

Jammu and Kashmir State Forest Policy 2010

1. PREAMBLE

Forests are vital for existence of humankind on earth. The State of Jammu and Kashmir is richly endowed with diverse forest resources which play an important role in preserving the fragile ecosystem of the region and also serve as catchments for important Himalayan rivers. Forests are essential for soil and water conservation, and for meeting the demands of local population for timber, firewood, fodder and other forest produce. Forests of the State were constituted alongwith the initial revenue settlement as per State specific demarcation rules. Being the largest land based resource in the State, forests have immense potential for generating livelihood and alleviating poverty particularly in the rural areas and remote corners of the State.

In the past, forests were treated as a source of revenue and primarily managed for production of timber and other forest produce. This, coupled with excessive grazing, encroachments, and diversion of forest land for non-forestry purposes has resulted in degradation of forests and loss of forest land. Deforestation is one of the contributing factors of global warming and it also results in diminished livelihood support, loss of biodiversity and low productivity. Deficiency in infrastructure and trained manpower for managing forest resources has further compounded the problem. Resultantly, flow of ecosystem goods and services from forests has been affected adversely.

Restoring forests to pristine condition will have a mitigating effect on climate change besides addressing the concerns of poverty alleviation and biodiversity conservation. Therefore, forests have to be conserved and managed in a sustainable manner with the active participation of local communities so as to ensure a continuous flow of benefits to all stakeholders, present as well as future. In a marked departure from the past, revenue generation shall focus on non-extractive uses of natural forests like utilization of biodiversity, especially medicinal plants and their products, emerging concepts of eco-tourism and nature tourism. In this manner, unique aesthetic value of forest landscape of the State will be sustainably tapped to generate revenue. This will require adequate infrastructure, trained manpower and matching financial resources. The Government of Jammu and Kashmir, being aware of the important role performed by the forests and the close association between people and forests, accordingly adopts this forest policy.

2. BACKGROUND

2.1 Forest Area of Jammu and Kashmir

The recorded forest area of the State is 20,230 km². About 59 % of the geographical area of the State is under permanent snow cover, glaciers and cold desert and unable to support tree growth. Therefore, out of the total area reported for land utilization, forests constitute nearly 54 percent (SFR 2005, and SFR, 2007). Forests of Jammu and Kashmir exhibit remarkable diversity ranging from sub-tropical to temperate to alpine because of the distinctive geo-climatic conditions prevalent in the three regions of the State, viz., Jammu, Kashmir Valley and Ladakh.

2.2 Functions and Importance of Forests

Forests provide a host of products and services, both ecological and economic. Soil, water, and air are the three components of biosphere that form the basis of life on earth. Forests have a profound influence on these vital resources which also form the bedrock of all economic activity. In mountainous regions like Jammu and Kashmir, the perennial supply of water including groundwater recharge, and health of soils, primarily depend upon the extent and quality of forest cover. In addition, people in rural areas lean heavily on forests for their firewood, fodder, food and small timber requirements. Therefore, forests are integral to the sustainability of primary sectors like agriculture, horticulture and animal husbandry, particularly in hilly regions. In this context, the famous Kashmiri saint, Sheikh Noor-ud-din Wali (1377-1440 CE) has aptly stated, "*Ann poshi, teli yeli wann poshi*, i.e., food will last as long as forests last."

Since regular flow of water in the rivers and control of soil erosion have a direct bearing on hydroelectric power generation, a healthy forest cover in catchments is essential for long term operation of hydroelectric projects. In addition, forests provide raw material for different industries and in the process influence other sectors of the economy as well. The State of Jammu and Kashmir is endowed with breathtaking scenic beauty in the form of snow capped mountains, sparkling streams and rivers, picturesque lakes, and lush green forests and meadows. Therefore, there is immense potential for tourism in the State, and forest areas play a pivotal role in making the State a preferred tourist destination.

