Class 9 Social Science Chapter 10: Oceans and Life - Notes, Important Questions and MCQs (2026-27)

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These Class 9 Social Science Chapter 10 notes (Part 2, Chapter 1) cover “Oceans and Life” from the new NCERT textbook Understanding Society: India and Beyond (Part 2, 2026-27): submarine relief, movements of ocean water – waves, tides and currents – tsunamis and early warning, marine resources and their sustainable use, and maritime zones under international law – with tables, Q&A, 10 MCQs and a free PDF.

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Chapter Overview

Oceans cover most of the Earth and are vital for trade, travel, communication and regulating climate. The ocean floor has its own relief – continental shelves, slopes, abyssal plains, ridges, trenches and seamounts – which affects marine life, resources and exploration.

Ocean water moves as waves, tides and currents, influencing ecosystems, climate, fishing and navigation. Oceans provide food, minerals and energy, but need sustainable use. Countries divide the seas into maritime zones – territorial waters, contiguous zone, Exclusive Economic Zone and high seas – under international law such as UNCLOS.

Important Topics and Concepts

Submarine Relief

- Continental shelf: shallow, gently sloping extension of the continent; rich in fish and minerals.
- Continental slope and rise: steeper zone leading down to the deep ocean.
- Abyssal plain: flat, deep ocean floor.
- Mid-ocean ridges: underwater mountain chains; trenches: deepest parts; seamounts: underwater volcanic mountains, some flat-topped.
- Bathymetry is the study and mapping of underwater topography.

Waves

- Waves are formed mainly by wind blowing over the water surface.
- Wave energy erodes coasts through hydraulic action, forming cliffs, caves, arches and stacks.
- Waves also deposit sand to form beaches.

Tides

- Tides are the regular rise (high tide) and fall (low tide) of sea level caused mainly by the Moon’s gravitational pull, along with the Sun’s.
- Spring tides: Sun, Moon and Earth in a line (full and new moon) – highest high tides.
- Neap tides: Sun and Moon at right angles – smallest tidal range.
- Example: the Bhadkeshwar Mahadev Temple in Dwarka can be reached only at low tide.
- Tides help navigation, fishing and tidal energy.

Ocean Currents

- Continuous flows of ocean water in a definite direction, driven by winds, temperature and salinity differences and Earth’s rotation.
- Warm currents flow from the equator towards the poles; cold currents from the poles towards the equator.
- Where warm and cold currents meet, plankton thrive, creating rich fishing grounds.
- Currents influence coastal climates and navigation.

Tsunamis and Early Warning

- Tsunamis are giant waves usually caused by undersea earthquakes.
- The 26 December 2004 Indian Ocean Tsunami killed about 2,30,000 people; India was badly affected.
- India’s tsunami early warning system (INCOIS, Hyderabad) uses seismic stations, sea-level gauges and buoys to detect, verify and warn.
- INCOIS with IMD also runs a storm surge early warning system; alerts reach fishermen via mobile apps.

Marine Resources and Maritime Zones

- Marine resources: biotic (fish, seaweed) and abiotic (oil, gas, minerals, salt), plus energy and tourism.
- Sustainable use requires regulation, cooperation and conservation (linked to the global goal on life below water).

- Territorial sea: up to 12 nautical miles (NM) – full sovereignty; foreign ships have innocent passage.
- Contiguous zone: up to 24 NM – control over customs, immigration, pollution.
- Exclusive Economic Zone: up to 200 NM – rights over natural resources.
- High seas: beyond national jurisdiction, open to all.
- UNCLOS defines zones and helps settle disputes; MARPOL prevents pollution from ships.

Spring vs Neap Tides

Frequently asked.

Spring tide	Neap tide
Sun, Moon, Earth in a straight line	Sun and Moon at right angles
Full moon and new moon	First and last quarter moon
Highest high and lowest low tide	Smallest difference between tides

Maritime Zones

Zone	Extent from baseline	Rights of the coastal state
Internal waters	Landward of baseline	Full sovereignty
Territorial sea	Up to 12 NM	Sovereignty; innocent passage allowed
Contiguous zone	Up to 24 NM	Customs, immigration, sanitation control
Exclusive Economic Zone	Up to 200 NM	Rights over fishing, minerals, energy
High seas	Beyond EEZ	Open to all nations

Important Definitions and Terms

Term	Meaning
Continental shelf	Shallow extension of a continent under the sea
Abyssal plain	Flat, deep ocean floor
Trench	Long, narrow, deepest part of the ocean
Seamount	Underwater mountain, often volcanic
Bathymetry	Mapping of underwater topography
Tide	Periodic rise and fall of sea level
Ocean current	Continuous directed flow of ocean water
Tsunami	Giant sea wave caused by undersea earthquakes
EEZ	Exclusive Economic Zone up to 200 NM
UNCLOS	UN Convention on the Law of the Sea

Short Answer Questions

Q1. Why are continental shelves important?

They are shallow and rich in fish, oil, gas and minerals.

Q2. What causes tides?

Mainly the gravitational pull of the Moon, along with the Sun.

Q3. Differentiate between spring and neap tides.

Spring tides occur when Sun, Moon and Earth are in line and have the highest range; neap tides occur when they are at right angles and have the lowest range.

