

# 03 JANUARY 2023 → DAILY QUESTIONS & MODEL ANSWERS:

**Q1. The worrisome rate of sea level rise could have a number of severe effects on the coastal states. Examine how vulnerable India is to sea level rise driven on by global warming. (250 words)**

**Paper & Topic: GS III → Environmental Conservation**

- **Model Answer:**

- **Introduction:**

- An increase in ocean levels as a result of global warming and other reasons is referred to as "sea level rise." According to a draught analysis from the United Nations Intergovernmental Panel on Climate Change, destructive changes have already begun. The draught assessment predicts that by the year 2050, many low-lying megacities and small island states will regularly experience extreme sea level occurrences, even under the most hopeful scenario for carbon reduction. The United States of America, China, India, and the European Union would experience the harshest consequences of climate change's effects on the ocean and ice, according to a report.

- **Body:**

- **The speed of sea level rise is concerning:**

- Sea levels have increased by 180 to 200 millimetres since 1900.
- If no coastal defences or adaptation measures are put in place by 2100, almost 5-0.7% of the planet's geographical area may experience intermittent coastal flooding, which would affect 2.5-4.1% of the global population.
- By the year 2100, there will be an increase in the number of individuals who could be harmed by periodic coastal flooding from 128 to 171 to 176-287 million.

- **Effects of sea level rise on coastal states:**

- Loss of habitat: The majority of the world's beaches and islands are within 200 km of nearly 3 billion people.
- De-urbanization is the effect of habitation loss brought on by sea level rise.
- Due to the soil subsiding about 25 cm year, Indonesia aims to move its capital to Jakarta, the "world's fastest-sinking city".
- It may significantly affect tourism and leisure through affects on landscapes (such as beaches), cultural features, etc.
- Agriculture: Due to land submergence, salinization of soil and fresh groundwater resources, and land loss due to permanent coastal erosion, SLR will have an influence on agriculture and have implications for production, livelihood diversification, and food security.
- SLR significantly affects ecosystems, which in turn has an adverse effect on the coastal aquaculture and fishing industries (e.g., coral reef degradation, reduced water quality in deltas and estuarine environments, soil salinisation, etc.).
- Influence on Small Island Nations: Small islands have a high coastline-to-land-area ratio, hence most of their settlements, farms, and important infrastructure are found along or along the shores.

- **India's vulnerability to the effects of global warming-related sea level rise:**

- Sea levels around the Indian coast are predicted to rise by as much as 2.8 feet by the end of the century as a result of global warming, according to a study by the Indian National Centre for Ocean Information Services in Hyderabad.
- Of India's 1.4 billion people, about 170 million reside in the coastal areas, which are especially susceptible to the consequences of a changing climate because of erosion, sea level rise, and natural catastrophes like cyclones and tropical storms.
- The strongest cyclone to hit the Bay of Bengal in decades, Cyclone Amphan, in May 2020, forced the evacuation of several million people, providing the most recent illustration of this vulnerability.
- Climate change is expected to submerge significant areas of Mumbai by 2050, having an impact on millions of people.
- Between 1990 and 2016, India lost 235 square kilometres of land owing to coastal erosion, endangering people's homes and means of subsistence. The only option was for the government to intervene and assist people in escaping to safer areas.
- According to scientific forecasts, 36 million Indians are anticipated to reside in often flooded areas by the year 2100.
- Sea level surrounding Asia in the North Indian Ocean has risen more quickly than the global average due to the loss of coastal lands and shoreline erosion.

