



NATIONAL FOREST POLICY OF BHUTAN

2011

Royal Government of Bhutan
Ministry of Agriculture and Forests



ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF AGRICULTURE AND FORESTS



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Glossary of Acronyms and Technical Terms

CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSI	Cottage and Small Industries
DoFPS	Department of Forest and Park Services
FMU	Forest Management Unit
GEF	Global Environment Facility
GNH	Gross National Happiness
GRF	Government Reserve Forest
IPPC	International Plant Protection Convention
MDG	Millennium Development Goals
MW	Megawatt
NEPA	National Environment Protection Act
NFI	National Forest Inventory
NWFP	Non wood forest products
PHCB	Population and housing census of Bhutan 2005
SAARC	South Asian Association for Regional Cooperation
SDG	SAARC Development Goals
UNCCD	United Nations Convention to Combat Desertification
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
USP	Unique selling point

Term	Description
Afforestation	The establishment of trees by sowing, planting or natural regeneration on an area from which trees have always or very long been absent.
Agroforestry	A collective name for landuse systems and practices where woody perennials are deliberately integrated with crops and/or animals on the same land management unit. The integration can be either in spatial mixture or in temporal sequence. There are normally both ecological and economic interactions between the woody and non-woody components in agroforestry.
Biodiversity/ Biological diversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.
Biological Corridor	An area set aside to connect one or more protected areas, which shall be conserved and managed for the safe movement of wildlife.
Buffer Zone	The region near the border of a protected area; a transition zone between areas managed for different objectives.
Community Forestry	Any area of Government Reserved Forest designated for management by a local community in accordance with the provisions under Section 36 of the Rules, as per Chapter 1 Section 3 of the Act.
Climate Change	Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use
Core Zone	A fully protected zone within a Protected Area, designated in accordance with Technical Regulations, in which human related activities are not permitted, except for regulated research and monitoring programmes.

Carbon Market	The market for carbon credits originating from voluntary or certified measurable reduction of green house gases into the atmosphere from a specified activity or area, and a specified period of time.
Deforestation	Clearing an area of forest on a non-temporary basis for another use. Clear cutting (even with stump removal), if shortly followed by reforestation for forestry purposes, is not deforesting.
Dzongkhag	District.
Ecosystem	Any complex of living organisms with their environment that “we isolate mentally for purposes of study”. It includes all of the organisms living in a community, together with the physical environment in which they live.
Endangered species	Species classified by an objective process (e.g. national Red Book) as being in IUCN categories critically endangered and endangered. A species is considered to be a critically endangered when it is facing an extremely high risk of extinction in the wild in the immediate future. It is considered endangered when it is not critically endangered but is still facing a very high risk of extinction in the wild in the near future.
Environment	All of the biotic and abiotic components of a site surrounding and affecting the development of life.
FMU (Forest Management Unit)	A geographic area of Government Reserved Forest designated pursuant to the Forest and Nature Conservation Rules for scientific management of forest
Forest land (Government Reserved Forest land)	Government Reserved Forests land means forest, scrub forest and /or any land and water body (excluding Thromde, Institutions and private forest) the ownership of which is not vested in any person and is under the custody of the Ministry
Forest	Forest means land with trees spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent. It does not include land that is predominantly under agricultural or urban land use.

Scrub Forest	Scrub forest means land not classified as forest spanning more than 0.5 hectares; with trees height less than 5 meters and a canopy cover of 5-10 percent. It does not include land that is predominantly under agricultural or urban land use.
Forest cover	Forest cover means land covered by forest and/or scrub forest.
Forest Management	Generally, the practical application of scientific, economic and social principles to the administration and working of a forest for specified objectives; more particularly, that branch of forestry concerned with the overall administrative, economic, le-al. and social aspects, and with the essentially scientific and technical aspects, especially silviculture, protection and forest regulation.
Geog	Sub-district
Harvesting	The aggregation of all operations, including pre-harvest planning and postharvest assessment, related to the felling of trees and the extraction of their stems or other usable parts from the forest for subsequent processing into industrial products. Also called timber harvesting.
Invasive species	Species of fauna and flora of non-local origin which has established itself or has been introduced into a given area and has spread in the natural conditions on an undesirable scale, e.g. to the extent that it has replaced or seriously suppressed the species previously occupying this specific area.
Management Plan	A plan prepared in accordance with sections 5 and 21 (b) of the Act, and Chapter II of the Rules, and includes all forestry management plans including those related to conservation management, community and social forestry, reforestation and other activities and categories of forest land.
Non-point source pollution	Pollution discharged over a wide land area not from one specific location, and caused by sediments, nutrients, organic and toxic substances originating from land use activities, which are carried to lakes and streams by surface runoff.

