

## Strategic Policy Framework for Forestry in Orissa

### 1. Background:

Orissa is endowed with vast forests extending over 37.34% of its geographical area that are rich in floral and faunal diversity. Diversity of forest ecosystems comprises natural teak, Sal and bamboo forests in the hinterland and lush green mangroves on coast. Thus, the State occupies a prominent place in the national biodiversity map.

The forests of the State can broadly be classified under three main types namely the Northern Tropical Semi-evergreen Forests, the Northern Tropical Moist deciduous Forests and the Northern Tropical Dry Deciduous Forests. In addition, there exist some subsidiary and seral types due to edaphic, biotic, and local climatic factors, but in limited occurrences.

State is reckoned to be backward due to poor economic growth and low human development indices. 47% of its population reportedly struggle below the poverty line. Nearly 85% BPL families belong to tribal community, which constitutes approximately 23% of State's population. Majority of tribal families live in and around forests with which they have strong symbiotic and cultural linkages. Overall, 40% of State's population depends on forests for their livelihood. Studies have revealed that forest resource contributes 25% to 52% to the household income of people living in and around forests. This underscores the vital role forests play in the economy of rural communities in general and tribal in particular. Yet the poverty ratio of forest rich districts is 70% compared to the State's average of 52%.

The long coastline occurring on a vulnerable position in the continental landscape exposes the state to frequent cyclones with saline ingress causing extensive damage to life and property in the coastal region. Besides, erratic rain fall results in frequent floods and droughts across the state and cause immense stress to the state's economy.

The State is also richly endowed with mineral resources like coal, iron ores, bauxite that hold the potential of transforming it into an industrial hub and elevating standard of livings of its people. Ironically, the mineral resources are found under the good forested lands. Proper use of mineral resources for development of the people of the state necessitates an environmentally sound approach that secures the ecological balance.

Over the years the forests have suffered severe depletion and degradation due to, growing demand for fuel wood, small timber and fodder, unsustainable shifting cultivation practices, uncontrolled grazing, and encroachments. The loss of tidal forests is a matter of grave concerns

owing to its protective function in ecological stability of coastal regions. About 50% of the forest area of the State is estimated to be in various stages of degradation. Fortunately, a large number of communities are zealously protecting adjoining forests, which harbours a promise for rejuvenation and conservation of forests.

The National Forest Policy (NFP), 1988 enunciates ecological security and environmental stabilization as prime objectives for forest conservation and strategizes community participation in forest management as crucial to forest conservation. Post 1988 policy enunciation, irrefutable evidences have been compiled to link forest denudation to global warming. Eco-system services of forests have assumed primordial importance over forest products. The Provisions of Panchayat (Extension to Scheduled Areas) Act, 1996 has come into effect from 1996. This accords community rights over non-timber forest produce (NTFP). A vision statement has been enunciated for Orissa Forestry Sector in 2020 that provides the policy development and organizational reforms. The Scheduled Tribe and Other Traditional Forest Dwellers' (Recognition of Forest Rights) Act, 2006 has been enacted to accord recognition to individual and community rights over sustainable use of forest lands and resources. Consistent with national forest policy 1988 objectives and other relevant legislations and recognizing the state specificities, it has been felt necessary to evolve a strategic policy framework prescribing a set of actionable agenda for the forestry to contribute to pro-poor economic growth.

## **2. Principles of Forest Management:**

Management of forests in the State should be guided by the following principles:

- a. All forests including protected areas should be managed through approved working/management plans formulated on the basis of internationally recognized and nationally adopted Sustainable Forest Management Principles.
- b. Forest cover should be maintained primarily for ecological security and environmental stabilization.
- c. Participatory and benefit sharing approach with the stakeholders should be followed for protection and management of forests and conservation of bio-diversity.
- d. Forest dependent communities should have well-defined ownership right over sustainable use of NTFPs, including medicinal and aromatic plants.
- e. Livelihood issues of people living in and around forest should be pivotal in managing forest and wild life resources.

- f. People's need of timber and firewood including industrial timber should be substantially sourced from "Trees outside Forests"
- g. Clean & healthy micro-environment should be recognized as a basic human need.

### **3. Strategies:**

#### **3.1. Area under forest:**

Forest area of the state is already more than the area prescribed in the NFP, 1988. Efforts, therefore, should be made to bring improvement in the health and structure of existing forests through appropriate protection and eco-restoration measures.

