

Training Program on Preparation of Water Resources Projects

FOREST AND WILDLIFE CLEARANCES OF WATER RESOURCES PROJECTS

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Importance of Wildlife and Forest

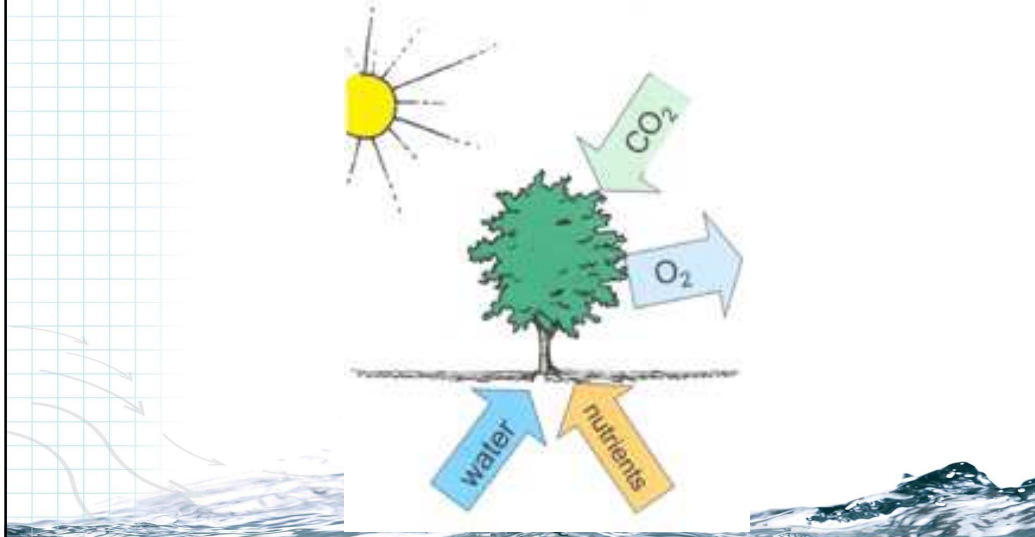
Maintains ecological 'balance of nature' and food chain

The diagram illustrates the flow of energy and nutrients through an ecosystem, structured as a pyramid with six levels:

- Top Level Consumers:** (Apex) - Mostly apex eat consumers. Represented by a lion and a hawk.
- Secondary Consumers:** - Mostly eat consumers, also consume eaten at prey. Represented by a snake and a frog.
- Primary Consumers:** - Mostly eat producers. Represented by a rabbit, a deer, and a bird.
- Producers:** - Make their own food (sugar). Represented by various plants and flowers.
- Decomposers:** - Return nutrients back to the soil. Represented by mushrooms, worms, and beetles.

