



सत्यमेव जयते

GOVERNMENT OF RAJASTHAN

RAJASTHAN FOREST POLICY 2023

RAJASTHAN FOREST DEPARTMENT



**Government Rajasthan
Forest Department**

RAJASTHAN FOREST POLICY 2023

Forest Department, Rajasthan

www.forest.rajasthan.gov.in



Ashok Gehlot
Chief Minister
Rajasthan

Message

Rajasthan, India's largest State, is arid or semi-arid in most parts. A fast growing economy and increasing population in Rajasthan understandably translates into increasing pressure on natural resources. Today, when environmental concerns form the bedrock of development management, it is important that growth processes are congruent with the primary principles of wise use of landscapes and ecosystems.

It is in this backdrop that the Government of Rajasthan has decided to revisit and recast the State Forest Policy 2010. The earlier document had to be updated keeping in view the challenges posed by climate change, pollution, zoonosis etc. with the sustainable management of forest resources. A major learning from the Covid pandemic is the need to harmonize lifestyles with nature. The new policy document outlines the government's strategy for managing and conserving the forest and wildlife wealth in the state. We have tried to emphasize the importance of conservation of biological diversity and restoring ecological balance within the various forest types while also recognizing the social and economic requirements of indigenous communities residing on the fringes of forests and grasslands in Rajasthan.

I am confident that this policy document shall be the primary framework for the next decade and guide the harmonious management of the forests. I take this opportunity to congratulate the entire team of the Forest Department for the hard work in drawing up this document.

(Ashok Gehlot)



Hemaram Choudhary
Hon'ble Minister of Forest,
Environment and Climate Change,
Government of Rajasthan

Message

Rajasthan has a long tradition of respect for the wilderness. History is replete with legends and parables that illustrate the strong connect communities have had with forests and wildlife. The sacrifice of Amrita Devi in Khejadli, Jodhpur, the Kadamb Kunj and its association with the leela of Bhagwan Shri Krishna and many more such depictions are indicative of a universal respect for nature and its elements.

Nearly 10% of Rajasthan's geographical area is administered by the forest department. Our officers and staff work in desert, tribal and otherwise remote areas, tasked with looking after the valuable forest and wildlife resources of the state. On a day to day basis, they have to carry out both development activities and police the land from miscreants. Their success, to a significant extent, can be attributed to the support they receive from the local people.

My department, through a series of consultations, reviewed and updated the erstwhile Forest Policy. The State Forest Policy 2023 summarizes the principles and strategy of forest and wildlife management in Rajasthan, keeping in view national priorities and international commitments. This document emphasizes on the use of technology as a tool of management and caters to the sustainable management of natural forests, plantations and wildlife in the days to come.

I take this opportunity to congratulate Shri Shikhar Agrawal, Additional Chief Secretary, Forest Department and Shri Munish Kumar Garg, Principal Chief Conservator of Forests (Head of Forest Force) and all team members of the department who worked on creating this future proof document.

(Hemaram Chaudhary)



Shikhar Agrawal
IAS
Additional Chief Secretary
Department of Forest,
Environment & Climate Change
Government of Rajasthan

Message

State Forest Policy 2010 envisioned increasing vegetal cover in the State to 20 percent of the geographical area. Forest cover in the State actually increased by around 82 sq km. from 2017 to 2021. There is now a clear need to provide much needed momentum to the efforts being made in this direction.

In the more recent times, a clear obligation has also been felt to integrate the vision of sustainable forest management through elements of ecosystem conservation, ecological security, climate change mitigation and adaptation, promotion of urban forestry and robust convergence with the Sustainable Development Goals.

The preparation and release of new State Forest Policy 2023 is accordingly very timely. It is hoped that the new Policy will augment sustainable management of forests, wildlife, biodiversity and protected areas through scientific, traditional and experiential knowledge towards the overall achievement of ecological, economic and social well being and actually increase vegetal cover to 20 percent by 2040.

It is sincerely hoped that all stakeholders will work together and implement the Forest Policy 2023 in letter and spirit.

(Shikhar Agrawal)



Munish Kumar Garg
IFS

Principal Chief Conservator of Forests
(Head of Forest Force)
Forest Department, Rajasthan

FOREWORD

Rajasthan is India's largest State with 10.40 percent of the geographical area of the country. The forest cover in the state is 9.60 percent of the total geographical area of the state. The total forest and tree cover in the state is 7.42 percent of the geographical area. Forest and wildlife areas of the State are prone to many biotic and abiotic pressures which deeply influence the health and condition of the forests. Despite increasing pressure on forests to meet the fuel wood, fodder and timber requirements of the communities, it is worth appreciating that there has been no net loss of forest cover in the state since the year 1995.

Presently, there are comprehensive schemes and projects ongoing in the department, both state funded and externally aided projects, which are targeted towards increasing the green cover in the state. With this bio-geographical background, the new Forest Policy of Rajasthan 2023 has been brought out by the government. The policy aims to increase vegetation cover to 20 percent of the geographical area within next twenty years with special focus on increasing vegetation cover outside forests. The vision and objectives of the State Forest Policy, 2023 shall be achieved on the basis of the principles of protection and consolidation, ecological restoration, and people's participation.

I trust that large scale restoration and rewilding that is underway in Rajasthan will further get strengthened by the new Forest Policy for the local and global common good.

