# A Summary on the Shortcomings in the Natural Ecosystems

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With regard to issues on FOREST/NATURAL ECOSYSTEM AND WILDLIFE there are several issues that need to be analysed.

Issue One: Destruction/degradation of primary natural forest ecosystem

*Virgin forest areas and natural forest patches can never be recreated. Loss of primary virgin forest ecosystem cannot be compensated by any means. Such patches, where they still remain, should be protected against any alternative cost or opportunity. Incidentally most of such forest patches lie deep inside the Protected Forest Areas (PA) of West Bengal, i.e., Wildlife Sanctuaries (WLS) and National Parks (NP).*

Suggested Remedial Measures:

* Identification of primary virgin or near virgin forest patches
* Provide and ensure full scale protection to these patches. These areas should not be kept open for any kind of operations. Ultimate effort to be given to protect these areas for any human interference, even if local. If necessary, arrange for translocation of certain forest villages. *(e.g., Certain areas within National Parks at Neora Valley, Gorumara, Jaldapara, Buxa, Singalila and Sunderbans).*

Issue Two: Destruction/further degradation of partially degraded / degraded natural forest ecosystem and non-forest wilderness areas

*Most part of the ‘protected forest areas’ and ‘natural forest ecosystem’ outside the PAs in use by the community for (a) wildlife conservation/preservation (b) tourism and (c) for meeting certain daily requirements of the fringe and forest villagers for their bare minimum subsistence – are partially degraded. It is an absolute necessity to stop further degradation and ensure sustainability for future exploitation. Otherwise, total depletion of those areas is inevitable which eventually will result into invasion on remaining primary virgin forest patches.*

Suggested Remedial Measures:

* To restrict operations detrimental to semi-primary natural forest or near natural wilderness areas. In any case, the local/fringe people should be allowed to use these patches sustainably for their daily needs only. *(e.g., buffer areas of Sanctuaries / National Park, wilderness areas spread all over the State, natural wetlands not yet converted)*
* Strictly curb illegal activities in these areas - particularly encroachment and destruction of habitat through indiscriminate exploitation. (e.g. identify and shut down all illegal sawmills around or near PAs).

Issue Three: Destruction/further degradation of mangrove ecosystem (part of forest ecosystem)

*The mangrove forest belt of lower Bengal acts as a protective shield against severe natural disasters like cyclonic storms, tidal bores and even sea-level rise due to climate change. It is essential to keep this natural barrier intact for the survival of lower Bengal habitation areas including the city of Kolkata.*

Suggested Remedial Measures:

* Identifying problem areas.
* Ensure strict protection and regeneration of mangrove belt along coastal area.

Issue Four: Destruction/further degradation of coastal and marine ecosystem

*There are Coastal Regulation Acts and other environmental guidelines to protect the marine and coastal ecosystems. But for short-term benefits of mostly private parties these norms and regulations are often being flouted.*

Suggested Remedial Measures:

* Identifying problem areas
* Coastal Regulation Act to be strictly implemented particularly in the area of tourism industry.

Issue Five: Indiscriminate destruction of Wildlife and Biodiversity

*In all kind of awareness campaigns usually conservation of plants, animals and environment is highlighted. But while speaking of ecosystem conservation, conservation of biodiversity has to be emphasized. It means planting of trees is welcome, but the real measure should be planting of various local and indigenous species of trees, not only fast growing fuel-wood yielding and timber varieties. Campaign towards preservation and expansion of greenery is beneficial, but the benefits will be multiplied if as many as possible species can be preserved in* in-situ *or* ex-situ *conditions. Also, there are many rare species of plants and animals native to West Bengal. It is the duty of the State to ensure their protection against any cost.*

Suggested Remedial Measures:

* Focus on preservation of biodiversity. Extensive awareness generation campaigns focusing primarily on preservation of bio-diversity.
* Identifying human activities particularly destructive to biodiversity and find alternative to curb those activities. *(e.g., natural prawn-seed collection along coastal areas and areas around the Sunderbans)*
* To bring man-animal conflict under reasonable control. *(e.g., elephant killing on rail track /due to electrocution etc., killing of leopard/tiger/gaur during conflict situation, unnecessary killing of wild animals due to irrational fear. In West Bengal such incidents are fairly common and even recent incidents indicated that West Bengal Forest Department is not properly equipped or trained to handle such situations).*
* Identifying particularly endangered animal species residing within the State, protect their niche and habitat with special care, initiate research and intensive awareness campaign on these species (e.g., Bengal Florican, Marsh Mongoose, Fishing Cat, Red Panda, Himalayan Newt). Similar initiatives to be taken to preserve endangered plant species.
* Stop poaching and passage of wildlife contraband through the State.
* Identification, listing, mapping and preservation of sacred groves.

Issue Six: Increasing pressure on natural habitat for growing human needs

*There are a few basic requirements for all habitations around forest and non-forest areas, such as requirement for fuel-wood, requirement of natural fodder for domestic livestock etc. If these requirements can be met, greenery and trees around habitations can be better preserved and to some extent extreme poverty situation can be tackled.*

*Similarly, as population is increasing, demand for space for several economic purposes are increasing particularly around major habitation areas. This excess demand usually in the form of encroachment and conversion activities is posing threat to semi-natural ecosystems and wilderness areas.*

Suggested Remedial Measures: Some General Conservation Initiatives

* To put thrust again on social forestry related activities.
* Ensure spread of Joint Forest Management activities (following the famous Arabari model) particularly in North Bengal to meet basic daily requirements of the local villagers (e.g., requirement for fuel-wood)
* Identifying wetland areas essentially supportive to good environment, biodiversity and livelihood sustainability of local people.
* Legal demarcation of boundaries should be done as early as possible.
* No further encroachment to be ensured. *(e.g., The ‘East Kolkata Wetlands’, one of the important Ramsar Sites of India, a natural mechanism that recycles the huge quantity of waste-water generating from Kolkata City and a place known to be the lungs and kidneys of the metropolis, is under severe threat of encroachment and destruction from real-estate and other such profit-making agencies. This has to be taken care of to ensure better living of inhabitants of Kolkata and its outskirts)*
* Encourage eco-tourism and village-based home-stay tourism along the fringe areas of Wildlife Sanctuaries / National Parks / Wilderness areas (to make fringe population less dependent on forest; also, to generate conservation awareness among visitors)

**In addition, and in summary some recommendations can be given on Environmental issues:**

* Ganga Action: Anti-pollution drive along the course of Ganga (Hugli River) and its tributaries particularly along the middle course that is flowing through the industrial belts of Haora, Purba Bardhaman, Hugli, North 24 Parganas and Kolkata districts.
* Anti-pollution (both air and water) drive throughout the industrial region of particularly Haora, Hugli, North 24 Parganas, Kolkata, Purba Bardhaman and Paschim Bardhaman districts. Special thrust to be given to Haora-Kolkata, Durgapur, Raniganj and Asansol industrial area. Sponge Iron factories to be brought under special scanner.
* The boundaries of ‘East Kolkata Wetlands’ has to be decisively marked and legally documented. No further encroachment or conversion to be allowed. Same for Dankuni Wetlands, Borti Bill and wetlands of Haora and Hugli districts. Ensure wise-use of these wetlands.
* Coastal Regulation Act to be enforced along the coastline, particularly around the beach resorts of Bakkhali, Shankarpur, Digha and New Digha.
* Developing research and monitoring system to assess and document climate change issues. Close monitoring of climate change factors, particularly sea-level rise along the coastal belt.
* Minimizing use of polybags, plastic / thermocol / foil products.
* Minimizing unplanned garbage disposal particularly in hill areas. Awareness generation on garbage segregation.
* Minimizing use of chemical pesticides in tea gardens. Encourage use of bio-pesticides.
* Substituting use of fuel-wood for cooking particularly in hill areas and villages around forest fringes with use of cooking gas, solar cookers and alternative energy sources.
* Minimizing traffic pollution.
* Minimizing energy consumption. (e.g., through replacement of traditional bulbs by LED bulbs).

\*Designation: Member Commission of Ecosystem Management IUCN / Wildlife Consultant & Conservation worker