

WWF Bhutan Annual Report, '09

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Our Vision

Conservation and maintenance of natural resources and biological diversity so that future generations live in harmony with nature.

Our Goal

To conserve biodiversity in representative ecosystems to ensure the ecological, economic and socio-cultural intregity of Bhutan.



Major highlight for the financial year 2009 has been the declaration of Wangchuck Centennial Park. The park measuring 4,914 km² connects with Jigme Dorji National Park in the west and Bumdeling Wildlife Sanctuary in the east. With the inclusion of the new park, Bhutan's total area under protection now stands at 51.44 % of the country's surface area-the highest in the world. The connectivity between the North Bank landscape in north east India and the Kanchenjunga landscape in the west has now been secured providing a unique opportunity for conserving the rich biodiversity of the Eastern Himalayas.

In Royal Manas National Park, the addition of 34 km² of park area brings about an uplifting encouragement from the government to further strengthen conservation in the kingdom. WWF also began work in Phibsoo Wildlife Sanctuary in the southern part and Toorsa Strict Nature Reserve in the extreme west of the country. In Thrumshingla National Park, WWF continues to provide the much needed support in building staff capacity in camera trapping, species listing, mapping distribution of species and scientific survey techniques.

In species conservation, snow leopard assessment was completed in Jigme Dorji National Park during this financial year. The exercise has resulted in enhancing the capacity of the field staff to independently conduct research work and has more importantly generated valuable information on this elusive species in Bhutan.

The year 2009 also saw the start of the WWF freshwater and climate change programs which are new areas for WWF Bhutan. With the inception of freshwater program, the high altitude wetland inventory work has begun. The programme is now embarking on a study to assess hydropower sustainability on critical biodiversity hotspots around the country.

In the arena of climate change, WWF has rendered critical support to the artificial lowering of Thorthormi Lake in Lunana. WWF Bhutan will continue to work with the government to study impacts of climate change on biodiversity and water resources besides supporting mitigation and adaptation programs.

In April, 2009, WWF's building in Thimphu was inaugurated by His Excellency, Lyonpo (Dr) Pema Gyamtsho and Mr. Carter Street Roberts, President WWF-US.

Kinzang Namgay, Country Representative, **WWF Bhutan**





Scenario of the protected areas in Bhutan:

The Eastern Himalayan eco-region spanning the entirety of Bhutan, Nepal, and north-east India has long been declared a biodiversity hotspot. Bhutan's protected area systems comprises of five national parks, four wildlife sanctuaries, one strict nature reserve and a network of biological corridors. In total 51.44% of Bhutan's total surface area falls under the protected areas system. The newest and the largest national park, Wangchuck Centennial Park was declared in December 2008. The park measuring 4914 sq km is sandwiched between Jigme Dorji National Park and Bumdeling Wildlife Sanctuary and is hailed as a major conservation success as it allows a complete protection in the northern part of the country.

While Bhutan is lauded for its wise conservation policies, the country does face its own share of

problems. Still, some 80% of the population are subsistence farmers and largely dependent on forest resources for their livelihood. Challenges facing the country are increasing demand for fuel-wood and timber, overgrazing by domestic animals and poaching and over-harvesting of non-timber forest products. The lack of environmental awareness coupled with limited financial and technical capacity of authorities to address these threats is increasingly exacerbating human-wildlife conflict. As a result, the very survival of the fascinating and rare species such as the tigers, elephants, rhinos, snow leopards and Takins are being threatened.

FOREST AND CLIMATE CHANGE

Forests conservation program is undoubtedly the largest program of WWF Bhutan both in terms of scope and investment. Forest programmes are



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designed to protect, restore and promote the forest in Bhutan through policy advocacy, partnering with the government implementing agencies and local communities at the grass root level.

In Bhutan, more than 64% of the area is under forest cover. Apart from harboring a wide variety of biodiversity, the forest is also home to local communities who derive their living from forest products. To be able to develop a harmonious kinship within, conservation programs are designed to protect the landscape, wild species and local communities living in around the forests.

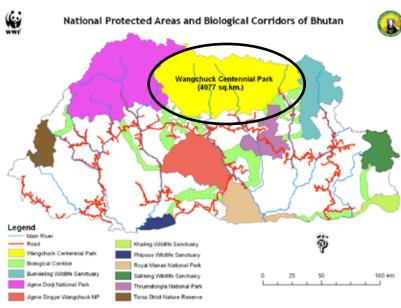
A new conservation area: Wangchuck Centennial Park (WCP):

Wangchuck Centennial Park was declared protected by the Royal Government in 2008 as a part of the centennial celebration of Bhutan's monarchy. It is the largest national park in Bhutan spread-

ing over five districts of Gasa, Wangduephodrang, Bumthang, Trongsa and Lhuentse. The park houses important water towers that feed four major rivers of Bhutan namely Punastangchu, Mangdechu, Chamkharchu and Kurichu.

