

# Class 10 Social Science Geography

## Chapter 2 NCERT Solutions

NCERT Class 10 Geography Solutions Chapter 2 Solutions Forest and Wildlife Resources are given here.

### 1. Multiple choice questions

(i) Which of these statements is not a valid reason for the depletion of flora and fauna?

- (a) Agricultural expansion
- (b) Largescale developmental projects
- (c) Grazing and fuel wood collection
- (d) Rapid industrialisation and urbanization

**Answer:** (c) Grazing and fuel wood collection

(ii) Which of the following conservation strategies do not directly involve community participation?

- (a) Joint forest management
- (b) Beej Bachao Andolan
- (c) Chipko Movement
- (d) Demarcation of Wildlife sanctuaries

**Answer:** (d) Demarcation of Wildlife sanctuaries

2. Match the following animals with their category of existence.

Animals/Plants	Category of existence
----------------	-----------------------

Black buck	Extinct
Asiatic elephant	Rare
Andaman wild pig	Endangered
Himalayan brown bear	Vulnerable
Pink head duck	Endemic

**Answer:**

Animals/Plants	Category of existence
Black buck	Endangered
Asiatic elephant	Vulnerable
Andaman wild pig	Endemic
Himalayan brown bear	Rare
Pink head duck	Extinct

**3. Match the following.**

Reserved forests	other forests and wastelands belonging to both government and private individuals and communities
Protected forests	forests are regarded as most valuable as far as the conservation of forest and wildlife resources
Unclassed forests	forest lands are protected from any further depletion

**Answer:**

Reserved forests	forests are regarded as most valuable as far as the conservation of forest and wildlife resources
Protected forests	forest lands are protected from any further depletion
Unclassed forests	other forests and wastelands belonging to both government and private individuals and communities

**4. Answer the following questions in about 30 words.**

(i) What is biodiversity? Why is biodiversity important for human lives?

**Answer:** Biodiversity is made up of various types of life forms found on earth. It is a measure of variation at the ecosystem, species and genetic level.

Biodiversity is abundant in Tropical areas. Tropical areas cover 10 per cent of the earth surface, but they host 90% of the world species.

It is important for human lives because the human beings, along with the biodiversity, form a complete web of ecological system in which we are only a part and are very much dependent on this system for our own existence.

**(ii)** How have human activities affected the depletion of flora and fauna? Explain.

**Answer:** Following activities by humans resulted in the depletion of flora and fauna:

- Various dam and river valley projects resulted in a decline of forest cover.
- Illegal mining projects also destroyed forests in a vast area.
- Increasing housing plans, factories and infrastructure also disturbed the flora and fauna adversely.
- Hunting animals for their skin, tusk, bones, teeth, horns, etc., led many species to the verge of extinction.
- Increasing environmental pollution caused many species of birds to extinct.
- Increasing forest fires due to the global warming resulted in depletion of valuable forests and wildlife.

**5. Answer the following questions in about 120 words.**

**(i)** Describe how communities have conserved and protected forests and wildlife in India.

**Answer:** In India many traditional communities still live in a close contact with the forests as they depend on the forest produce for their livelihood. Such

local communities are contributing significantly in conservation of the forest land. For example:

- In Sariska Tiger Reserve, Rajasthan, villagers fought against mining activities.
- In Alwar district of Rajasthan, local communities belonging to five villages have set their own rules and regulations in 1,200 hectares of forest land to stop hunting and outside encroachments in these lands.
- The Bishnois of Rajasthan protect black buck, chinkara and peacocks quite fervently.
- Chipko movement is another example of community initiative that resisted deforestation in several areas.
- Nature worship is an age old tradition for many local communities. By doing so, they help in conservation of forest.

(ii) Write a note on good practices towards conserving forest and wildlife.

**Answer:** In India, many governmental and non-governmental organisations are working towards creating public awareness for conserving forests and wildlife. Central and state governments in India have set up national parks and wildlife sanctuaries to protect forests and endangered species in wildlife.

