



Global Tiger Initiative

National Consultations—the Road to the Tiger Summit

National Tiger Recovery Program Summary

Bhutan

May, 2010

Template to describe a Summary of National Tiger Recovery Program (NTRP)
(NTRP will feed into the Global Tiger Recovery Program—GTRP)

Country Name:	BHUTAN
Long Term Strategic Goals. <p>Bhutan is unique in having tigers at altitudes as 4,100 m in the north and central region, and represents the only tiger ecotype adapted to live in high altitude habitats. Tiger conservation in Bhutan has to be harmonized with its sustainable development goals, based on its principles of Gross National Happiness, and the commitment to maintain 60% forest cover. Because poaching of tigers and prey and retaliatory killing is low relative to other regions of the tiger range, it is unlikely that tiger populations are significantly depressed (although more rigorous surveys are necessary to confirm this). Therefore, it is unlikely that tigers can be doubled in Bhutan’s tiger landscape, although there could be potential for a marginal increase before stabilization. However, the goal can be revisited and revised following nation-wide surveys to establish a reliable baseline estimate.</p> <p>Long Term Strategic Goal: <i>By 2022, demographically stable tiger meta-population in Bhutan thrives and co-exists harmoniously with people through habitat conservation and compatible development activities and livelihoods.</i></p>	
Baseline Status. <p>The current population estimate of 67-81 adult tigers (~ 115-150 total) is based on five nationwide surveys and analysis of sign data (Bhutan Tiger Action Plan 2005). The densities of tigers are estimated at 1/50 km² in the southern subtropical forests, and 1/185 km² in the central Himalayan temperate broadleaf forests (McDougal & Tshering 1998 in Bhutan TAP). The naturally low prey densities expected in temperate forests is consistent with lower tiger densities; however, these data require verification through rigorous, scientifically robust surveys. A nation-wide survey using camera-trapping and occupancy or distance surveys is planned.</p> <p>The current system of corridors/linkages excludes important habitats with rich biodiversity, including good tiger habitat. Therefore, a corridor review is being undertaken, and based on its results, the corridor system could be realigned to include additional tiger habitat.</p> <p>Transboundary collaboration will be maintained and strengthened to maintain ecological and administrative links, especially with India.</p> <p>Bhutan’s development plans can fragment existing habitat areas. Therefore, proactive assessment of infrastructure and other economic development initiatives should be reviewed for impact to important tiger habitat. Appropriate capacity and policy should be developed to assess for impacts, and discuss and develop mitigations with line agencies and ministries.</p> <p>People living in Bhutan’s protected areas and corridors should be engaged in conservation, especially since MoFNPS staff is inadequate to effectively manage the large protected areas system.</p>	

Priority Actions

Habitat and species conservation

Bhutan has pledged to maintain over 60% forest cover. About 51% of the country is now included in a system of protected areas and biological corridors. But surveys over the past decade indicate that a significant proportion of tigers occur outside the protected areas and biological corridors. Thus, a revision of the corridor system to include important tiger habitat outside the current park-corridor system is necessary. Parks should be zoned to identify core tiger habitats, and corridors should be clearly designated and identified to enforce rules and regulations that govern land-use and land-management. Because the protected areas are relatively large (four important parks are >1000 sq km) and conservation cadre is limited, communities should be engaged to participate in habitat conservation and protection. A reliable baseline of the status and distribution of tigers and a regular monitoring system is necessary to track progress towards the goal. Trans-boundary collaboration with India and China, and regional links are essential to curb the illegal trade of tiger parts and derivatives.

Integrating tiger conservation and rural livelihoods

People live in Bhutan's parks and corridors, and harvest forest resources for everyday use and livelihoods. Living in tiger habitats has associated opportunity costs (livestock depredations; limited or constrained access to forests and forest resources). Thus, compensation in the form of alternative income generation, insurance for depredation, conservation payments, etc. to elicit support for biodiversity conservation and community stewardship is a necessary action.

Building institutional capacity

The current staffing levels—numbers and skill levels—are inadequate to carry out scientific conservation of key and species of special concern. Linkages among the different units of the Department of Forests and Park Services (DoFPS) are inadequate or non-existent, and no single unit has a clear mandate to coordinate the national park and wildlife protection services in the country. These shortcomings have to be rectified for more effective, efficient conservation and protection of tigers and tiger habitats.

