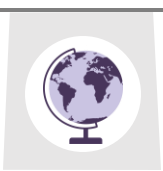


# 8.03: Ecosystems



## Classification of Ecosystem

1 ecosystem	(n) A community of living organisms interacting with each other and their environment in a particular area.
2 biome	(n) A large-scale ecosystem and an area of the world that, because of a similar climate, have similar landscapes, animals (fauna) and plants (flora).
3 habitat	(n) The place where an organism lives.
4 biodiversity	(n) The variety of plants and animals found in a particular ecosystem or biome.
5 sustainability	(n) Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

## Features of an Ecosystem

1 flora	(n) The plants of a particular region, habitat or geological period.
2 fauna	(n) The animals of a particular region, habitat or geological period.
3 food chain	(n) A diagram that models the feeding relationships between populations.
4 food web	(n) A network of interconnected food chains showing how energy and nutrients flow between different organisms in an ecosystem.
5 organism	(n) Something that is living or used to be alive.
6 interdependence	(n) Interdependence refers to the way that species, places, environments and systems are connected, and how a change in one can impact others.
7 adaptation	(n) A feature or characteristic that helps a plant or animal survive and reproduce in its environment.

## Climatic Features

1 climate	(n) The average weather conditions of an area over thirty years.
2 temperature	(n) A measure of how hot or cold something is, often recorded in degrees Celsius (°C).
3 precipitation	(n) Water falling to the ground in all forms (rain, snow, sleet or hail).
4 climate graph	(n) A visual that shows the average monthly temperature and rainfall for a particular location, allowing us to see patterns in climate throughout the year.
5 solar insolation	(n) The amount of the sun's energy received at the Earth's surface in a specific place and time.

## Major Global Biomes

1 tundra	(n) A cold, treeless biome found at high latitudes or at high altitudes, where the ground is frozen for most of the year (permafrost).
2 hot desert	(n) A dry biome with very low rainfall, high daytime temperatures and sparse vegetation, such as the Sahara Desert.
3 temperate forest	(n) A forest biome found in regions with moderate temperatures and rainfall, usually with four distinct seasons.
4 savannah grasslands	(n) A large open area covered mainly with grasses and scattered trees, found in tropical or subtropical regions (savannah).
5 tropical rainforest	(n) Found in both the northern and southern hemisphere mainly on or around the equator. Vegetation is vast and varied, climate is humid, hot and wet year-round.



# 8.03: Ecosystems



## Biome 1: The Taiga, Russia

1	<b>taiga</b>	(n) A cold forest biome found in northern regions, made up mainly of coniferous (pine) trees; also called a boreal forest.
2	<b>permafrost</b>	(n) Ground that remains continuously frozen for two or more consecutive years, often found in polar and subarctic regions.
3	<b>deciduous</b>	(adj) Trees or plants that shed their leaves annually.
4	<b>evergreen</b>	(adj) Trees or plants that retain their leaves throughout the year.
5	<b>logging</b>	(n) The cutting down of trees to sell the wood for profit (legally or illegally).
6	<b>deforestation</b>	(n) The permanent removal of trees, often to make space for farming or construction.
7	<b>Indigenous communities</b>	(n) Groups of people who are the original inhabitants of a region and have distinct cultural traditions, languages, and ways of life that are closely connected to their natural environment.

**Location:** Northern Hemisphere, along the Arctic circle. Siberia, Russia.

**Features:** Low biodiversity, infertile soils, very cold and dry climate.

**Animal and plant adaptations:** Moose and black spruce tree

Threats	Management strategies
Logging	Selective logging
Mining and energy resources	Mine zoning
Tourism	Low impact tourism
Threats to Indigenous communities	Cultural protection

## Biome 2: The Coral Triangle, Philippines

1	<b>coral reef</b>	(n) A large underwater structure made of the skeletons of coral polyps, providing habitat for many marine species.
2	<b>polyp</b>	(n) A small, soft-bodied organism that builds coral skeletons; the basic living unit of a coral reef.
3	<b>colony</b>	(n) A group of organisms of the same species living closely together, often for mutual benefit.
4	<b>Marine Protected Areas (MPAs)</b>	(n) Specific zones in the ocean where human activities such as fishing, mining, and tourism are restricted or carefully managed.
5	<b>ecotourism</b>	(n) Tourism directed towards natural environments, intended to support conservation efforts and observe wildlife responsibly.

**Location:** Shallow tropical waters, around coastlines and islands.

**Features:** High biodiversity, warm water 23-29°C, shallow clear water 60m or less.

**Animals and plant adaptations:** Clown fish, sea turtle, seagrass

Threats	Management strategies
Coral bleaching	MPAs
Overfishing	The Bantay Dagat sea patrols
Pollution from land	Funding reef-positive businesses
Tourism	Green fins ecotourism

