

GENERAL STUDIES II

Baltic Sea 2026: Complete UPSC Geography Notes

Faculty/Author: Faculty Editorial Board

Date: 21 October 2026

Platform: Civil Service Gurukul Research Wing

Reading Time: 5 Mins

The Baltic Sea, a semi-enclosed brackish sea in Northern Europe, is facing persistent ecological stress due to nutrient pollution, eutrophication, oxygen-depleted seabeds and declining fish populations. On 19 October 2026, the Nordic Council highlighted the need for stronger regional cooperation and marine conservation initiatives. Bordered by nine countries and connected to the North Sea through the Danish Straits, the Baltic Sea is an important topic for UPSC map-based questions and environmental studies. These original Civil Service Gurukul notes cover physical geography, coastal countries, gulfs, straits, major rivers, marine pollution, HELCOM, the Baltic Sea Action Plan, Prelims MCQs and Mains model answers.

Civil Service Gurukul

KNOWLEDGE | DISCIPLINE | SUCCESS
UPSC PRELIMS & MAINS 2027

PLACES IN NEWS | WORLD MAPPING

Complete UPSC geography and environment notes covering the Baltic Sea, Danish Straits, major gulfs, its brackish-water ecosystem, Nordic cooperation and HELCOM.

Published: 21 October 2026 GS Paper I & III UPSC Prelims 2027 Civil Service Gurukul

Why in News? On 19 October 2026, the Nordic Council highlighted the persistent environmental deterioration of the Baltic Sea. The key concerns include **nutrient pollution, eutrophication, oxygen-depleted seabeds and stressed fish stocks**. The development makes the Baltic Sea important for UPSC map-based geography, marine ecology and international environmental governance.

Bordering Countries

Brackish

Low-Salinity Sea

2030

Action Plan Implementation Horizon

UPSC GS Section / Paper

GS Paper I: World Geography, physical features, seas, straits and location based questions.

GS Paper III: Environmental pollution, marine biodiversity, eutrophication and ecological conservation.

GS Paper II: Regional institutions and international environmental cooperation.

UPSC Prelims: Countries, rivers, gulfs, straits and environmental terminology.

Table of Contents

1. Location and Geography
2. Neighboring Countries
3. Danish Straits and Gulfs
4. Physical Characteristics
5. Current Environmental Crisis
6. Eutrophication Explained
7. Marine Dead Zones
8. Economic and Strategic Importance
9. HELCOM and Baltic Sea Action Plan
10. Challenges and Way Forward
11. Prelims Revision Notes
12. Prelims Practice MCQs
13. Mains Model Answer
14. Frequently Asked Questions
15. Conclusion

1. Where Is the Baltic Sea Located?

The Baltic Sea is a semi-enclosed sea situated in Northern Europe. It lies between the Scandinavian Peninsula and continental Europe.

It forms part of the broader Atlantic Ocean system through its connection with the North Sea.

The sea is relatively shallow and receives freshwater from numerous rivers.

Its restricted exchange with the North Sea creates distinctive salinity and ecological conditions.

Prelims map fact: The Baltic Sea connects with the North Sea through the Danish Straits, not through the Bosphorus or the Strait of Gibraltar.

2. Nine Countries Bordering the Baltic Sea

Country	Geographical Relevance
Denmark	Western entrance and Danish Straits
Sweden	Western and northern Baltic coast
Finland	Northern Baltic coast and Gulf of Finland
Russia	Gulf of Finland and Kaliningrad coast
Estonia	Eastern Baltic coast
Latvia	Eastern coast and Gulf of Riga
Lithuania	Southeastern Baltic coast
Poland	Southern Baltic coastline
Germany	Southwestern Baltic coastline

Which Are the Three Baltic States?

The term **Baltic States** refers specifically to Estonia, Latvia and Lithuania.

Although Sweden, Finland and Denmark also border the Baltic Sea, they are not included in the three Baltic States.

Norway is a Nordic country, but it does not have a Baltic Sea coastline.

3. Important Straits, Gulfs and Rivers

Danish Straits

The principal Danish passages include the Øresund, the Great Belt and the Little Belt.

These passages form part of the route between the Baltic Sea and the North Sea.

Major Gulfs

Gulf	Location
Gulf of Bothnia	Between Sweden and Finland
Gulf of Finland	Between Finland and Estonia, extending toward Russia
Gulf of Riga	Between Estonia and Latvia

Important Rivers

Major rivers entering the Baltic Sea system include the Vistula, Oder, Neva, Daugava and Neman.

These rivers contribute freshwater and transport land-based nutrients into the marine environment.

4. Why is the Baltic Sea Geographically Unique?

Brackish Water

The water contains less salt than ordinary ocean water due to substantial freshwater inputs.