Sustainable Financing

Tiger conservation will be greatly expedited if sustainable funds and financing is available. Therefore, a sustainable financing mechanism will be developed, incorporating innovative fund sources to allow for planning, implementing, and achieving ambitious and long-term conservation goals.

Program Indicators (interim)

Tigers: relative tiger abundance; ratio of adult to cubs; ratio of male to female tigers; tigers poached; tigers killed in surrounding villages.

Prey: absolute prey abundance; number of prey poached.

Habitat: habitat monitoring; condition, impact of infrastructure and mitigations, livestock grazing, tiger presence, corridor use by tigers

Government commitment and will: development plans that avoid tiger habitat, budget and staff support, realignment of corridors to include additional tiger habitat

Engagement of local communities: attitudes, community conservation groups, habitat condition and tiger presence in community managed forests.

Program Indicators (final)

Tigers: relative tiger abundance; ratio of adult to cubs; ratio of male to female tigers

Habitat: habitat monitoring (condition and presence of un-fragmented habitat from avoided infrastructure or 'green infrastructure', tiger presence, corridor use by tigers)

Government commitment and will: tiger conservation priorities included in Five-Year Plan, budget and staff support

Engagement of local communities: attitudes, habitat condition and tiger presence in community managed forests.

Template to describe a NTRP Component linked to the Priority Actions

1. Mapping of Actions against Goals

Long Term Strategic Goal: By 2022, demographically stable tiger meta-population in Bhutan thrives and co-exists harmoniously with people through habitat conservation and compatible development activities and livelihoods.

Priority Actions:

- A baseline of the current tiger and prey populations (estimate and distribution) set by scientifically robust techniques and subsequently, a monitoring program is required to track the status of the tiger and prey populations and progress towards the overall goal.
- The protected areas system should be linked by effective and functional corridors to conserve a meta-population of tigers in Bhutan. But since the current corridors do not capture important tiger habitats and other areas of biological significance, a revision of the corridor system is required. The protected areas should be zoned to facilitate appropriate land-use and management regulations. Land management/use regulations should be prepared for the PAs and corridors to proactively avert impact and threats to critical tiger habitats from anthropogenic activities.
- Local communities have to be engaged in habitat management and community stewardship through appropriate strategies (e.g., community forestry, alternative income generation, improved livelihood opportunities based on or linked to sustainable forest use). Support for forest conservation can be generated through awareness programs on the importance of biodiversity, and intact forests and ecological services to lives and livelihoods.
- Reduce killing, trade, and conflicts with tigers through: staff recruitment and training; engaging and building community support; and transboundary and regional collaboration to curb trade and trafficking of wildlife.
- Capacity within the DoFNPS has to be built for effective and efficient conservation and protection in the field, and to engage and coordinate with government line agencies and ministries, especially to mitigate the impacts of proposed/planned development that will impact on critical tiger habitat.
- A sustainable financing plan and strategy has to be prepared to ensure continued financial support for tiger conservation.

2. Description of Program Component.

Bhutan's tiger recovery and conservation program has four priority components: 1) habitat and species conservation; 2) integrating tiger conservation and rural livelihoods; 3) institutional capacity building; and 4) sustainable financing mechanisms.

Habitat and species conservation

Bhutan has pledged to maintain over 60% forest cover, and 51% of the country is now included in a system of protected areas and biological corridors. Past surveys indicate that a significant proportion of tigers occur outside the protected areas and biological corridors; thus, a revision of the current corridor system is warranted to include important tiger habitat within this system. Because the government conservation cadre is limited and the protected areas are large, community stewardship for tiger protection and habitat management is a more efficient strategy. Despite several national tiger surveys, the estimates are unreliable; a scientifically robust baseline and subsequent monitoring system is required to track the status of the tiger population and progress towards the overall goal.

Objective 1: To establish a nationwide monitoring program for tigers and prey

A nationwide survey of tigers and a system for routine monitoring by park patrolling teams using 'standardized' and accepted methods will be introduced. The methods are use, or will be introduced in landscapes across the tiger range.