NWFP	Means resin, varnish, katha, kutch, plants, flowers, seeds, bamboo, bulbs, roots, leaves, grasses, creepers, reeds, orchids, cane, fungi, moss, medicinal plants, herbs, leaf or mould, or other vegetative growth, whether alive or dead; wild animals (including fish) and the parts or products of wild animals, including the skin, hide, feather, fur, horn, antler, tusk, bone, bile, musk, honey, wax, and lac; and boulders, stone, sand, gravel, rocks, minerals, peat and soil.
National Forest Inventory	National Forest inventory is the systematic collection of data and forest information for assessment or analysis. The main purpose of the National Forest Inventory is to continuously provide information about the state of the forests. The information is used for planning of future activities by the government, industry and the forest owners. The traditional role of the National Forest Inventory has been to provide unbiased, reliable large area forest resource information covering the whole country and including computation of forest statistics. The information has been utilized in large area forest management planning, such as determining the level of cuttings and other treatments needed, as the information basis of the official forest policy and in the strategic planning of the forest industries.
Plantation	A stand of growing plants raised artificially, either by sowing or by planting.
Private Forest	Any area of private lands that has been registered as a private forest pursuant to Chapter IV PART 'A' of the Rules. (F&NC Rules, 2000)
Production Forest	A forest managed to harvest forest products and to sustain the bioproductivity of the system. The biotic or abiotic diversity of the forest may be altered: e.g. by plowing, planting, and cultivation of selected crops, including the introduction of faster growing varieties or exotic species.
Protected Area	An area, which has been declared to be a national park, conservation area; wildlife sanctuary, wildlife reserve, nature reserve, strict nature reserve, research forest, critical watershed or other Protected areas, in accordance with Chapter VI of the Rules.

Protection Forest	The function of forest/other wooded land in providing protection of soil against erosion by water or wind, prevention of desertification, the reduction of risk of avalanches and rock or mud slides; and in conserving, protecting and regulating the quantity and quality of water supply, including the prevention of flooding. Includes: Protection against air and noise pollution.
Reforestation	Re-establishment of trees on forest land.
Regeneration	Re-establishment of a forest stand by natural or artificial means following the removal of the previous stand by felling or as a result of natural causes, e.g. fire or storm.
Sustainable Forest Management	Management regimes applied to forestland, which maintain the productive and renewal capacities as well as the genetic, species and ecological diversity of forest ecosystems. Sustainable forest management is required to obtain sustainable forest development.
Sokshing	A plot of the Government Reserved Forest land leased out for leaf litter production and collection
Timber	Any tree or trees, whether standing or fallen, regardless of whether converted to logs, lumber, firewood, or any other form, and includes branches, stumps, roots, lops and tops.
Thromde	An area under the jurisdiction of a Municipal authority.
Tree	A woody perennial with a single main stem or, in the case of coppice, with several stems, having a more or less definite crown. Includes: Bamboos, palms and other woody plants meeting the above criterion.
Tsamdro	The Government Reserved Forests land leased out for grazing and improved pasture management.
Watershed	The geographic area that drains to surface water bodies: A watershed generally includes lakes, rivers, wetlands, estuaries, surrounding landscape, and contributing ground water.
Wildlife	Non-human, non-domesticated, non-cultivated organisms; all wild mammals, birds, reptiles, amphibians, fishes, invertebrates, plants, fungi, algae, bacteria, and other wild organisms.

Surface
collection

The collection of loose boulders, stones and gravels from riverbeds and land surface without using excavating machineries and explosives. However, it will include dredging of sand from river beds using excavator.

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1. Background and Context

Bhutan has been endowed with a rich heritage of renewable natural resources. Past policies and practices of the Government have successfully protected this heritage. Rural people in Bhutan, who make up about 69% of the population (PHCB, 2005), have traditionally depended heavily on forests for subsistence goods and services (fuelwood, non-wood forest products, construction timber, leaf litter for animal bedding, etc.). However, pressures are mounting on the forests to provide an increasing range of goods and services.

Until 1960s the rural dwellers made use of the natural resources in their immediate vicinity with little interference from the Government. With the commencement of the Five Year Development Planning framework, the Government interventions in the management of the country's natural resources increased and most of the resource management functions which had traditionally been carried out at village level were centralised.

With increasing democratisation, decentralisation and devolution, the contemporary political landscape in Bhutan is one where this trend is reversing and there is emphasis on a more decentralised and people-centred approach to forest governance and management with a strong agenda directed at poverty reduction. In addition, Bhutan is increasingly interfacing with an external globalised world and, among other things, has taken on international treaty obligations.

The past decade has seen a gradual change of emphasis in the management of forests. There has been a shift from a primary focus on protection and conservation towards a focus on balancing conservation with sustainable utilisation. The change in overall governance from monarchy to a democratic governance, continued decentralisation and devolution are themes that will impact on many aspects of forest planning and development. The National Forest Policy is framed in the context of these larger scenarios. The policy instruments are framed in a flexible manner so that they can adapt to and support the on-going changes, some of

which can be predicted, but many of which are difficult to foresee at the present time. Sound policy directions that are proactive can contribute to national development in a changing scenario by setting appropriate framework.