- Millions of people who currently reside in major coastal metropolitan regions, such as Mumbai, Chennai, and Kolkata, are at risk of flooding and sea level rise, and it is possible that they will relocate to safer areas in the future.
- To prevent forced migration and displacement in such circumstances, population removal from high-risk areas would need to be carefully managed and preemptive.
- **Strategies for adaptation:**
  - Integrated coastal management will assist in resource management by employing an integrative, holistic approach and an interactive planning method to address the complex management issues in the coastal area.
  - The Coastal Regulation Zone notices issued under the Environmental Protection Act of 1986 will help this integrated management.
  - Local government ownership Policymakers should involve stakeholders early on in the decision-making process to increase overall resilience in coastal areas and to promote community ownership.
  - Rotterdam has given other municipalities a model for how to deal with flooding and land loss. Barriers, drainage systems, and avant-garde architectural features like a "water square" with temporary ponds have all been built by the city of Rotterdam.
- **Getting Ready for Sea Level Rise:**
  - Moving utility infrastructure, such as treatment centres and pump stations, to higher elevations would reduce the risks from coastal flooding.
  - Knowledge of and modelling of groundwater conditions will guide aquifer management and predicted changes in water supply and quality.
  - Plans for coastal restoration could expand the habitat that coastal ecosystems like mangroves and wetlands provide as a barrier against storm surge damage. This would preserve water utility infrastructure.
  - The addition of fresh water to aquifers can help act as a barrier while incursion replenishes groundwater supplies.
  - decreasing global warming Carbon emissions can be reduced by using renewable energy sources (solar, wind) more frequently. Nations must act rapidly to meet their NDCs and advance carbon sequestration.

- **Conclusion:**

- The Paris Agreement provides a clear plan for reducing global warming and, consequently, sea level rise. The threat caused by climate change and the measures being taken to prevent it must be understood by representatives of the general public, various government agencies, scientists, industry, and communities. Disasters brought on by sea level rise must be avoided at all costs since they are a gradual but devastating catastrophe.

**Q2. Do you think religion can provide moral guidance? cite examples to back your claims. (150 words)**

**Paper & Topic: GS IV → Ethics**

- **Model Answer:**

- **Introduction:**

- Ethics is the study of right and wrong, good and evil. Ethics and religion coincide in how they address these concerns. Our society was built with religion as its cornerstone. Every religion also has a set of tenets that outline what it deems to be right and wrong. The long-running and ongoing argument over whether morality requires religion. In the Euthyphro, Socrates famously questioned whether goodness is great because it is adored by the gods or if goodness is liked by the gods because it is good.

- **Body:**

- **As a source of moral guidance, religion:**

- Religion has a crucial role in defining a person's cultural identity. Religion helps provide an ethical framework and acts as a standard for moral behaviour in daily life. The development of a person's character is helped by this particular tactic. To put it another way, religion acts as a socializational force. As a result, religion aids in the growth of virtues like love, empathy, respect, and harmony.
- Morality is served by religion in the same way that a seed planted in the earth is served by water. Similar to how a seed is stifled underground when it is not adequately hydrated, morality that

lacks the sustaining power of religion is thin and dry and ultimately perishes. In other words, morality without religion would be useless.

- In addition to creating money to assist current and future commercial and economic progress, India has a long heritage of "caring for the society." This has taken many different forms, such as the building and development of hospitals, schools, and other educational facilities, as well as a number of institutions for charity and religion, and continued support of other religious and humanitarian endeavours.
- Every religion promotes its fundamental principles, which have always been concerned with the prosperity and well-being of the general public. For instance, the Sanatana Dharma cultivates and encourages love and compassion in society through the ideas of Sarve Sukhina Bhavantu and Vasudaiva Kutumbakam (the world is a family) (let everyone be happy).
- The two are the same as religious adherents who solely base their ethical judgements on their religion beliefs. Therefore, some Christians believe that divorce is wrong because it disobeys God's word. While some think that religious and ethical duties can coexist and even be related. For instance, some individuals think that adultery is wrong since it goes against God's law and involves deceiving one's spouse.
- However, individuals (Atheists) who hold the secular concerns to be the foundation of ethics disagree on related matters. One of the problems with basing ethics on a specific set of religious ideas is that it leaves those in the dark who do not share those beliefs. These people have no reason to bow to god's authority. Due to this problem, many people now base their ethical principles on objective facts rather than generally accepted religious ideas.
- **Conclusion:**
- Naturally, not every religion is the same; some are more liberal than others, while others are more conservative; but, broadly speaking, every religious tradition believes that their religion may help people find wisdom and redemption. Genuine religious understanding dismantles the barriers between various religions. By cultivating tolerance for different faiths, we will come to truly comprehend our own. Of course, tolerance does not muddy the lines separating good from evil or right from wrong. Religion thus develops into a source of ethics.