

## MARINE LIFE: ISSUES AND CONCERNS

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Marine life refers to the diverse collection of living organisms that water life bodies or marine life which we call as it's related to water body organisms. As in the 21<sup>st</sup> century or today's current era due to the development of technology or other industrial areas due to the advancement of life, it is affecting nature more and more today. Nature includes water, air, land, etc areas that cover every aspect of life, and one of the affecting areas is marine life which is a concerned issue related to the Environment. The world's ocean and marine ecosystems are facing a myriad of critical issues and concerns that demand urgent attention and action. And to that marine life includes marine plants, marine mammals, and other organisms which are important for our ecosystem and are getting affecting day to day and some of the species are getting extinct due to the development and technological advancement. There are many issues which are in the current era that should be needed to take action like overfishing, pollution, climate change, and biodiversity loss. Marine life is one of the major aspects that provide a livelihood to humans and protect us from harmful sources that can affect our earth and us humans. Climate change is a major as why because the environment of our earth is affecting today's life and that's why marine life issues and concerns should also be taken in awareness to take actions related to issues and concerns which is rising so that the ecosystem of our earth is not harmed it also includes our major topic which is our ozone layer which is a fundamental main issue as we are breathing because of having such environment but due to the effect on nature it is affecting on our ozone layer too which provides oxygen from our nature where marine life plays a major role.

Effective solutions to address these issues and concerns include strengthening marine conservation efforts, implementing sustainable fisheries management practices, reducing pollution, and mitigating climate change impacts. Global cooperation, regulations, and public awareness are crucial in safeguarding the diverse and valuable marine. The issues and concerns not just affect marine life but also the well-being of millions of people who depend on the ocean for their livelihoods and sustenance.

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## INTRODUCTION

“Water is the most essential source of life as there is no life without water. Water is the only common substance to exist as a solid, liquid, or gas under conditions normal to life on Earth. Marine life, sea life, and ocean life are the plants, animals, and other organisms that live in the salt water of the seas or oceans or the brackish water of the coast. Marine life affects the nature of the planet. Marine organisms, mostly microorganisms produce oxygen and sequester carbon”.

Marine life is important because it exists life which is important because it exists life is important for our ecosystem to balance the earth which produces oxygen such as: -

**Marine Plants** – Seaweeds, kelp, and phytoplankton which are a source of marine food chains that produce oxygen through photosynthesis.

**Marine Mammals** – Dolphins, whales, seals, and sea lions are mammals which is important for our ecosystem, and because of the pollution, it affects their health, making their species extinct nowadays.

**Fish** – From small fish to large fish all are lively resources of humans as they depend on the food for them. Fishes like sharks, tuna, marlins etc.

**Marine Invertebrates** – This category comprises a vast number of animals such as corals, jellyfish, crabs, lobsters a variety of other species that are a source of eating to humans but if they continue to be affected by pollution, it can harm them.

**Reptiles** – Reptiles such as sea turtles are closely related to the marine environment and spend a significant portion of their lives in the sea.

**Marine Birds** – Seabirds like Penguins, gulls, albatrosses, and Siberian birds are important parts of the ecosystem and they rely on the ocean for food and habitat.

**Microscopic life** – Plankton which consists of – Phytoplankton – and zooplankton (microscopic animals) plays a foundation role in marine ecosystems by forming the basis of the marine food chain.

As we can see from the above-listed life of marine how many are these living organisms and how they are important for our earth and our ecosystem to be balanced as they contribute to

climate regulation, oxygen, production, and nutrient cycling? These Ecosystem also provide resources for the human population including food, economic opportunities through fisheries, tourism, and more. The Conservation and sustainable management of marine life are crucial to ensure the health of marine ecosystems and their continued benefits to both the environment and human society.

## **ISSUES RELATED TO MARINE LIFE**

As our current situation, marine life is facing many problems that are specific to the country's unique coastal and marine environments –

**Overfishing** – Overfishing and unsustainable fishing practices are leading to economic and ecological consequences. The Indian government has implemented various measures to regulate fishing and promote sustainable practices.<sup>1</sup>

**Habitat Degradation** – Coastal development which includes port constructions to technology advancement in this era could result in habitat degradation and loss of marine ecosystems such as coral reefs and mangroves.