1.1 The Constitution of the Kingdom of Bhutan

The Article 5 of the Constitution of the Kingdom of Bhutan states that: “*Every Bhutanese is a trustee of the Kingdom’s natural resources and environment*”. The Royal Government is enjoined in the Constitution to conserve and improve the environment and safeguard the country’s biodiversity. It is further directed to secure sustainable development while promoting economic and social development. The Constitution further charges the Government to ensure that a minimum of 60 % of country’s land area should be maintained under forest cover for all time.

1.2 Evolution of forest policy and legislation

The *Thrimzhung Chenmo*, 1957 provides for open access to use of forest resources. It also provides for conservation in the form of restriction on poaching of wildlife. The Forest Act of 1969 was the first Act passed by the National Assembly. The first formal forest policy of Bhutan was approved in 1974, the only officially approved policy statement on forests thus far. Prior to 1974 a series of general principles were followed for the management of country’s forests, derived mostly from the Forest Act of 1969 which maintained that all forests belong to the State and that there should be no private rights to any part of them. All lands not registered under an individual’s *thram* (land title document) were considered to be forest lands and were nationalised. Currently, all forest land is owned and managed by the State. The 1974 policy sets a framework for the scientific management of the country’s forest lands, and laid out approaches to be adopted for the key areas of forest conservation, afforestation, resource survey, utilisation and wildlife conservation. It contained the first mention of the objective to maintain “*a minimum of 60 % of the total land under forest cover for all times to come*”, which was later included in the Constitution.

The 1969 Forest Act was repealed in 1995. The Forest and Nature Conservation Act of Bhutan, 1995 further strengthened scientific approach to forest governance and management. It includes separate chapters on soil conservation, community forestry, Protected Areas, protection of wildlife and a list of totally protected species of flora and fauna. It recognises the traditional and cultural rights of local people to access and use of forest resources reversing the provisions of the 1969 Act which restricted these rights. The 1995 Act also makes provision for private forestry in privately registered lands and for community forests on government forest lands, with the communities being granted management and use rights under conditions as set out in an approved management plan.

Since 1957, forest governance has transitioned from providing “free access” to “almost no access” to “managed access”. The new dimensions in the present system of governance include the application of scientific approaches to forest management with emphasis on public participation in management and utilisation, sustainable economic use of forest resources while at the same time maintaining conservation values.

Some of the pertinent and contemporary policies and legislation related to forest governance and management include the following:

Economic Development Policy of the Kingdom of Bhutan, 2010

identifies a broad range of economic growth opportunities based on “Brand Bhutan” as a Unique Selling Point (USP) and recognizes the success of the country’s environment conservation as one of the main drivers for developing the “Brand Bhutan” theme for which it calls for protection of biodiversity, genetic resources and promotion of indigenous knowledge. The salient features of the economic policy that relates to forest management include:

- a. Accelerated development of hydropower to achieve a minimum power generation of 10,000 MW by 2020.
- b. Promote industries based on natural resources.
- c. Inventory of natural resources in the country to identify the areas of opportunities for CSIs in different parts of the country.

- d. Tourism product diversification to include, amongst others, eco-tourism, nature and agro-tourism and enable line sectors to develop such tourism products which should provide benefits/choices to all sections of the Bhutanese society including local farmers.
- e. Provision of sales tax and customs duty exemption for import of environmentally friendly technology.

Bhutan Water Policy, 2003 recognizes that sustained flow of water of good quality depends on the integrity of the watershed. It emphasizes on water resources management within river basins and aquifers, including both upstream and downstream water users. It calls for an integrated approach for effective management of water resources and provides directive to protect all forms of water resources. The policy seeks sound watershed management through extensive soil conservation, watershed area treatment, conservation of forests and increasing the forest area to reduce the incidence and intensity of floods.

The Land Act of Bhutan 2007 is an important legal document that has major implications for forest management. It clarifies that trees, either naturally grown or planted, in registered land shall belong to the landowner. The Act provides for the leasing of GRF land for various economic and other activities. All *tsamdrol* (grazing) and *sokshing* (the rights to use forest land for collection of leaf litter) rights shall revert to GRF land and converted to leasehold uses. The leasehold shall be provided to individuals or communities owning livestock, with preference being given to previous rights holders in the case of *tsamdrol* in rural areas and to individuals or communities, with preference given to previous rights holders or those who have agricultural land in the case of *sokshing*. However, land categorised as *sokshing* where there are no trees shall not be leased. The management of *sokshing* and *tsamdrol* shall be carried out in accordance with a management plans.

These conditions in the Land Act places a considerable burden on the Department of Forests and Park Services to facilitate the development of management plans, often in conjunction with other Departments, over very large areas of land that were previously managed as *tsamdrol* or *sokshing* under customary rights.