Scattered and discrete forest lands should be consolidated in contiguity of existing notified forest blocks and brought under scientific management.

The provisions of Orissa Forest Act, 1972 should be extended to such forest areas that hitherto have remained outside its purview to prevent encroachment and degradation and to incident management interventions for qualitative improvement.

#### **3.2. Management of State Forests:**

3.2.1. **Natural Forests:** Natural forests covering eco-fragile zones and constituting major watersheds should be managed for ecological security. Management of other natural forests should have a shift towards multi-tier forestry to generate forest produce primarily for local use and enhancing livelihood opportunities.

3.2.2. **Bamboo Forests:** Bamboo Forests should be re-invigorated through appropriate silvicultural operations including measures directed towards productivity enhancement to augment production. Community access should be facilitated for meeting local needs and developing bamboo based enterprises.

3.2.3. **Mangroves & Coastal Shelterbelts:** Restoration and Conservation of mangrove forests and creation and maintenance of shelterbelts should be accorded priority considering their role in, coastal ecological security and mitigation of impact of natural calamities.

3.2.4. **NTFPs:** Inventory of non-timber forest produce, medicinal plants and aromatic plants should be made in terms of diversity and potential. Steps should be taken to augment the production base of important NTFPs through appropriate conservation strategy supplemented by plantations in forest, community and private lands. Species specific sustainable harvest practices should be developed and disseminated to the primary

collectors through village based organization like VSS and other community based organization (CBO) to conserve resource base and ensure long-term flow of benefits to the communities.

3.2.5. **Medicinal Plants:** The vast and diverse medicinal plant resources should be conserved and its potentiality of traditional knowledge based alternative medicine system should be tapped to supplement safe and affordable health care.

3.2.6. **Community Participation:** Community participation in the protection and management of forest should be further strengthened under appropriate legal framework, administrative and financial empowerment. Community efforts should be rewarded in proportion to gross domestic product (GDP) contribution from such forests in terms of valued direct goods and environmental services. Efforts should be made to articulate the eligibility of joint forest management (JFM) regenerated forest tracks for earning ‘carbon credits’ under clean development mechanism and such other initiatives to further boost, economic benefit to, and motivation of, communities in forest protection and conservation.

3.2.7. **Forest Protection:** Protection arrangement should be strengthened through deployment of fully equipped special forest protection force at vulnerable pockets to effectively deal with organized smuggling.

3.2.8. **Micro-Environment Amelioration:** Micro-environment management in and around human habitations particularly in urban, industrial and mining areas, should engage special attention to provide cleaner and healthier environment through development of greenery and adequate tree cover. Industries should be made responsible for amelioration of micro-environment as part of their corporate social responsibility.

3.2.9. **Criteria and Indicators:** State specific criteria and indicators for sustainable forest management should be evolved and followed to periodically assess forest management status.

### **3.3 Wildlife & Biodiversity Conservation:**

3.3.1. All protected areas should be managed through approved management plans to ensure biodiversity conservation.

- 3.3.2. Boundaries of protected areas should be rationalized to ensure, as far as possible, exclusion of human habitations to assure them their inalienable rights over their private property vital for success of conservation efforts.
- 3.3.3. Conservation efforts should be supplemented outside protected areas by declaring identified critical ecosystems as ‘conservation reserve’ or ‘community reserve’ where ever feasible.
- 3.3.4. Corridors between national parks, sanctuaries, forests and other protected areas should be identified and established to maintain genetic continuity of flora and fauna, and minimize straying of wild animals in to human habitation
- 3.3.5. Stakes of communities in conservation efforts should be strengthened and ensured through their active involvement in eco-development committees and by partnering them in ecotourism and other activities.
- 3.3.6. Efforts should be made to minimize Man-Animal conflict through adaptive practices for mutually beneficial co-existence. Adequate compensation package should be instantaneously available in case of loss of human life or damage to property to de-escalate antagonism towards wild life amongst the affected persons in particular and people in general.

#### **3.4. Diversion of Forests Land:**

Diversion of forest land coming within ecologically sensitive zone and dense and very dense categories should be discouraged. Sacrifice of forest cover for mining operation should be minimized by making underground operation obligatory. Formal community consultation should be a prerequisite for any proposal of diversion of forest land and loss of livelihood should be compensated through site specific rehabilitation plans.

