

GE 2211 Environmental Science and Engineering

Unit – II

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Biogeographical Classification of India

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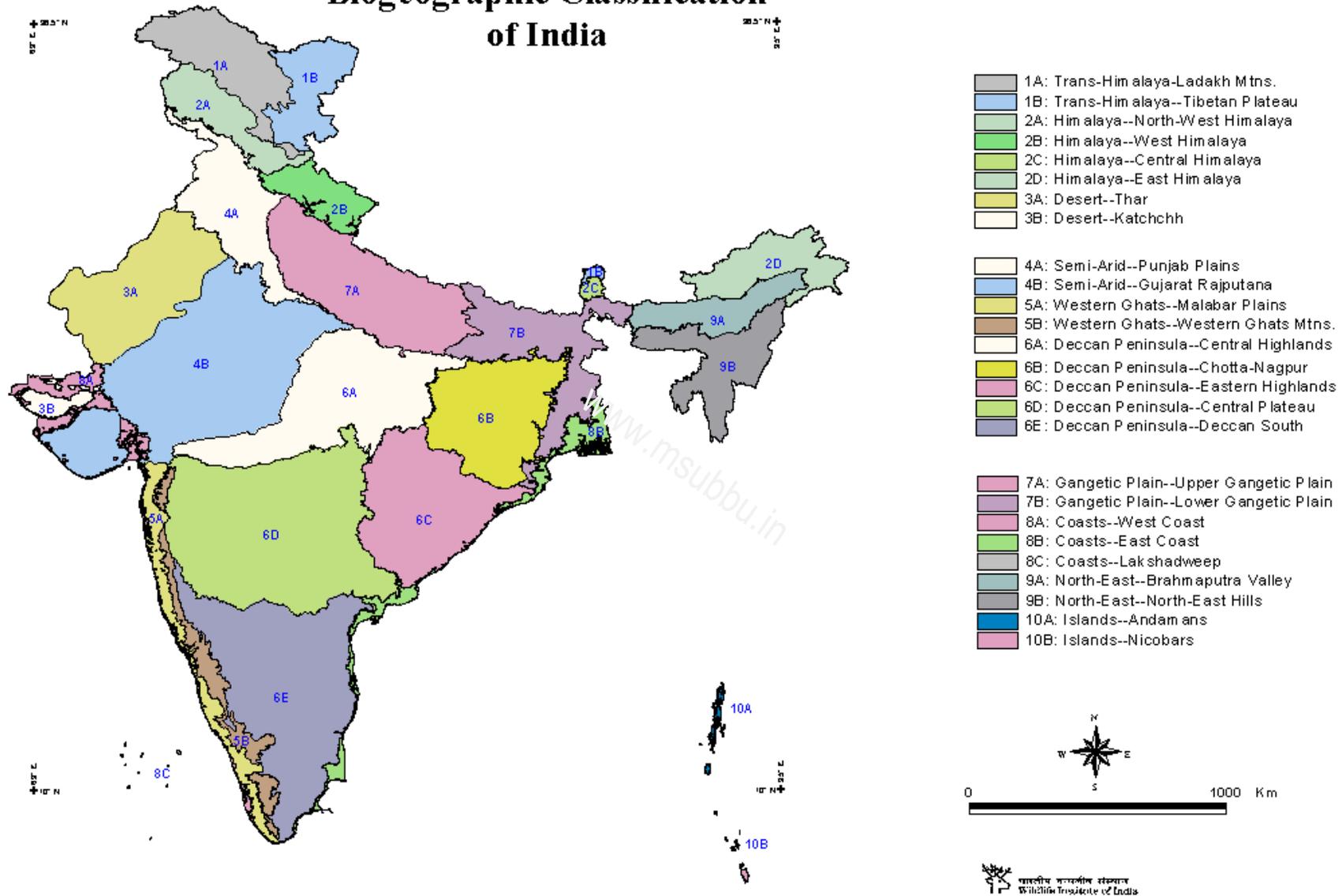
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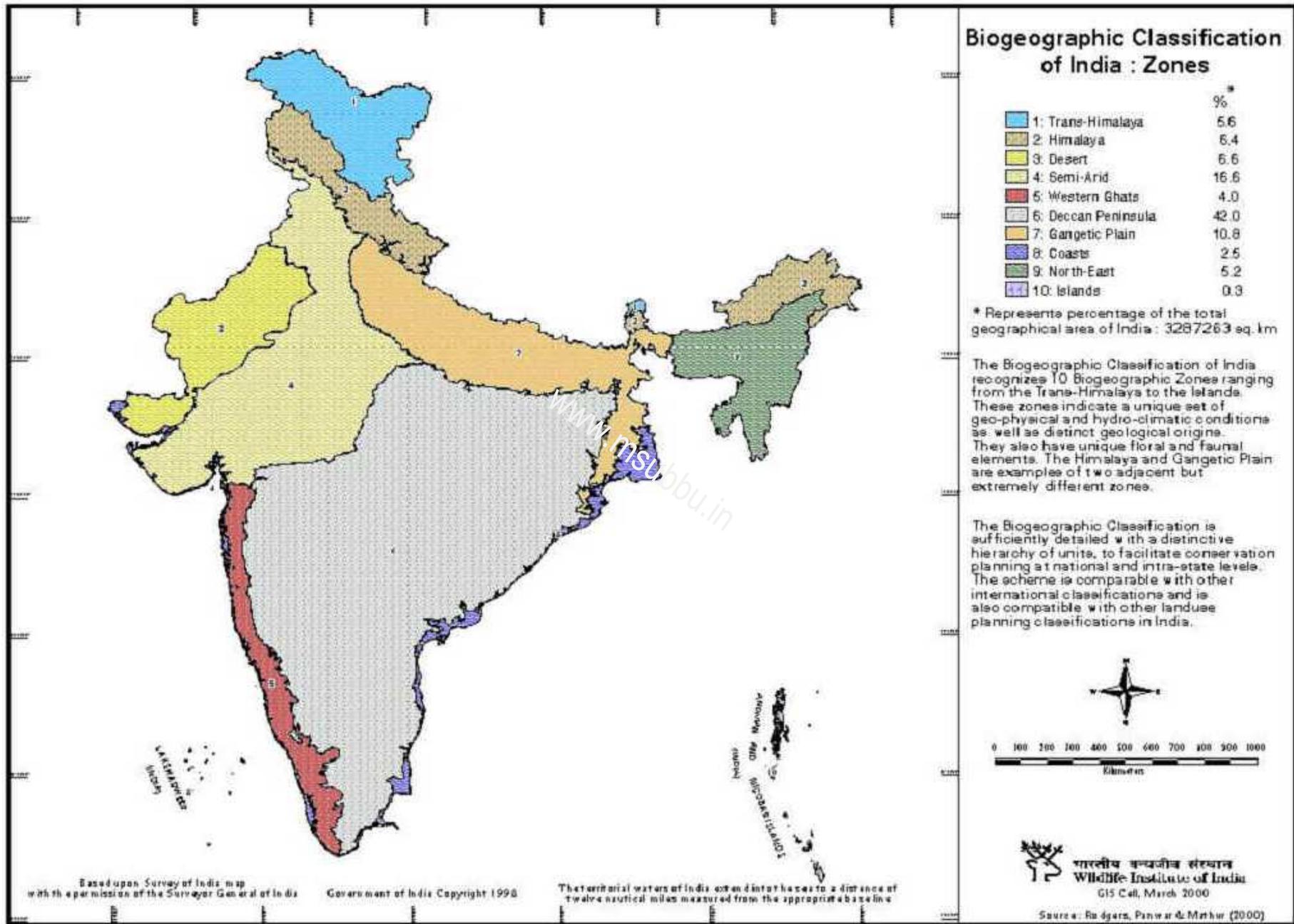
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Biogeographical Zones of India

