

Class-X ch-2 [Geography] · Forest and Wildlife Resources

- Introduction:

- Interdependence [Plant, animals, soil, forest]

- Biodiversity : Species Diverse in form and function but closely integrated in a system through multiple network of interdependencies.

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• flora and fauna in India

→ 8% total Species in the world [1.6 Million]

- 81,000 Species of fauna

- 47,000 Species of flora [15,000 flowering Species are endemic to India]

→ 10% [wild flora] and 20% of mammals are on threatened list.

- cheetah, pink-headed duck, mountain quail, Forest Spotted owl

- Madhuca insignis [wild Mahua], Hubbardia [A species of grass]

→ Pace of Extinction.

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• Vanishing Forest

→ Total forest Cover = 24.01 % [78.92 Million hectare]

• Dense forest = 12.24 %

• Open forest = 8.99 %

• Mangroves = 0.14 %

→ According to state of forest Report forest area ↑ by = 10,098 sq/km Since 1997

→ Limitation ??

→ It does not differentiate between natural forests and Plantations

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• IUCN's Classification

(i). Normal Species

→ population level are normal for their survival. ex: Cattle, Sal, Pine

(ii). Endangered Species

→ In danger of extinction
→ Survival may not be possible if threats to their population continuous to operate.
ex: Black buck, lion tailed Macaque

(vii). Vulnerable Species

→ Decline in the population, from where they are likely to move into the endangered category, if the threat continuous to operate.

ex: Blue sheep, Asiatic elephant
Ganges dolphin

(iv). Rare Species

(v). Endemic Species

(vi). Extinct Species

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• IUCN's Classification

→ International union for Conservation of nature and Natural Resources.

(i). Normal Species

(ii). Endangered Species

(iii) Vulnerable Species

(iv). Rare Species

→ All ready Small population

→ May move into Endangered or vulnerable Category if the threats to their population Continous to operate

Ex: Himalayan brown bear, wild Asiatic buffalo

(v). Endemic Species

→ found in some particular area

→ Isolated by natural or geographical barriers

→ Ex: Andaman teal, Nicobar pigeon

(vi). Extinct Species

→ Not found after Searches, where earlier they used to occur

→ A species may Extinct from, local area region, country, or the entire earth.

Ex: Asiatic cheetah, pink head duck

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- Asiatic cheeta - Where did they go??
 - Fastest land mammal 112km/h
 - Difference between cheetah and leopard
 - Asiatic cheetah is nearly extinct due to decline in habitat and Prey.
 - Extinct in India Since 1952

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• Depletion of Flora and Fauna

→ Factors Responsible for the depletion of the flora and fauna?

(i). Loss during Colonial period

→ Railways, Commercial and Scientific forestry

→ Enrichment plantation
[ex: Teak \Rightarrow Natural forest of South India
÷ chir pine in Himalayas \Rightarrow Himalayan oak]

→ Mining activities

(ii). Agricultural Expansion

→ According to Forest Survey of India 26,200 sq/km of forest area \Rightarrow Agriculture area

→ "slash and burn" agriculture [Jhum] in north eastern and central India.

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• Depletion of Flora and Fauna

→ factors Responsible for the depletion of the flora and fauna?

(iii) Large Scale developmental projects

→ Since 1951, 5000 sq/km of forest was cleared for River valley project.

→ Narmada Sagar project [M.P] would inundate 40,000 Hectares

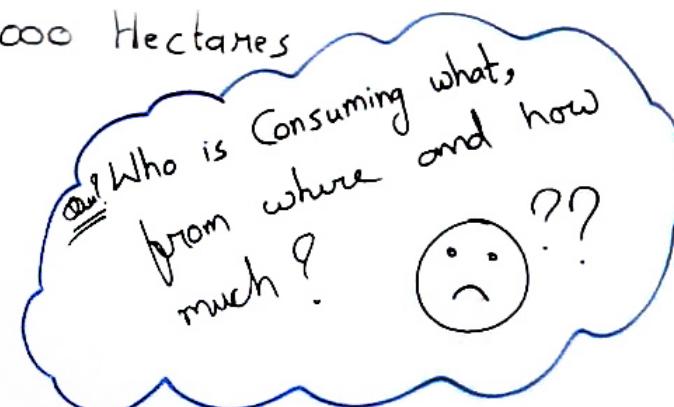
→ Dolomite Mining [Buxa tiger Reserve in W.B]

(iv) Human and Natural factors

→ Grazing and fuel-wood collection [lopping & felling]

→ Expanding industrial economy.

→ Habitat destruction, Hunting, poaching, over exploitation, Environmental pollution, poisoning and forest fire etc.



