



CLASS: VI

SUBJECT: GEOGRAPHY

CHAPTER: 2

OCEANS AND CONTINENTS



OCEANS

The largest water bodies we see on the globe are called 'oceans'.

But in the picture of the Earth you can see at least one other colour, brown.

This colour is that of land, which covers a little over one-fourth of the globe.

A large body of land is called a 'landmass', and a large continuous expanse of land is called a 'continent'.



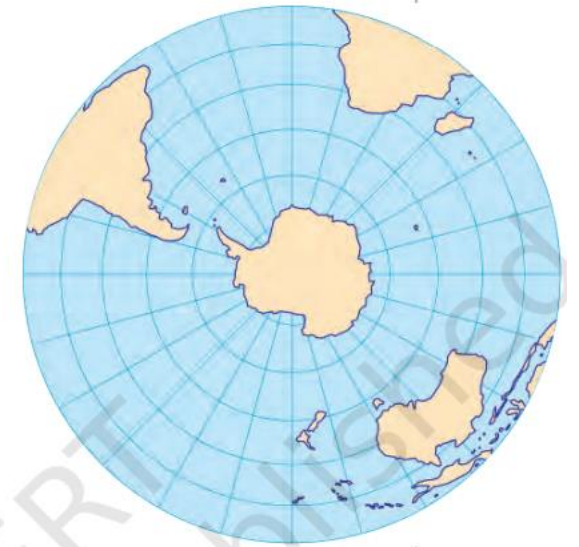


DON'T MISS OUT

The emblem of the Indian Navy contains the motto Sam noh Varunah (pronounced 'ŚhamnoVaruṇah'), which means, "Be auspicious to us, O Varuna." This is an invocation to Varuṇa, a Vedic deity associated with the oceans, the sky, and water in general.

The Distribution of Water and Land on the Earth

As it happens, oceans and continents are not distributed equally between the Northern and Southern Hemispheres.



If there is such abundance of water on the planet, why is there so much talk of ‘water scarcity’ or a ‘water crisis’?

- **Most Water is Saltwater:** The majority of Earth’s water is salty ocean water, which isn’t drinkable.
- **Limited Freshwater:** Freshwater, which we need for drinking and farming, is limited and not evenly distributed. It’s mostly trapped in glaciers, ice caps, or underground.
- **Pollution:** Many freshwater sources are polluted, making the clean water we have less accessible.
- **Overuse:** We use more freshwater than can be naturally replenished, leading to shortages.
- **Climate Change:** Changes in climate can affect where and how much freshwater is available.
- These issues make it challenging to access enough clean water, even though there is a lot of water on the planet.

Definition of the important terms: Marine, Flora and Fauna



Marine - Related to or found in the oceans and seas.



Flora - The plant life of a particular region or period of time.



Fauna - The animal life of a particular region or period of time.

Oceans



The largest water bodies we see on the globe are called ‘oceans’. There are five oceans. They are **Pacific Ocean, Atlantic Ocean, Indian Ocean, Southern Ocean, Arctic Ocean**.



The oceans together hold most of the water available on the planet. But this seawater is salty and unfit for consumption by most land animals, including humans.



On the other hand, freshwater makes up a very small proportion of the planet’s water resources.



It is found in glaciers, rivers, lakes, in the atmosphere and also underground (the last is called ‘groundwater’).

Continents

A large body of land is called a 'landmass', and a large continuous expanse of land is called a 'continent'. There are seven continents. They are **Asia, Africa, North America, South America, Antarctica, Europe** and **Australia**.

Continents can be counted in several ways. Depending on our choice, we may list any number of continents between four and seven!

Here is why:

1 North America and South America are generally considered to be two continents; but if seen as a single landmass, they can also be considered as one.



2 Europe and Asia are generally considered as two continents, although the map makes it clear that they form a single landmass. For historical and cultural reasons, Europe's evolution has been very different from Asia's, which is why they can be seen as two continents. Geologists, however, often regard them as a single continent called 'Eurasia'.



