
CLASS: X
TOPIC: CHAPTER: 2- FOREST AND WILDLIFE REOURCES
WORKSHEET – 05

Introduction

- Forests are the primary producers, on which all the species of animals depend directly or indirectly. The variety of living things found in a region, country or the entire earth is called its biological diversity or biodiversity.

Classification Based on the International Union for Conservation of Nature and Natural Resources (IUCN):

Normal Species, Endangered Species, Vulnerable Species, Rare Species, Endemic Species, Extinct Species.

FACTORS RESPONSIBLE FOR THE LARGE SCALE DEPLETION OF FLORA & FAUNA

1. The greatest damage done on our forests was during the **colonial period**. During **colonial period** due to the expansion of the railways, agriculture, commercial and scientific forestry and mining activities our forests and wildlife were damaged.
2. After Independence : Agricultural expansion is one of the major causes of depletion of forest resources. Between 1951 and 1980, according to the Forest Survey of India, over 26,200 sq. km. of forest area was converted into agricultural land all over India. Major parts of the tribal belts, especially in the northeastern and central India, have been deforested or degraded by shifting cultivation (jhum), a type of 'slash and burn' agriculture.
3. **Large-scale development projects** : Since 1951, over 5,000 sq km of forest was cleared for river valley projects. Clearing of forests is still continuing with projects like the Narmada Sagar Project in Madhya Pradesh, which would inundate 40,000 hectares of forest.
4. **Mining activities** : Mining is another important factor behind deforestation. The Buxa Tiger Reserve in West Bengal is seriously threatened by the ongoing dolomite mining. It has disturbed the natural habitat of many species and blocked the migration route of several others, including the great Indian elephant.
5. **Over grazing and fuel wood collection** : Many foresters and environmentalists believe that the factor behind the depletion of forest resources is grazing and fuel-wood collection .A substantial part of the fuel-fodder demand is met by lopping rather than by felling entire trees

Factors that have led to the decline in India's biodiversity.

- Habitat destruction of plants and animals
- Hunting & poaching for commercial purposes,
- Over-exploitation,
- environmental pollution, & poisoning
- caused by industrial activities
- forest fires

Social Effect of Resource Depletion:

In many societies, it is the women who are responsible for collection of fuel, fodder, water and other basic subsistence needs. Depletion of these resources means women need to work harder to collect those resources. At some places, women may have to walk more than 10 km to collect firewood. This causes serious health problems for women.

Why conservation of forest and wildlife necessary in India?

- Conservation preserves the ecological diversity and our life support systems – water, air and soil.
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- It also preserves the genetic diversity of plants and animals for better growth of species and breeding. For example, in agriculture, we are still dependent on traditional crop varieties.
- Fisheries too are heavily dependent on the maintenance of aquatic biodiversity.

Classification of forests

- **Reserved Forests, Protected Forests, Unclassed Forests:**

Main measures taken to conserve forests and wildlife in India.

- The Indian Wildlife (Protection) Act was implemented in 1972, with various provisions for protecting habitats.
- An all-India list of protected species was also published.
- For protecting the remaining population of certain endangered species following steps were taken: Banning hunting, Giving legal protection to their habitats, Restricting trade in wildlife.
- Subsequently, central and many state governments established national parks and wildlife sanctuaries.

Q. No.	Questions	Marks
1.	<p>What is Biodiversity or Biological diversity? Give examples. (2+2) (SA I- 2015-16)</p> <p>We are all connected.</p>    	4
2.	<p>Mention the percentage of species that India contributes in the world.</p> <p>Ans India is one of the world's richest countries in terms of its vast array of biological diversity, and has nearly 8 per cent of the total number of species in the world (estimated to be 1.6 million).</p>	1
3.	<p>State the percentage of wild flora and mammals in India that are facing extinction. Which of these would be categorised as 'critical'? Give examples. (1+3)</p> <p>Ans. 10 % of India's recorded wild flora and 20% of its mammals are on the threatened list. Many of these would now be categorised as 'critical', that is on the verge of extinction like the cheetah, pink-headed duck, mountain quail, forest spotted owlet, and plants like madhuca insignis (a wild variety of mahua) and hubbardia heptaneuron, (a species of grass).</p>	4
4.	<p>What is the estimated forest cover in India? What percentage does it account to the total geographical area?</p> <p>Ans The forest cover in the country is estimated at 637,293 sq km, which is 19.39% of the total geographical area.</p>	1
5.	<p>State the percentage of dense forest cover according to the State of Forest Report (1999). Give the reason for this increase.</p> <p>Ans i) According to the State of Forest Report (1999), dense forest cover in India is 11.48 per cent; ii) The dense forest cover has increased by 10,098 sq km since 1997. However, this apparent increase in the forest cover is due to plantation by different agencies</p>	1
6.	<p>Give a detailed classification of plants and animal species according to the International Union for Conservation of Nature and Natural Resources (IUCN).</p> <p>Ans Based on the International Union for Conservation of Nature and Natural Resources (IUCN), we can classify as follows –</p> <p>Normal Species: Species whose population levels are considered to be normal for their survival,</p>	4

such as cattle, Sal, pine, rodents, etc.