Q4. Why are areas where warm and cold currents meet good for fishing?

Plankton grow well there, attracting large numbers of fish.

Q5. What happened on 26 December 2004?

A massive Indian Ocean tsunami killed about 2,30,000 people across many countries, including India.

Q6. Which Indian institution issues tsunami warnings?

INCOIS (Indian National Centre for Ocean Information Services).

Q7. What is the extent of territorial waters?

Up to 12 nautical miles from the baseline.

Q8. What rights does a country have in its EEZ?

Rights to explore and use natural resources like fish, oil and minerals up to 200 NM.

Long Answer Questions

Q1. Describe the main features of submarine relief.

Continental shelf – shallow, resource-rich.

Continental slope and rise – steep descent.

Abyssal plain – flat deep floor.

Mid-ocean ridges and seamounts – underwater mountains.

Trenches – deepest parts of oceans.

Q2. Explain waves, tides and currents and their importance.

Waves – wind-driven, shape coasts.

Tides – rise and fall due to Moon and Sun; help navigation and tidal energy.

Currents – directed flows driven by winds, temperature, salinity, rotation.

Currents affect climate and fishing grounds.

All influence marine ecosystems and human activity.

Q3. Explain maritime zones and the role of UNCLOS.

Territorial sea up to 12 NM – sovereignty with innocent passage.

EEZ up to 200 NM – resource rights.

High seas – open to all.

UNCLOS defines these zones and helps resolve disputes; MARPOL controls ship pollution.

MCQs with Answers

1. The deepest parts of oceans are(a) ridges (b) trenches (c) shelves (d) plainsAnswer: (b) trenches

2. Tides are mainly caused by the(a) wind (b) Moon (c) Earth’s core (d) riversAnswer: (b) Moon

3. Spring tides occur at(a) quarter moons (b) full and new moon (c) only full moon (d) only eclipsesAnswer: (b) full and new moon

4. Territorial waters extend up to(a) 12 NM (b) 24 NM (c) 200 NM (d) 100 NMAnswer: (a) 12 NM

5. EEZ extends up to(a) 12 NM (b) 24 NM (c) 200 NM (d) 350 NMAnswer: (c) 200 NM

6. Indian Ocean tsunami occurred in(a) 2001 (b) 2004 (c) 2010 (d) 2015Answer: (b) 2004

7. Tsunami warnings in India are issued by(a) ISRO (b) INCOIS (c) NITI Aayog (d) RBIAnswer: (b) INCOIS

8. UNCLOS deals with(a) law of the sea (b) air travel (c) climate (d) trade tariffsAnswer: (a) law of the sea

9. MARPOL aims to prevent(a) overfishing (b) pollution from ships (c) piracy (d) tsunamisAnswer: (b) pollution from ships

10. Bhadkeshwar Mahadev temple is reachable at(a) high tide (b) low tide (c) night only (d) monsoon onlyAnswer: (b) low tide

Quick Revision Points

- Relief: shelf, slope, rise, abyssal plain, ridge, trench, seamount.
- Waves (wind), tides (Moon/Sun), currents (winds, temperature, salinity, rotation).
- Spring vs neap tides.
- Tsunami 2004; INCOIS warning system.
- Marine resources; sustainable use.
- Zones: 12, 24, 200 NM; high seas; UNCLOS, MARPOL.

Chapter Summary

Oceans support trade, travel, climate regulation and resources. The ocean floor has continental shelves, slopes, abyssal plains, ridges, trenches and seamounts. Ocean water moves as waves, tides and currents, which shape coasts, influence climate and support fishing and navigation.

Tsunamis like that of 2004 show the need for early warning systems such as India’s INCOIS. Marine resources must be used sustainably, and international law – especially UNCLOS – divides the seas into territorial waters, contiguous zones, EEZs and high seas to manage rights and settle disputes.

Exam Tips and PYQ Pattern

- Maritime zones table with NM values is very important.
- Draw spring and neap tide positions.
- Learn submarine relief features with one line each.
- Use the 2004 tsunami and INCOIS as examples.
- Know UNCLOS and MARPOL full forms.

Frequently Asked Questions

Is this chapter in the 2026-27 CBSE syllabus?

Yes. It is part of the new NCERT Class 9 Social Science textbook “Understanding Society: India and Beyond” (Part 2, Chapter 1), prescribed for the 2026-27 session.

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What are the maritime zones?

Internal waters, territorial sea (12 NM), contiguous zone (24 NM), Exclusive Economic Zone (200 NM) and high seas.

What causes tides?

Mainly the gravitational pull of the Moon, with some effect of the Sun.

Conclusion

Oceans and Life shows how the seas shape climate, livelihoods and international relations. Learn the zones and tides tables, practise the Q&A here and save the free PDF for revision.

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Author Bio: Written and reviewed by the Nextoper Editorial Team, a group of CBSE social science educators who build chapter notes directly from the NCERT textbook and past board paper patterns.

Freshness Note: These notes follow the NCERT Class 9 Social Science textbook, Understanding Society: India and Beyond (Parts 1 and 2, first edition 2026, NCF-SE 2023), and the CBSE syllabus for the 2026-27 session. Last checked on 23 November 2026.