3 Africa and Eurasia are generally regarded as two continents, but sometimes as one.

Let us summarise the different counts in a table:

Count of continents (in alphabetical order)	
Four continents	Africa-Eurasia, America, Antarctica, Australia
Five continents	Africa, America, Antarctica, Australia, Eurasia
Six continents	Africa, Antarctica, Australia, Eurasia, North America, South America (<i>this is reflected in Fig. 2.3 on page 32</i>)
Seven continents	Africa, Antarctica, Asia, Australia, Europe, North America, South America

Marine life is considered to be highly diverse

- Many plant and animal species can be found across multiple oceans.
- The marine flora includes tiny plants called algae and all kinds of seaweeds; the marine fauna consists of thousands of species of colourful fish, dolphins, whales, and countless mysterious deep-sea creatures.
- Each part of the ocean, from the sun-lit surface to the dark depths, has its own diverse life forms.

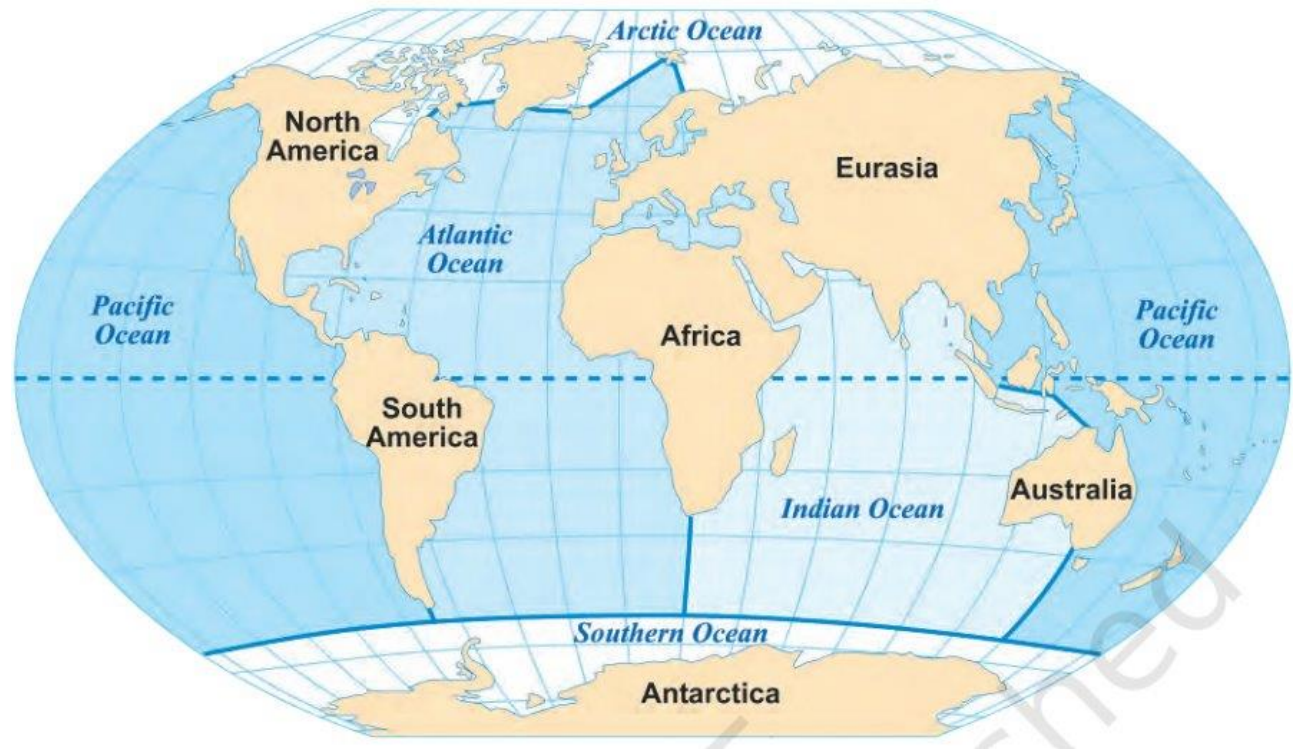


Locate the five oceans and, in the table below, mark the hemisphere or hemispheres they belong to.