Endangered Species: These are species which are in danger of extinction. The survival of such species is difficult if the negative factors that have led to a decline in their population continue to operate. The

examples of such species are black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, sangai (brow antler deer in Manipur), etc.



Lion Tailed Macaque



Sangai



Black Buck

Vulnerable Species : These are species whose population has declined to levels from where it is likely to move into the endangered category in the near future if the negative factors continue to operate. The examples of such species are blue sheep, Asiatic elephant, Gangetic dolphin, etc.

Rare Species: Species with small population may move into the endangered or vulnerable category if the negative factors affecting them continue to operate. The examples of such species are the Himalayan brown bear, wild Asiatic buffalo, desert fox and hornbill, etc.

Endemic Species: These are species which are only found in some particular areas usually isolated by natural or geographical barriers. Examples of such species are the Andaman teal, Nicobar pigeon, Andaman wild pig, mithun in Arunchal Pradesh.



Andaman Teal



Nicobar pigeon



Mithun

Extinct Species: These are species which are not found after searches of known or likely areas where they may occur. A species may be extinct from a local area, region, country, continent or the entire earth. Examples of such species are the Asiatic cheetah, pink head duck.

7.	What are the negative factors that cause fearful depletion of flora and fauna?	4
8. Ans	How have we transformed nature into a resource? We have transformed nature into a resource obtaining directly and indirectly from the forests and wildlife – wood, barks, leaves, rubber, medicines, dyes, food, fuel, fodder, manure, etc.	1
9. Ans	When and why was the greatest damage inflicted on Indian forests? The greatest damage inflicted on Indian forests was during the colonial period i) Due to the expansion of the railways and agriculture ii) commercial and scientific forestry iii) Mining activities.	3
10. Ans	What has been the major cause of depletion of forest in India after independence? Even after Independence, agricultural expansion continues to be one of the major causes of depletion of forest resources. Between 1951 and 1980, according to the Forest Survey of India, over 26,200 sq. km. of forest area was converted into agricultural land all over India.	1
11. Ans	Explain with examples how agriculture, large-scale development and mining led to degradation of forestland according to the Forest Survey of India. (Any four points.) i) Substantial parts of the tribal belts, especially in the north eastern and central India, have been deforested or degraded by shifting cultivation (jhum), a type of ‘slash and burn’ agriculture. ii) Large-scale development projects have also contributed significantly to the loss of forests. Since 1951, over 5,000 sq km of forest was cleared for river valley projects. Clearing of forests is still continuing with projects like the Narmada Sagar Project in Madhya Pradesh, which would inundate 40,000 hectares of forest. iii) Mining is another important factor behind deforestation. The Buxa Tiger Reserve in West Bengal is seriously threatened by the ongoing dolomite mining. iv) It has disturbed the natural habitat of many species and blocked the migration route of several	5