Importance of Wildlife and Forest

Receptor of CO₂ and Emitter of Oxygen



Importance of Wildlife and Forest

Economic value – timber, paper, gums, ivory, leather, honey



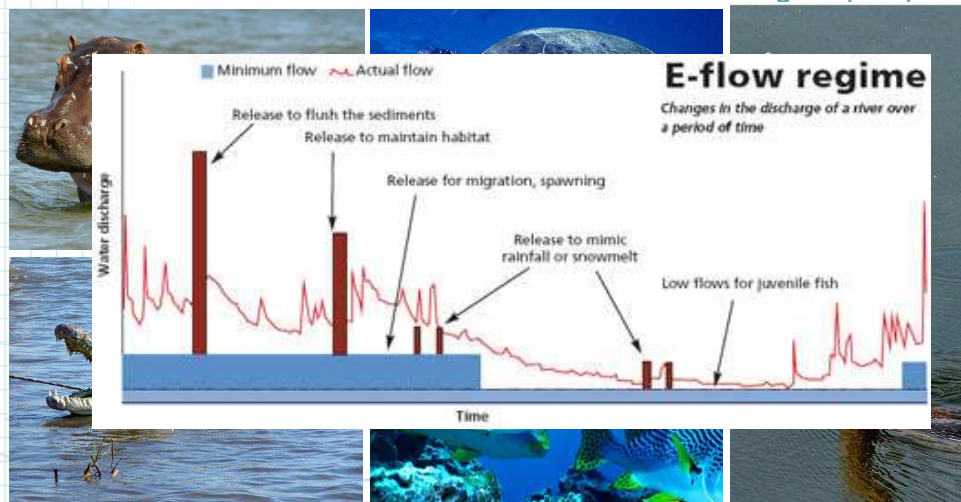
Importance of Wildlife and Forest

Medicinal value- Wide application in Ayurveda



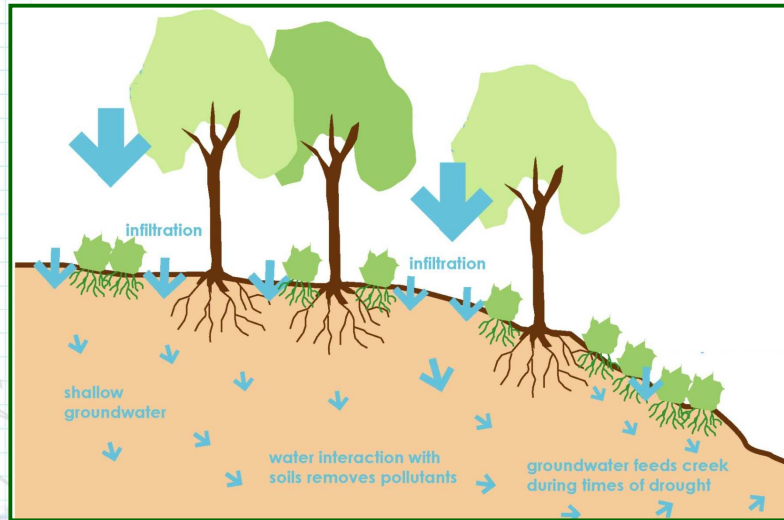
Impact of Wildlife & Forest and Water Resources

Wildlife affects assessment of Environmental Flow Regime (EFR)



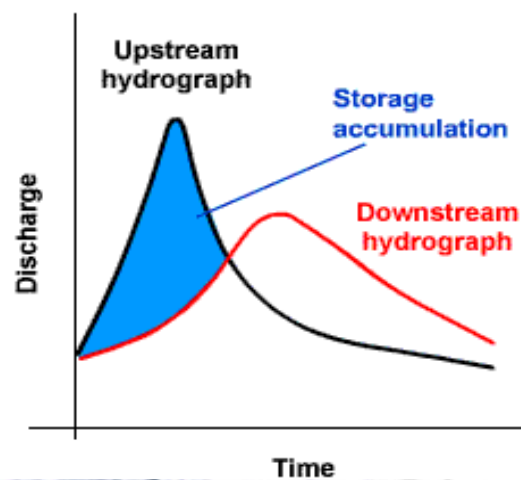
Impact of Wildlife & Forest and Water Resources

Vegetation & Forests increase infiltration & storage capacity of the soil



Impact of Wildlife & Forest and Water Resources

Retardance to the overland flow and peak discharge



Indian Wildlife



Unique assemblage of globally important endangered species like Asiatic lion, Asian Elephant, One-horned Rhinoceros, Gangetic River Dolphin, Snow Leopard, Kashmir Stag, Dugong, Gharial, Great Indian Bustard, Lion Tailed Macaque etc.

Threat to Wildlife in India



Wildlife-Constitutional Provision

- Concurrent list of Indian Constitution;
- Federal Ministry acts as a guiding torch
- Regional Offices of MoEF/ Provincial Forest Departments - implementation of national policies and plans

Wildlife (Protection) Act 1972

- To provide uniform legislation on wildlife throughout the country;
- To establish network of Protected Areas;
- To regulate illegal trade in Wildlife & its products.