The Joint Forest Management (JFM) programme in India furnishes a good example of involving local communities in the management and restoration of degraded forests. Under JFM local (village) institutions are set up to undertake the protection activities mostly on degraded forest land. In return, the members of these communities are entitled to intermediary benefits like non-timber forest produces and share in the timber harvested by 'successful protection'. Many laws had been passed in the past to protect the wildlife.

In 1972, the Indian Wildlife (Protection) Act was implemented. It made protecting specific habitats a law. It released a list of wildlife species that had to be protected. Hunting these animals was considered as a criminal act.

“Project Tiger”, one of the well publicised wildlife campaigns in the world, was launched in 1973 to save tigers in the country.

# Resources and Development Class 10

## Geography Chapter 2 Extra Questions

### Very Short Answer Type Questions

1. What is biodiversity?

**Answer:** It is the sum total of all the varieties of species of plants, animals and microorganisms living on the earth.

2. What is flora?

**Answer:** Plants of particular region or period are referred to as flora.

3. What is fauna?

**Answer:** Species of animals of a particular region or period are referred as fauna.

4. “India is one of the world’s richest countries in terms of its vast array of biological diversity”. Justify.

**Answer:** India has nearly 8% of the total number of species in the world.

5. What is IUCN? [NCERT 2013]

**Answer:** International Union for Conservation of Nature and Natural Resources.

6. What are normal species? [NCERT.2014]

**Answer:** Species whose population levels are considered to be normal for

their survival are classified as normal species.

**7. What are endemic species?**

**Answer:** Species which are found in some particular areas usually isolated by natural or geographical barriers.

**8. What are endangered species?**

**Answer:** The species, which are in danger of extinction are called endangered species.

**9. What are vulnerable species?**

**Answer:** The 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.

**10. What are extinct species?**

**Answer:** The species which are not found after searches of known or likely areas where they may occur.

**11. Give two examples of rare species?**

**Answer:** (i) Wild Asiatic buffalo (ii) Hombill

**12. Categorise the following as endangered or vulnerable species- Asiatic elephant, Indian Rhino.**

**Answer:** (i) Asiatic elephant – Vulnerable species.

(ii) Indian Rhino – Endangered species.

**13. Categorise the following as extinct or normal species- Pine, Asiatic Cheetah.**

**Answer:** (i) Pine – Normal species  
(ii) Asiatic Cheetah – Extinct species

**14. Categorise the following as endemic and endangered species- Lion tailed macaque, Nicobar Pigeon.**

**Answer:** (i) Lion tailed macaque – Endangered.  
(ii) Nicobar pigeon – Endemic.

**15. Mention any two factors responsible for depleting our forests and wildlife.**

**Answer:** (i) Expansion of agriculture (ii) Mining

**16. Name the Tiger Reserve which is seriously threatened by dolomite mining activity.**

**Answer:** The Bauxa Tiger Reserve in West Bengal.

**17. Mention a social impact of deforestation.**

**Answer:** In many societies, women bear the major responsibility of collection of fuel, fodder, water and other basic subsistence needs. As these resources are depleted, the drudgery of women increases and sometimes they have to walk for more than 10 km to collect these resources.

**18. Mention any wildlife protection programme?**

**Answer:** The Indian Wildlife Act 1972.

**19. Mention any one step which was undertaken under Indian Wildlife Act to protect the wildlife.**

**Answer:** Trade in wildlife was declared illegal.

**20. What are permanent forests?**

**Answer:** Reserved and protected forests are known as permanent forests.

**21. Which state has the largest area under permanent forests?**

**Answer:** Madhya Pradesh. \* .

**22. Name any two states which' have large percentage of reserved forests of its forest area. [NCERT 2014]**

**Answer:** Jammu and Kashmir and Andhra Pradesh.

**23. Name any two states which have bulk of its forests area under protected forests.**

**Answer:** Punjab and Haryana.

**24. Name any two states which have bulk of its forests area under unclassified forests.**

**Answer:** Assam and Tripura.

**25. Name the place of state where people have fought against mining by citing the Wildlife Protection Act.**

**Answer:** Sariska Tiger Reserve – Rajasthan.

**26. What is Chipko Movement?**

**Answer:** It was a movement launched by the people of the Himalayas against deforestation.

**27. Name any two farmers/citizens group which have shown that adequate levels of diversified crop production without use of synthetic chemicals are**

possible and economically viable.