National Environment Protection Act, 2007 (NEPA) outlays principles and legal framework that has implications on forest governance and management. It requires a person taking natural resources from the environment or deriving economic benefits to ensure sustainable use and management of those resources and their ecology. Likewise a person polluting the environment or causing ecological harm is responsible for the costs of containment, avoidance, abatement, medical compensation, mitigation, remediation and restoration. A person using or extracting natural resources shall be liable to pay for ecosystem/environmental services.

The Act calls for conservation of natural resources to be based on a participatory approach aimed at achieving an equitable sharing of the costs and benefits of conservation among resource users. It also provides for promoting the use of clean energy and alternative technologies in order to reduce use of fuelwood/timber from primary forest. Such innovative practices of reducing the burden on natural resources shall be supported with incentives such as provision of:

- a. Tax incentives for environmental services and/or manufacture of environmentally friendly products through reductions of customs and other duties for the import of environment friendly and energy efficiency technologies;
- b. Grants or cofinancing for civil society or public sector environmental protection or nature conservation projects;
- c. Incentives for reducing, recycling and reusing waste;

As well as charges or fees for utilization of natural resources and taxes or charges for raw materials or products posing specific environmental risks.

The NEPA, 2007 calls for conservation and protection of wetlands, alpine regions, watersheds, and other vulnerable ecosystems in addition to the existing Protected Areas. For inter-generational equity and sustainable utilization of natural resources, the Act provides for bioprospecting and other commercial extraction and export from the country, of any insitu and exsitu plant and animal genetic resources.

Environment Assessment Act, 2000 requires that the Government shall ensure that environmental concerns are fully taken into account when formulating, renewing, modifying and implementing any policy, plan or program and that issuance of an environmental clearance shall be pre-requisite to the issuance of a development consent. Projects that do not require development consent may commence only after receiving environmental clearance.

Mines and Minerals Management Act, 1995 requires that all minerals shall be developed in accordance with the policies of the Royal Government of Bhutan, with due respect to efficient use of resources, protection of environment, worker and public health and safety.

The Biodiversity Act of Bhutan, 2003 provides for conservation and sustainable use of biological resources and associated traditional knowledge. It aims to realize additional value of biological resources by developing new products and compounds through regulation of access and equitable sharing of benefits arising thereof.

The Water Act of Bhutan 2011 confers a position of competent Authority to the Ministry of Agriculture and Forests for implementing activities as they relate to land use and irrigation, watershed management, water resources in forests, wetlands and protection of catchment areas, which collectively fall under the jurisdiction of DoFPS. Further the Act enjoins the DoFPS to raise issues relating to water resources and promote the principle of integrated water resource management within the scope of integrated watershed management.

1.3 Bhutan 2020 and Gross National Happiness

The vision for the future contained in “Bhutan 2020” re-affirms the notion of Gross National Happiness (GNH) as the central development concept for the country. This organising concept is translated into objectives or the pillars of GNH that give strategic direction to policy making and implementation. These pillars include equitable & sustainable socio-economic development, environmental conservation, preservation and promotion of culture and good governance and their linkages.

The strategic directions from the GNH pillars require that the country's rich biodiversity should also be regarded as a development asset while approach to environmental conservation is uncompromising. It also emphasises that development must take account of the devolution of new powers and responsibilities to the Dzongkhag and Geog levels.

1.4 Status and classification of Bhutan's forests

The total area of forest in the country is 24,718.147 sq. km. and this combined with scrub forest of 3,457.348 sq. km, constitutes 72.7 percent of the land area. Approximately 43 percent of the total land area is contained within the Protected Areas system with an additional 7 percent of the total designated as biological corridors.

Approximately 14 percent of the forest area is economically accessible and available for commercial timber production, with about 5.8 percent currently under FMU management plans and 8.2 percent yet to be brought under plans. The remaining area is not suitable for harvesting timber using current technology and under the prevailing economic circumstances. Most of this area is used on an *ad hoc* basis for rural timber supplies. This category also includes the area above 4,000 metres a.s.l. It is estimated that about four percent of the forest land will be designated as Community Forests by the end of 2013 and about 20% by 2020.

1.5 Bhutan's International forest related commitments

Bhutan is party to several International Treaties and Agreements. The key ones are the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), UNESCO World Heritage Convention, adherence to International Plant Protection Convention (IPPC), the Millennium Development Goals (MDG) and the SAARC Development Goals (SDG). Bhutan is committed to seeking synergies in activities and strengthening ties between these Conventions in pursuing more efficient, holistic approach to addressing the problems.

2. Policy Statements

The framework for the National Forest Policy consists of the underlying principles on which the policy is based, a long term goal and major policy objectives and specific statements to enable various aspects of forest production, use and management.