Wildlife - Protected Areas

- National Board for Wildlife (NBWL);
- National Wildlife Action Plan (2002-2016) was adopted in 2002;
- A network of 668 Protected Areas (PAs) has been established;
- National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves.

Protected Areas – Wildlife Sanctuary



Bharatpur Bird Sanctuary, Rajasthan



Protected Areas – Wildlife Sanctuary

- Area of significant ecological, faunal, floral, geomorphological, natural or zoological significance.
- For protecting, propagating or developing wildlife or its environment.
- Certain rights of people living inside the Sanctuary could be permitted.
- 515 nos. of Wildlife Sanctuaries in India.

Protected Areas – National Park



Kaziranga National Park, Assam



Protected Areas – National Park

- Area of significant ecological, faunal, floral, geomorphological, natural or zoological significance.
- For protecting, propagating or developing wildlife or its environment.
- No rights of people living inside the Sanctuary could be permitted.
- 102 nos. of National Parks.

National Park Vs. Wildlife Sanctuary

- National Parks enjoys higher degree of protection than sanctuaries.
- No grazing inside a National Park; in a Sanctuary, the Chief Wildlife Warden may regulate, control or prohibit it.
- Removal or exploitation of wildlife or forest produce from a Sanctuary requires the recommendation of the SBWL whereas NBWL for National Park.
- As per Supreme Court orders, such removal also requires recommendation of the Standing Committee of NBWL for both Sanctuaries as well as National Park.

Protected Areas – Conservation Reserves



Jayamangali Black Buck Conservation Reserve, Karnataka



Protected Areas – Conservation Reserves

- Area adjacent to National Parks and Sanctuaries and those areas which link Protected Areas.
- For protecting landscapes, seascapes, flora and fauna and their habitat.
- The rights of people living inside a Conservation Reserve are not affected.
- 47 nos. of Conservation Reserves.

Protected Areas – Community Reserves



Kokkare Bellur Community Reserve, Karnataka

Protected Areas – Community Reserves

- Private or community land, not comprised within Protected area, where an individual or a community has volunteered to conserve wildlife and its habitat.
- For protecting fauna, flora and traditional or cultural conservation values and practices.
- The rights of people living inside a Community Reserve are not affected.
- 4 nos. of Community Reserves.