Activities:

- Conduct nationwide tiger and prey survey to establish national baseline based on camera trapping and occupancy or distance surveys
- Establish routine monitoring protocols for tigers, preys, and habitats (MIST)

Expected Outcomes:

- National baseline and database to assess the status of Bhutan's tiger population

Objective 2: To classify and define tiger habitat at a landscape scale in Bhutan

Identify and zone tiger core areas and corridors, including important tiger habitat, in the Bhutan Biological Conservation Complex for management guidelines and regulations. Because surveys indicate that significant tiger habitat is now excluded from the system of protected areas and corridors a review of the corridors will be undertaken with revision as appropriate based on the findings.

Activities:

- Identify and delineate tiger core zones (that support breeding tigers) and dispersal corridors
- Establish management zones in the protected areas based on habitat use and distribution of tigers
- Review and revise the currently designated corridors in the light of tiger distribution and conservation
- Develop a mechanism to assess impacts of proposed development projects on tiger habitats in the protected areas and corridors
- Assess impacts of climate change on tiger habitat and land use practices by local communities

Expected Outcomes:

- Conservation and management of a tiger meta-population in Bhutan
- Proactive measures to prevent impacts from development projects on tiger habitats in the protected areas and corridors
- A projection of the impact of climate change on tiger habitat for adaptation strategies

Objective 3: Participatory management of tiger habitats

Community participation and engagement in tiger habitat conservation through community forestry in appropriate management zones in protected areas and corridors can facilitate habitat conservation and tiger protection.

Activities:

- Develop community-based natural resource management programs in the protected areas (e.g., community forestry)
- Develop joint anti-poaching programs and establish intelligence networks with the communities

Expected Outcomes:

- Community stewardship for tiger conservation
- Sustainable natural resources for the local communities

Objective 4: Strengthen trans-boundary conservation linkages

Bhutan and India share trans-boundary protected areas complexes that can benefit from administrative linkages to maintain ecological linkages. Trans-boundary collaboration with India and China, and regional links are also necessary to curb the illegal trade of tiger parts and derivatives (as well as other wildlife and plants).

Activities:

- Monitor cross border movement of animals
- Set up cross border administrative coordination mechanisms for joint patrolling, intelligence sharing, and policing for wildlife trade

Expected Outcomes:

- Meta-population links between tigers in India and Bhutan
- Reduced killing, trafficking, and trade of tigers

Objective 5: Strengthen anti-poaching and wildlife crime enforcement

Anti-poaching measures are needed to reduce poaching of tigers and prey. Although organized poaching is not a significant problem now, anti-poaching and intelligence networks to curb regional poaching that can reach into Bhutan are necessary as a preemptive measure.

Activities:

- Strengthen anti-poaching and wildlife enforcement with the Nature Conservation Division as the coordinating body
- Set up intelligence networks (including at community levels) with database for poachers.
- Develop links with Customs, Police, Armed Forces, Judiciary, and BAFRA (Bhutan Agriculture and Food Regulatory Authority)

Expected Outcomes:

- Reduced killing and trade of tiger parts and derivatives

Component will be implemented in priority tiger protected areas and corridors and program duration is estimated at 5-8 years

Integrating tiger conservation and rural livelihoods

A high proportion of the people still depend on forest resources for everyday use and livelihoods. Living in tiger habitats have opportunity costs, especially due to livestock depredation, and limited or constrained access to forests and forest resources. Compensation in the forms of alternative income generation, insurance for depredation, conservation payments, etc. to elicit support for biodiversity conservation and community stewardship can help local livelihoods and gain support for biodiversity conservation.

Objective 6. To provide alternative forest resource use practices to reduce anthropogenic pressure on tigers and tiger habitat.

People live in protected areas and corridors; thus, forest resource use and other activities (e.g., livestock grazing, *jhuming*) can contribute towards forest degradation and disturbance. Providing alternative income sources, alternative livelihoods, and better livestock management can take some of the extraction pressure off the forests, and help with conservation.