**Answer:** Beej Bachao Andolan and Navdanya

**28. What is JFM?**

**Answer:** JFM (Joint Forest Management) was a movement launched to manage and restore degraded forests by involving the local communities.

**29. Name the state which was first to pass the JFM resolution. [NCERT 2014]**

**Answer:** Odisha

**30. Name any four movements which were launched by local communities for the protection of forests or wildlife.**

**Answer:** (a) Chipko Movement

(b) Beej Bachao Andolan

(c) Narmada Bachao Andolan

(d) Bhairodev Dakav Sonchuri

## Short Answer Type Questions

**1. What is biodiversity? [NCERT Sept. 2012]**

**Answer:** Biodiversity is the sum total of all the varieties of species of plants, animals and micro-organisms living on the earth. It also includes the habitat in which they live. Some scientists estimate that more than 10 million species live on our earth and some believe that this number can be more than 100 million.

**2. What is importance of forests?**

Or

“Forests play a key role in the ecological system.” Highlight the value of forests in our life. [NCERT Sept. 2013]

Or

**Why is it necessary to increase the area of forest in India? [NCERT 2013]**

**Answer:** (i) Forests play a key role in the ecological system as these are the primary producers on which all other living beings depend.

(ii) Many forest dependent communities directly depend on them for food, drink, medicine, culture, spirituality etc.

(iii) Forest provide us timber.

(iv) Forests also provide bamboo, wood for fuel, grass, charcoal, fruits, flowers, etc.

**3. "The diverse flora and fauna of India is under threat". Justify by giving reasons.**

**Answer:** (i) At least 10% of India's recorded wild flora and 20% of its mammals are on the threatened list.

(ii) 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) have already been categorised as critical, i.e. they are on the verge of extinction.

(iii) Many smaller animals like insects and plants have become extinct.

**4. What are Normal species? How are these different from endangered species. Give four examples.**

**Answer:** Normal species are the species whose population levels are considered to be normal for their survival, such as cattle, sal, pine, rodents, etc.

Whereas the endangered species are the 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. Black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, etc., are examples of endangered species.

**5. What are Vulnerable species? Give four examples. [NCERT Sept. 2012]**

**Answer:** These are the 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 such species. The examples of such species are Blue sheep, Asiatic elephant, Gangetic dolphin, etc.

**6. What are Rare species? Give four examples. [NCERT Sept. 2012]**

**Answer:** 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.

**7. What are Endemic species? Give four examples.**

**Answer:** The species which are only found in some particular region usually isolated by natural or geographical barriers. The examples of such species are the Andaman teal, Nicobar pigeon, Andaman wild pig, etc.

**8. What are Extinct species? Give four examples.**

**Answer:** These species which are not found after searches of known or likely areas where they may occur. These species may be extinct from a local area,

region, country, continent or the whole earth. The examples of such species are the Asiatic cheetah, pink headed duck, etc.

**9. Large scale development projects have also contributed significantly to the loss of forests. Explain.**

**Answer:** (i) Since 1951, over 5,000 square kilometres of forests were cleared for river valley projects.

(ii) Clearing of forests is still continuing because of new projects like the Sardar Sarovar Project, the Ranjit Sagar Dam Project, etc. Many wildlife sanctuaries are seriously threatened due to large scale mining activities.

**10. (i) Which factor is often cited as the cause of environmental degradation in the third world countries?**

**(ii) Mention any four factors which have led to the decline of India's biodiversity.**

**Answer:** (i) Overpopulation.

(ii) (a) Habitat destruction

(b) Hunting

(c) Poaching

(d) Overexploitation

(e) Environmental pollution

(f) Forest fires.

