



CONSERVATION MANAGEMENT PLAN

Jigme Singye Wangchuck National Park

January 2014 - December 2018





ROYAL GOVERNMENT ENDORSEMENT AND APPROVAL

Jigme Singye Wangchuck National Park
Conservation Management Plan (July 2013-June 2017)



*"In accordance with and as per the provision of the Forests and Nature Conservation Act of
Bhutan, 1995"*

Submitted for Approval:

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(Kelzang Wangchuk)

Chief Forestry Officer

Jigme Singye Wangchuck National Park.

Recommended for approval:

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Director General,
Department of Forests & Park Services

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Hon'ble Secretary,
Ministry of Agriculture & Forests

Approved By:

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His Excellency the Minister,
Ministry of Agriculture & Forests

7. MANAGEMENT OBJECTIVES AND STRATEGIC ACTIONS

The following Management Objectives were developed to address the threats to the biodiversity targets, and to achieve the desired management goals of the National Park.

Management Objective 1. To strengthen the institutional structure of the park to manage, monitor, and protect the national park from threats

Strategic Actions:

- Provide training to park staff on the following wildlife survey and monitoring techniques: SMART patrolling, tiger and prey occupancy surveys, plant and animal identification and taxonomy for monitoring, freshwater fish and insect identification and taxonomy for monitoring using aquatic bio-indicators, and data analysis.
- Provide training in PRA/RRA tools and techniques and data analysis for socio-economic surveys and monitoring.
- Provide training to deal with human-wildlife conflict, conflict verification and resolution.
- Infrastructure development for the effective functioning of the national park.

Management Objective 2. To identify and mitigate immediate threats to focal species by monitoring their population to maintain it at 2013 baseline

Strategic Actions:

- Conduct tiger occupancy surveys in JSWNP using sign surveys and camera trapping techniques. Surveys will be conducted every two years.
- Study on predator-prey dynamics, especially for tigers and wild dogs and their primary prey species (sambar, wild pig, barking deer, and gaur).
- Monitor golden langur populations. Monitoring program will be integrated into SMART patrolling.
- Monitor distribution and nesting of Rufous-necked and Wreathed hornbills. Monitoring program will be integrated into SMART patrolling.
- Monitor red panda populations. Monitoring program will be integrated into SMART patrolling.
- Conserve and recover the White-bellied heron population by: monitoring nests to prevent predation and increase reproductive success, monitoring for forest fires and establishing early warning system to report forest fires in the area; providing artificial feeding sites until the hydro power project is completed; including suitable feeding habitat into the hydropower

project design; and setting up signage in key areas to avoid disturbance to WBH.

- Survey of streams and rivers to develop a database of aquatic biodiversity for monitoring of endangered fishes (Mahseer) and use of bio-indicators for stream/river water quality and flows.
- Survey of butterflies to develop a database on butterfly diversity and identify indicator species for monitoring habitat and climate change.
- Study orchid diversity within the national park.

Management Objective 3. To control and mitigate habitat conversion, degradation, and fragmentation, by reducing the incidence of forest fire by 50% in next 5 years, and by adopting controlled grazing systems

Strategic Actions:

- Develop infrastructure development guidelines in JSWNP and buffer zone to minimize impacts on natural ecosystems/habitats and populations of focal species.
- Mitigate impacts from infrastructure development projects in the park and buffer zone, and where the project footprint overlaps with the park by ensuring project EIA proposition/recommendations are met.
- Develop park staff capacity to assess, monitor, and ensure that projects comply with park regulations, infrastructure design, and EIA recommendations.
- Coordinate with development sectors in the government and project contractors and engineers to ensure that park habitat and management zones, goals and objectives are met and respected during development planning and design (to meet 'Green Infrastructure designs, locations to avoid 'no go areas', impact mitigation etc). This will require cross-sectoral coordination.
- Check recultivation of abandoned Tseri and cash crop plantation within the core zone areas of the national park.
- Build capacity for fire-fighting.
- Form local firefighting teams of community volunteers and organize firefighting training for volunteers.
- Procure firefighting equipments.
- Establish fire reporting protocol in fire prone areas.
- Conduct awareness programs, especially among the farmers and herders about the consequences of forest fires.
- Establish periodic habitat monitoring (3-year satellite imagery for macro-scale, and annual ground plot monitoring, especially in restoration areas).