Activities :

- Provide alternative energy sources (especially biogas in lowlands) to reduce fuel wood consumption
- Develop better fodder and pasture, and herd management to reduce grazing pressure and livestock depredation
- Promote and help to start up community-based eco/nature tourism operations (treks, accommodation, guides, produce, etc.)
- Initiate a micro-credit scheme for financing and supporting rural livelihoods and micro-enterprise project start-up
- PES: compensate local communities through revenue-sharing from hydro-schemes and other projects for conserving habitat and ecosystem services
- Promote micro-enterprise schemes (mushroom cultivation, medicinal plant growing and sustainable harvest, cane and bamboo, etc.)
- Implement an awareness program on the links between tiger conservation and ecosystem services and sustainable resource availability
- Implement community-based livestock insurance programs and scale up across tiger habitat in landscape
- Human wildlife coexistence education and awareness programs to local communities

Expected outcomes:

- Greater awareness of conservation needs and actions
- Community stewardship for tiger conservation and consequently, less habitat degradation
- Sustainable livelihoods and better livestock management practices
- Reduced human-tiger conflict and greater tolerance to depredations

Component will be implemented in priority tiger protected areas and corridors and program duration is estimated at 5-8 years

Building institutional capacity

Objective 7. To enhance institutional capacity of the Department of Forest and Park Services to deal with the national park and wildlife protection issues.

Linkages among the different units (Division and National Parks) of the Department of Forests and Park Services (DoFPS) are inadequate. No single unit has a clear mandate to coordinate the national park and wildlife protection services in the country. The numbers and skill levels of the present staff are inadequate to carry out scientific conservation of key species and species of special concern. Though Bhutan has a 10 Year National Tiger Action Plan (2006-2013) there is no dedicated program in place to execute the action plan.

Activities:

- Synchronize mandates of existing units (Division, national parks, programs) of the DoFPS for intra-unit linkages and establish coordination platform
- Strengthen DoFPS partnerships with other relevant government sectors (law enforcement agencies, national environment commission, UWICE, NRTI, NGO, Local communities, BTFEC, etc.) to effectively conserve key species and species of special concern
- Explore creation of an autonomous unit (ideally a Department) within the Ministry of Agriculture and Forests (MoAF) to deliver the national park and wildlife protection services
- Recruit, train, and provide logistical support to DoFPS field staff (national park and DoFs) to carryout wildlife conservation

Expected outcomes:

- DoFPS capable of developing and effectively executing wildlife/biodiversity conservation programs and projects

This component is located nationwide and will take approximately 5 years

Sustainable Financing

Objective 8. To have an Integrated Financing Plan/Strategy by the end of 2010

An integrated financial plan that includes innovative and sustainable financing of conservation interventions will allow for planning, implementing, and achieving ambitious and long-term conservation goals.

Activities:

- Prepare a financing strategy/plan with the full range of activities for the tiger recovery program, including expected impact, cost and sources of fund
- Donor Mapping - external/traditional donors
- Explore innovative financing sources (e.g., payments/revenue from hydro and ecotourism, carbon trade for corridor forests and alternative energy sources, biodiversity credits, PES etc.)
- Mainstream tiger conservation plans into the national and local plans (education, awareness, sensitization in line agencies and ministries, conservation and livelihoods plans)
- Create synergy through harmonization of related activities (information sharing, coordinating activities among the related agencies such as NEC (UNFCC).

Expected Outcome:

- Conservation activities implemented as per plan
- Sustainable financing for tiger recovery plan

This component can be completed in 1 year

3. Policy to achieve the Objectives.

- Protected Areas and Wildlife Act has to be finalized
- Bilateral policy and MoU between India and Bhutan for collaborative management of transboundary protected areas and possible designation as Transboundary Peace Parks
- Shift in existing tourism policies to benefit local communities through ecotourism
- Policy for decentralization/co-management of conservation areas by involving local communities and local institutions

- Policies for improved intelligence network sharing within Bhutan and in the region
- Clear policies on PES defined and integrated into overall government conservation policies and acts.
- MoAF's support to improve linkages among the different units of the DoFPS and to explore creation of an autonomous body within the MoAF to coordinate the national park and wildlife protection services in the longer term.
- Frameworks for PES, access and benefit sharing, and carbon trading

4. Capacity needs to be enhanced or created to achieve the Objectives.

- Training of conservation and PA staff for tiger surveys, data analysis, and monitoring
- Training of communities for participatory management and anti-poaching
- Wildlife intelligence networking
- Lack of hardware and software for monitoring (equipment, GIS and database management)
- Capacity building for partner law enforcement agencies (customs, police, BAFRA)
- Develop better coordination within DoFPS to execute national park and wildlife conservation program