Restricted Exchange

Narrow sea connections restrict the exchange of water with the North Sea.

Stratification

Surface and deeper water layers can have different salinities and densities.

Post-Glacial Formation

The sea's development was shaped by the retreat of major Pleistocene ice sheets.

These physical characteristics influence the distribution of dissolved oxygen, marine species and pollution.

Stable water layering can make it harder for oxygen-rich surface water to reach deeper basins.

5. Baltic Sea Environmental Crisis 2026

The Nordic Council's October 2026 discussion highlighted continuing pressure on the Baltic Sea ecosystem.

Important concerns include nutrient enrichment, algal blooms, poor seabed oxygen conditions and declining fish-stock health.

Major Environmental Threats

✓ Excess nitrogen and phosphorus.

✓ Agricultural nutrient runoff.

✓ Municipal wastewater pollution.

✓ Marine eutrophication.

✓ Oxygen-depleted seabed habitats.

✓ Pressure on cod, herring and other fish stocks.

✓ Climate-related ecological stress.

Important 2026 Current Affairs Fact

The Nordic Council reported that, among 15 assessed commercial fish stocks, only about four on average were in good condition during 2016–2021.

The figure describes the historical assessment period, not the precise condition of every stock in October 2026.

6. Eutrophication: The Main Pollution Problem

Eutrophication is the enrichment of a waterbody with nutrients, primarily nitrogen and phosphorus.

Excess nutrients can stimulate rapid growth of algae. When the resulting organic matter decomposes, oxygen in the water may be consumed.

How Eutrophication Develops



Why Recovery Takes Time

Nutrients stored in seabed sediments can continue to influence the ecosystem, even after external inputs fall.

This internal nutrient recycling, compounded with restricted water exchange, can delay recovery.

7. Marine Dead Zones, Hypoxia and Anoxia

Term	Meaning
Hypoxia	Low dissolved oxygen concentration.
Anoxia	Absence of dissolved oxygen.
Dead Zone	Severely oxygen-depleted water where many organisms cannot thrive.
Stratification	Separation into water layers with differing density.

Dead zones can damage bottom-dwelling organisms, reduce habitat quality and disrupt marine food webs.

In some areas, low-oxygen sediments can release previously stored phosphorus, further reinforcing the eutrophication cycle.

8. Economic, Historical and Strategic Importance

Maritime Trade

The Baltic Sea is an important European shipping corridor.

Major ports in its region include Stockholm, Helsinki, Riga, Gdańsk and Saint Petersburg.

Historical Trade

The Hanseatic League connected trading towns around the Baltic and North Sea regions during medieval Europe.

Fisheries

Fishing supports regional coastal economies. Environmental degradation can affect catches, employment and food supply.

Security and Geopolitics

The Baltic Sea is strategically significant because it borders several European states and Russia and contains important shipping and infrastructure routes.

9. HELCOM and the Baltic Sea Action Plan

HELCOM stands for the Baltic Marine Environment Protection Commission.

It coordinates regional marine environmental cooperation under the Helsinki Convention.

Baltic Sea Action Plan

The Baltic Sea Action Plan was adopted in 2007 and updated in 2021.

It provides a framework for improving the environmental condition of the Baltic Sea through measures intended for implementation by 2030.

Priority	Policy Objective
Biodiversity	Healthy and resilient marine ecosystems.
Eutrophication	Reduction of excess nutrient loading.
Hazardous Substances and Litter	Lower marine pollution.
Sea-Based Activities	Environmentally sustainable maritime activities.

Important distinction: The Nordic Council is a regional political cooperation institution. HELCOM is a specialised regional marine environment protection body. They have different roles.

10. Challenges and the Way Forward

- ✓ **Reduce agricultural runoff:** Promote efficient fertiliser application and nutrient management.

✓ **Improve wastewater treatment:** Remove more nitrogen and phosphorus before discharge.

✓ **Protect coastal wetlands:** Maintain natural systems that help filter pollutants.

✓ **Restore marine habitats:** Protect biodiversity and ecological functioning.

✓ **Strengthen fisheries management:** Apply sustainable catch and stock-recovery practices.

✓ **Improve international coordination:** Use shared monitoring, environmental targets and scientific cooperation.

The Baltic Sea demonstrates that transboundary environmental problems cannot be addressed effectively through isolated national policies alone.

11. UPSC Prelims 2027: Quick Revision

Topic	Key Fact
Sea	Baltic Sea
Location	Northern Europe
Coastal Countries	9
Baltic States	Estonia, Latvia, Lithuania
Connection	North Sea via Danish Straits
Water Type	Brackish
Gulfs	Bothnia, Finland, Riga
Rivers	Vistula, Oder, Neva, Daugava, Neman
Main Ecological Issue	Eutrophication
Main Nutrients	Nitrogen, phosphorus
Oxygen-Deficient Water	Hypoxia
Marine Protection Body	HELCOM
Action Plan Adopted	2007
Action Plan Updated	2021
Action Plan Horizon	2030

12. UPSC Prelims Practice MCQs

Question 1

Which of the following countries border the Baltic Sea?