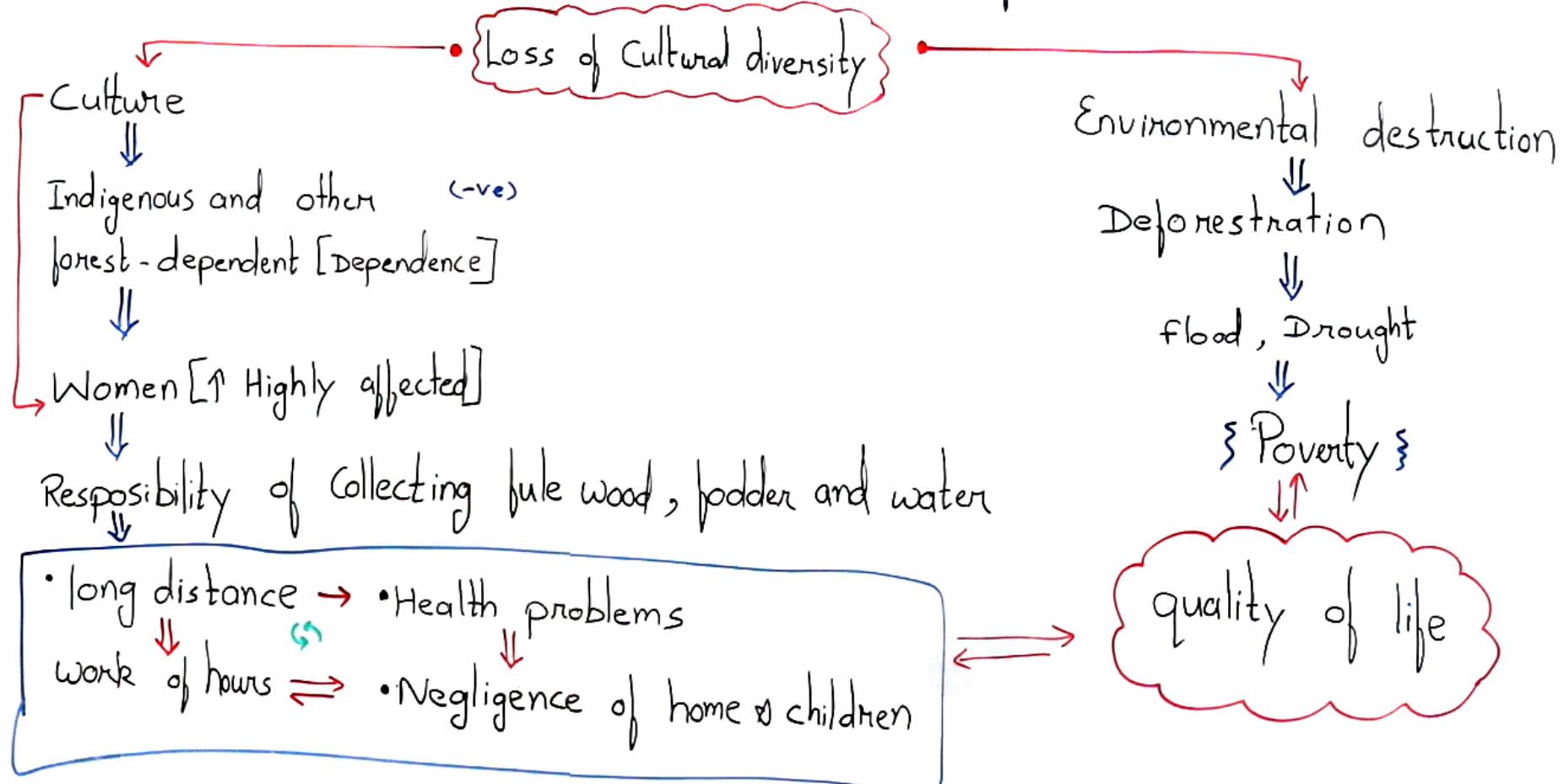
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• Impact of destruction of forest and wildlife

- $\frac{1}{2}$ of Natural forests are gone
 - $\frac{1}{3}$ of wet land's drained out
 - 70% of Surface water bodies are polluted
 - 40% Mangroves wiped out
 - Thousands of Species are heading towards Extinction.
- } <sup>Ques Biological issue ??
→ far more than it.</sup> = loss of cultural diversity

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- Impact of destruction of forest and wildlife = II



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• Conservation of forest and wildlife In India

1. why do we need it ??
2. Step's taken ??
3. Project tiger ??