Main features of the National Forest Policy, 2011 include:

- a. Integrated landscape level approach to sustainable forest management.
- b. All GRF land must be brought under management regimes focused on the sustainable supply of forest products or ecosystem services.
- c. Emphasis on poverty reduction.
- d. Promotion of forest-based industries through sound resource assessment.
- e. Balanced sustainable use and conservation of forest and natural resources with emphasis on efficient and environment friendly technology for value-addition and waste minimization.
- f. Enabling conservation of a significant representation of the country's biodiversity.
- g. Science based and participatory approach to forest governance and management that respects the cultural values of the forests.
- h. Integration of climate change, disaster management and new challenges and opportunities in forest governance and management.
- i. Enabling payment of environment services.

2.1 Principles of the National Forest Policy

Several principles have been considered while framing the National Forest Policy. These are:

- i. Equity and justice in terms of access, optimal utilization, conservation of forest resources and its ecosystem services.

- ii. Contribution of forest products and services for poverty reduction through integrated approach.
- iii. Deregulation and devolution through people centred forest management practices and decision making.
- iv. Application of good science and indigenous knowledge through integrated research and development in all aspects of forest planning and management.
- v. Allowing import of logs and sawn timber to enhance availability of timber materials within the country while export of round logs and sawn timber shall not be allowed to encourage value-addition.

2.2 National Forest Policy Goal

Bhutan's forest resources and biodiversity are managed sustainably to produce a wide range of social, economic and environmental goods and services for the equitable benefit of all citizens and natural environment while still maintaining a minimum of 60% of the land under forest cover thereby contributing to Gross National Happiness.

2.3 Policy Objectives

In order to achieve the policy goal, the following broad objectives shall be pursued;

- i. Manage Bhutan's forests for sustainable production of economic and environmental goods and services and to meet the long term needs of society;
- ii. Manage Bhutan's production forests for sustainable supply of timber, other forest products and environmental goods and services and to meet the long term needs of society;
- iii. Maintain species persistence and ensure long term sustainability of Bhutan's biodiversity, ecosystem services, natural habitats

and cultural heritage through a network of Protected Areas, biological corridors and management of other parts of the forest landscape for positive environmental outcomes;

- iv. Provide for effective and integrated watershed management, maintain and improve water and watershed conditions and contribute to sustainable livelihoods through provision of watershed services;
- v. Empower rural communities to manage forests sustainably for socio-economic benefits, poverty reduction and to contribute to overall sustainable forest management at national level;
- vi. Facilitate raising forestry crop on registered land of individuals or institutions and accrue ecological, social and economic benefits;
- vii. Enable an economically viable and efficient forest based industry aimed at adding value to forest products and build capacity of private sector and rural communities to utilise, process and market forest products;
- viii. Establish a dynamic organisational set up through institutional reforms for appropriate managerial and technical capacity to implement all policy objectives;

2.4. Sustainable management of Government Reserve Forests (GRF)

To manage Bhutan's forests for sustainable production of economic and environmental goods and services and to meet the long term needs of society, the following policy measures shall be pursued;

- i. All GRF land must have forest management plans focused on the sustainable supply of forest products or ecosystem services. GRF lands that are currently not covered by any other management regimes should be progressively brought under more explicit management. Such Management must ensure that

pests and diseases, forest fires, and natural disaster management related to the particular resources are integral part of the plan. Moreover, the waste management aspects should also feature in the management regime to ensure health of the ecosystems.

- ii. Manage GRF land based on forest functions at landscape level in consultation with local communities and the other key stakeholders. This should identify parts of the landscape, among others for production, protection of cultural sites, watershed services, biodiversity, community use areas and areas with important environmental services such as riparian strips, marsh lands and steep or erosion prone areas.
- iii. Provide adequate consideration to the fundamental linkages between forest, water, watersheds with environment and people in all sustainable forest management programmes.
- iv. Carry out periodic National Forest Inventory (NFI) to enhance knowledge on the overall forest resources, biodiversity and ecosystem health across the country and to guide forest classification, functional mapping, strategic investment and decisions.
- v. Pursue forest plantation of appropriate vegetation composition in areas where natural regeneration is inadequate or absent. The Government should realize funds for such investments from beneficiaries of watershed and ecosystem services. Further, the Department should also carry out plantation of shrubs and low height tree species under high tension transmission lines to maintain forest cover.
- vi. Ensure wood balance by planting equal or more saplings than the numbers or volume cut and removed in a year from the forests for allotment to various use groups. The Department should also promote planting of saplings through religious forum as an act of accumulation of merits for departed soul.