**11. "Developed countries and rich people are considered the major factors for environmental degradation." Explain.**

**Answer:** (i) Developed countries consume more resources than underdeveloped or developing countries. For example an average American consumes 40 times more resources than an average Somalian.

(ii) The rich class probably causes more ecological damage than the poor class because energy consumption level of the rich is high as compared to poor.

(iii) Rich people use non-renewable resources on a large scale.

**12. “Grazing and fuel-wood collection are not responsible for deforestation in India.” Support the statement with suitable reasons. [NCERT 2013]**

**Answer:** (i) Overgrazing destroys the saplings and plants are tom out by the roots by animals.

(ii) Overgrazing also leads to soil erosion. Soil erosion is one of the important factor for deforestation.

(iii) While collecting fuel wood the locals also destroy the trees, which leads to deforestation.

**13. “The conservation projects are now focusing on biodiversity rather than on a few of its components.” Explain.**

**Answer:** (i) Inclusion of small insects and other animals in planning : Under the new plans, even insects and other smaller species of animals are beginning to find a place in conservation planning.

(ii) New notifications : In the notification under the Wildlife Act of 1980 and 1986, several hundred butterflies, moths, beetles, and one dragonfly have been added to the list of protected species. In 1991, for the first time, plants were also added to the list, starting with six species.

**14. With reference to the type and distribution of forests, answer the following questions:**

**(i) How are they classified?**

**(ii) Which type of forests are regarded most valuable as far as the conservation of forest and wildlife resources are concerned?**

**Answer:** (i) (a) Reserved forests

(b) Protected forests

(c) Unclassed forests.

(ii) Reserved forests.

**15 Define the following:**

**(i) Reserved forests**

**(ii) Protected forests**

**(iii) Unclassed forests**

**Or**

**How many types of forests are classified in India? Explain. [NCERT Sept. 2010]**

**Answer:** (i) Reserved forests : These are forests which are permanently earmarked either to the production of timber or other forest produce and in which right of grazing and cultivation is seldom allowed.

(ii) Protected forests : These are forests in which the right of grazing and cultivation are allowed subject to a few minor restrictions.

(iii) Unclassed forests : These consist largely of inaccessible forests or unoccupied wastes.

**16. (a) What was the Chipko Movement?**

**(b) What is JFM? What is its objective?**

**(c) Name the state which took initiative for the Joint Forest Management.**

**Answer:** (a) (i) The movement was launched in the Himalayas against deforestation.

(ii) The movement has also shown the community afforestation with indigenous species can be enormously successful.

(iii) The movement has highlighted the role of local communities in forest conservations.

(b) It is Joint Forest Management. It is programme which involves local communities in the management and restoration of degraded forests.

(c) Odisha.

**17. (i) Name any two states which have the largest area under permanent forests (ii) Name any four states which have a large area under reserved forests.**

**(ii) Name any four states which have the large area under unclassified forests.**

**Answer:** (i) (a) Madhya Pradesh

(b) Jharkhand

(ii) (a) Jammu and Kashmir

(b) Andhra Pradesh

(c) Uttarakhand

(d) Kerala

(iii) (a) Gujarat

(b) Manipur

(c) Assam

(d) Sikkim

**18. 'India has rich flora and fauna.' Explain.**

**Answer:** (i) India is one of the world's richest countries in terms of its vast array of biological diversity.

(ii) It has nearly 8% of the total number of species in the world. (1.6 million approximately.)

(iii) Of the estimated 47,000 plant species, about 15,000 flowering species are indigenous to India.

**19- Mining is one of the major important factors responsible for deforestation. Explain.**

**Answer:** (i) Mining operation needs big machines, labour, roads, railways, etc. All these lead to deforestation.

(ii) The Buxar Tiger Reserve in West Bengal is seriously threatened due to mining operations. The mining operations have caused severe ecological damage to the Reserve and region around.