#### **3.5. Promotion of Trees outside Forest:**

- 3.5.1. District-wise plan for ‘Trees Outside Forests’ should be prepared covering degraded non-forest land and private marginal lands based on need assessment of fuel wood, fodder, small timber, timber, industrial wood and carbon sequestration and implemented in a time bound manner.
- 3.5.2. Public-Private Partnership should be encouraged to augment flow of resources and technology for implementation of the district plan.
- 5.5.3. A liberalized regulatory framework for felling, transportation and industrial processing of timber should be put in place to encourage participation of farmers and private-public

entities in the campaign for ‘Trees Outside Forests’ and production of processed wood products for meeting demands of such products.

### **3.6. Livelihood Development:**

#### **3.6.1. Forest Based Livelihood:**

- a. **NTFP Value addition:** Livelihood options based on value addition and processing of prioritized of NTFP items should be promoted through self-help groups (SHG) under suitable credit linkages from banks or other micro-financing institutions. SHGs should be networked into district level and state level federations to access better markets with enhanced bargaining power to secure higher returns for their produce. The state level federation should provide research inputs on marketing strategy, storage techniques, demand, price trends, and product development along with development of standards for certification, in a mission mode.
- b. **Timber and Processed wood Products:** Agro forestry based livelihoods should be promoted by encouraging processing of wood and ligno-cellulosic materials for production and use of quality wood products.
- c. **Bamboo Products:** Bamboo based enterprises should be promoted with adoption of appropriate technology to provide improved avenues for livelihood enhancement, particularly for traditional and potential bamboo artisans.
- d. **Eco-tourism:** Eco-tourism should be promoted with the community support without disturbing the pristine nature to provide nature based recreation and alternate livelihood opportunities for people living in and around protected areas.
- e. **Product Standardization:** Use of standard products should be promoted through sensitization of all the stake-holders through appropriate awareness programmes.
- f. **Global Market:** Access to global market should be facilitated through appropriate public private partnership framework to realize the true value of forest products.

#### **3.6.2. Development of Alternate Livelihood:**

Integrated area development and non-forest based livelihood support activities should be implemented in forest fringe villages to provide alternate and better opportunities for income generation and significant economic welfare to break the “subsistent dependence and degradation” syndrome. Appropriate institutional mechanism should be put in place to bring in multi-sectoral coordination for

convergence of development activities for the above purpose with Forest Department as the nodal agency at state and district/forest district level.

Development of fodder reserves with cattle improvement measures, exploration and tapping of renewable energy sources, promotion of fuel wood plantation over community waste lands, fuel saving devices etc. should be accorded urgent attention.

### **3.7. Tribal & Forest Interface:**

3.7.1. Shifting cultivation is recognized as a traditional farming practice with the tribal, which in its present form is considered pernicious and non-remunerative. Efforts should be made to convert this practice in to sustainable, remunerative and easily adaptable farming system through appropriate agro-forestry model.

3.7.2. Forest villages should be converted into revenue villages to bring them under the umbrella of general development initiatives.

3.7.3. Forest land under encroachment and in possession of tribal communities and other traditional forest dwellers should be urgently identified using latest satellite data supplemented with required ground truthing. Recognition of forest rights should be settled in accordance with the provisions of the Scheduled Tribe and Other Traditional Forest Dwellers' (Recognition of Forest Rights) Act 2006 expeditiously to neutralize the sense of alienation amongst them in order to entrust with them the responsibility of "green brigade" in forest protection.

### **3.8. Forest Research:**

Priority should be accorded to State specific research needs aiming at enhancing ecological and economic contribution of forests with due recognition of socio-cultural/traditional values of the communities living on forest fringes.

Technological aspects requiring research in collaboration with leading research institutes and universities should include restoration of mangrove forests, regeneration of Sal forests, restocking of bamboo forests, rehabilitation of 'gharial', stabilization of rookery sites for Olive ridley turtles, productivity enhancement and sustainable harvesting practices of NTFP including medicinal plants, improved nursery practices for indigenous species, production of quality planting material, development of appropriate agro-forestry systems.

Research studies on wildlife forensics, diseases and depredation should specially be undertaken to derive necessary inputs in wildlife management.