**Marine Pollution** – Pollution which comes from industrial and domestic sources, as well as plastic waste materials are affecting marine life, leaving them extinct. Coastal areas are particularly vulnerable to pollution, which can harm marine life and disrupt ecosystems.<sup>2</sup>

**Illegal Fishing** – In Indian waters, many foreign countries encroaching and depleting fish stocks where it is illegal, unreported, and unregulated fishing is a significant concern.

**Bycatch** – The bycatch of non-target species, including endangered sea turtles, dolphins, and sharks, is a common problem in Indian fisheries

**Marine Biodiversity Loss** – Several marine species like sharks, whales, and sea turtles are threatened by overfishing and habitat loss which has been disrupting the marine ecosystem as things are imbalanced, and due to that the species would become extinct.

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<sup>1</sup> <https://www.juscorpus.com/key-problems-faced-by-aquaculture-in-india/>

<sup>2</sup> <https://www.legalserviceindia.com/legal/article-3982-marine-pollution-in-india-and-its-laws.html>

Climate Change Impacts – Rising temperature and extreme weather which is causing immense heat which is where they are linked to climate change and are causing coral bleaching, shifting distribution of marine species, and other changes in India's marine environment.

Coastal Erosion – Coastal erosion is affecting the beaches and coastal sites which is the loss of nesting sites for sea turtles and breeding grounds for birds.

Oil Spills – The transportation of oils by ships from country to country and hazardous materials in the maritime industry pose a risk of oil spills, which can have severe environmental consequences.

Lack of effective enforcement – The need for marine regulations and rules should be implemented more and be enforceable to meet the needs of marine life so that it can be protected as there are limited resources and enforcement capabilities, resulting in difficulties in curbing illegal activities.

Efforts should be made as many issues are increasingly related to Marine life problems where the species are in danger and becoming extinct so India should involve the implementation and strengthening of marine conservation and fisheries management, coastal zone regulations, and international collaborations to combat all these issues. Public awareness and involvement in marine conservation are important components of ongoing efforts to protect and sustainably manage India's marine life.

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### **NECESSITY OF MARINE LIFE**

- Marine life is a very important aspect of our environment which is needed to balance and be protected as it is an important part of our nature which is protecting and is an important resource on which humans are dependent.
- Marine provides us with food and maintains our ecosystem which helps our planet Earth to be well protected by maintaining our ozone layer and other natural aspects in which are living.
- Mostly marine life species whether plants or animals are keeping us protected from dangerous atmospheres or radiation which are present there and providing us with food and nutrients to keep us strong.
- Marine life resources are so useful which is keeping and making our economic opportunities stronger day by day

- The vast array of species that are unique and not found easily is the biodiversity which is essential for the overall health and stability of the planet's ecosystem.
- Oxygen production plays an important role in marine plants only as it helps in producing oxygen through photosynthesis. Marine photosynthesizers are estimated to contribute at least 50% of the Earth's oxygen.
- Ocean plays a critical role in climate regulations as they absorb large amounts of carbon dioxide helping to mitigate climate change. Additionally, ocean currents and circulation patterns influence weather and climate systems.
- Marine organisms provide a large number of sources for medicine which help save human life for the treatment of cancer, pain, and bacterial infections.
- Coastal ecosystems, including mangroves, salt marshes, and coral reefs, provide natural defenses against coastal erosion, storms, and tsunamis that help protect human communities and infrastructure from the impacts of extreme weather events.
- Marine ecosystems provide vital information to scientist all over the world where insights into the history of life on Earth is provided and have been valuable scientific research that helps in understanding the planet's geology, climate, and biological evolution.
- Marine life holds cultural, spiritual, and recreational significance for many people which is a source of inspiration, art, and recreation for those who hold their heritage there.

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Preserving marine life is important for maintaining ecological, economic, and cultural benefits. Threats to marine life such as overfishing, habitat destruction, pollution, and climate change, need to be addressed by the government and the public to ensure the sustainability of marine ecosystems and the well-being of future generations. Conservation efforts, management, and international cooperation can help together to solve the problems in protecting the world's ocean and their inhabitants.

### **CONCERNS NEED TO BE SOLVED IMMEDIATELY**

- Overfishing
- Illegal, Unreported and Unregulated fishing
- Habitat destruction
- Marine pollution

- Climate change
- Ocean acidification
- Plastic pollution
- Invasive species
- Oil spills
- Loss of biodiversity
- Overuse of resources for tourism

These are the concerns that should be addressed as it is impacting the environment which is affecting climate change the health and well-being of marine life are essential for the health of our planet and all life on Earth, including human society.