(Munish Kumar Garg)

RAJASTHAN FOREST POLICY 2023

1. Preamble

- 1.1 Forests are the most valuable natural ecosystem associated with the well being of the society. They provide foundation for life on Earth through the ecological functions not only by regulating the climate and water resources but also by serving as habitats for plants and animals. Forests need to be preserved for their economic, ecological, scientific and cultural values and for the ecosystem services they provide like water, source of medicine, soil amelioration, bio-diversity conservation, carbon sequestration, recreation etc.
- 1.2 Rajasthan State Forest Policy 2010 aimed to increase the vegetal cover in the State to 20 percent of the total geographical area over a reasonable period of time.
- 1.3 By seeing the new set of challenges and possibilities it is felt to need to replace the State Forest Policy 2010 by a new policy. Accordingly, Rajasthan Forest Policy 2023 is being brought out.

2. Overview of Forests and Wildlife of Rajasthan

- 2.1 Rajasthan is India's largest State with 10.40 percent of the geographical area of India. The State is broadly divided into two unequal halves by the Aravalli Hill ranges that run from south-west to north-east. Two third part of the State that lies to the west of Aravalli is primarily arid and semi-arid and is a part of the Great Indian Thar desert of which 61 percent lies in Rajasthan. The areas to the east of Aravalli and the south-western part is better in terms of agro climatic conditions and are house to the good forests of Rajasthan. The Vindhyan intrusions in the east and the southeastern part of the State, drained with rivers and streams, well endowed with vegetation and wildlife, are as significant to the ecology of the State as the desert and grassland ecology of desert and arid regions in the western part of the State. Forests and forestry in Rajasthan, therefore, has to be understood, not in terms of vegetal cover or tree density but in terms of ecological units and the ecosystem services provided by them.

- 2.2 The forests in Rajasthan belong to two type groups -Tropical Dry Deciduous and Tropical Thorn Forests, which are further divided into 20 forest types. The major forest types found in Rajasthan are Northern Dry Deciduous Forests (40.07 percent), *Anogeissuspendula* Forest (15.21 percent), Dry Deciduous Scrub (10.96 percent), Desert Dune Scrub (6.62 percent) and Desert Thorn Forest (6.17 percent).
- 2.3 Recorded Forest Area (RFA) in the State is 32,869.69 km² (9.6percent of the States Geographical area) of which 12,176.28 km² is Reserved Forest, 18,588.39 km² is Protected Forest and 2105.3 km² is Unclassed Forests. However, as per India State of Forest Report 2021 (ISFR, 2021) the forest cover in terms of vegetation cover is 16,654.96km²which is 4.87 percent of the State's geographical area.
- 2.4 Rajasthan is better placed among other states of the country in terms of trees occurring in patches of size less than 1hectare including scattered trees, referred to as 'Tree Cover' by the Forest Survey of India. The State ranks second in this category with 8733 km² area under Tree Cover as reported in ISFR 2021. An area of 12,828 km² is estimated as TOF (Tree Outside Forests) in the State which is the sum of Forest Cover outside the recorded forest area (4095 km²) and Tree Cover (8733 km²).
- 2.5 The Protected Area Network of the State covering 3.92 percent of its geographical area comprises of 3 National Parks, 26 Wildlife Sanctuaries and 22 Conservation Reserves. The State is also having 4 Tiger Reserves (Ranthambhore, Sariska, Mukundra Hills and Ramgarh Vishdhari) and 2 Ramsar Sites (Keoladeo National Park and Sambhar Lake). The Protected Areas of the State cover an area of 13418.18 km² in all.
- 2.6 Conservation ethos are well entrenched in communities of the State where people protect, conserve and nurture wildlife and biodiversity on their own. Across the State, there are many areas that are outside the network of Protected Areas but are immensely rich and vibrant with wildlife and biodiversity, due to a strong involvement of communities.
- 2.7 The assessment by Forest Survey of India 2019 reports a total of 3826 wetlands covering an area of 56,341 hectare inside the recorded forest area of the State which includes 284 natural inland wetlands covering an area of 21,519 hectare, 1275 inland manmade wetlands with area of

- 28,064 hectare. These wetlands form 1.70 percent of the recorded forest area of the State and indicate towards the need for proper scientific management of forests for the betterment of these wetlands.
- 2.8 The Growing Stock in Trees Outside Forest is around 90.63 million cubic meter which is more than that in the recorded forest area, which is 26.56 million cubic meter.
- 2.9 The total carbon stock of forests in the state is 110.77 million tonnes (406.16 million tonnes of CO₂ equivalent) which is 1.54 percent of total forest carbon of the country. Soil Organic Carbon forms the bulk of this carbon stock to the tune of around 70 million tonnes, pointing towards the need to conserve and improve soil.
- 2.10 Rajasthan has 9829 square km. area under grasslands which occupy around 2.9 percent of the total geographical area of the State. Altogether, 375 species belonging to 188 genera and 46 families have been found in these grasslands.
- 2.11 As per the 2011 census, Rajasthan has a population of 68.55 million accounting to 5.66 percent of India's population. The 20th livestock census 2019 has reported a total livestock population of 56.80 million in the State which is the second highest in the country. Of the total livestock, 54.94 million are found in the rural areas of the State. This includes 13.9 million cattle, 13.7 million buffalo, 7.9 million sheep, 2.13 million camels and 20.8 million goats, most of which derive their fodder supply from the forests and forest based resources as stall feeding is seldom practiced in the State.
- 2.12 The Forest Survey of India in its ISFR 2019 estimates that dependence of people in forest fringe villages on forests is for fuel wood (8.5 million tonnes), fodder (112.7 million tonnes), bamboo (3698 tonnes) and small timber (82.4 thousand cubic meters). These figures indicate the value of forest and forest-based resources in the economic and social well-being of people of the State, mainly those in the rural areas and forest fringe villages.
- 2.13 Forest and wildlife areas of the State are also prone to many biotic and abiotic pressure which deeply influence the health and conditions of the forests. Encroachment, deforestation, mining, grazing, poaching of

wildlife, habitat destruction and forest fires are the major adverse influencers on the forests and wildlife. Large forest tracts with open borders, fragmented forest blocks and huge livestock population present immense challenge to protection, conservation, restoration and management of forests and wildlife in the State. Despite increasing pressure on forests to cater to the fuel-wood, fodder and small timber needs of the population especially those residing in and around the forest areas, it is worth appreciating that there has been no net loss of forest cover in the State since year 1995.

