id- narayanniharika@gmail.com

Agro-Climatic Region of India

In order to maximize the production from the available resources and prevailing climatic conditions, need-based, location specific technology needs to be generated. Delineation of agro-climatic zones based on soil, water, rainfall, temperature etc. is the first essential step for sustainable production.

Agro-Climatic Region- An “Agro-climatic zone” is a land unit in terms of major climates, suitable for a certain range of crops and cultivars. The planning aims at scientific management of regional resources to meet the food, fiber, fodder and fuel wood without adversely affecting the status of natural resources and environment. Crop yield is (FAO, 1983). Agro-climatic conditions mainly refer to soil types, rainfall, temperature and water availability which influence the type of vegetations. An agro-ecological zone is the land unit carved out of agro-climatic zone superimposed on landform which acts as modifier to climate and length of growing period.

Planning of Agro Climatic Zones in India-

With the 329 million hectares of the geographical area the country presents a large number of complex agro-climatic situations.

Several attempts have been made to delineate major agro-ecological regions in respect to soils, climate, physiographic and natural vegetation for macro-level planning on a more scientific basis. They are as follows.

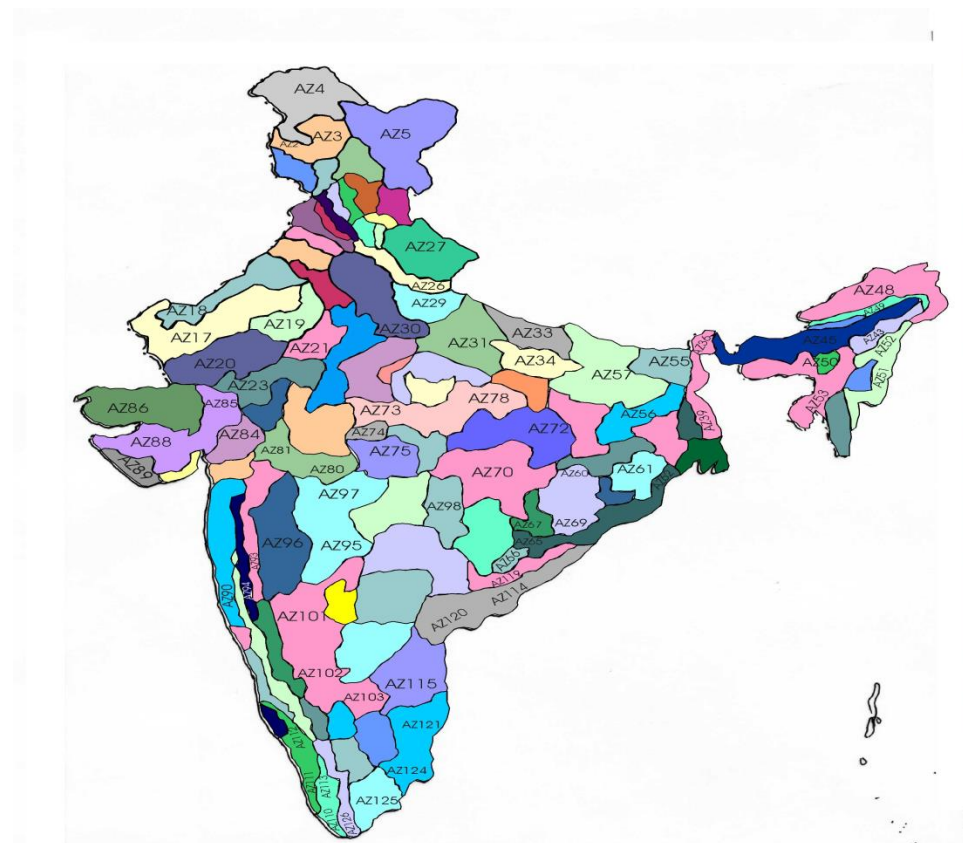
- Agro-climatic regions by the Planning Commission
- Agro-climatic zones under National Agricultural Research Project (NARP)
- Agro-ecological regions by the National Bureau of Soil Survey & Land Use Planning (NBSS & LUP)

Agro-climatic regions by the Planning Commission

The Planning Commission, as a result of the mid-term appraisal of the planning targets of the Seventh Plan, has divided the country into fifteen broad agro-climatic zones based on physiography, soils, geological formation, Climate, cropping patterns, and development of irrigation and mineral resources for broad agricultural planning and developing future strategies. Fourteen regions were in the main land and the remaining one in the islands of Bay of Bengal and the Arabian Sea. The main objective was to integrate plans of the agro-climatic regions with the state and national plans to enable policy development based on techno-agro-climatic considerations. In the agro-climatic regional planning, further sub-regionalization was possible based on agro-ecological parameters.