- vii. Ensure rehabilitation and restoration of GRF land used for purposes other than sustainable forest management.
- viii. Ensure compensatory plantation with suitable local species to compensate for the loss of forest cover due to establishment of development projects.
- ix. GRF land categorized as production forests should be managed under a system of Forest Management Units (FMUs) or any other management regimes defined by Forest Management Code of Bhutan.
- x. GRF land categorized as biodiversity conservation forests are managed under a system of National Parks, Wildlife Sanctuaries, Strict Nature Reserve, Biological Corridors, Recreational and Botanical Parks, or any other management regimes that contributes to biodiversity conservation.
- xi. GRF land categorized as community use areas are managed under a system of community management regime.
- xii. The negative environmental impact as a result of infrastructure development inside the forest shall be minimized through:
 - a. adoption of environmental friendly technologies.
 - b. proper need based assessment of the infrastructure requirement.
 - c. sharing of resources where ever possible.
- xiii. GRF land categorized as cultural/sacred, heritage sites, local water supply sources and riparian reserves, soil protection, specific wild floral/faunal habitat and species protection are excluded from forest production related activities except in cases of epidemic or disasters.
- xiv. Forest land which do not fall under GRF land are managed under *viz*; (a) private forest, (b) *thromde* forest, (c) institutional forest, and (d) industrial forest.

- xv. Facilitate leasing of GRF land, identified as potential land for lease, for commercial or any other activities to individuals, communities or institutions within the country. In addition, the Government may also lease out suitable GRF land, under FDI, to interested foreign companies in compliance with FDI policy. All such leasehold GRF land shall be managed as per approved management plans.
- xvi. Institute mechanism or measure for preventing poaching, encroachment and illegal trade of forest and wildlife products.
- xvii. Prevent and control forest pests and diseases to ensure health and vitality of forests.
- xviii. Prevent and control forest fires in fire sensitive ecosystem while prescribed forest fires may be used as a management tool for improving ecosystem health.
- xix. Carry out research to generate knowledge, information and technology to support policy implementation and development including integration of climate change issues.
- xxi. Ensure that information management and archival systems are in place.
- xxii. Build strong human resources through appropriate training and education to implement policy objectives.

2.5 Forest Use and Priorities

2.5.1 Production forests

To manage Bhutan's production forests for sustainable supply of timber, other forest products and environmental goods and services and to meet the long term needs of society, the following policy measures shall be pursued:

- i. Manage production forests under the system of Forest Management Unit or any other suitable management regime, primarily for production of timber, and other forest products and services.

- ii. Harvest timber and other forest produce based on scientific forest resource assessment and approved management plans.
- iii. Allow any commercial agency notified by the Royal Government to operate in larger FMUs and Working Schemes requiring huge investments. However, DoFPS shall operate in smaller Working iv. Schemes as per the forest management plans approved by the Ministry.
- v. Formulate a separate policy on (i) Allotment of subsidized rural timber and other forest produce and (ii) Timber Pricing and Marketing to prevent illegal timber operations in the country. These policies shall enable availability of adequate supply of timber in the country that is accessible and affordable to the population. These policies shall, among others, include:
 - a. defined areas where timber supplies shall be made in the form of standing trees.
 - b. appropriate system to provide alternative subsidy in place of timber for the rural communities.
- vi. Ensure plantation of the harvested areas with appropriate species, by the harvesting or beneficiary agency in areas where commercial or large scale harvesting of forest resources are carried out. Maximise production of forest resources per unit area and also enhance efficient utilization of low quality timber.
- vii. Facilitate import of timber to meet the demand and encourage use of alternatives to reduce pressure on GRF land.
- viii. Plantation of suitable bamboo species shall be carried out as an alternative to reduce pressure on timber resources by relevant agency identified by DoFPS.
- ix. Allow regulated/managed grazing in production forests including silvi-pastoral practices or other forms of management except in natural regeneration and young plantation areas.

- x. Facilitate forestry clearance for mining and quarry if it doesn't negatively impact on the overall forest production, health and local environment.
- xi. Minimize or reduce impact of climate change on sustainable forest management and development through appropriate adaptation and mitigation measures.
- xii. Uphold the country's position on carbon neutrality and contribute to availing benefits from carbon markets linked to conservation and sustainable management of forests.
- xii. Allow surface collection of sand and stone and sustainable harvesting of NWFPs according to management prescriptions.
- xiv. Establish strong monitoring and evaluation mechanism.

2.5.2 Nature Conservation

To maintain species persistence and ensure long term sustainability of Bhutan's biodiversity, ecosystem services, natural habitats and cultural heritage through a network of Protected Areas, biological corridors and management of other parts of the landscape for positive environmental outcomes, the following policies measures shall be pursued:

- i. Initiate and identify designation of Protected Areas including riparian zones and critical habitats for conservation purposes.
- ii. Ensure that Protected Areas contain a significant representation of the country's biological diversity.
- iii. Manage Protected Areas based on functional zones to accommodate integrated conservation and development through a variety of appropriate management regimes.
- iv. Maintain connectivity between Protected Areas through a network of biological corridors.
- v. Mainstream sustainable solutions to mitigate human wildlife