- 2.14 The State of Rajasthan is well endowed and rich in wildlife and contains a range of prey and predator fauna. Various parts of the State are witnessing increased arrival of migratory avifauna from various parts of the world and have generated deep interest among the people of the state. This rich biodiversity attracts large number of tourists to the State and contributes significantly towards the economy.
- 2.15 Forests also form the lifeline of the people in rural areas especially the tribal and indigenous groups who reside in and around forest areas. Forests make significant contribution thereby contributing towards making life and livelihood easy for the tribal's and the deprived.
- 2.16 As per the report of Indian Institute of Forest Management (IIFM), Bhopal, the forestry sector in the State contributes to about 2.19 per cent to the State's GSDP (Gross State Domestic Product).

3. Vision

To promote the sustainable management of forests, wildlife, biodiversity and protected areas through scientific, traditional and experiential knowledge towards the overall achievement of ecological, economic and social well-being and increase vegetation cover to 20 percent of the geographical area within next twenty years with special focus on increasing vegetation cover outside forests.

4. Objectives

The objectives of the present policy are:

- 4.1 To protect, conserve, restore and manage existing natural forests, wildlife and bio-diversity to enhance their productive capacity for

ecological security and flow of ecosystem services as well as to contribute towards economic and social well-being.

- 4.2 To increase the extent of forest/tree cover in the State by encouraging reforestation, restoration and rehabilitation measures in existing forest areas and by encouraging and expanding vegetal cover in urban and rural areas outside the existing forest areas by promoting protection and afforestation practices on common property resources, agro forestry practices on farm lands and tree planting on available spaces.
- 4.3 To encourage community participation and improve livelihoods opportunities for people through sustainable use of forest and grassland based resources and ecosystem services.
- 4.4 To prevent all forms of land degradation including decertification, and improve productivity of land under forests, grasslands and plantations through appropriate management interventions and use of contemporary scientific and technological knowledge.
- 4.5 To conserve and promote floral and faunal diversity and gene pool reserve especially of the rare and endangered species of flora and fauna through *ex-situ*, *in-situ* and *circa-situm* conservation measures including conservation and management of bio-diversity rich ecosystems like grasslands, wetlands, sacred groves, deserts etc.
- 4.6 To consolidate climate change mitigation and adaptation measures in forest, wildlife and bio-diversity management and management of vegetal cover in Rajasthan.

5. Principles of Forest Management

The vision and objectives of the State Forest Policy shall be achieved on the basis of following broad principles:

- 5.1 **Protection and Consolidation:** Effective protection of forests, wildlife and bio-diversity rich areas enhance and accelerate ecological restoration. Compact and contiguous ecological units have far more beneficial impact than the sum of its parts. Hence, efforts shall be made to increase protection, reduce fragmentation and increase consolidation of ecological units to achieve a synergistic advantage.

- 5.2 Ecological Restoration:** Primacy shall be accorded to restoration of constituents of the ecosystem in such a way so as to restore the ecological structure, functions and bio-diversity of the area.
- 5.3 Sustainability:** Efforts shall be made to strike an equitable balance between the ecological, economic and social dimension in such a way so as to be able to meet the needs and aspirations of the present generation without compromising the ability of the future generations to be able to meet their own needs and aspirations.
- 5.4 Expansion:** It is imperative to spread the efforts and investments also in areas outside the recorded forest area so as to be able to increase the actual forest and vegetal cover.
- 5.5 Evidence-based Approach:** Knowledge gained out of research, technological innovation and field experience shall be sourced and put to effective use in all the efforts toward restoration and conservation of forests, wildlife and bio-diversity.
- 5.6 Participation:** Participation and productive engagement of stakeholders from all section of the society shall be ensured to achieve long term sustainability.

6. Strategy

Forests, wildlife and bio-diversity go together. They are the most important constituents of any ecological unit. Their interaction and dynamics define the various tangible and intangible ecosystem services that the ecosystem provides.

- 6.1** Broadly, the strategy for achieving the vision and objectives of this Policy shall, inter alia, include:
- 6.1.1 Protection, conservation, restoration and management of existing forests and protected areas according to approved Working/ Management Plans/ Action Plans formulated on the basis of extant rules, regulations and guidelines.
 - 6.1.2 Actively promoting natural regeneration and artificial regeneration on forest lands.
 - 6.1.3 Actively take up protection, conservation and plantation on community lands like *Gochar, Oran, Charagah* etc.

- 6.1.4 Actively take up plantation on institutional/ public land, linear strips along roads, rivers, canals, railway track etc.
- 6.1.5 Actively increase tree cover outside forest through distribution of tall plants to individual/farmers.
- 6.1.6 Developing coordination mechanisms among related departments, agencies, institutions and organizations to ensure integrating ecological and forest considerations into their sectoral policies and programs and to bring more area under effective forest and tree cover through planting, protection, conservation and management.
- 6.1.7 Ensure intensive and extensive stakeholder participation in the protection, conservation and management of forests and protected areas including sharing of usufructs as per extant provisions.
- 6.1.8 Improving productivity of the forests and protected areas in terms of their ecological functions as well as their contributions towards economic and social well-being of the people of the State, with primacy being accorded to the ecological functions of the area.
- 6.1.9 Ensuring extensive sensitization, orientation, education and awareness of all stakeholders about role, importance and significance of forests, wildlife and biodiversity in the long-term ecological, economic and social well-being.