	others, including the great Indian elephant.	
12.	What are the greatest degrading factors behind the depletion forests as suggested by many foresters and environmentalists?	1
Ans	Many foresters and environmentalists hold the view that the greatest degrading factors behind the depletion of forest resources are grazing and fuel-wood collection. Though, there may be some substance in their argument, yet, the fact remains that a substantial part of the fuel-fodder demand is met by lopping rather than by felling entire trees.	
13.	'The Forests ecosystems are repositories of the country.' Justify the statement.	1
Ans	The forest ecosystems are repositories of some of the country's most valuable forest products, minerals and other resources that meet the demands of the rapidly expanding industrial urban economy.	
14.	What are the reasons for the decline of biodiversity in India'?	3
15.	What are the causes of environmental destruction?	4
Ans	Other important causes of environmental destruction are i) Unequal access of resources, ii) Inequitable consumption of resources iii) Differential sharing of responsibility for environmental well-being. iv) Over-population in third world countries are often cited as the cause of environmental degradation.	
16.	Explain with example how there exists an imbalance in the consumption of resources between rich and poor countries and also in the Indian society with reference to ecological damage.	3
Ans	An average American consumes 40 times more resources than an average Somalian. Similarly, the richest five per cent of Indian society probably cause more ecological damage because of the amount they consume than the poorest 25 percent. The former shares minimum responsibilities for environmental well-being.	
17.	'As the resources are depleted, the drudgery of woman increases.' Explain the statement with its social implications on women and children.	3
18.	Why do we need to conserve our forests and wild life? Explain with examples. OR "Forest and wild life are vital to the quality of life and environment". Justify this statement by giving three reasons.	4
19.	When was the Indian Wildlife (Protection) Act implemented? Explain the main features of this act. (Any four features)	5
Ans	OR Describe any five steps that have been taken to protect the wildlife in India. (SA I- 2015-16) OR Evaluate measures of forest conservation. (SA I 2015-16) A) 1972. B) <u>Features of the Act:</u> a) An all India list of protected species was published. b) The thrust of the programme was towards protecting the remaining population of certain endangered species by banning hunting, giving legal protection to their habitats, and restricting trade in wildlife. c) Central and many state governments established national parks and wildlife sanctuaries. d) The Central government also announced several projects for protecting specific animals, which gravely threatened the tiger, the one-horned rhinoceros, the Kashmir stag etc. e) More recently, Indian elephant, black buck (chinkara), the great Indian bustard and the snow leopard etc have been given full or partial legal protection against hunting and trade throughout India.	
20.	'The conservation projects are now focusing on biodiversity rather than on a few of its components.' Explain the statement with examples.	4
Ans	i) The conservation projects are now focusing on biodiversity rather than on a few of its components. ii) There is now a more intensive search for different conservation measures. Increasingly, even insects are beginning to find a place in conservation planning. iii) In the notification under Wildlife Act of 1980 and 1986, several hundred butterflies, moths, beetles, and one dragonfly have been added to the list of protected species. iv) In 1991, for the first time plants were also added to the list, starting with six species	
21.	Give a detailed classification of forests. (Refer Text Book)	3

22.	What is the other name given to reserved and protected forests? Why are they maintained? (1+2) Reserved and protected forests are also referred to as permanent forest estates maintained for the purpose of producing timber and other forest produce, and for protective reasons.	3
23.	Name the state that has largest area under permanent forests. How much it constitutes to its total forests area? Madhya Pradesh has the largest area under permanent forests, constituting 75 per cent of its total forest area.	1
24.	a) Name the states that have largest percentages of reserved forests to their total forest area Jammu and Kashmir, Andhra Pradesh, Uttaranchal, Kerala, Tamil Nadu, West Bengal, and Maharashtra have large percentages of reserved forests of its total forest area. (2) b) Name the states that have bulk of area under protected forests. (2) Bihar, Haryana, Punjab, Himachal Pradesh, Orissa and Rajasthan have a bulk of it under protected forests.	4
25.	Mention the two areas that have a high percentage of their forests as un-classed. Who manages these forests? All North-eastern states and parts of Gujarat have a very high percentage of their forests as un-classed forests managed by local communities.	1
26.	Explain with examples how local communities in various parts of the country conserve forests in their own ways. (1+1+2) OR “Different traditional communities are involved in conserving their own natural habitats in India”. Analyse the statement. (SA I 2015-16) i) In some areas of India, local communities are struggling to conserve these habitats along with government officials, recognising that only this will secure their own long-term livelihood. ii) In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act. iii) In many areas, villagers themselves are protecting habitats and explicitly rejecting government involvement. iv) The inhabitants of five villages in the Alwar district of Rajasthan have declared 1,200 hectares of forest as the Bhairondev Dakav ‘Sonchuri’, declaring their own set of rules and regulations which do not allow hunting, and are protecting the wildlife against any outside encroachments.	5
27.	Write a short note on Chipko Movement for the conservation of forests. i) The famous Chipko movement in the Himalayas has not only successfully resisted deforestation in several areas but has also shown that community afforestation with indigenous species can be enormously successful. ii) Attempts to revive the traditional conservation methods or developing new methods of ecological farming are now widespread. iii) Farmers and citizen’s groups like the Beej Bachao Andolan in Tehri and Navdanya have shown that adequate levels of diversified crop production without the use of synthetic chemicals are possible and economically viable	3
28. Ans	Explain the role of Joint Forest Management (JFM) programme in management and restoration of degraded forests. OR Describe the Joint Forest Management programme. (SA I – 2015-16) i) In India joint forest management (JFM) programme furnishes a good example for involving local communities in the management and restoration of degraded forests. ii) The programme has been in formal existence since 1988 when the state of Orissa passed the first resolution for joint forest management. iii) JFM depends on the formation of local (village) institutions that undertake protection activities. iv) Mostly on degraded forest land managed by the forest department. v) In return, the members of these communities are entitled to intermediary benefits like non-timber forest products and share in the timber harvested by ‘successful protection’.	5

Please Note: Write the question in your Geography Note Book that have been asked in the CBSE Board Examinations.