

Disaster Management and Environment

Syllabus:

- Conservation, environmental pollution and degradation, environmental impact assessment; Disaster and disaster management.

Year- 2013

1. How important are vulnerability and risk assessment for pre-disaster management. As an administrator, what are key areas that you would focus in a disaster management?
2. Enumerate the National Water Policy of India. Taking river Ganges as an example, discuss the strategies which may be adopted for river water pollution control and management. What are the legal provisions for management and handling of hazardous wastes in India?
3. What do you understand by run of the river hydroelectricity project? How is it different from any other hydroelectricity project?
4. Write a note on India's green energy corridor to alleviate the problems of conventional energy.
5. What are the consequences of illegal mining? Discuss the ministry of environment and forests 'concept of GO AND NO GO zones for coal mining.

Year – 2014

1. Drought has been recognised as a disaster in view of its party expense, temporal duration, slow onset and lasting effect on various vulnerable sections. With a focus on the September 2010 guidelines from the National disaster management authority, discuss the mechanism for preparedness to deal with the El Nino and La Nina fallouts in India.
2. Should the pursuit of carbon credit and clean development mechanism set up under UNFCCC be maintained even through there has been a massive slide in the value of carbon credit? Discuss with respect to India's energy needs for economic growth.
3. Environmental impact assessment studies are increasingly undertaken before project is cleared by the government. Discuss the environmental impacts of coal-fired thermal plants located at Pitheads.

Year – 2015

1. The frequency of earthquakes appears to have increased in the Indian subcontinent. However, India's preparedness for mitigating their impact has significant gaps. Discuss various aspects.
2. To what factors can the recent dramatic fall in equipment costs and tariff of solar energy be attributed? What implications does the trend have for the thermal power producers and the related industry?
3. The Namami Gange and National mission for clean Ganga (NMCG) programmes and causes of mixed results from the previous schemes. What quantum leaps can help preserve the river Ganga better than incremental inputs?

Year – 2016

1. The frequency of urban floods due to high intensity rainfall is increasing over the years. Discussing the reasons for urban floods. Highlight the mechanisms for preparedness to reduce the risk during such events.
2. With reference to National Disaster Management Authority (NDMA) guidelines, discuss the measures to be adopted to mitigate the impact of the recent incidents of cloudbursts in many places of Uttarakhand.
3. Rehabilitation of human settlements is one of the important environmental impacts which always attracts controversy while planning major projects. Discuss the measures suggested for mitigation of this impact while proposing major developmental projects.

4. Give an account of the current status and the targets to be achieved pertaining to renewable energy sources in the country. Discuss in brief the importance of National Programme on Light Emitting Diodes (LEDs)

Year – 2017

1. Not many years ago, river linking was a concept but it is becoming reality in the country. Discuss the advantages of river linking and its possible impact on the environment.
2. Climate Change is a global problem. How India will be affected by climate change? How Himalayan and coastal states of India will be affected by climate change?
3. On December 2004, tsunami brought havoc on 14 countries including India. Discuss the factors responsible for occurrence of Tsunami and its effects on life and economy. In the light of guidelines of NDMA (2010) describe the mechanisms for preparedness to reduce the risk during such events.

Year-2018

1. Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing Sendai Framework for DRR (2015-2030)'. How is this framework different from Hyogo Framework for Action, 2005?
2. What are the impediments in disposing the huge quantities of discarded solid wastes which are continuously being generated? How do we remove safely the toxic wastes that have been accumulating in our habitable environment?
3. What is wetland? Explain the Ramsar concept of wise use' in the context of wetland conservation. Cite two examples of Ramsar sites from India.
4. How does biodiversity vary in India? How is the Biological Diversity Act, 2002 helpful in conservation of flora and fauna?

Year 2019

1. Coastal sand mining, whether legal or illegal, poses one of the biggest threats to our environment. Analyze the impact of sand mining along the Indian coasts, citing specific examples.
2. Define the concept of carrying capacity of an ecosystem as relevant to an environment. Explain how understanding this concept is vital while planning for the sustainable development of a region.
3. Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help disaster mitigation in the case of landslides
4. Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters.

Year 2020

1. How does the draft Environment Impact Assessment (EIA) Notification, 2020 differ from the existing EIA Notification, 2006?
2. What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security?
3. Suggest measures to improve water storage and irrigation system to make its judicious use under the depleting scenario.
4. Describe the benefits of deriving electric energy from sunlight in contrast to conventional energy generation. What are the initiatives offered by our Government for this purpose?
5. What are the key features of the National Clean Air Programme (NCAP) initiated by the Government of India?
6. Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach.

Year 2021

1. Discuss about the vulnerability of India to earthquake related hazards. Give examples including the salient features of major disasters caused by earthquakes in different parts of India during the last three decades. (Answer in 150 words)
2. Describe the various causes and the effects of landslides. Mention the important components of the National Landslide Risk Management Strategy. (Answer in 250 words)
3. Explain the purpose of Green Grid Initiative launched at the World Leaders Summit of COP26 UN Climate Change Conference in Glasgow in November 2021. When was the idea first floated in the International Solar Alliance (ISA)? (Answer in 150 words)
4. Describe the key points of the revived Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve these revised standards?
5. Describe the major outcomes of the 26th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference? (Answer in 250 words)

Year 2022

1. Explain the mechanism and occurrence of cloudburst in the context of the Indian subcontinent. Discuss two recent examples.
2. Each year a large amount of plant material, cellulose, is deposited on the surface of Planet Earth. What are the natural processes this cellulose undergoes before yielding carbon dioxide, water and other end products?
3. Discuss in detail the photochemical smog emphasizing its formation, effects and mitigation. Explain the 1999 Gothenburg protocol.
4. Discuss global warming and mention its effects on the global climate. Explain the control measures to bring down the level of greenhouse gases which cause global warming, in the light of the Kyoto Protocol, 1997.
5. Explain the causes and effects of coastal erosion in India. What are the available coastal management techniques for combating the hazard?

Year 2023

1. What is oil pollution? What are its impacts on the marine ecosystem? In what way is oil pollution particularly harmful for a country like India?
2. The adoption of electric vehicles is rapidly growing worldwide. How do electric vehicles contribute to reducing carbon emissions and what are the key benefits they offer compared to traditional combustion engine vehicles?
3. Comment on the National Wetland Conservation Programme initiated by the Government of India and name a few India's wetlands of international importance included in the Ramsar Sites.
4. The Intergovernmental Panel on Climate Change (IPCC) has predicted a global sea level rise of about one meter by AD 2100. What would be its impact in India and the other countries in the Indian Ocean region?
5. Dam failures are always catastrophic, especially on the downstream side, resulting in a colossal loss of life and property. Analyse the various causes of dam failures. Give two examples of large dam failures.