6.2 Forest Protection

Effective protection from unscientific and unregulated intervention and biotic and abiotic pressures is key to maintaining the growth and ecological health of any forest. This can happen through constant vigil on the forest area, regular engagement with the stakeholders and augmentation of protection capability proportionate to the gravity of the threat. The following steps shall be undertaken to make forest protection effective:

- 6.2.1 Consolidation of forest land records including block files,

notifications and block maps and their proper entry including mutation into the revenue land records.

- 6.2.2 Proper demarcation of forest land on ground by way of good quality boundary pillars.
- 6.2.3 Effective use of technology and communication systems to improve vigil.
- 6.2.4 Making legal provisions to enable more effective action to check offences.
- 6.2.5 Putting in operation suitable incentive scheme for rewarding informers, and those who cooperate in detection, prevention, investigation and proceedings.
- 6.2.6 Putting in place scheme to incentivize people and communities that assist and help in detection and control of forest fires.
- 6.2.7 Improving patrolling, monitoring and strengthening of networks of forest check posts.
- 6.2.8 Active engagement of forest right holders in protection activities.
- 6.2.9 Improving coordination among related departments through higher use of technology and by way of sharing information.
- 6.2.10 Improving analytical framework for identifying sensitive areas and preventing commission of offences.
- 6.2.11 Ensuring effective participation of people in forest protection.
- 6.2.12 Affirmative policy initiatives to promote and incentivise protection of trees, vegetation and forests.
- 6.2.13 Improving networks of fire-lines and watch-towers and training to control forest fires.
- 6.2.14 Improving detection and investigation of crimes related to wildlife.
- 6.2.15 Timely clearances under Forest Conservation Act and Wildlife Act would be provided to facilitate development of suitable infrastructure and socio-economic development and any non-

forestry activity in the forest and without requisite clearance shall be effectively checked.

- 6.2.16 Central database shall be created for forest and wildlife offences and dossiers of serious offenders shall be maintained to strengthen the process of detection, apprehension and prosecution.

6.3 Forest Development and Conservation

Conservation of forests, wildlife and biodiversity would be further strengthened and augmented through the following measures:

- 6.3.1 Effective closure of big chunks of potential areas, with 6 feet high pucca wall, would be taken up to ensure regeneration and habitat improvement.
- 6.3.2 Advance closure of areas one year prior to restoration or afforestation would be promoted to allow natural regeneration to take place and the biodiversity to revive. Subsequently, need-based planting, direct seeding and assistance to natural regeneration shall be implemented.
- 6.3.3 Degraded areas including village commons, pasture land, culturable wasteland and linear strips would be taken up for afforestation and reforestation.
- 6.3.4 More active community participation shall be attempted involving the Village Forest Protection and Management Committees, Eco-Development Committees, Eco-Development committees, Panchayat Raj Institutions, Urban Local Bodies, Biodiversity Management Committees during all stages of afforestation/ reforestation/ restoration work.
- 6.3.5 Support shall be provided to holders of Forest Rights and Community Rights as per the provisions of The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 to positively engage in development and conservation of forest areas.
- 6.3.6 Special care shall be taken regarding representative ecological regimes; rare, endangered and threatened species of flora and

fauna and their habitat; certified plus trees and areas of critical ecological importance.

- 6.3.7 Efforts would be made to increase tree cover in areas outside the recorded forest areas like private land and agricultural fields.
- 6.3.8 Treatment of catchment areas of rivers and areas sensitive to soil erosion shall be done with appropriate forestry and soil moisture conservation measures on watershed basis.
- 6.3.9 Focus shall be made on developing road side plantations, implementing Catchment Area Treatment plans, Wildlife Conservation Plan and other such projects on behalf of the other agencies.
- 6.3.10 Latest research findings and technology shall be regularly identified and put to use in all conservation and restoration efforts.
- 6.3.11 Established silvicultural practices and prescriptions shall be duly incorporated in all schemes and plans.

6.4 Forest Management

Management involves putting all the available natural, human, physical knowledge and financial capital to its optimum use. The following shall be ensured as regards to forest management:

- 6.4.1 Comprehensive Working Plans and Management Plans shall form the basis of working on forest areas and Protected Areas.
- 6.4.2 Areas already treated under different schemes over time and that still have scope of further improvement shall be taken up for further treatment.
- 6.4.3 Identification of forest areas which need to be taken up on priority basis for various reasons shall be done to prepare suitable plans.
- 6.4.4 Resources shall be invested to optimize benefit by working on contiguous areas in a phased manner instead of spreading up the work in scattered areas.
- 6.4.5 Norms for inspection shall be regularly updated and closely

monitored.

- 6.4.6 The field staff and members of Village Forest Protection and Management Committees(VFPMCs) would be trained to elicit their effective and better contribution.
- 6.4.7 Efforts shall be made to explore the possibility of voluntary resettlement forest right holders from inside the good forest blocks to its periphery or to areas outside the blocks in order to prevent fragmentation of forest areas and provide uninterrupted space for growth of forests and wildlife.
- 6.4.8 Efforts shall be made to develop capacities of right holders and village communities that are allowed as per law for better management of forest areas.