Most importantly, forests provide other environmental services like carbon sequestration, pollution abatement, amelioration of climate, *in-situ* conservation of biodiversity and maintenance of ecological balance. In nutshell, the economy of the State, livelihood of its most citizens, and their environmental security is intimately linked to the tangible and intangible benefits that flow from forests.

2.3 Present Status of Forests

Past few decades have witnessed exponential growth in human and livestock population, rapid industrialization, and a spurt in developmental activities. These developmental processes have resulted in loss of forest area accompanied by an overall degradation of forest crop and forest soils. Earlier, forests were managed mainly for timber production. Although, commercial felling of green trees has now been discontinued, mortality of trees due to natural causes is unavoidable. Further, due to continuous and unrestricted grazing, most of the forests in the State are deficient in regeneration. Other factors like forest fires, invasive weeds, unregulated tourist movement and lack of timely silvicultural operations also contribute towards failure of regeneration. Resultantly, more than 40% of forests in the State have slipped into the category of open forests. Similarly, a marked reduction in population of species yielding important non-timber forest products, particularly medicinal plants, has also been noticed throughout the State.

Exploitation of forests beyond their sustainable capability has resulted in degradation, and thereby severe impairment of their ability to provide environmental benefits. The effects of degradation of forests are already visible in drying up of perennial water sources at many places, accelerated soil erosion, flash floods, silting up of reservoirs, loss of biodiversity and reduced forest productivity.

3. BASIC OBJECTIVES

The forests of Jammu and Kashmir will be managed with the following objectives:

- Conservation of biodiversity and natural habitat through preservation of natural forests with the vast variety of flora and fauna.
- Rehabilitation of degraded forests so as to optimize their productivity and restoring their potential for providing ecosystem goods and services.
- Poverty alleviation by meeting livelihood needs of forest dependent communities by improving productivity of existing forests and by extending forest and tree cover on non-forest lands to maintain sustainable supply of forest products for bonafide purposes.
- Checking denudation and soil erosion in catchments through integrated watershed management techniques and practices.
- Reducing pressure on forests through appropriate interventions including development of degraded forest fringe belt into high production tree strips.

- Revenue generation from the non-extractive uses of natural forests including institutionalization and operationalization of concepts of eco-tourism and nature tourism.
- Creating a sustained people's movement for achieving the aforementioned objectives so that environmental security of posterity can be ensured.

4. STRATEGY

4.1 Area under Forests

Nationally, the goal is to have at least two-thirds of the total land area in the hills and mountainous regions under forest and tree cover. In Jammu region and Kashmir valley, forests account for 47% of the geographical area. Ladakh region, which is mostly devoid of tree cover, has a distinct ecosystem and supports many rare and endemic species of flora and fauna. Therefore, the goal of maintaining adequate forest cover will be achieved in various regions of the state, with due consideration for the cold desert conditions of Ladakh.

4.2 Protection of Forest Land

Encroachment of forest lands is a serious issue concerning forest protection and this problem is becoming more serious with every passing day. For effective protection of forest land, the following strategy will be adopted:

- a. Land records of Revenue Department will be reconciled with Demarcation Record of Forest Department in a time bound manner starting with highly vulnerable areas.
- b. The system of forest demarcation will be completely modernized. In the field, existing boundary pillars will be strengthened and their locations will be recorded using Global Positioning System and other modern technologies.
- c. Demarcation record will be maintained in digital format on GIS platform. Remote sensing technology will be used for monitoring encroachments.
- d. Wherever possible, *chaks* within and completely surrounded by forests will be relocated outside forests with adequate compensation.

4.3 Conservation of Natural Forests

Conservation of forests for ecosystem goods and services will be the principal objective of forest management and derivation of direct economic benefit shall be subordinated to this principal aim.

- a. For effective protection and management of forests and wildlife, the infrastructure, manpower and organization will be strengthened, particularly at the field level.