- conflict through innovative mechanisms and instruments based on good science.
- vi. Combat poaching and illegal trade of wild flora and fauna through participatory approaches as well as through a well coordinated national and international network.
 - vii. Integrate conservation of cultural/sacred, heritage sites, local water supply sources and riparian reserves, soil protection, specific wild floral/faunal habitat and species protection, historical/cultural sites and local traditions in Protected Area management.
 - viii. Advocate environmental education and awareness.
 - ix. Provide enabling environment for promotion of nature-based tourism to bring benefits to local communities and enhance conservation. In addition, the Protected Area management should incorporate expanded roles for park officials in eco-tourism advocacy and orientation programmes. Sanctity of biodiversity in the national parks and eco-sites should be upheld to promote eco-tourism.
 - x. Enable creation of public recreational areas and/or facilities that should be managed based on code of best practices.
 - xi. Manage Protected and recreational Areas under self-financing mechanisms. Further, the DoFPS should explore the possibility of out-sourcing the management of some of the Protected Areas or sites or components within the Protected Areas to private entrepreneurs.
 - xii. Maintain database on cultural/sacred, heritage sites, local water supply sources and riparian reserves, soil protection, specific wild floral/faunal habitat and species protection, historical sites and local traditions.
 - xiii. Integrate aquatic-biodiversity conservation and management in the overall nature conservation approach.

- xiv. Allow regulated grazing in multiple-use and buffer zones but not in the core zone.
- xv. Establish strong monitoring and evaluation mechanism.
- xvi. Create enabling environment to promote initiatives in the field of biodiversity prospecting with the equitable sharing of benefits arising thereof. Biodiversity prospecting should not have adverse impacts on the sustainability of the resources, the livelihood of local communities and on the environment.
- xvii. Develop and implement measures to protect natural ecosystems against invasive alien plant species.
- xviii. Follow stringent environment-friendly constructions norms for any infrastructure development in biodiversity conservation areas. However, development activities of national importance should be given due consideration.

2.5.3 Watershed Management

To provide for effective and integrated watershed management, maintain and improve water and watershed conditions and contribute to sustainable livelihoods through provision of watershed services, the following policy measures shall be pursued;

- i. Mainstream watershed management objectives into regular national and local development plans as well as the land use specific planning frameworks for forest management units, protected areas, community forests, industrial areas, urban development, human settlement, etc.
- ii. Adopt river basins as organizing units for strategic level planning to assess watershed conditions across the country and to identify critical sub-watersheds for priority attention with appropriate management regimes.
- iii. Adopt an integrated approach to development through area-based planning framework for operational level planning to

enhance watershed conditions, water quality and improve livelihoods.

- iv. Provide adequate protection of wetlands including but not limited to alpine lakes, glaciers, marsh lands and other potential water reservoirs.
- v. Pursue options for the payment for watershed services to cover the costs of maintaining and improving watershed conditions and watershed services.
- vi. Allow regulated grazing, collection of NWFPs by the communities, community forestry and surface collection of sand and stones in the GRF land categorized for watershed management except in critical sub-catchment areas.
- vii. Develop strategies to maintain and improve reliable flow of water from the watershed throughout the year for domestic use, irrigation and sustainable production of reliable hydropower power.
- viii. Manage catchment areas in an integrated and holistic manner involving both upstream and downstream stakeholders with good vegetation cover for continued supply of water and watershed services for downstream beneficiaries.
- ix. Minimize negative impacts from non-point source pollution.
- x. Establish strong monitoring and evaluation mechanism.

2.5.4 Social Forestry

A. Community Forestry

To empower rural communities manage forests sustainably for socio-economic and environmental benefits, poverty reduction and to contribute to overall sustainable forest management at national level, the following policy measures shall be pursued;

- i. Strengthen the rights, responsibilities and capacities of local communities to regulate access and sustainable use of forest resources in and around villages through decentralization and devolution of management authority from the central government to local communities.
- ii. Manage Community Forests based on principles of good governance to ensure transparency, accountability, participation, predictability, empowerment, inclusiveness, equity and benefit sharing, and in line with decentralisation and devolution policies.
- iii. Manage Community Forests to meet the requirements of timber, firewood of the local people and other goods and services.
- iv. Manage Community Forests by applying principles of Sustainable Forest Management to achieve ecological, social and economic objectives.
- v. Manage Community Forests to generate a wide range of other goods and services contributing to rural poverty reduction through sale of forest products and services.
- vi. Enhance sustainable rural livelihoods through income generating opportunities, creation of on and off-farm employment opportunities and strengthen community skills related to such opportunities.
- vii. Facilitate establishment of Community Forests in the Protected Areas and biological corridors without compromising with the objectives of such areas.
- viii. Interface contemporary management and institutional arrangements with indigenous and traditional approaches to forest management.