Project Tiger



Royal Bengal Tiger





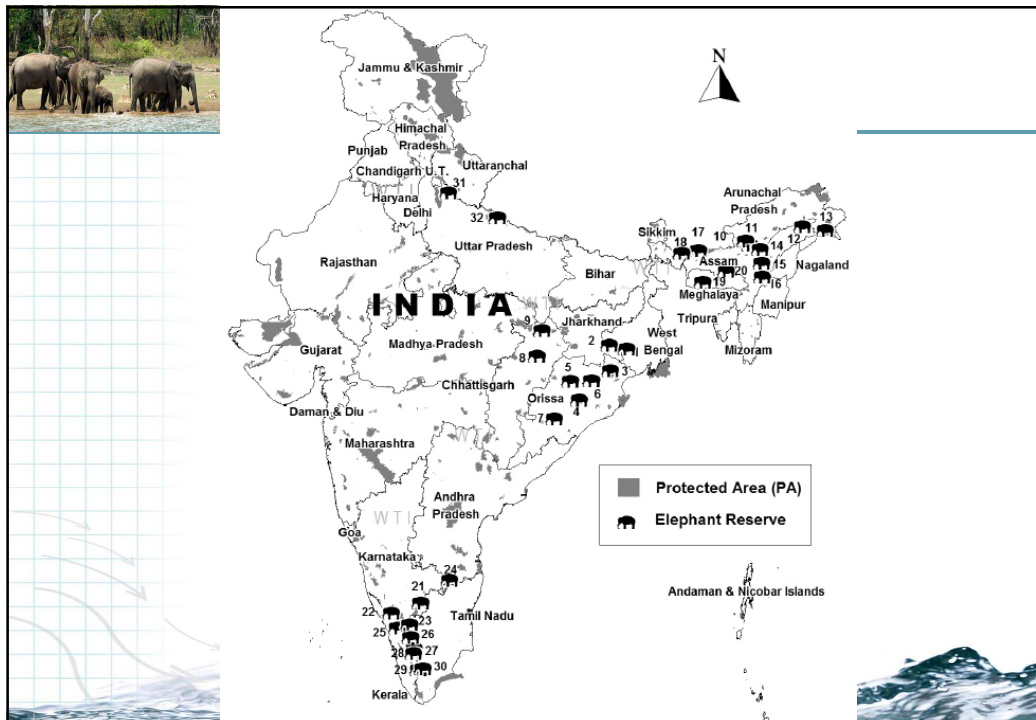
Project Tiger

- Centrally Sponsored Scheme of Government of India since 1973;
- Initially, the Project started with 9 tiger reserves, covering an area of 16,339 sq.km; Presently, 41 tiger reserves covering an area of 37,761 sq.km in 17 States;
- Project Tiger has put the tiger on an assured course of recovery from the brink of extinction;
- The population of tigers in the country has increased significantly to about 4000 from about 268 tigers at the time of launch of the project .



Project Elephant






Project Elephant

- Launched in 1992 by the Government of India Ministry of Environment and Forests;
- The Project is being implemented in 13 States / UTs of India. 26 Elephant Reserves (ERs) extending over about 60,000 sq km;
- Aims at protecting the elephants, their habitats;
- It also seeks to address the issues of human-elephant conflict and welfare of domesticated elephants.



Wildlife Protection-International Conventions

- The Convention on International Trade in Endangered Species (CITES) of Flora & Fauna;
- India is signatory of CITES since 1976;
- CITES protects 5,000 species of animals and 28,000 species of plants;
- Species grouped under Appendices on the basis of level of protection required (Red Data Book, IUCN).



Wildlife Protection-International Conventions

- International Convention for Regulation of Whaling, Washington 1946 (India joined in 1981);
- Convention on conservation of Migratory Species of Wild Animals, Bonn, 1979 (India joined in 1983)
- UNESCO has designated 5 Protected Areas as World Heritage Sites.



Wildlife Protection-International Conventions

1. Kaziranga Wild Life Sanctuary, Assam
2. Manas Wild Life Sanctuary, Assam
3. Keoladeo National Park, Rajasthan
4. Nanda Devi and Valley of Flowers National Parks, Uttarakhand
5. Sundarbans National Park, West Bengal