(iii) The mining activities have blocked the migration route of several species, including the great Indian elephants, thus, disturbing their natural habitat.

**20. What are the main objectives of JFM? [NCERT Sept. 2012, 2014]**

**Answer:** (i) Under the Joint Forest Management programme, local communities are involved in the management and restoration of degraded forests.

(ii) The major purpose of the JFM is to protect the forests from encroachments, grazing, theft and fire and also to improve the forests in accordance with an approved Joint Forest Management plan.

(iii) In return, the members of these communities are entitled to intermediary benefits like non-timber forest produces.

**21. Highlight any three differences between endangered species and extinct species. [NCERT Sept. 2010]**

**Answer:**

### **Endangered species**

1. These are species which are in danger of extinction.
2. The survival of such species is difficult if the negative factors that have led to decline in their population continue to operate.
3. Black buck, crocodile, Indian wild ass, lion tailed macaque etc., are examples of endangered species.

### **Extinct species**

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

**22 What has been the contribution of the Indian Wildlife Protection Act in protecting habitats in India? Explain. [NCERT Sept. 2010, 2011]**

**Answer:** (i) An all-India list of protected species was published. 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.

(ii) The central government also announced several projects for protecting specific animals, which were greatly threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag or hangul, three types of crocodiles—fresh water crocodile, saltwater crocodile and the Gharial, the Asiatic lion, and others.

(iii) Many national parks, wildlife sanctuaries and bioreserves were established to protect and conserve the wildlife.

**23. How does biological loss of forest and wildlife correlate with loss of cultural diversity? [NCERT Sept. 2010, 2011]**

**Answer:** (i) Biological loss of forest and wildlife has increasingly marginalised and impoverished many indigenous and other forest dependent communities, who directly depend on various components of the forest and wildlife for food, drink, medicine, culture, spirituality, etc.

(ii) The indirect impact of degradation such as severe drought or deforestation-induced floods, etc., also hits the poor the hardest. Poverty in these cases is a direct outcome of environmental destruction.

(iii) Due to biological loss of forest and wildlife many tribal communities have disappeared.

**24. "Nature-worship is an old age belief". Explain how has it helped in the conservation of forests and wildlife. [NCERT Sept. 2013]**

**Answer:** (i) Nature-worship is an age old tribal belief based on the premise that all creations of nature have to be protected. Such beliefs have preserved several virgin forests in pristine form called Sacred Groves (the forests of God and Goddesses). These patches of forest or parts, of large forests have been left untouched by the local people and any interference with them is banned.

(ii) The Mundas and the Santhal of Chota Nagpur region worship mahua (*Bassia latifolia*) and kadamba (*Anthocaphalus cadamba*) trees, and the tribals of Odisha and Bihar worship the tamarind (*Tamarindus indica*) and mango (*Mangifera indica*) trees during weddings.

(iii) Peepal and banyan trees are also considered sacred and worshipped in most parts of India.

(iv) Sacred qualities are often ascribed to springs, mountain peaks, plants and animals which are closely protected.

(v) In and around Bishnoi villages in Rajasthan, herds of blackbuck, (chinkara), nilgai and peacocks can be seen as an integral part of the community and nobody harms them.

**25. What is Himalayan Yew? Why is it under great threat at present? [NCERT 2012]**

**Answer:** The Himalayan Yew is a medicinal plant which is found in various parts of Himachal Pradesh and Arunachal Pradesh.

(i) It is under great threat due to over-exploitation.

(ii) A chemical compound called 'taxol' is extracted from the bark, needles, twigs and roots of this tree.

(iii) So, it is now biggest selling anti-cancer drug in the world.