1. Sweden
2. Poland
3. Norway
4. Estonia

- (a) 1 and 2 only
- (b) 1, 2 and 4 only
- (c) 2, 3 and 4 only
- (d) All four

Show Answer

Correct Answer: (b). Norway does not border the Baltic Sea.

Question 2

The Baltic Sea is connected to the North Sea through:

- (a) Bab-el-Mandeb
- (b) Danish Straits
- (c) Strait of Hormuz
- (d) Bering Strait

Show Answer

Correct Answer: (b).

Question 3

The Baltic Sea is brackish because:

- (a) It contains no freshwater
- (b) Freshwater mixes with restricted inflows of saline seawater
- (c) It is located in the Indian Ocean
- (d) It has no connection with other seas

Show Answer

Correct Answer: (b).

Question 4

Which nutrients are primarily responsible for eutrophication?

- (a) Nitrogen and phosphorus
- (b) Iron and gold
- (c) Helium and neon
- (d) Sodium and chlorine alone

Show Answer

Correct Answer: (a).

Question 5

Consider the following statements:

1. HELCOM deals with Baltic marine environmental protection.
2. The Baltic Sea Action Plan was updated in 2021.
3. The Nordic Council and HELCOM are the same institution.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) All three

Show Answer

Correct Answer: (b). The two organisations are distinct.

13. UPSC Mains GS-III: Model Answer

Practice Question — 15 Marks

"The ecological degradation of the Baltic Sea demonstrates the importance of transboundary cooperation in marine conservation." Discuss with special reference to eutrophication and oxygen-depleted marine environments.

Suggested length: 250 words

Model Answer

Introduction: The Baltic Sea is a semi-enclosed brackish waterbody in Northern Europe. Its restricted seawater exchange and dense network of river catchments make it environmentally sensitive. In October 2026, the Nordic Council highlighted persistent ecological stress.

Causes: Agricultural runoff, untreated or inadequately treated wastewater and other sources contribute nitrogen and phosphorus. Excess nutrients promote algal blooms, while decomposition reduces dissolved oxygen. Salinity-driven stratification limits the renewal of deep waters.

Consequences: Oxygen depletion affects marine biodiversity, fish populations and seabed habitats. Degraded water quality can also undermine fisheries, tourism and coastal livelihoods.

International Response: HELCOM and the Baltic Sea Action Plan support regional cooperation, nutrient reduction, biodiversity protection and monitoring. Stronger wastewater treatment, sustainable agricultural practices and ecosystem restoration are essential.

Conclusion: The Baltic Sea highlights the importance of integrated land-to-sea governance, scientific monitoring and long-term cooperation for restoring marine ecosystems.

14. Frequently Asked Questions

Q1. Where is the Baltic Sea?

In Northern Europe, between Scandinavia and continental Europe.

Q2. How many countries border it?

Nine countries.

Q3. Which are the Baltic States?

Estonia, Latvia and Lithuania.

Q4. Why does the Baltic Sea face eutrophication?

Excessive nitrogen and phosphorus enter through agriculture, wastewater and other sources.

Q5. What is HELCOM?

The Baltic Marine Environment Protection Commission.

Q6. Which GS papers cover the topic?

Primarily GS-I World Geography and GS-III Environment and Ecology.

15. Conclusion: A Global Lesson in Marine Conservation

The Baltic Sea is important for its distinctive physical geography, nine coastal countries and connection with the North Sea through the Danish Straits.

Its environmental problems demonstrate how nutrient pollution, restricted water exchange and oxygen depletion can threaten marine life.

The October 2026 Nordic Council initiative reinforces the importance of regional cooperation and evidence-based policy.

For UPSC aspirants, the most important approach is to combine map-based facts with environmental processes and international governance.

Join our Integrated Guidance Program for World Geography, Environment, Indian Polity, International Relations and Current Affairs, including Prelims practice and Mains answer writing.

[Enquire About Courses](#)[Visit Our Website](#)

Educational Disclaimer: This is an original educational article prepared by Civil Service Gurukul for UPSC and State PCS. The current affairs context is based on developments reported up to 21 October 2026. Future proposals are not presented as completed policies.

Civil Service Gurukul

Knowledge | Discipline | Success

CIVIL SERVICE GURUKUL

UPSC Preparation • Current Affairs • Mentorship • Test Series

Website: www.civilservicegurukul.com • Email: info@civilservicegurukul.com • Mobile: +91 9911020626