6.5 Bio-diversity Conservation and Wildlife Management

Most of the bio-diversity rich areas of the State are in the Protected Areas declared under The Wild Life (Protection) Act 1972. Many bio-diversity rich areas outside the protected areas also are home to many wildlife floral and faunal species including avifauna. Following measure shall be undertaken to ensure their proper conservation and management of such areas:

- 6.5.1 Effort shall be made to increase Protected Areas to 5 percent of State's geographical area through creation and management of corridors, creation of new sanctuaries, national parks, conservation reserves and community reserves.
- 6.5.2 All Protected Areas shall be managed as per the approved Management Plans with special emphasis on habitat improvement, prey-base augmentation, provisioning of permanent water sources, fire control measures and regulated eco-tourism.
- 6.5.3 Conservation and management of endangered species such as Tiger, Great Indian Bustard, Caracal, Spiny tailed lizard, Pangolin, Wolfe, migratory birds etc., shall receive special attention.
- 6.5.4 Historical tiger and sloth bear habitats, which have now been

degraded shall be improved by effective protection and habitat improvement.

- 6.5.5 There shall be special efforts in Desert National Park and other Thar habitats to increase the population of desert, arid and semi-arid fauna by appropriate habitat management interventions.
- 6.5.6 Relocation of villages located inside Protected Areas, Tiger Reserves and Critical Habitats shall be accorded utmost priority.
- 6.5.7 Effort shall be made to explore the possibility of voluntary resettlement of forest right holders from inside the Protected areas to its periphery or to areas outside the Protected Areas in order to prevent fragmentation of Protected Areas and to provide uninterrupted space for wildlife.
- 6.5.8 Development of corridors between Protected Areas and wildlife rich areas shall be done through suitable plans.
- 6.5.9 Comprehensive plans shall be made to harvest rainwater at appropriate locations so as to be used during the period of water scarcity.
- 6.5.10 Bio-diversity rich areas and their components shall be suitably linked to generate livelihood opportunities for people living in and around such area through equitable sharing of benefits.
- 6.5.11 Devans/Orans/Sacred Groves shall be duly identified and proper management plans prepared in consultation with the local communities and their traditions and knowledge.
- 6.5.12 Human wildlife conflict is an issue of increasing concern. Strategies and frameworks shall be developed to draw and implement suitable mitigation plan.
- 6.5.13 Specialized veterinary care unit shall be established to handle rescue operation of wild animals including big cats.
- 6.5.14 Cadre of well-trained veterinarians shall be developed within the Forest Department by imparting specialized training for treating wild animals.

6.6 Grassland Management

The livestock population of the State is immensely dependent on grasslands for their fodder and forage requirements. Grasslands also serve important ecological functions such as binding the soil, preventing further decertification, improving the soil moisture regime and carbon sequestration, ground water recharge etc. Species like the Great Indian Bustard (GIB), florican, black buck, chinkara etc. are dependent on grasslands for their survival.

Conservation of grasslands is necessary to maintain bio-diversity and to provide nutritious forage to livestock and wildlife thereby not only maintaining the health of the wildlife habitats but also playing a major role in the rural economy. Increasing human and livestock population have caused a serious stress on the grassland ecosystems of the State. Long term conservation strategies and species level monitoring and management is needed to make these grasslands productive and useful for the economy, ecology and society.

Following measure would be adopted to conserve and improve the health of grasslands:

- 6.6.1 Suitable plan shall be developed and implemented to eradicate such invasive species like *Prosopis juliflora* and *Lantana camara* from such grasslands followed by replanting and sowing with suitable grass species to restore in natural form.
- 6.6.2 Effective material as well as social fencing methods would be adopted to prevent over grazing in grasslands existing beyond the forests areas to develop them as managed grasslands.
- 6.6.3 Suitable management systems based on the carrying capacity of grassland shall be adopted with the active participation of people and stakeholders for sustainable use and management.
- 6.6.4 Nursery techniques for selecting and raising the local species of grasses and species found in dryland vegetation shall be standardized and implemented.

6.6.5 Traditional pasture lands shall be developed in collaboration with and active involvement of the Panchayat Raj Institutions.

6.7 Combating Desertification and Land Degradation

Wind erosion, water erosion, water logging etc. are the major causes of desertification and land degradation in the State. This impacts agriculture, land productivity and livelihood opportunities thereby threatening the food and water security. Following activities shall be undertaken in this regard :-

6.7.1 Sand dune stabilization of actively shifting sand dunes shall be promoted.

6.7.2 Wind-Breaks and Shelter-Belt Plantations shall be promoted on public as well as private lands to arrest desertification.

6.7.3 Silvi-pastoral plantation with indigenous species shall be encouraged for arresting the advancement of desertification process.

6.7.4 Sequential restoration interventions shall be implemented with introduction of indigenous vegetation to address the problem of reactivating sand dunes.

6.7.5 Ravines, saline area and water logged areas shall be reclaimed and developed by planting locally appropriate species, using the appropriate soil working techniques.

6.8 Conservation and Management of Forest Produce

Forests, village commons and agro-ecosystems are a store house of a variety of forest produce which not only augment the food security of the people but also act as a source of livelihood. However, over time due to various anthropogenic pressures and unsustainable harvesting practices, the condition of production systems has degraded. The following steps shall be taken for the betterment of the areas and people:

6.8.1 Action shall be initiated to augment the production base of important NTFPs such as tree-borne oil seeds, gums, oleo-resins, wild flowers, wild fruits, tendu leaves and medicinal and aromatic Plants.