### **CURRENT LAWS THAT ARE IN INDIA FOR MARINE LIFE –**

- The Wildlife Protection Act, 1972
- The Indian Fisheries Act, 1897
- The Environment (Protection) Act, 1986
- The Coastal Regulation Zone (CRZ) Notification
- The Biological Diversity Act, 2002
- The Marine Aids to Navigation Act, 2011
- International Treaties and Agreements

It is to ensure that these regulations are being implemented and enforceable by the government to protect and maintain the sustainability of marine life to protect it from being affected and extinct as they are affected by climate change.<sup>3</sup>

### **PREVENTIVE MEASURES THAT SHOULD BE TAKEN**

#### **Sustainable fisheries management –**

- Implementation and regulation to prevent overfishing.
- Promote selective and sustainable fishing practices.
- Scientific methods-based catch limits and quotas.

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<sup>3</sup> S. Jagannath vs Union of India & Ors; M.C. Mehta vs. Union of India

**Marine Protected Areas –**

- Designate and protect areas of the oceans as marine protected areas to conserve marine ecosystems and biodiversity.
- Enforce regulations to limit human impacts, such as fishing and resource extraction.

**Habitat Conservation –**

- Protect and restore critical marine habitats like coral reefs, mangroves, seagrass beds, and kelp forests.
- Implement measures to reduce coastal development and pollution that can harm habitats.

**Reducing Pollution –**

- Promote recycling and reduce plastic waste to minimize plastic pollution.
- Implementing regulation which is strict as there be less discharge of pollutants into the ocean, and industrial, agricultural, and sewage runoff.

**Marine Debris Management –**

- Promote responsible waste disposal and recycling.
- Participate in beach clean-up efforts to understand and address the effects of acidification on marine life.

**Climate Change Mitigation –**

- Reduce greenhouse gas emissions to mitigate climate change impacts on marine ecosystems.
- Support international agreements like the Paris Agreement to limit global warming.

**Ocean Acidification Mitigation –**

- Reduce carbon emissions to slow acidification.
- Promote research and conservation to understand and address the effects of acidification on marine life.

**Oil Spill Preparedness –**

- Develop and Maintain oil spill responses and clean-up plans.
- Enforce safety regulations for offshore drilling and shipping to minimize the risk of spills.

**Education and Awareness –**

- Raise public awareness about the importance of marine life and the impacts of human activities.
- To educate individuals and communities about sustainable practices and responsible tourism.

**International Cooperation –**

Collaboration on global initiatives to protect marine life such as the regional agreements on marine conservation or conventions on biological diversity.

**Support Scientific Research –**

- Use scientific data to inform conservation and management departments for good decisions to be taken.
- Provide Funds and do monitoring programs to better understand marine ecosystems and the threats they face.

**Responsible Tourism –**

- Encourage tourists to respect marine life and habitats, such as safeguarding marine animals by keeping distance and disturbing coral reefs.
- Promote responsible and sustainable marine tourism practices such as diving, and whale watching.
- Preventive measures are for marine life which require a combination of legislation, international cooperation, education, and individual actions. These are the factors that would be the long-term health and sustainability of our oceans and the diverse species that inhabit them.



## CONCLUSION

Marine life is a very important aspect of our life and to our nature which helps to protect the environment of our Earth. The resources and food, we get are from marine life only. As well as it helps the climate regulation which is important for our Earth because the increases in heat due to climate change are affecting marine life too. The marine life helps in oxygen production which is important for the life we live in as we exist because of nature only. The government and the people should take preventive measures to protect marine life to conserve and sustain it because marine plants and marine animals are the source which is helping to protect us from harmful substances.

Marine life protects us from the increased production of carbon dioxide which is harmful to us humans and other living beings as it helps to absorb it also many medical uses medicines are used to cure human diseases. Marine life helps us to protect us from erosion, storms, and tsunamis which are a danger to human communities. All these things that are listed above are the reasons why marine life is important for us to conserve and protect the environment which is protecting us and providing such important resources. We also need to save it because there are species that are becoming extinct due to climate change and pollution caused by humans, protect it because we are alive because of them only and now we must protect them from our things only.