- Reforestation or Plantation establishment at degraded watersheds.

Management Objective 4. To build a scientific database on biodiversity and social aspects to enable informed management decisions and updating the management plans

Strategic Actions:

- Create data repository within the park for easy accessibility and data sharing on biodiversity.
- Regularly update the data on biodiversity as and when information are available after verification.
- Maintain a database for socio-economic status of the park residents and update as and when new surveys are done.
- Plan for updating the Conservation Management Plan regularly by conducting relevant surveys.

Management Objective 5. To reduce poaching and illegal activities in the park by 90% by 2018

Strategic Actions:

- Create public awareness through anti-poaching campaigns. Develop and install signboards where necessary.
- Establish forest check points at entry and exit points in the national park, especially for newly constructed farmroads and bridges.
- Conduct a survey of poaching levels and areas vulnerable to poaching to establish a baseline.
- Map poaching/illegal hotspots and trails and develop database for monitoring and SMART patrolling.
- Reinforce patrolling and monitoring, especially in identified hotspots.
- Establish intelligence network of local informants in the Nabji range as a pilot, and replicate in other ranges (with necessary adaptations after assessing the pilot project).

Management Objective 6. To protect religious, cultural and historical sites of natural, regional or local importance

Strategic Actions:

- Maintenance of existing structures of cultural heritage and survey other heritage sites.
- Documentation of cultural heritages and its history for information.

- Promote indigenous tradition and culture through exchange programmes among the park residents.
- Improve and maintain trails to the sites and placing environmental information along the trails and sites.

Management Objective 7. To prevent retaliatory killing of wildlife species in the park by 60% within 5 years and adopt controlled grazing systems

Strategic Actions:

- With livestock development extension services, provide access to improved cattle breeds and encourage stall feeding to reduce vulnerability of free ranging cattle to wildlife depredation. Improve existing cattle housing sheds.
- With agriculture and livestock development extension services, identify pastures for livestock grazing in buffer zones and in multiple use areas.
- Introduce livestock insurance scheme to compensate for livestock killed by wildlife in designated pastures, and institutionalize verification teams from the communities to verify depredation. Replicate the model from Korphu geog in other geogs. Stop compensation for free ranging cattle lost to wildlife depredation inside the park.
- Reduce grazing pressure by livestock in the national park.
- Study the grazing impacts to: assess the severity of impacts; identify grazing hotspots; study cattle migration trends; engage local communities to adopt better grazing practices; promote stall feeding and improved cattle breeds; encourage downsizing of herds, and adopt improved breeds of livestock.

Management Objective 8. To Make Collection of NTFP and Fishing Sustainable

Management Objective 8 (a). To ensure that 20% of families in the buffer zone and multiple user zone covers the annual income from the NTFP harvesting and other alternative such as eco-tourism within five years

Strategic Actions:

- Initiate conservation-based enterprises to offset pressure on the park and to compensate for opportunity costs due to constraints of park management (e.g., grazing restrictions). Some of these can include mushroom cultivation and allied species which have a huge local market, and community-based ecotourism. Seven nature-based and four culture-based trekking routes to initiate community-based tourism have already been identified and detailed in the previous management plan
- Maintenance of existing structures of cultural heritage and survey other

heritage sites.

- Documentation of cultural heritages and its history for information.
- Promote indigenous tradition and culture through exchange programmes among the park residents.
- Improve and maintain trails to the sites and placing environmental information along the trails and sites.