→ Conservation preserves the ecological diversity

• It preserves genetic diversity

Ex: Traditional Crop Varieties

Fisheries on aquatic biodiversity.

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• Conservation of forest and wildlife In India = II

2. Steps taken

- Indian Wildlife Protection Act [1972]
- An all-India list of protected species was published
- Banning hunting, giving legal protection to their habitat, Restricting trade in wildlife
- Establishment of National parks and Wildlife Sanctuaries
- Projects to protect specific animals, such as tiger, one-horned Rhinoceros three types of crocodiles, Asiatic lion etc.
- Project ⇒ Biodiversity ⇒ Insects ⇒ Notification of Wildlife Act of 1980 and 1986 Butterflies, Moths, dragon fly have been added to protected list.
- In 1991 six plant species were also added to protected list.

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• Conservation of forest and wildlife In India - III

3. Project tiger

- ↓ Population from 55,000 to 1,827 [in a century]
- Reasons ?? = Poaching for trade, shrinking habitat, depletion of prey base species, growing human population, the trade of tiger skin, bone for traditional Medicines.
- India and Nepal Habitat of $\frac{2}{3}$ surviving tiger population. Now these areas are prime target.
"Project tiger" launched in 1973
- ⇒ Population • 4,002 ↑ 1985 • 4334 ↑ 1989 • 3,600 ↓ 1993 • 2,226 ↓ 2014
- 39 tiger reserves ex: Corbett National park in U.K, Sunderban National park W.B Bandhavgarh National park in M.P and Many more
- Umbrella programme.

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Types and Distribution of forest and wildlife Resources

→ Conserve to manage

(i). Reserved forests

• More than $\frac{1}{2}$ of total forest land



100

- ★ Reserved + Protected = Permanent Forest
- Maintained for producing timber and other forest produce.

(iii). Unclassed forests

- Other forest area and wasteland of govt. and private individuals and communities.
- open Category
- North Eastern states and Gujarat.

(ii) Protected Forest

• almost $\frac{1}{3}$ of total forest area

• Protected from any further depletion

• Bihar, Haryana, Punjab, H.P., Orissa, Rajasthan

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Community and Conservation - I

- Traditional System of Conservation by Specific Community
 - Struggle of local communities
 - (i) In Sariska Tiger Reserve, villagers fought against mining by citing wildlife Protection act.
 - (ii) Alwar district of Rajasthan, 5 villages declared 1,200 hectares of forest as the "Bhairadev" Dakav Sonchumi, having their own set of Rules and Regulations

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Community and Conservation - II

- Chipko Movement

→ Resisted deforestation and also revived the traditional Conservation by Community afforestation.

- Beej Bachao Andolan

→ In Tehri and Navdanya, diverse variety of Crop is produced without the use of Synthetic and chemicals.

- JFM [Joint Forest Management]

→ Involving local Communities in restoration of degraded forests.

→ In 1988, state of Orissa passed first resolution for JFM.

→ local Institute takes up the protection activities on lands Managed by govt.



- Provided with non-timber benefit and share in timber harvested by "Successful protection"

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Community and Conservation - III [Sacred groves]

- Tribal Belief
 - ↓
 - Nature Worship
 - ↓
 - Preserved Several forests
 - ↓
 - Sacred Groves
[The forests of god and goddesses]
 - Fedding langurs and macaques around temples.
 - In Bishnoi village of Rajasthan, herds of Blackbucks, nilgai and peacocks are integral part.

ex: Munda and Santhal of chota nagpur worship Mahua and kadamba

 - Tribes of orissa and Bihar worship tamarind and Mango during weddings
 - In general peepal and Banyan tree is Considered as sacred.
 - Sacred qualities are often Connected with springs, Mountains, peaks , plants and animals.

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* Frequently Asked Questions

- ① Write a note on flora and fauna in India?
- ② What are the various categories of species classified by IUCN? [specific]
- ③ Reasons for depletion of ~~flora~~ Asiatic cheetah?
 - ⓐ Colonial forest policy
 - ⓑ Agricultural Expansion
 - ⓒ Large Scale displacement
 - ⓓ Human and Natural factors.
- ④ Impact of destruction of forest and wildlife?
 - ⓐ On Nature
 - ⓑ Social life
- ⑤ Steps taken for the conservation? Need? Project Tiger?
- ⑥ Types of forest? Distribution? [specific]
- ⑦ How community can play an important role in conservation of F.A.W? [specific]
- ⑧ Explain the concept of Sacred groves? [with example]
- ⑨ Define: Types of Species, Project tiger, Reserved, Protected, Unclassed forests
Chipko Movement, Beej Bachao Movement and J.F.M.