## **Long Answer Type Questions**

**1. "Conservation of rapid decline in wildlife population and forestry has become essential." Explain.**

**Or**

**Why do we need to conserve our forests and wildlife resources? Explain any two steps taken by the communities to protect our forest and wildlife resources. [NCERT 2013]**

**Or**

**Why is conservation of forests and wildlife necessary? In what way have**

conservation projects changed in the recent years? [NCERT 2010]

Or

Assess the need for the conservation of forests and wildlife in India. [NCERT 2012]

**Answer:** (i) Loss of cultural diversity : The loss of forest and wildlife is not just a biological issue but it is also correlated with cultural diversity. There are many forests-dependent communities, which directly depend on various components of the forests and wildlife for food, drinks, medicines, etc. Many of tribal communities like Muria Gonds, Dhurwas, Bhatras, etc. have lost their habitat because of the destruction of forests.

(ii) Complex web of living organisms : We humans along with all living organisms form a complex web ecological system in which we are only a part and very much dependent on this system for our own existence. For example, the plants, animals and micro-organisms recreate the quality of the air we breathe, the water we drink and the soil that produce our food without which we cannot survive.

(iii) Large scale destruction of forests : Between 1951 and 1980, according to the Forest Survey of India, over 26,200 s km of forest areas were converted into agricultural lands all over India.

2. Describe the different types of plant and animal species found in India. [NCERT 2013]

Or

Explain any five different categories of existing plants and animal species based on the International Union for Conservation of Nature and Natural Resources with examples. [NCERT 2013]

**Answer:** (i) Normal species : These include those whose population levels are considered to be normal for their survival, such as cattle, sal, pine, rodents etc.

(ii) Endangered species : These include those species which are in danger of extinction. The several of such species is difficult if the negative factors that have led to a decline in their population continue to operate. For example, black buck, crocodile, Indian wild ass, etc.

(iii) Vulnerable species : These include the 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. For example, blue sheep, gangetic dolphin etc.

(iv) Rare species : They may move into the endangered or vulnerable category for example, blue bear, wild Asiatic buffalo.

(v) Endemic species : These are found in some particular areas usually isolated by natural or geographical barriers. For example, Andaman teal, Nicobar prigo.

**3. What steps have been taken by the government for the conservation of forest and wildlife in India? Explain. [NCERT 2014]**

Or

**Write any three effective practices towards conserving forests and wildlife. [NCERT Sept. 2010]**

Or

**Explain any three measures taken by the Indian Government to protect wildlife. [NCERT Sept. 2010, 2011]**

**Answer:** (i) National parks, biosphere and wildlife sanctuaries : To protect the biodiversity, the Indian government has established 100 national parks, 515 sanctuaries and 17 biosphere reserves.

(ii) The Indian Wildlife Protection Act :

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. 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.

(iii) Projects for protecting specific animals : The central government has also announced several projects for protecting specific animals which were greatly threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag or hangul, the three types of crocodiles – the freshwater crocodile, the saltwater crocodile and the Gharial, the Asiatic lion and others.

(iv) Forest Policy : India is one of the few countries which has a forest policy since 1894. It was revised in 1952 and again in 1988. The main plank of the forest policy is protection, conservation and development of forests.

(v) Forest Research Institutes : Indian government has created many forest Research Institutes for the research, protection and development of the forests. IFS Dehradun is the oldest research institution of the country.

**4. Distinguish between Reserved forests, Protected forests and Unclassed forests.**

Or

**Classify the forests into three categories. [NCERT 2014]**

**Answer:**

Reserved Forests	Protected Forests	Unclassed Forests
These are permanently earmarked either for production or other forest produce.	These are protected from any further depletion.	These consist of inaccessible forests or wastelands.
More than 50% of the total forest land of India has been declared as reserved forests.	Almost 1/3rd of the total forest area of India is called as the protected forest.	These consist of only 16% of the total forest areas of India.
These are controlled by the government.	These are controlled by the government.	These are owned by government and private individuals.
The forests of J & K, Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal and Maharashtra fall in this category.	The forests of Bihar, Haryana, Punjab, Himachal Pradesh, Odisha and Rajasthan fall under this category.	The forests of north-eastern states and parts of Gujarat fall under this category.