- 6.8.2 Emphasis shall be given on value addition, processing and developing market links for important forest produce.
- 6.8.3 Better coordination with various departments and agencies shall be established for promotion of growth, and trade in Bamboos, NTFPs and medicinal plants.
- 6.8.4 Priorities shall be given to the Rare, Endangered and Threatened (RET) medicinal plants for developing protocols on propagation and cultivation packages for farmers.
- 6.8.5 Harvesting and transit rules shall be revised to encourage protection, conservation and promotion of useful species in agricultural fields and private holdings.
- 6.8.6 Domestication of wild tree species shall be encouraged and promoted through incorporation in agro forestry practices.

6.9 Management of Invasive Species

Invasive alien species are one of the most significant drivers of adverse ecological transformation. In Rajasthan, the prominent invasive species include *Prosopis juliflora*, *Lantana camara* etc. These species have severely invaded into natural ecosystem in many places including Tiger Reserves and pose a serious threat to the native bio-diversity and ecology.

These species, however, also serve as a source of fuel wood and fodder supplements thereby providing a buffer to the good forest areas. Controlling further spread, as well as eradication from their present spread is needed. Following steps shall be undertaken to properly control and manage the invasive alien species:

- 6.9.1 Suitable short-term and long-term management plan for control and eradication of invasive species shall be drawn and implemented.
- 6.9.2 Effective protection mechanism shall be put in place to control reintroduction of such alien species once removed with the active support and help of local communities.
- 6.9.3 To the extent possible, productively utilizing the extracted or harvested produce for the benefit of the society shall be undertaken.

- 6.9.4 Suitable plans shall also be developed to control and eradicate faunal invasive species.

6.10 Community Forestry and Joint Forest Management

Participatory approach to forests and grasslands ensures transparency, accountability, responsiveness and inclusiveness. Following step shall be taken to further improve and strengthen the process:

- 6.10.1 The existing 3-tier Joint Forest Management consisting of Village Forest Protection and Management Committees (VFPMCs) and the Eco-Development Committees (EDCs) at the village level, the Forest Development Agency (FDA) at the division level and State Forest Development Agency (SFDA) at the State level shall be suitably strengthened.
- 6.10.2 The Joint Forest Management resolutions related to Village Forest Protection and Management Committees and the Eco-Development Committees shall be suitably revised to incorporate the changing need of the hour.
- 6.10.3 Suitable mechanism to provide incentives to people and communities for their active role and support in protection, development, restoration and conservation of forests, wildlife and biodiversity shall be put in place.
- 6.10.4 Special efforts to include and empower women in forest protection, development, conservation and management shall be made.
- 6.10.5 Forestry on private and revenue lands shall be encouraged along with scientific management of existing vegetation.
- 6.10.6 Adequate framework to secure effective private participation in forest protection, development, conservation and management shall be put in place.
- 6.10.7 Special attention shall be paid to create awareness and orientation of people towards legal provisions related to forests, wildlife and biodiversity to ensure better understanding and improved participation.

6.11 Enhancement of Productivity:

Despite growing anthropogenic pressure on the forests, wildlife and biodiversity, there is enormous potential to enhance the productivity of areas through incorporation of improved technical, technological and management practices. Following action shall be taken in this regard:

6.11.1 For enhancement of timber and NTFP productivity:

6.11.1.1. Tree improvement program for important indigenous tree species shall be undertaken and Candidate Plus Trees (CPT) for each species shall be identified for collection of seeds and vegetative propagules for mass multiplication. The multiplied plants from the CPT/Seed Orchards shall be used in reforestation, afforestation and restoration programmes.

6.11.1.2. Quality planting material (QPM) shall be used in all types of planting programs. Bio-fertilizers and vermicompost shall be used instead of chemical fertilizers.

6.11.1.3. Better and improved technology and practices shall be encouraged for raising of sapling in the nursery and planting in the field.

6.11.1.4. In order to augment the productivity of forests on private and revenue areas, modern techniques such as tissue-culture, better seeds and plants shall be used.

6.11.2 For improvement of productivity of ecosystems in terms of their structure, functions, services of natural forests:

6.11.2.1 Existing planting/restoration models shall be reviewed and updated based on available evidence.

6.11.2.2 Standardization of propagation methods shall be done for important indigenous species like *Anogeissus pendula*, *Prosopis cineraria*, *Commiphora aughtii* etc.

6.11.2.3 All restoration programs shall aim to develop natural forest with multi-storeyed vegetation and indigenous

fauna. Suitable habitats shall be developed to support the local fauna.

6.11.3 Collaboration with research institutions like Arid Forest Research Institute, Jodhpur and agriculture universities shall be strengthened and enhanced for production of quality planting stock/clones for timber, fodder, bamboo, fuelwood and medicinal plant species.

6.12 Silviculture, Research and Extension

The following shall be done to strengthen research and extension activities:

6.12.1 Forestry professionals shall be encouraged to engage in research for protection, restoration and management of forests, agro-forestry and trees outside forests and treatment of degraded ecosystems.

6.12.2 Silviculture wing of the Department shall focus on:

6.12.2.1. Suggesting technical guidelines for various management and conservation activities.

6.12.2.2. Reviewing the existing practices and suggest appropriate changes.

6.12.2.3. Provide guidance to increase the productivity of the forests

6.12.2.4. Identification of Plus Trees for important species and collection of propagation materials, creation of Seedling Seed Orchards (SSO) and Clonal Seed Orchards (CSO) and providing seed material to field offices for quality planting stock production and direct sowing.

6.12.2.5. Research to develop methods for rehabilitating problematic sites, taking up improvement of sites infested with invasive alien species, and for regeneration of local multipurpose species.