- b. Working plans for every division will be formulated, or revised, with focus on regeneration of open forests and conservation of biodiversity. At least one fourth of the forest area in each division will be set aside for regeneration in accordance with working plan prescriptions. These areas will be strictly closed to grazing and continuously managed till such time the regeneration gets established.
- c. Selection felling system will be the preferred silvicultural system to manage forests with a view to keeping them closest to their natural form. Other more commercially intensive silvicultural systems like 'clearfelling' and 'conversion to uniform' will be gradually replaced by selection felling system with due consideration to other silvicultural factors.
- d. Germplasm of valuable medicinal plants in natural forests and pastures will be conserved and commercial exploitation of such plants from natural habitats will be regulated in a sustainable manner in view of their dwindling populations.
- e. Forest areas heavily infested with invasive weeds like *Lantana camara* will be systematically treated to restore the natural mix of vegetation in order to augment the supply of fodder, firewood, timber and other forest produce.
- f. Integrated Watershed Management approach for soil and water conservation will be adopted to check soil erosion and denudation in catchments.
- g. Management of forest fires is an important aspect of forest protection. Working Plan of each Forest Division will devote a separate section on forest fire management. Proper equipment and trained manpower will be provided for effective management of forest fires in vulnerable areas. Involvement of local communities in prevention and control of forest fires will be further strengthened through incentive based mechanism.
- h. Forest areas at the fringe of habitations will be managed for meeting the demands of local population for different forest produce and such areas will be rehabilitated in participatory mode to increase their productivity. In these areas, thrust will be on raising fast-growing species that provide fodder, firewood and small-timber.

4.4 Diversion of Forest Land for Non-Forestry Purposes

Significant forest area is lost due to diversion of forest land for non-forestry purposes. Proliferation of developmental activities in forest areas also results in fragmentation of habitat which has an adverse effect on wildlife. Therefore, diversion of forest land will be regulated on the following principles:

- a. Diversion of forest land for non-forestry purposes will be considered only as a last resort, after exploring all other alternatives, and not in a routine manner.
- b. In order to compensate for the loss of forest area on account of diversion of forest land for non-forestry purposes, other unutilized state lands appropriate for forestry land use will be brought under compensatory afforestation.

4.5 Expanding Forest and Tree Cover

Afforestation will be carried out on all degraded and denuded lands in the State, inside or outside forests, in order to bring maximum geographical area of the State under forest and tree cover. This will involve:

- a. Planting of trees along roads, railway lines, rivers, streams and canals, and other un-utilized lands under state, institutional or private ownership.
- b. Development of tree crops and fodder species on village and community lands in partnership with local people.
- c. Encouraging farm forestry and agro-forestry by providing quality growing stock and other technical inputs to farmers, and developing market linkages for their produce.
- d. Rationalization of felling and transit rules, and other relevant laws, to encourage planting of tree crops on farm lands, and to facilitate harvest and marketing of produce from such plantations.

4.6 Supply of Timber and Other Wood Based Produce

- a. Efforts will be made to bridge the gap between demand and supply of timber by increasing productivity and actively facilitating import of timber.
- b. Technologies and processes that minimize deterioration and wastage of timber during conversion, extraction and transportation will be adopted so that dry and fallen trees do not deteriorate in forests.
- c. Use of timber substitutes and composite wood will be encouraged in government constructions and popularized amongst general public also.
- d. Wood based industries will meet their requirement from privately raised plantations on non-forest lands, preferably in partnership with farmers or through imported timber.

4.7 Management of Concessions

To ensure protection of forests, their scientific management, and also the needs of the inhabitants of neighbouring villages, the concessions traditionally enjoyed by these inhabitants are duly acknowledged as recognized during settlement. The bonafide concessionists, particularly those living in remote areas like *burfani ilaqua* will continue to get forest produce and other usufructs from the forests subject to the silvicultural availability.