**5. “Conservation projects have changed their focus in the recent years.”**

**Explain. [NCERT 2014]**

**Or**

**In what ways the conservation project has changed in the recent years?**

**Answer:** The conservation projects are now focusing on biodiversity rather than on a few of its components. There is now a more intensive search for different conservation measures. Increasingly, even insects are beginning to find a place in conservation planning. 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. In 1991, for the first time plants were also added to the list, starting with six species. The clear lesson from the dynamics of both environmental destruction and reconstruction in India is that local communities everywhere have to be involved in some kind of natural resource management.

**6. “Maintenance of ecological system is of utmost importance.” How can you contribute to conserve it and what values are developed through this**

activity? [NCERT 2014]

**Answer:** (i) We humans along with all living organisms form a complex web of ecological system in which we are only a part and very much dependent on this system for our own existence. For example, the plants, animals and micro-organisms re-create the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive. Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend.

(ii) We should save our environment by switching to green technology and by contributing less to the emission of carbon dioxide.

(iii) We should plant more and more trees, say no to plastic bags, travel by public transport, etc.

(iv) It will improve the quality of our lives as well as our children and will save our money to switch to alternate sources for power.

## HOTS Questions and Answers

1. How has the IUCN classified the existing animals? [NCERT Sept. 2014]

**Answer:** 1. Normal Species 2. Endangered Species 3. Vulnerable Species 4. Rare Species 5. Endemic Species 6. Extinct Species

2. Classify the following animals according to the IUCN. Asiatic Cheetah, Nicobar Pigeon, Asiatic Elephant, Blue Sheep, Indian Rhino.

**Answer:** (i) Endangered – Indian Rhino

(ii) Vulnerable – Asiatic Elephant, Blue Sheep

(iii) Endemic – Nicobar Pigeon

(iv) Extinct – Asiatic Cheetah

**3. What is 'Project Tiger'? When was it launched? Mention any four tiger reserves of India.**

Or

**Write a brief note on 'Project Tiger'. [NCERT Sept. 2010]**

**Answer:** Project Tiger was a wildlife conservation project initiated in India in 1973 to protect the Bengal Tiger. There are more than 42 tiger reserves in India covering an area of about 37,761 s km.

Four Tiger Reserves in India are :

(i) The Corbett National Park – Uttarakhand

(ii) The Sunderban National Fbrk – West Bengal

(iii) The Manas Tiger Reserve – Assam (iu) The Periyar Tiger Reserve – Kerala

**4. The greatest damage inflicted on Indian forests was due to the extension of agriculture. Explain. Suggest any two ways to increase area under forests.**

**Answer:** (i) The expansion of agriculture started during the colonial period.

(ii) Between 1951 and 1980, according to the Forest Survey of India, over 26,200 s km of forest areas were converted into agricultural lands all over India.

(iii) 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' agricultural method.

Suggestions :

(i) Planting more trees

(ii) Celebrating Van Mahotsav at community and school level.

5. Give three reasons why we need to save the biodiversity of our planet. How can you contribute in the given cause? [NCERT Sept. 2012, 2013]

Or

Explain the importance of biodiversity for human beings. [NCERT 2010, 14]

**Answer:** (i) We humans along with all living organisms form a complex web of ecological system in which we are only a part and very much dependent on this system for our own existence. For example, the plants, animals and micro-organisms recreate the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive.

(ii) The destruction of forests and wildlife is not just a biological issue. The biological loss is strongly correlated with the loss of cultural diversity.

(iii) It also preserves the genetic diversity of plants and animals for better growth of species and breeding.

Our contribution :

(i) Minimising wastage of resources.

(ii) Use Jute bags.

(iii) Planting more trees.

6. Mention any four major threats to the population of tiger? Explain the efforts made by the government to protect them. [NCERT 2013]

**Answer:** (i) Poaching for trade

(ii) Shrinking habitat

(iii) Depletion of prey base species

(iv) Growing human population

(v) The trade of tiger skins and the use of their bones in transitional medicines, especially in the Asian countries left the tiger population on the verge of extinction.