### **3.9. Forest Education:**

Forest education should be promoted and supported in institutes like Orissa University of Agriculture and Technology (OUAT) and other State Universities and should be brought to national standards to nurture highly competent forestry professionals to meet demand for such personnel from private as well as public sector. Forest Rangers College (FRC) Angul should be developed into a Centre of Excellence in training forestry personnel at all levels and all other training schools should be brought under the technical control of FRC, Angul.

### **3.10. Forest Extension:**

Considering the unique nature of the forest resource and its importance, strong extension service is very crucial to obtain the required public awareness for their development and conservation. An extension wing should be set up in the state with units in each forest division to:

- a. Collect and disseminate information related to forest management interventions, product development and marketing of forest products for public awareness.
- b. Educate and make the people aware of all aspects related to forestry & wildlife scenario in the state through print & electronic media.
- c. Sensitize the people in general through media campaign on the adverse impact of deforestation including global warming and climatic change, impact of actions taken up for development of forest ecosystem, in a manner that is less instructive and more entertaining and participatory.
- d. Motivate people towards tree culture by making them aware of its economic as well as ecological benefits including carbon trading.
- e. Produce IEC material, like audio visual, printed materials for circulation to the communities for effective propagation of value of trees, forests, wildlife and natural resources and their linkages with community development.
- f. Periodically interact with the media to brief about latest developments in the field of forestry and wildlife for wide publicity.

The extension activities should be undertaken in close collaboration with the VSSs and other CBOs.

### **3.11. Forest Resource Database and e-governance:**

- a. A robust information network using the Information Technology should be established and maintained at the state level and all field units should be computerized and effectively networked.
- b. Geographic Information System (GIS) based data base should be developed for facilitating management planning and decisions. All the forest blocks of the state should be surveyed with their boundary pillars geo-referenced by using differential geo-position system and electronic total station method. Digitized maps of the blocks should be prepared.
- c. Satellite data should be intensively processed to assess and monitor forest type, crown density, growing stock, and encroachment.
- d. A central data base should also be created for various forest produces to aid in overall forest management.
- e. An assessment of direct goods and services and the indirect environmental services rendered by each type of forests in the State including their contribution to GDP should be made.
- f. A central data base should be created for forest and wildlife offences and dossiers of serious offenders should be maintained to strengthen the process of detection, apprehension, and prosecution.

### **3.12. Human Resource Development(HRD):**

- a. Regular in-service training should be organized for forestry personnel at all levels on sustainable forest management, participatory forest management, NTFP management, poverty alleviation measures particularly involving non-forest based resources, agro-forestry system, legal procedures and prosecution, adoption of new technologies etc. for enhancing professional competence.
- b. Training in handling of weapons, martial arts, first-aid etc. should form part of training curriculum for the frontline staff. More over regular short term refresher courses should also be conducted on such subjects.
- c. Provision of appropriate incentives, such as improved promotional prospects, encouraging specialization, tenural posting in remote and difficult areas, should be made to boost up the morale and enthusiasm of the personnel engaged in arduous nature of duties.

- d. Forest Colonies should be developed at suitable places for providing housing, education, health care and other facilities to the families of the forest staff working in remote and difficult areas.
- e. Capacity building of local people specially the members of VSS, Eco Development Committee etc. should form an integral part of the human resource development (HRD) strategy of the state.

#### **4. Implementation:**

##### **4.1. Responsive and enabled Forest Department:**

Implementation of policy strategies is not possible without an enabled and motivated forestry organization, with necessary administrative and financial delegation. Apart from investing in human resource development, the state should strive to establish an HRD system to keep the forestry personnel motivated and responsive to the needs of the people through institutional linkage with the Community based organizations.

##### **4.2. Legal support:**

Efforts should be made for building synergies between the various Forest and related Acts, Rules, and Regulations to achieve the Policy Vision and wherever necessary, appropriate legislation should be enacted and rules framed.

##### **4.3 Budgetary allocations:**

Achievement of full potential of forestry sector is largely dependent upon investment of financial resources on implementation of the strategies. The State should ensure timely allocation of adequate funds for implementation of approved Working/Management plans and other forestry sector development programmes.

##### **4.4. Monitoring of implementation of strategies**

The development of forestry sector should be carefully monitored through a high-powered state level committee to identify deficiencies and bottlenecks and to facilitate course corrections.