4.8 Meeting Local Fodder and Firewood Requirements.

- a. Productivity of pastures and grasslands will be enhanced by control of unpalatable species, introduction of nutritious grasses and herbs, and by adopting improved grassland management practices.
- b. Fodder production in degraded forest areas, particularly those invaded by alien weeds, will be enhanced through appropriate management intervention.
- c. Grazing in the forests will be regulated in accordance with the carrying capacity.
- d. In order to reduce grazing pressure on forests, and to increase the productivity of livestock, stall feeding and breed-improvement will be encouraged.
- e. Tree planting on private lands and community lands will be encouraged in order to meet the requirements of firewood, fodder and small timber.
- f. Use of alternative sources of energy like LPG will be encouraged in rural areas to reduce consumption of firewood. As an interim measure, use of fuel efficient stoves would be encouraged to economize on use of firewood.

4.9 Non-timber Forest Produce

- a. Package of practices for cultivation of medicinal plants will be developed and farmers will be encouraged to undertake cultivation of such medicinal plants and tree species on non-forest lands and private lands. Simultaneously, handling, processing, transportation and marketing of medicinal plants and related products will be facilitated.
- b. Value addition and processing of non-timber forest produce within the State will be encouraged alongwith development of market linkages and trade related information so that these are not exported in raw form, and producers get remunerative price for their produce.
- c. To facilitate conservation of medicinal plants in natural forests, local communities will be encouraged to form co-operatives at village level for

non-destructive harvesting, and processing and marketing of medicinal plants and other species having commercial value with a view to augmenting their income.

- d. Ladakh region of the State is a repository of many valuable medicinal plants. Cultivation of these herbs and shrubs in Ladakh will be taken up on priority so that wild populations of these plants are not over-exploited to meet the ever-increasing demand.
- e. Resin tapping will be regulated in a sustainable manner ensuring that the chir crop, and its potential to regenerate, is not adversely affected.
- f. Laws, rules and regulations will be revisited, reviewed and rationalized to encourage activities referred to in the sub-paragraphs above.

4.10 Wildlife Conservation

- a. Habitat destruction and disturbances in habitat of wild animals are the foremost reasons for reduction in their populations, and man-animal conflict. Therefore, forest management outside protected areas will also focus on habitat conservation and management of wildlife.
- b. Being a repository of biodiversity and genepool, the national parks, wildlife sanctuaries and conservation reserves will receive utmost attention for their conservation through improved management plans and techniques.
- c. Zoological parks and animal rescue centres will be further developed as centres of environmental and wildlife education.
- d. Special attention is required to address the man-animal interface through a joint mechanism between agencies such as Forest Department, Forest Protection Force, Wildlife Protection Department, Revenue Department, Police, Local Administration and local institutions and by creating awareness amongst general public.

4.11 Biodiversity Conservation

Apart from *in-situ* conservation of bio-diversity in natural forests and habitats, the rich genetic resource base of the State will be preserved through following actions:

- a. Biodiversity of the State will be surveyed and documented systematically, and sites having exceptional taxonomic and ecological value will be conserved.
- b. Legal and administrative measures for protection of biodiversity of the State against bio-piracy will be taken. Intellectual property rights of the tribals and local communities will be protected, and domesticated

species and varieties of plants and animals will be conserved as an integral part of the State's rich genetic diversity.

- c. Modern techniques of ex-situ conservation will be promoted for the preservation of endangered and threatened species.
- d. Adequate regulatory and institutional mechanisms will be established for protection and conservation of wetlands.

4.12 Forests and Climate Change

Trees utilize carbon dioxide in the atmosphere for biomass production. In order to tap the potential of forests for climate change mitigation, following strategy will be adopted:

- a. Conservation, sustainable management of forests and enhancement of forest carbon stocks will be encouraged to offset emissions from core sectors of energy, industry and transport.
- b. Forest carbon stocks will be conserved and enhanced by reforestation of regeneration deficient and open forest areas.
- c. Unutilized areas suitable for tree growth will be afforested by planting fast growing species to meet the energy requirements of local population in order to offset use of fossil fuels. Technologies for efficient conversion of energy from biomass will also be developed and popularized.
- d. In order to benefit from international incentivization of conservation, maintenance and enhancement of forest carbon stocks, institutional framework will be established to synergize actions of individuals, organizations and Government Departments. Cent percent incentives will flow to the local community wherever such incentives accrue because of involvement of the community in protection, afforestation and reforestation activities.