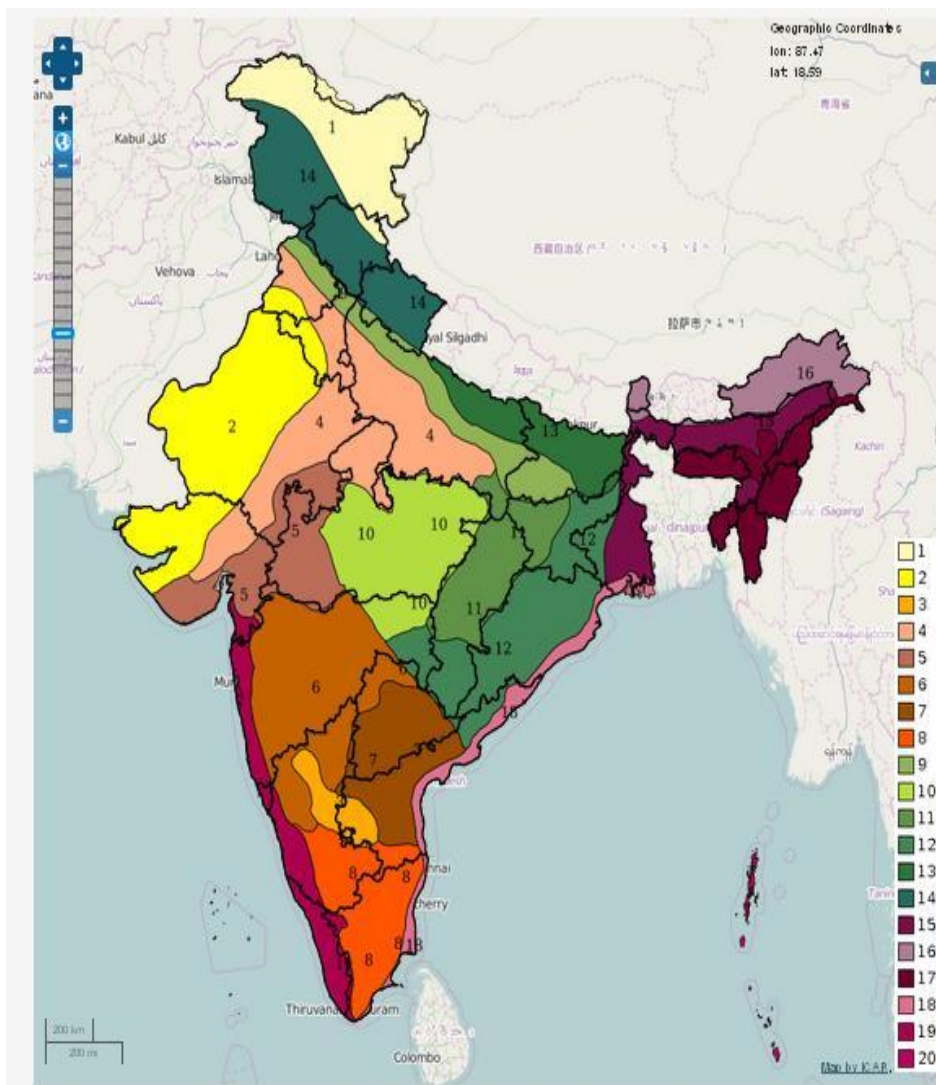
Agro-climatic zones under National Agricultural Research Project (NARP)

National Agricultural Research Project (NARP) was launched by ICAR for initiating agricultural research in the agro-climatic zones of the country. The objective was to set up or upgrade a zonal research station in each agro-climatic zone for generating location specific, need based research targeted for specific agro-ecological situations. The focus was on analyzing agro-ecological conditions and cropping patterns and come out with a programme directly targeted to solve the major bottle necks of agricultural growth in a zone based on natural resources, major crops, farming systems, production constraints and socio-economic conditions prevalent in that zone. Stress was on technology generation. In NARP, the country was divided into 127 agro-climatic zones.



Agro-ecological regions by the National Bureau of Soil Survey & Land Use Planning (NBSS & LUP)

The National Bureau of Soil Survey & Land Use Planning (NBSS&LUP) came up with twenty agro-ecological zones based on the growing period as an integrated criteria of effective rainfall, soil groups, delineated boundaries adjusted to district boundaries with a minimal number of regions. Subsequently, these twenty agro-ecological zones were sub- divided into 60 sub-zones.



Study of Agro-climatic regions according to the classification given by the Planning Commission

The Planning Commission, as a result of the mid-term appraisal of the planning targets of the Seventh Plan, has divided the country into fifteen broad agro-climatic zones based on physiography, soils, geological formation, Climate, cropping patterns, and development of irrigation and mineral resources for broad agricultural planning and developing future strategies. Fourteen regions were in the main land and the remaining one in the islands of Bay of Bengal and the Arabian Sea. The main objective was to integrate plans of the agro-climatic regions with the state and national plans to enable policy development based on techno-agro-climatic considerations. In the agro-climatic regional planning, further sub-regionalization was possible based on agro-ecological parameters.

1. Western Himalayan division
2. Eastern Himalayan division
3. Lower Gangetic plain region
4. Middle Gangetic plain region
5. Upper Gangetic plain region
6. Trans-Gangetic plain region
7. Eastern plateau and hill region
8. Central plateau and hill region
9. Western plateau and hill region
10. Southern plateau and hill region
11. East coast plain and hill region
12. West coast plain and hill region
13. Gujarat plain and hill region
14. Western plain and hill region
15. Island region

The physical attributes and socio-economic conditions prevailing in the regions.

Agro-climatic zones of India

