Class X - Social Science

Forest and Wildlife Resources

CBSE NOTES

Forest and Wildlife Resources - Practice Worksheet

Strengthen your foundation with key concepts and basic applications.

Practice Questions

1. Explain the importance of biodiversity for human lives.

Hint: Consider how biodiversity affects air, water, soil, and food resources.

Solution: Biodiversity refers to the variety of life forms on Earth, including plants, animals, and microorganisms, and the ecosystems they form. It is crucial for human survival as it provides essential services like air and water purification, soil fertility, and pollination of crops. Biodiversity also contributes to medicine, with many drugs derived from plants and animals. It supports cultural and recreational activities, enhancing human well-being. The loss of biodiversity can disrupt ecosystems, leading to unforeseen consequences for human life. For example, the decline in bee populations affects crop pollination, threatening food security. Biodiversity also has intrinsic value, meaning it is valuable in itself, beyond its utility to humans. Conservation efforts are necessary to maintain biodiversity for future generations. The interdependence of species means that the loss of one can have cascading effects on others. Human activities like deforestation, pollution, and overexploitation are major threats to biodiversity. Protecting biodiversity is thus not just an environmental issue but a necessity for human survival and prosperity.

2. Describe the types of forests in India and their significance.

Hint: Focus on the conservation value and management practices of each forest type.

Solution: India's forests are classified into Reserved Forests, Protected Forests, and Unclassed Forests. Reserved Forests are the most valuable for conservation, covering more than half of India's forest area. They are under strict government control to preserve biodiversity and prevent exploitation. Protected Forests, making up about one-third of the forest area, are safeguarded against further depletion but allow some activities. Unclassed Forests include other forests and wastelands owned by both government and private entities, often managed by local communities. These forests play a critical role in maintaining ecological balance, supporting wildlife, and providing resources like timber, fuelwood, and medicinal plants. They also help in climate regulation, soil conservation, and water cycle maintenance. The distribution of these forests varies across states, with Madhya Pradesh having the largest area under Reserved Forests. Community involvement in managing Unclassed Forests has shown positive results in conservation. The classification helps in targeted conservation strategies, ensuring sustainable use and protection of forest resources.

3. Discuss the role of communities in conserving forests and wildlife in India.

Hint: Think about traditional practices and government-community partnerships.

Solution: Communities in India have played a pivotal role in conserving forests and wildlife through traditional practices and modern initiatives. Examples include the Chipko Movement, where villagers hugged trees to prevent deforestation, and the Joint Forest Management (JFM) programme, which involves local communities in protecting and managing forests. Sacred groves, protected by local beliefs, have preserved biodiversity for centuries. Communities like the Bishnois in Rajasthan protect wildlife, considering animals like blackbuck and peacocks as part of their culture. These efforts are based on the understanding that conservation supports their livelihoods and cultural identity. Community-led conservation is often more sustainable as it is rooted in local knowledge and needs. The success of such initiatives highlights the importance of involving local populations in environmental governance. Government policies are increasingly recognizing the value of community participation in conservation. However, challenges remain in ensuring equitable benefits and decision-making power for communities. The integration of traditional knowledge with scientific conservation methods can enhance effectiveness. Community conservation models offer a hopeful path towards balancing ecological and human needs.

4. What are the main threats to tiger populations in India, and how is Project Tiger addressing them?

Hint: Consider habitat, poaching, and conservation strategies.

Solution: The main threats to tiger populations in India include poaching for skin and bones, habitat loss due to deforestation and human encroachment, depletion of prey species, and human-wildlife conflict. Project Tiger, launched in 1973, aims to protect tigers by creating reserves where hunting and habitat destruction are prohibited. It focuses on preserving the tiger's habitat, ensuring a stable prey base, and reducing human-tiger conflicts. The project also involves anti-poaching patrols and legal measures against wildlife trade. Tiger reserves like Corbett, Sunderbans, and Bandhavgarh are part of this initiative. Project Tiger has contributed to the increase in tiger numbers, but challenges like habitat fragmentation and illegal trade persist. The project now emphasizes biodiversity conservation beyond tigers, recognizing their role as umbrella species. Community involvement and eco-development programs around reserves are key strategies. Despite successes, continuous efforts are needed to address emerging threats and ensure the long-term survival of tigers in India.

5. Explain the significance of sacred groves in biodiversity conservation.

Hint: Focus on cultural beliefs and ecological benefits.

Solution: Sacred groves are patches of forests protected by local communities due to religious or cultural beliefs. They serve as reservoirs of biodiversity, preserving rare and endemic species that might otherwise be extinct. These groves are examples of traditional conservation practices, where

nature is worshipped and protected. They play a crucial role in maintaining ecological balance, supporting pollinators, and preserving genetic diversity. Sacred groves also help in water conservation and soil fertility, benefiting surrounding areas. The cultural significance of these groves ensures their protection across generations, without the need for formal laws. However, urbanization and changing lifestyles threaten their existence. Efforts to document and legally protect sacred groves are increasing. They exemplify how cultural practices can contribute to environmental conservation. Sacred groves are a testament to the harmonious relationship between humans and nature, offering lessons for modern conservation strategies.