6.12.2.6. Development of site-specific and evidence-based

restoration/planting techniques for ravines, wastelands, steep hill slopes and other degraded areas.

- 6.12.2.7. Study of wetland habitats and migratory birds and suggesting suitable interventions.
- 6.12.2.8. Study on ecosystem services including carbon sequestration potential of different types of forests for tangible and intangible benefits to the society and its incorporation into field management practices.
- 6.12.2.9. Detailed survey, documentation and assessment of conservation status of NTFPs including medicinal plants with the involvement of universities and research organizations.
- 6.12.2.10. Collaborate with universities and research institutions for utilizing the expertise and knowledge about forest production, conservation, restoration and management.
- 6.12.2.11. Acting as a repository of knowledge on tropical dry forests and tropical arid forests to facilitate its application on the ground.

6.13 Infusion of New Technology and Resources in Natural Resource Management

Following steps shall be taken in this regard:

- 6.13.1 In order to make forest management more effective, the present system would be changed and it would be developed into a proper Enterprise Solution with capacity to interact with other databases. For example, to interact with Transport Department on the registered vehicles, Police on registered fire arms and offence related data etc. to enable better decision making.
- 6.13.2 Better communication tools, multipurpose handheld devices and accessories and data connection facilities shall be provided to improve performance.
- 6.13.3 Field offices would be adequately equipped to enable them to use digital technology and platforms for regular forest management.

- 6.13.4 All the relevant information and data would be digitized for better planning and effective management.
- 6.13.5 Mobile-based application for plant identification, seed treatment, nursery techniques, preparation of estimates and availability of planting stock for public distribution shall be developed.
- 6.13.6 Farmer-friendly platforms based on mobile applications for planting, maintenance, estimation of growing stock, harvest, and market information shall be developed.
- 6.13.7 Appropriate digital databases and capacities shall be developed to interpret data acquired through remote sensing/UAV etc.
- 6.13.8 Commensurate, capabilities in terms of human resources shall be created within the Forest Department at all levels.
- 6.13.9 Spatial imageries shall be intensively used to assess and monitor forest type, crown density, growing stock and encroachments etc.

6.14 Human Resources Development, Administration and Staff Welfare

Following steps shall be taken with regard to improvement of human capital and human resource development:

6.14.1 Training:

- 6.14.1.1 A database of training institutes, subject specialists and training material would be made and utilized to enhance the quality of the training.
- 6.14.1.2 Periodic mandatory in-service training and refresher courses for all levels of forest personnel shall be organized.
- 6.14.1.3 Regular orientation and capacity building programs, courses and workshops shall also be organized for officers and personnel of other departments and agencies that have crucial bearing on forest management.
- 6.14.1.4 Short-term and long-term thematic and general training programs shall be organized for forestry

personnel in collaboration with institutes of national and international repute.

- 6.14.1.5 Exposure visits of forestry personnel, stakeholder communities, members of civil society organizations, researchers, scientists and experts shall be organized to improve understanding of issues, challenges and developments.
- 6.14.1.6 Creation of a database of frontline staff and subordinate forest services at state level for providing equal opportunities in training and career development.
- 6.14.1.7 Online Training System shall be used appropriately to impart training to forest officials, members of forest committees and various stakeholders of forestry.
- 6.14.1.8 Forest officials at various levels shall be provided specific assistance and training to better utilize the information technology and develop positive attitude for enhanced use of use of various applications.
- 6.14.1.9 The curriculum for the frontline staff shall be revised to meet the current challenges of forest management. Areas of training may include community mobilization, livelihoods improvement, knowledge management, strategies for linking knowledge to action, ecotourism, relocation of villagers from the protected areas, forest fire management, ecological restoration, mob control and management, human-animal conflicts, usage of modern tools and technology and use of weapons and firearms, among other subjects.

6.14.2 Administration:

- 6.14.2.1 Rationalization of deployment and posts of frontline staff and subordinate forest services to suit the present day challenges shall be undertaken keeping in mind the management challenges of contemporary times. Efforts shall be made to entrusting an area under a forest guard

to be around 5-7 km². The sanctioned strength for each division shall accordingly be revised. New posts shall be created as necessary.

- 6.14.2.2 Suitable provisions shall be made to cater to additional responsibilities such as taking up activities outside recorded forest areas, works related to The Biological Diversity Act 2002, Eco Sensitive Zone, wildlife corridor management, wetland conservation.
- 6.14.2.3 Duties and responsibilities defined in the Forest Manual shall be periodically revised to suit the changing scenario of forest management.
- 6.14.2.4 Suitable arrangements and efforts shall be made for regular recruitment and timely promotions in all the cadres and ranks.
- 6.14.2.5 Forest officials, doing outstanding and courageous work in the field for forests and wildlife protection and development, will be encouraged by providing out of turn promotions. Appropriate modifications in the service rules shall be made in this regard.
- 6.14.2.6 Adequate up gradation and improvement of Rajasthan Forestry and Wildlife Training Institute, (Jaipur), Forest Training Schools (Alwar and Jodhpur) shall be undertaken along with creation of sub-training centers at places like Kota, Udaipur and Tal Chhappar to meet the increasing demand for training.

6.14.3 Staff Welfare:

- 6.14.3.1 Special rules shall be framed to provide adequate *ex-gratia* amount and other supporting facilities to the next of kin, in the event of death / disability of forest staff/official while on duty.
- 6.14.3.2 Efforts shall be made to provide suitable incentives to staff working in difficult areas.
- 6.14.3.3 Mechanism for regular dialogue and interaction

between field personnel and officers shall be streamlined and strengthened to enable proper communication.