4.13 Eco-Tourism and Nature Tourism

Jammu and Kashmir has immense potential for Eco-tourism which provides basic framework for ecologically sustainable tourism with livelihood opportunities for local communities. Following actions will be taken to promote and popularize ecotourism in the State:

- a. Eco-tourism activities will be regulated in a manner that preserves the health, scenic beauty and natural attributes of the eco-tourism sites.
- b. Local communities will be trained and motivated to be an integral part of the eco-tourism activities.

4.14 Participatory Forest Management and Forest Extension

- a. Conservation of forests requires active involvement of every citizen. Therefore, participatory approach will be central to forestry activities in forest as well as in non-forest areas. This will be achieved by creating livelihood opportunities for forest dependent communities and their involvement in the decision making process.
- b. Public will be sensitized about the value of forests, wildlife, and nature in general. For this purpose, suitable extension activities will be undertaken including publicity through different forms of media and involvement of educational institutions.
- c. Local communities will be involved in development of degraded forest fringe belt into highly productive tree strips incorporating appropriate proportion of fast growing tree and plant species. Cent percent share of produce from fringe belts will flow to the participating community.

4.15 Revenue Generation

Meeting requirement of local communities with respect to timber, fodder, firewood and other ecosystem goods and services from forests in a sustainable manner will be accorded highest priority. However, non-extractive uses of forests like utilization of medicinal plants and other non-timber forest products, and tapping unique forest landscape of the State through eco-tourism and nature tourism, will be encouraged to generate revenue for the State and the local communities.

4.16 Forestry Research

- a. Research in forestry will be need based so that it can be applied in the field to address key problems like low productivity, rehabilitation of degraded forests, conservation of biodiversity, and forest protection.
- b. Infrastructure and skilled manpower required for research will be strengthened keeping in view the future trends in forestry management in general and climate change issues in particular.
- c. Management information system will be developed so that the field functionaries can keep abreast with the latest in the field of environment and forestry for effective decision making.

4.17 Development of Infrastructure and Human Resources

- a. Forests constitute nearly 47 percent of combined geographic area of Jammu and Kashmir regions. Protection of this vast and valuable resource requires commensurate infrastructure keeping in view the

pressures on these forests and the ecosystem goods and services that they provide to the people, especially in rural areas.

- b. Timely recruitment at various levels in forest and allied wings will be accorded top priority in order to ensure availability of trained manpower.
- c. Institutional reforms and capacity building measures will be undertaken for personnel in forest and environment sector to improve their skills and professional competence keeping in view the arduous nature of their duties, often in remote and inhospitable places.
- d. Adequate infrastructure and professionals will be provided to meet the training requirements of all levels of forest staff keeping in view the current needs and future trends in forestry management and administration.

4.18 Investment Needs

- a. Nearly half of the forest area in the state has degraded into open category due to immense biotic pressure and lack of appropriate investment for its rehabilitation. Therefore, funding for forest and environment sector will be based on the extent of forests in the State, the quantum of goods and services they provide and level of their degradation. The budget of forestry sector will be appropriately enhanced so that the objectives enshrined in this Forest Policy can be achieved.
- b. Keeping in view the seasonal and continuous nature of forestry works, the fund flow mechanism will be devised in a manner that ensures availability of funds for various activities at appropriate time.

4.19 Resolution of Inter-Sectoral Conflicts

- a. Forests influence, and in-turn are influenced by activities and functions of different departments like Revenue, Tourism, Sheep and Animal Husbandry, Agriculture, Horticulture, Industry, Irrigation and Flood Control, Public Works Department etc.
- b. Necessary steps will be taken to ensure that the policies, objectives and activities of different departments and organizations of the State are in harmony with the objectives enshrined in the State Forest Policy, and conflicts, wherever these exist, will be resolved appropriately.