6. How does deforestation affect wildlife and human communities?

Hint: Consider ecological, economic, and social impacts.

Solution: Deforestation leads to habitat loss, endangering wildlife species and reducing biodiversity. It disrupts ecosystems, affecting food chains and leading to the extinction of species. For humans, deforestation results in loss of resources like timber, medicinal plants, and non-timber forest products, impacting livelihoods. It also contributes to climate change by reducing carbon sequestration, leading to global warming. Soil erosion and water cycle disruption are other consequences, affecting agriculture and water availability. Deforestation increases human-wildlife conflicts as animals lose their habitats and venture into human settlements. The loss of forests also means the loss of cultural and spiritual values associated with them. Reforestation and sustainable forest management are essential to mitigate these effects. Community-based conservation and alternative livelihoods can reduce dependence on forests. Addressing deforestation requires global cooperation and policies that balance development with environmental protection.

7. Describe the Indian Wildlife (Protection) Act and its importance.

Hint: Focus on legal protections and conservation outcomes.

Solution: The Indian Wildlife (Protection) Act of 1972 provides legal framework for the protection of wildlife and their habitats. It prohibits hunting of specified animals, regulates trade in wildlife products, and establishes protected areas like national parks and sanctuaries. The Act has been amended to include more species and stricter penalties for violations. It plays a crucial role in conserving endangered species like tigers, rhinoceroses, and elephants. The Act also recognizes the importance of community participation in conservation. It has helped in the recovery of several species and habitats, contributing to biodiversity conservation. However, challenges like inadequate enforcement and human-wildlife conflicts remain. The Act is a cornerstone of India's environmental legislation, reflecting the country's commitment to wildlife conservation. It aligns with international conventions like CITES, enhancing global conservation efforts. Continuous updates and community engagement are essential for its effectiveness.

8. What are the objectives of Joint Forest Management (JFM) in India?

Hint: Think about community benefits and forest regeneration.

Solution: Joint Forest Management (JFM) aims to involve local communities in the management and restoration of degraded forests. It seeks to ensure sustainable use of forest resources while improving the livelihoods of forest-dependent communities. JFM fosters a partnership between the forest department and local villages, with communities protecting forests in exchange for benefits like non-timber forest products and a share in timber revenues. The programme encourages afforestation and biodiversity conservation. It recognizes the traditional rights and knowledge of local communities, making conservation more effective. JFM has been successful in many states, leading to improved forest cover and community empowerment. However, issues like unequal benefit sharing and lack of awareness need addressing. JFM represents a shift towards participatory governance in forest management. It highlights the importance of local involvement in achieving ecological and social objectives. The programme is a model for integrating conservation with community development.

9. Discuss the impact of human activities on flora and fauna.

Hint: Consider direct and indirect effects of human actions.

Solution: Human activities like agriculture, urbanization, industrialization, and pollution have significantly impacted flora and fauna. Habitat destruction is the leading cause of species extinction, with forests being cleared for farming and development. Pollution from industries and vehicles affects air, water, and soil quality, harming wildlife. Overexploitation of resources, such as overfishing and hunting, threatens species survival. Climate change, driven by human activities, alters habitats and migration patterns. Invasive species introduced by humans can outcompete native species. However, humans also have the capacity to conserve and restore ecosystems through protected areas, legislation, and sustainable practices. Education and awareness can reduce negative impacts. Balancing development with conservation is crucial for the coexistence of humans and wildlife. The restoration of degraded habitats and the protection of endangered species are positive steps towards mitigating human impact.

10. Explain the concept of ecological farming and its benefits.

Hint: Focus on sustainability and environmental health.

Solution: Ecological farming is a sustainable agricultural practice that works in harmony with nature, avoiding synthetic chemicals and genetically modified organisms. It emphasizes biodiversity, soil health, and ecological balance. Benefits include reduced pollution and water usage, enhanced soil fertility, and increased resilience to pests and diseases. Ecological farming

supports wildlife by providing habitats and reducing pesticide exposure. It produces healthier food, free from harmful residues, and maintains genetic diversity of crops. Practices like crop rotation, organic composting, and natural pest control are central to ecological farming. Initiatives like the Beej Bachao Andolan promote traditional seed varieties and farming techniques. Ecological farming can be economically viable, offering long-term benefits over conventional methods. It represents a shift towards sustainable food systems that protect the environment and human health. Adopting ecological farming is essential for achieving food security and environmental sustainability.

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Good Luck!

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