

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 owlet

- 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 $\uparrow$ 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
Gangetic 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

Continuous 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 112 km/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

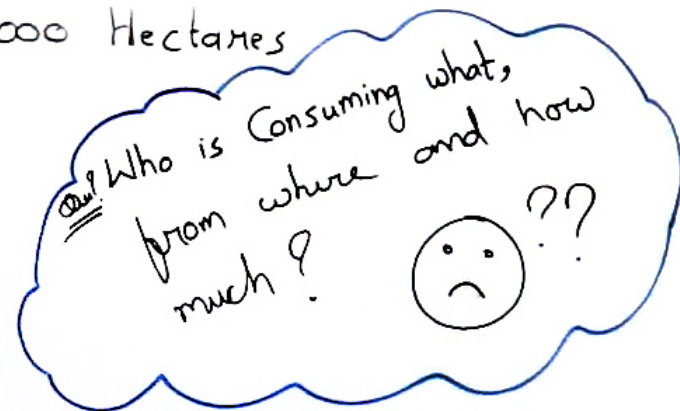
→ Dolomite Mining [Buxa tiger Reserve in W.B]

(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

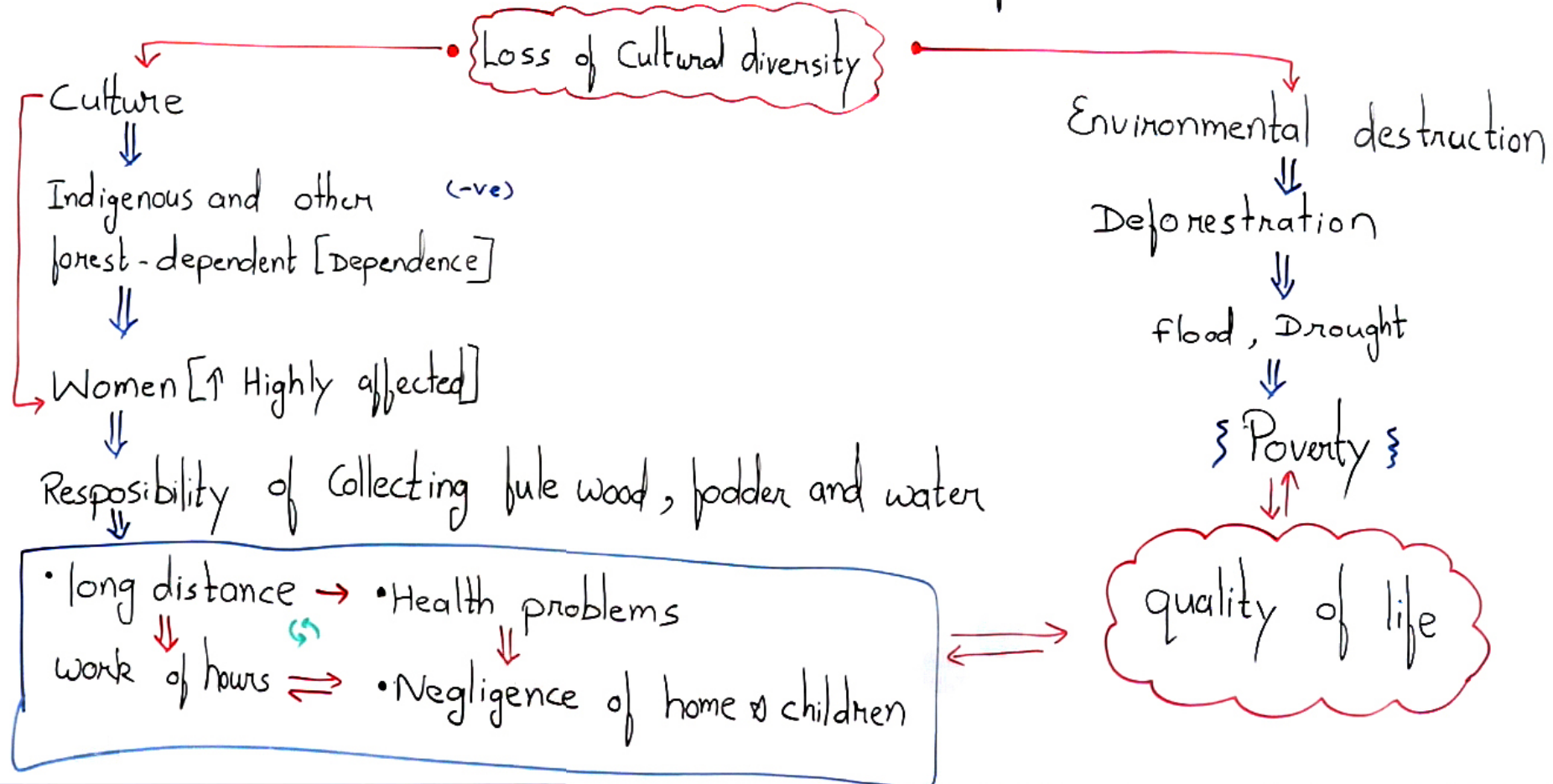
- $\frac{1}{2}$ of Natural forests are gone
- $\frac{1}{3}$ of wetland's drained out
- 70% of Surface water bodies are polluted
- 40% Mangroves wiped out
- Thousands of Species are heading towards Extinction.

Ques Biological issue ??
→ far more than it.

↓
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. Steps 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 $\Rightarrow$ Biodiversity $\Rightarrow$ Insects $\Rightarrow$ 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.

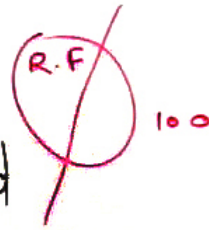
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• Types and Distribution of forest and wildlife Resources

→ Conserve to manage

(i). Reserved forests

- More than $\frac{1}{2}$ of total forest land
- Most valuable
- strictly regulated
- J&K, Andhra P., U.K, Kerala, T.N, W.B, Maharashtra



(ii) Protected Forest

- almost $\frac{1}{3}$ of total forest area
- Protected from any further depletion
- Bihar, Haryana, Punjab, H.P, Orissa, Rajasthan

★ 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.

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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 "Bhairodev" Dakor Sonchuni, 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 Nardanya, 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.

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• 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
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- Nature Worship
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- preserved Several forests
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- Sacred Groves
[The forests of god and goddesses]

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.
- In Bishnoi village of Rajasthan, herds of Blackbucks, nilgai and peacocks are integral part.

• Feeding langurs and macaques around temples.

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* Frequently Asked Questions

- ① Write a not on flora and fauna in India?
- ② What are the various categories of species classified by IUCN? [specific]
- ③ Reasons on depletion of ~~Asiatic cheetah~~ ^{flora}?
 - Ⓐ Colonial forest policy
 - Ⓑ Agricultural Expansion
 - Ⓒ Large Scale displacement
 - Ⓓ Human and Natural factor.
- 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, unclassified forests
Chipko Movement, Beej Bachao Movement and J.F.M.