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**BIOME AND BIODIVERSITY HOTSPOTS**

**Biome:**

A biome is a large community of vegetation and wildlife adapted to a specific climate. The five major types of biomes are aquatic, grassland, forest, desert, and tundra. Biomes are regions or landscapes of the world that are divided on the basis of climatic conditions, vegetation, and adaptation of flora and fauna. The regions with ice caps, like the Arctic, are known as Tundra, the Amazon is a tropical rainforest, while grasslands, savannah and aquatic biomes exist around the world as well. The categorization of biomes is not fixed.

Broadly, Biomes can categorize into two main headings: terrestrial (land) biomes and aquatic (water) biomes. Out of the 9-20 biomes, the 9 main biomes of the world are:

* Tropical Rainforest,
* Temperate Forest,
* Desert,
* Tundra,
* Boreal Forest or Taiga,
* Grassland,
* Savannah,
* Freshwater and
* Marine.

As different biomes have different kinds and quantities of plants and animals, the scientists refer to it as biodiversity. Biomes with greater kinds or quantities of plants and animals are said to have high biodiversity. Biomes like the temperate deciduous forest and grasslands have better conditions for plant growth. Ideal conditions for biodiversity include moderate to abundant precipitation, sunlight, warmth, nutrient-rich soil, and a long growing season. Because of the greater warmth, sunlight, and precipitation in the low latitudes, the tropical rainforest has greater numbers and kinds of plants and animals than any other biome.

**Biodiversity hotspots:**

Biodiversity hotspots are defined as regions “where exceptional concentrations of endemic species are undergoing an exceptional loss of habitat”. The concept of biodiversity hotspots was developed by the Norman Myers in 1988 when he identified that the tropical forest losing its plants species as well as habitat. IUCN prepares ‘Red Data Book’. There are 34 areas around the world which are qualified as Biodiversity hotspots. These hotspots represent only 2.3% of the total Earth's land surface. These hotspots are important because Biodiversity underpins all life on Earth. Without species, there would be no air to breathe, no food to eat, no water to drink. There would be no human society at all. And as the places on Earth, where the most biodiversity is under the most threat, hotspots are critical to human survival.

Criteria to qualify as a Biodiversity Hotspot:-

A region must meet two strict criteria to qualify as a biodiversity hotspot which is given below:

1. It must have at least 1,500 vascular plants as endemics which are to say, it must have a high percentage of plant life found nowhere else on the planet. A hotspot, in other words, is irreplaceable.

2. It must have 30% or less of its original natural vegetation. In other words, it must be threatened.

**Biodiversity Hotspots of the World**

These hotspots regions support a rich biodiversity because of geologic formations and endemic flora and fauna and also exhibit exceptional scientific interest. It is important ecosystem in the world and the habitat of endemic species. The Biodiversity Hotspots of the World are given below:

Africa

1. Eastern Afro-Montane

2. The Guinean forests of Western Africa

3. Horn of Africa

4. Madagascar and the Indian Ocean Islands

5. Maputoland, Podoland, Albany hotspot

6. Succulent Karou

7. East Malanesian islands

8. South Africa's Cape floristic hotspot

9. Coastal forests of Eastern Africa

[**Terrestrial Biomes of the World**](https://www.jagranjosh.com/general-knowledge/terrestrial-biomes-of-the-world-1522760427-1?ref=list_gk)

Asia and Australia

1. Himalayan hotspot

2. The Eastern Himalayas

3. Japan biodiversity hotspot

4. Mountains of South-West China

5. New Caledonia

6. New Zealand biodiversity hotspot

7. Philippine biodiversity hotspot

8. Western Sunda (Indonesia, Malas and Brunei)

9.  Wallace (Eastern Indonesia)

10. The Western Ghats of India and Islands of Sri Lanka

11. Polynesia and Micronesian Islands Complex including Hawaii

12. South-Western Australia

North and Central America

1. California Floristic Province

2. Caribbean islands hotspot

3. Modrean pine-oak wood lands of the USA and Mexico border

4. The Mesoamerican forests

[**Aquatic Biomes of the World**](https://www.jagranjosh.com/general-knowledge/aquatic-biomes-of-the-world-1522842491-1?ref=list_gk)

South America

1. Brazil's Cerrado

2. Chilean winter rainfall (Valdivian) Forests

3. Tumbes-Choco-Magdalena

4. Tropical Andes

5. Atlantic forest

Europe and Central Asia

1. Caucasus region

2. Iran-Anatolia region

3. The Mediterranean basin and its Eastern Coastal region

4. Mountains of Central Asia

Above Biodiversity Hotspot regions are blessed with a variety of exceptional plant species and habitat, but facing endemism and serious habitat loss. Hence, it is our duty to protect and conserve the endemic species and their habitat. We can conserve biodiversity in two ways- first is in-situ and second is ex-situ. In-situ conservation involves in the maintenance of bio-diversity rich area in its natural form, whereas in ex-situ conservation, the endangered species are kept in a specially protected area which is separated from its natural habitat region.