- ix. Create an enabling regulatory, technical backstopping and extension framework for Community Forestry.
- x. Establish mechanism to compensate the loss of area or resources due to developmental activities from the designated community forests.
- xi. Monitor and evaluate the biophysical and socio-economic outcomes of Community Forestry.
- xii. Establish strong monitoring and evaluation mechanism.

B. Private Forestry

To facilitate raising forestry crop on registered land of individuals or institutions and accrue ecological, social and economic benefits, the following policy measures shall be pursued;

- i. Promote Private forests through the creation of an enabling regulatory, technical backstopping, extension and marketing framework.
- ii. Encourage agro-forestry, silvi-pastoral practices or any other forms of management in the private forests that would bring economic, social and environmental benefits.
- iii. Create enabling environment for providing technical backstopping to promote private forestry.
- iv. Create enabling environment and mechanism for harvesting and marketing of forest produce from the private forests.

2.5.5 Forest Based Industries

To enable an economically viable, environmentally friendly and efficient forest based industry aimed at adding value to forest products and build capacity of private sector and rural communities to utilise, process and market forest products, the following policy measures shall be pursued;

A. Wood based

- i. Ensure that policies concerning private sector investment in utilising and marketing forest products, including permits, taxes, licenses, leases, etc. do not have a perverse effect on the ability of the private sector to engage in the profitable, and sustainable utilisation and marketing of forest products.
- ii. Establish a system requiring the endorsement of MOAF for establishing new wood based industries in the country to ensure sustainability in the supply of raw materials.
- iii. Promote efficient harvesting and wood processing technologies and reduce wastage through tax exemption on import of such plant.
- iv. Promote forest operation services through registration and certification of such service providers.
- v. Provide resource information and appropriate technology to support forest based industries.
- vi. Create improved information technology system for planning.
- vii. Promote establishment of industries based on sound resource assessment and feasibility.
- viii. Support industries to develop commercial plantation forests, including on leased GRF land to produce industrial raw material.
- ix. Promote environment friendly technology advancement, facilitate technical backstopping and provide support towards a sustainable wood based industries in the country through the creation a wood products processing training, advisory and research centre within the Ministry of Agriculture and Forests.
- x. Create enabling environment for value addition of timber within the country.

- xi. Ensure proper management of wastes from wood based industries.
- xii. Establish strong monitoring and evaluation mechanism.

B. *Non-wood Forest Products*

- i. Strengthen the rights, responsibilities and capacities of local communities to access and sustainable use of NWFPs through institutionalization of co-operatives and management groups.
- ii. Manage NWFPs based on principles of good governance to ensure transparency, accountability, participation, predictability, empowerment, inclusiveness, equity and benefit sharing, and in line with decentralisation and devolution policies.
- iii. Manage NWFPs by applying principles of sustainable forest management based on sound resource assessment and/or sustainable harvesting regimes to achieve ecological, social and economic objectives.
- iv. Enhance sustainable rural livelihoods through income generating opportunities, creation of on and off-farm employment opportunities and strengthen community skills related to such opportunities contributing to rural poverty reduction.
- v. Provide technical assistance to local communities to facilitate their ability to sustainably harvest, process and efficiently and economically market selected NWFPs, aimed at maximising local income generation.
- vi. Promote establishment of enterprises that can add value to the processing and marketing of NWFPs.
- vii. Interface contemporary management and institutional arrangements with indigenous and traditional approaches to management of NWFPs.

- viii. Create an enabling regulatory, technical backstopping and extension framework for NWFPs management and marketing.
- ix. Monitor and evaluate the biophysical and socio-economic outcomes of NWFPs.
- x. Establish strong monitoring and evaluation mechanism.

2.6 Institutional Arrangements

To establish a dynamic organisational set up with appropriate managerial and technical capacity to implement all policy objectives, the following policy measures shall be pursued;

- i. As the lead agency responsible to co-ordinate implementation of this policy, the Ministry of Agriculture and Forests shall:
 - a) Carry out Institutional reforms to ensure coordinated and effective decentralisation and devolution of authority with clear mandates and functions at various levels based on arrangements to best implement the national forest policy objectives.
 - b) Carry out effective co-ordination mechanisms between the Department of Forests and Park Services and other stakeholders for implementing crosscutting issues.
 - c) Develop and implement public, private and community partnership institutions to promote cost and benefit sharing mechanism in a fair and equitable manner.
 - d) Carry out research to generate knowledge, information and technology to support policy implementation and development including integration of climate change issues through a dedicated research programme.
 - e) Establish and strengthen programmes for scientific and technical capacities in conservation and sustainable use of forest resources.

- ii. The GNH Commission shall monitor the overall implementation and evaluate impact of policy implementation to ensure that broad objectives are met through periodic review.

- iii. Ensure fulfilment of commitments under International Treaties and Agreements that Bhutan is party to, through identification and appointment of appropriate focal points and institutionalization of effective co-ordination and reporting mechanisms.

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