Efforts made by the government to protect them are as under :

- (i) Project Tiger, one of the well-publicised wildlife campaigns in the world, was launched in 1973.
- (ii) There are 42 tiger reserves in India covering an area of 37,761 sq km.
- (iii) Tiger conservation had been viewed not only as an effort to save an endangered species, but with equal importance as a means of preserving bio types of sizeable magnitude.
- (iv) Some of the tiger reserves of India are Corbett National Park in Uttarakhand, Sunderbans National Park in West Bengal etc.

### 7. Explain the social impacts of loss of forests.

Or

“Forest and wildlife are vital to the quality of life and environment in the subcontinent.” Explain. [NCERT 2012, 2013]

**Answer:** (i) Loss of cultural diversity : The loss of forest and wildlife is not just a biological issue but it is also correlated with cultural diversity. There are many forests-dependent communities, which directly depend on various components of the forests and wildlife for food, drinks, medicines, etc. Many of tribal communities like Muria Gonds, Dhurwas, Bhatras, etc., have lost their habitat because of the destruction of forests.

(ii) Impact on women : Even among the poor, women are affected more than men. In many societies, women bear the major responsibility of collection of fuel, fodder, water and other basic needs. As these resources are depleted, the drudgery of women increases. Most of the time they have to walk for more than 10 km to collect the basic necessities. This causes serious health problems for women in the negligence of home and children because of the increased hours of work, which often has serious social implications.

(iii) Poverty : Deforestation is also responsible for poverty. It is considered as a direct outcome of environmental destruction. Most of the poor people or tribal people depend on forests for their basic needs. Now if the forests are destroyed, these poor people will be deprived of the basic necessities.

**8. Describe how communities have conserved and protected forests and wildlife in India. What moral lessons you have learnt from this? [NCERT 2014]**

**Answer:** (i) In Sariska Tiger Reserve : Rajasthani villagers have fought against mining by citing the Wildlife Protection Act. In many areas, villagers themselves are protecting habitats and explicitly rejecting government involvement.

(ii) The inhabitants of five villages in the Alwar district of Rajasthan have declared about 1,200 hectares of forest area as the 'Bhairodev Dakav Sonchuri'. The community has declared their own set of rules and regulations which do not allow hunting and are protecting the wildlife against any outside encroachments.

(iii) Many states have launched the Joint Forest Management programme to involve local communities in the management and restoration of degraded forests. Odisha was the first state to launch this programme.

(iv) Improper farming techniques, defective methods of farming are also responsible for depletion of our biodiversity. So many farmers and citizen groups support the Bee) Bachao Andolan in Tehri and Navdanya have developed or are using various crop production methods which do not use synthetic chemicals for growing crops.

(v) The famous Chipko Movement was launched by the women of Chamoli in northern India, saved more than 12,000 s km. area of forests just by hugging the trees when the lumberjacks attempted to cut them.

**Moral lessons :**

- Conservation strategies can be successful only with the participation of local people.
- The clear lesson from the dynamics of both environmental destruction and reconstruction in India is that local communities everywhere have to be involved in some kind of natural resource management. But there is still a long way to go before local communities are at the centre-stage in decision making. Accept only those economic or developmental activities, that are people centric, environment-friendly and economically rewarding.

**9. Which values do the wildlife sanctuaries of any country promote? [NCERT 2013]**

**Answer:** (i) Wildlife sanctuaries have been formed to conserve and maintain the diversity and integrity of natural heritage.

(ii) They help to preserve natural ecosystem.

(iii) They teach us the value of sharing because we humans along with all living organisms form a complex web of ecological system in which we are only a part and very much dependent on this system for our own existence.

**10. List any three examples of environmental degradation that you may have observed around you. [NCERT 2013]**

**Answer:** (i) Polluted air and water : Industries and vehicles release harmful gases and chemicals which are responsible for degradation of water and air.

(ii) Land degradation : Overuse of fertilisers and chemicals have resulted in land degradation.

(iii) Loss of biodiversity: Habitat destruction, hunting, poaching has led to the decline in biodiversity.