6.15 Miscellaneous Measures

- 6.15.1 Ecotourism in areas rich within forests, wildlife and PAs shall be governed by the Rajasthan State Ecotourism Policy.
- 6.15.2 Efforts shall be made to protect and conserve such unique landscapes outside the forests and Protected Areas by coordinating with relevant agencies.
- 6.15.3 For better management of wildlife and wild biodiversity outside forests like migratory and local avifauna and their habitat, efforts shall be made to impress upon appropriate agencies to adopt designs which accommodate the concern of resident and migratory avian fauna.
- 6.15.4 Domestication of useful wild tree species shall be promoted through incorporation in agro-forestry practices.
- 6.15.5 Women play a crucial role in protection, conservation and management of ecological systems. Special attention shall be paid to ensure attitudinal capacity building among forest personnel in this regard.

6.16 Financial Support Mechanism

Investments and financial support are required from all possible sources to implement the prescription of this policy in letter and spirit. The following steps shall be taken in this regard:

- 6.16.1 Efforts shall be made provide adequate budgetary support through various Central/State schemes.
- 6.16.2 Suitable provisions and mechanism shall be made to create new windows for resource generation.
- 6.16.3 Commercial operations through the Forest Development Corporation shall be encouraged.
- 6.16.4 Efforts shall be made to seek resources from external funding

agencies, various financial institutions, funds available under CSR, Environmental Compensation etc.

- 6.16.5 Efforts shall be made to dovetail forestry works with other works and schemes including Mahatma Gandhi National Rural Employment Guarantee Scheme, Tribal Development Schemes, Integrated Watershed Development Program, National Medicinal Plants Board, National Bamboo Mission etc.
- 6.16.6 Efforts shall be made to enhance flow of private and corporate investment sponsorships etc.
- 6.16.7 A mechanism shall be created to plough back revenue generated from Protected Areas and Ecotourism activities for strengthening and diversifying management and development of protected areas/ ecotourism activities.
- 6.16.8 In order to encourage funding from private individuals / organizations for development of forests, 'Green Rajasthan Fund' shall be established. Efforts shall be made to get such donations exempt from income tax under the Income Tax Act.
- 6.16.9 Global and national source of funds like National Adaptation Fund for Climate Change (NAFCC), Global Environment Fund (GEF), Clean Development Mechanism (CDM), Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism shall be accessed for financing various activities.

6.17 Monitoring and Evaluation

Forest related activities are by nature long term and have a long gestation period. Regular monitoring and timely evaluation of activities, therefore, are imperative to ensure success of works and activities undertaken. Accordingly, in order to upgrade and improve the monitoring and evaluation system, the following shall be undertaken:

- 6.17.1 Use of modern state of art equipment and technology such as mobile based apps, drones, remote sensing imageries and applications shall be enhanced.
- 6.17.2 Criteria and indicator framework of monitoring and evaluation

shall also be suitably revised to accommodate new challenges and need of the hour.

- 6.17.3 The performance and success of all afforestation, reforestation, restoration and conservation efforts shall be measured and evaluated in terms of the ecological improvement in ecosystem structure, ecosystem functions and biological diversity in the area and its ability to provide services for sustained ecological, economic and social well-being. Suitable framework of evaluation of performance with defined set of criteria and indicators shall be devised and implemented.
- 6.17.4 External third party monitoring and evaluation shall be encouraged to enhance transparency and accountability.
- 6.17.5 In complex projects, services of experts shall be solicited for the purpose of quality control, monitoring and evaluation.
- 6.17.6 A comprehensive multi-level monitoring and evaluation mechanism at filed level, project or scheme level, policy level shall be put in place for works in forests and outside forests.
- 6.17.7 Participatory community-based monitoring and evaluation framework shall be developed and put in place to ensure transparency, inclusiveness and accountability at the local level.
- 6.17.8 A rigorous multilevel framework shall be developed to ensure due compliance of the results of such monitoring and evaluation efforts and the suggestions for improvement received therein.

7. Review of Implementation of the Policy

Implementation of the provisions of the policy is possible through an equipped, enabled and motivated forestry organization. This requires proper administrative and financial empowerment, provisioning of enabling conditions and appropriate infrastructure.

The following steps shall be taken to ensure timely implementation of the prescriptions of this policy:

- 7.1. Efforts will be made to build synergies among various Acts, Rules,

Regulations and Legislations related to forests and wildlife to achieve objectives of the Policy. Wherever necessary, appropriate legislations may be enacted or modified.

- 7.2. Achievement of the policy objectives depend considerably on availability of financial resources. Efforts therefore need to be made for timely allocation of adequate funds for implementation of approved Working Plans, Management Plans and interventions envisaged in the policy.
- 7.3. A Forest Policy implementation and Review Committee shall be constituted under the Chairmanship of ACS/Principal Secretary, Forests, Environment and Climate Change with APCCF (Monitoring and Evaluation) as Member Secretary to review the progress in achieving the policy objectives.
- 7.4. State Forest Advisory Council (SFAC) established at the level of the Chief Secretary with Secretaries in-charge of Finance, Tribal Development, Urban Development, Local Self Government, Mining, Tourism, Agriculture, Rural Development, Panchayati Raj, Public Works Department and Water Resources Department as members to render guidance and effective coordination.
- 7.5. Policy prescription shall be categorized into short-term, medium-term and long-term and suitable indicators shall be developed to measure outcomes.

Disclaimer

*In the event of a conflict due to linguistic nuances and translation, the English version of the policy document shall be held as correct.



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