5. Stakeholders

- The political will and support of the Bhutan Government is crucial for tiger conservation
- Governmental line agencies, development-related departments, and relevant research institutions
- Schools and youth groups
- WWF (plays a critical role in bringing in funds for tiger conservation activities)
- UNDP (funds projects related to reducing human-tiger conflicts)
- Bhutan Trust Fund for Environmental Conservation (funds many activities related to tiger conservation)
- CITES, TRAFFIC, and SAWEN (crucial partners for curbing trade of tiger parts and derivatives)
- Bhutan Foundation, World Bank, Helvetas, SDS, GTI, GTF, Panthera Foundation, STF (significant funders)
- Law enforcement agencies to assist in monitoring WL trafficking and reducing offences
- NGOs and local community groups
- Media

6. Performance Indicators

Key measurable indicators will be chosen from the following suite based on project development:

Habitat and species conservation and Integrating tiger conservation and rural livelihoods

Map(s) of critical tiger habitats, protected area zones, and revised biological corridors; national baseline for tiger, prey, and habitat, MIST survey data; number of community forest management groups and engagements in anti-poaching activities; number of human-tiger conflicts (livestock losses); number of tigers detected across international borders; number of joint patrols/groups and frequency of joint patrols across international borders; number of tigers killed and incidences of poaching and trade of parts; number of institutions or agencies involved in anti-poaching and curbing trade of tigers and cases reported; livestock insurance program and beneficiaries; community groups and individuals engaged in alternative income generation enterprises; number of people using micro-credit schemes; number of biogas plants; volume of fuelwood used/collected; numbers of free grazing cattle in forests.

Institutional capacity building

DoFPS feedback to the planning and designing of the interventions based on field data; projects to conserve biodiversity and ecological processes implemented by DoFPS in partnership with other stakeholders

Sustainable Financing

Integrated financing strategy in place by 2010; number of grant agreements/MoUs signed; new financing mechanisms formalized and implemented; scale of conservation activities featuring into the sectoral and local development plans; numbers of inter-sectoral coordination meetings held

7. Indicative Costs in US\$ equivalent (approximate estimate):

Activity (combined for objectives)	Costs
1. Establish a nationwide monitoring program for tigers and prey	1,000,000
2. Classifying and zoning PAs in tiger landscape	1,500,000
3. Participatory management of tiger habitats	500,000
4. Strengthen trans-boundary conservation linkage	100,000
5. Strengthen anti-poaching and wildlife enforcement	300,000
6. Alternative forest resource use practices for local communities	1,500,000
7. Enhancing institutional capacity of DoFPS	1,300,000
8. Preparing sustainable financing plan/strategy	12,000
TOTAL (over 5-8 years)	6,212,000

8. Preferred Financing Mix.

- WWF (habitat conservation, surveys, zonation, corridors)
- GEF (Community participation, capacity building, human-tiger conflicts)
- SDS-Netherlands (zonation)
- HELVETAS (participatory management)
- SNV (participatory management)
- DANIDA (decentralized/participatory management)
- BTFEC (capacity building, infrastructure development, surveys, zonation)
- STF (tiger surveys, research)
- Royal Government of Bhutan (core costs)
- UNDP (community/conservation integration, alternative income generation)
- PES

9. Short-Term Catalytic Support Needed (in 2010-2011)¹. Identify and indicate the amount of short-term catalytic funding needed from the GTI funding partners to support the Component in the table below. Such funding is typically expected to cover the following types of activities:

Catalytic activity (provide brief description)	Costs, US\$
Implementing a monitoring system (MIST)	200,000
Training and capacity building for DoFPS and local communities	200,000
Cross-boundary meeting to enhance cooperation in law enforcement	20,000
Participatory zonation and management of tiger habitats in JDNP (including to mitigate climate change impacts)	50,000
TOTAL	470,000

¹ Short-term funds raised by the GTI partners will be used by TRCs for catalytic and initial work required to bring best practices to full-size projects. Such GTI support, in general, will be less than US\$500,000 in each case. Where medium- and full-size projects (costing more than US\$500,000 each) are already identified for possible submission to large funders, the GTI will facilitate lining up and leveraging the necessary cofinancing from other funders as appropriate.