Management Objective 8 (b). Within five years, there are no incidences of collecting NTFPS outside the standard and size limits defined by the park in consultation with the community

Strategic Actions:

- Establish forest management systems (such as community and private forestry) to meet the forest product requirements in multiple use zones. These areas will be co-managed with the local community forest management groups, with the park providing the legal, institutional support and monitoring, while the communities take responsibilities for day-to-day management.
- Strengthen the Community Based Natural Resource Management Plans (CBNRMP) for cane and bamboo to ensure sustainability of these resources and link them to forest management. The plans would consist of negotiated agreements between the local communities, the park, and the Dzongkhag. Local user groups would implement the plans with technical support from the national park and Dzongkhag.
- Form community groups in Athang for cane management, monitoring, and to regulate harvesting. The management groups will also conduct resource mapping and develop a management plan. Training will be supported by the park. Lessons can be learnt from the Jangbi cane and bamboo nursery.
- Promote firewood saving technology.
- Regulate orchid collection from park, especially from the White-bellied heron nesting areas. Publish brochures and posters to raise awareness of the status of orchids and its conservation needs.

Management Objective 8 (c). To stop the incidences of fishing in violation of the size limits specified by the regulations of the park in consultation with the community within five years

Strategic Actions:

- Park management will conduct surveys of people engaged in fishing to collect information on the catch (species, numbers, etc.) to assess the fish populations.

- Review and monitor the two rivers in the national park which have been handed over to the communities as community-based fishing management, the first of its kind in Bhutan.

Management Objective 9: To build resilience of the vulnerable communities of the 6000+ park residents and the ecosystems to climate change induced threats

Strategic Actions:

- Use the climate projections of habitat vulnerability to identify and include climate resilient habitat (climate refugia) into core zones, especially for red panda, musk deer, and other endangered and habitat specialist species in the park that are sensitive to climate change related impacts.
- Maintain connectivity with Thrumsing La, Jigme Dorji, and Wangchuck Centennial NPs in the north through habitat corridors for wide ranging species and those requiring access to climate refugia.
- Promote better irrigation technology for water harvesting and create small reservoirs in and around villages for sustained and controlled water release to maintain agricultural productivity and mitigate erosion and landslides from excessive runoff.
- Monitor for new diseases among livestock and wildlife, and take preemptive actions (vaccines, quarantine etc.) to prevent outbreaks.
- Raise awareness among the local community groups on the cause of climate change and its impacts, and build capacity of local leaders to monitor climate change indicators and plan for appropriate adaptation strategies.
- Diversify livelihood activities as a strategy to build resilience, including introduction of climate-resistant crops, better livestock and livestock management, and employment opportunities.
- Establish a hydrological and meteorological monitoring system.
- Create community-level capacity in drinking water sources allocation and quality, and restoration and management of water sources.

8. MONITORING AND EVALUATION

8.1. Introduction

Monitoring and Evaluation is an essential tool to assess the progress of the national park and to keep track of the progress and achievement for timely adjustments. It is only through regular monitoring and evaluation during the management and project cycle that the park management will be able to provide data and information about the activity to any outsiders and seek further professional and technical advices for rectifying the short comings so as to effectively implement the plan.

However monitoring and evaluation is not as easy as we describe in the management plan. This does not mean that monitoring and evaluation can be neglected. For the donor based projects, the quality of monitoring reports will have an effect on the subsequent funding and other similar projects in the future. This monitoring, however does not include impact monitoring as it is not so popular owing to the fact that impacts are apparent only in longer duration after the project is completed.

8.2. Objectives of Monitoring and Evaluation

The following objectives are considered under this chapter for monitoring of JSWNP activities.

- Performance monitoring,
- Biodiversity monitoring,
- Background biodiversity monitoring,
- Monitoring of potential threats,
- Monitoring of ICDP,

Monitoring and Evaluation will be carried out as per the following schedule for various monitoring objectives;

Strategic Actions	Particulars	Place	Plan Years				
			I	II	III	IV	V
8.1	Performance monitoring · Park Assessment	All Park Staff					