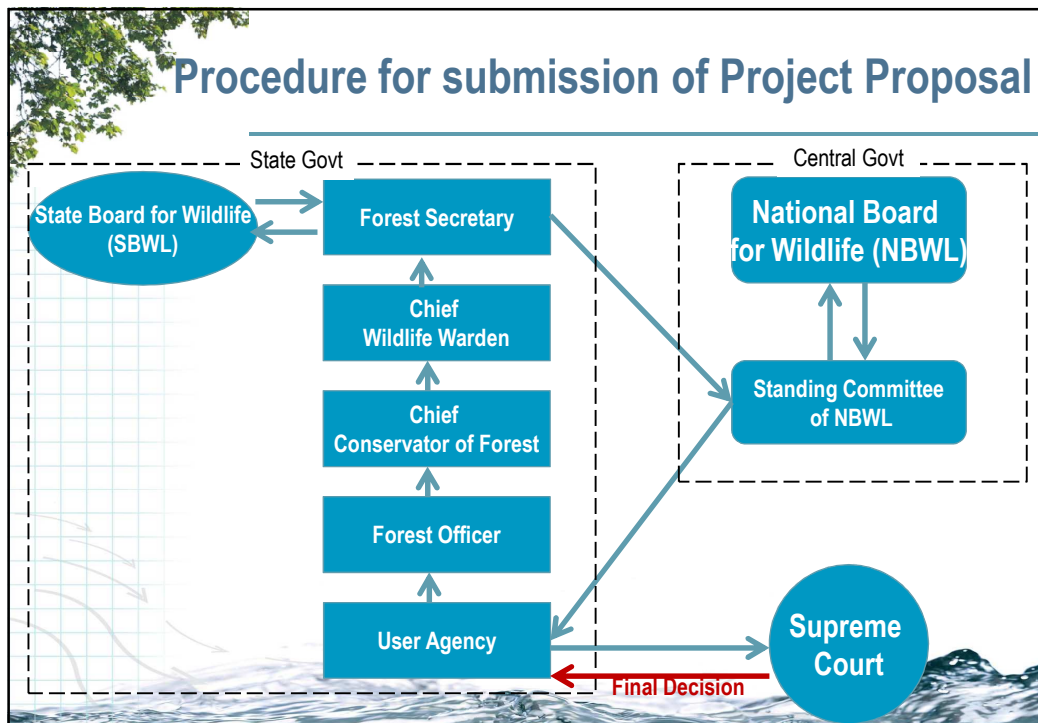


Procedure for submission of Project Proposal

- User Agency/Project Proponent is required to submit the proposal in the prescribed proforma having 5 parts to be filled by each of the following:
 1. User Agency;
 2. Concerned Divisional Forest Officer/Park Manager;
 3. Concerned Chief Conservator of Forests;
 4. Concerned Chief Wildlife Warden and
 5. Forest Secretary.

Procedure for submission of Project Proposal

- The proforma also seeks information in detail on the following:
 - Biodiversity of the area in question;
 - Maps of the area;
 - Other activities already in place;
 - Possible impacts of the proposal, etc.



Indian Forest



Indian Forest

- India has forest cover of about 64 million Ha, i.e. 19.5% of the total area.
- Per capita forest is one of the lowest in the world at 0.08 ha, against an average of 0.5 ha for developing countries and 0.64 ha for the world.
- 30% of total area should be under forest cover for ecological stability.
- Series of Forest Policy 1894, 1965 and latest 1988.

Forest Policy 1988

- Sets a national objective of expanding the forest cover of India to 33 percent of the total area of the country.
- Afforestation of wastelands (barren, un-utilised) both 'outside forests' and within recorded 'forest lands'.
- Conservation, protection & restoration of existing, degraded and encroached forests.
- 'Joint management' of forests together with farm forestry and agroforestry schemes on private lands.
- Strengthening of Protected Areas.
- Low priority to forest's raw material based industries.

Forest Policy 1988



Forest (Conservation) Act 1980

- To regulate the indiscriminate exploitation of forest lands
- To maintains a logical balance between the developmental needs of the country and the conservation of natural heritage.
- Prior approval of the Central Government is essential for diversion of forest lands for the non-forestry purposes.

Forest (Conservation) Act 1980..contd

- Prior to 1980, the rate of diversion of forest lands for non forestry purposes was about 1.43 lakh ha. per annum & it came down to 15,000 ha.
- Diversion of forest land are allowed only for essential developmental needs such as
 - Drinking water projects, Irrigation projects,
 - Transmission lines, Railway lines, Roads,
 - Power projects, Defense related projects Mining etc.
- Compensatory afforestation, catchment area treatment plan, wildlife habitat improvement plan, rehabilitation plan etc. are also stipulated.





Consideration by Committee (FAC/SAG)

- Inclusion of Protected Areas.
- Rehabilitation of people due to hydro power or river valley project.
- Certification from State Govt or other concerned authority that
 - No other alternatives are feasible
 - Area required in minimum needed for the purpose
- State Government or other concerned authority undertakes to provide at its cost for the acquisition of land of an equivalent area for afforestation.



MANY THANKS

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