Ocean	Northern Hemisphere	Southern Hemisphere
Pacific Ocean	Yes	Yes
Atlantic Ocean	Yes	Yes
Indian Ocean	Yes	Yes
Southern Ocean	No	Yes
Arctic Ocean	Yes	No

Oceans according to their size

- It is visible on the map that the Pacific Ocean is the largest of all,
- followed by the Atlantic Ocean.
- The Indian Ocean is the third largest,
- while the Southern Ocean is the fourth.
- The smallest one is the Arctic Ocean.



Limits of Oceans

- As the map of oceans makes clear, the main limits of the Indian Ocean are Asia to the north, Africa to the west and Australia to the east, apart from the Southern Ocean in the south.
- On either side of India, we find two parts of the Indian Ocean — the Arabian Sea to the west and the Bay of Bengal to the east.

The oceans play a crucial role in regulating the climate and sustaining life on Earth.

- Oceans and continents are vital parts of the environment and affect most aspects of our lives, even if we do not notice it.
- We have mentioned that oceans send rain to the continents; this is part of the Earth's water cycle, which you will further study in Science.
- Without oceans, for instance, there would be no rainfall! The Earth would be a desert.
- Moreover, more than half of the world's oxygen is produced by the oceans' flora, which is why they are called 'the planet's lungs'.
- The oceans, therefore, play a crucial role in regulating the climate and sustaining life on Earth.



The different ways oceans have affected human history.



Oceans have deeply impacted humanity in many other ways.



From early times, people have used oceans and seas to migrate to other regions, to trade in all kinds of goods, to conduct military campaigns, and as a source of food through fishing.



Oceans have also nourished the cultures of coastal people all over the world.



Almost all of them have tales and legends about the sea, sea gods and goddesses, sea monsters and treasures from the sea — the oceans' dangers but also their blessings.

Natural disaster that originates in the ocean

- Oceans often give rise to storms — violent events with extreme rainfall or very strong winds, such as cyclones, which can cause widespread damage to coastal regions of the world.
- A tsunami is another natural disaster that originates in the ocean. It is a huge and powerful wave generally caused by a strong earthquake or a volcanic eruption at the bottom of the ocean. Tsunamis can travel thousands of kilometres and submerge coastal areas, causing widespread damage.



DON'T MISS OUT

- You may have seen the five Olympic rings, one of the symbols of the Olympic Games. They symbolise the gathering of sportspeople from all over the world. The rings were chosen to represent five inhabited continents — Africa, America, Asia, Australia and Europe.



Islands

- Greenland is the largest island in the world.
- India has more than 1,300 small islands! Those include two major groups — Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep Islands in the Arabian Sea.

Indian Antarctica Programme

- Since 1981, the Indian Antarctica Programme has been exploring Antarctica, a continent with a very cold climate and harsh environment.
- In 1983, India established its first scientific base station there, called 'Dakshin Gangotri' (two more bases were established later).
- About 40 teams of Indian scientists have conducted research in this faraway region, especially on the evolution of climate and environment.
- The settlement where the scientists live has a library and even a post office!



The major roles of the ocean in supporting life on Earth.

- The United Nations has designated June 8 as World Oceans Day to “remind us all of the major role the ocean plays in everyday life.
- It serves as the lungs of our planet, a major source of food and medicine and a critical part of the biosphere.”



Identify two human-induced problems that contribute to the decline of marine environments.

- Scientific studies have shown how the oceans are polluted by human activity — we throw several million tonnes of plastic waste into the oceans every year, choking marine life.
- There are several other forms of pollution. As a result, the marine environment is under threat. Overfishing (excessive fishing) is another cause for the decline of marine life.
- It is our collective responsibility to protect oceans for the future of the planet and of humanity.





THANK YOU