1. The Trans Himalayas
2. The Himalayas
3. The Desert
4. The Semi-Arid
5. The Western Ghats
6. The Deccan Plateau
7. The Gangetic Plains
8. The Coasts
9. The Northeast
10. The Islands

Biogeographic Classification of India





Megadiverse countries

- India is one of 18 megadiversity countries of the world
- The **megadiverse countries** are a group of countries that harbor the majority of the Earth's species and are therefore considered extremely biodiverse.
- The World Conservation Monitoring Centre, an agency of the United Nations Environment Programme, has identified 18 megadiverse countries, most located in the tropics.
- Brazil, Indonesia, South Africa and Colombia are the highest of these.

The 18 Megadiverse Nations

-  Australia
-  Brazil
-  People's Republic of China (geographically including  Taiwan)
-  Colombia
-  Costa Rica
-  Democratic Republic of the Congo
-  Ecuador
-  India
-  Indonesia
-  Madagascar
-  Malaysia
-  Mexico
-  Papua New Guinea
-  Peru
-  Philippines
-  South Africa
-  United States
-  Venezuela

Species Diversity of India

Table 1. Comparison Between the Number of Species in India and the World (from <http://www.wcmc.org.uk/igcmc/main.htm>)

Group	No. of species in India (SI)	No. of species in the world (SW)	SI/SW (%)
Mammals	350 (1)	4,629 (7)	7.6
Birds	1224 (2)	9,702 (8)	12.6
Reptiles	408 (3)	6,550 (9)	6.2
Amphibians	197 (4)	4,522 (10)	4.4
Fishes	2546 (5)	21,730 (11)	11.7
Flowering Plants	5,000 (6)	250,000 (12)	6.0

Importance of Biodiversity

- Conservation and sustainable use of biodiversity is fundamental to ecologically sustainable development
- An environment rich in biological diversity offers the broadest array of options for sustainable economic activity, for sustaining human welfare and for adapting to change
- The diversity of genes, species and ecosystem is a valuable resource that can be tapped as human needs and demands change, the still more basic reasons for conservation are the moral, cultural and religious values.

Values of Biodiversity

- The importance of biodiversity can be understood, it is not easy to define the value of biodiversity, and very often difficult to estimate it.
- The value of biodiversity is classified into direct and indirect values.
- Biodiversity has direct consumptive value in agriculture, medicine and industry.
- Approximately 80,000 edible plants have been used at one time or another in human history, of which only about 150 have even been cultivated on a large scale. Today a mere 10 to 20 species provide 80%–90% food requirements of the world.
- The indirect values imply the functions performed by biodiversity which are not of any direct use such as ecological processes etc.