The Wangchuck Centennial Park harbors more than 242 species of vascular plants, 23 species of mammals and more than 134 species of birds. The new park connects Jigme Dorji National Park in the northwest and Bumdeling Wildlife Sanctuary in the east creating a contiguous area covering the entire northern frontier. This also directly contributes to the horizontal contiguity of the Living Himalayas eco-region by connecting Kanchenjunga landscape in the west and the North Bank landscape of India in the east. For the first time, WWF is fully involved in managing the park in partnership with the Royal Government.





Currently a provisional management plan for the park has been drawn up following a rapid biodiversity and socio-economic survey.

The opening of the park took place on 12th December, 2008 in Nasiphel village under Choekhar geog (block). More than a thousand people gathered at the opening. The Prime Minister, Lyonchen Jigme Yoser Thinley inaugurated the park.

Royal Manas National Park (RMNP):

Royal Manas National Park with an area of 1,057 km² lies in the southern border of the country and connects the Tiger Manas Reserve in India to the south and Jigme Singye Wangchuck National Park in the north. The park is home to global flagship species like the Asian elephant, Tiger, Clouded Leopard and the highly endangered pygmy hog. During the reporting period, the park area was increased from 1023 to 1057 km² by incorporating

Tingtibi buffer area in the north of the park. This area is significant as it harbors the rare and highly threatened rufous necked hornbill. This area also serves as an important corridor for the movement of the Bengal tiger.

Support to park residents include work on improvement of agricultural and animal husbandry practices through provision of improved seeds, livestock breeds, pasture development and assisting in marketing farmers products.

i Camera trapping exercises-

Staff of RMNP was provided training on the use of camera traps for the first time. Dr. Yoganand from India was invited to provide hands on training on techniques of camera trapping, species listing, distribution mapping of species, estimating population size and monitoring of the species. The camera trapping exercise has resulted in generat-





ing new information on the park's biodiversity and also captured rare species such as pygmy hog, the Royal Bengal tiger and clouded leopard. Frequent camera trapping exercises in the RMNP have also enhanced staff understanding of the predator-prey diversity and relationship.

ii Trans-boundary visits and study tours:

In order to promote trans-boundary cooperation, park staff and community leaders were sent to visit heritage sites and protected areas in neighboring India. The visit has helped the understanding of the field staff on the importance of improving transboundary cooperation for monitoring and checking of poaching and trade of illegal wildlife parts and products. Information was also exchanged on management of human-wildlife conflicts and involvement of local communities in eco-tourism development.

iii Providing infrastructural support:

Basic field equipment such as GPS units, binoculars, altimeters and cameras were provided to the park staff. This has enabled the staff to carry out research and monitoring of important species independently. The data collected has been useful for updating the management plan of Royal Manas National Park. Repair work of RMNP office and Umling range office were also completed.

iv New Management plan for RMNP:

Since the restoration of the security normalcy in Royal Manas and neighbouring India, a new management plan is now available for RMNP. This was made possible after a series of biological and socioeconomic surveys conducted by the park. The management plan will guide the park's future operations.



Thrumshingla National Park (TNP):

Out of its 905 km2 area expanse, 94% of the park consists mostly of alpine to subtropical broadleaf vegetation. More than 68 rare and endangered mammals like snow leopards, tigers, Malayan giant squirrel and red pandas are found in TNP. Some 341 species of birds are also recorded to be found in the park.

Red Panda study:

TNP has one of the country's best natural habitat for the red panda, an iconic species of the park. A detailed ecology and habitat study on red panda undertaken in the park revealed an occupancy rate of more than 31 percent of the park area mostly found between 2500 to 3900 masl. The encounter rate of red pandas has been recorded at 0.19 per kilometer. In the process of conducting this study, 16 park staff members benefited from a training on survey techniques, research methodology and data analysis using relevant software.

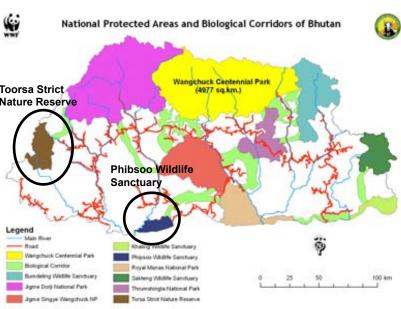
Operation of TSNR and PWS:

I. Toorsa Strict Nature Reserve (TSNR)

TSNR encompasses a large portion of the south western area of the country. The reserve measuring 609.51 km² in area comprises of huge tracts of tropical and alpine vegetation. Species commonly found in the reserve are Takin, Serow, red panda, Himalayan musk deer, Himalayan Thar, common leopard and clouded leopard.

WWF initiated a two-year project designed to collect information on birds, mammals and vegetation type in the park. A detailed socioeconomic survey is also being conducted in the park and this will be used for the development of a five year management plan to address issues and threats faced by TSNR.





Circled- The two recently operationalised parks



II. Phibsoo Wildlife Sanctuary (PWS):

Located in southern Bhutan, the 278 km2 sanctuary harbors a considerable number of flagship species such as the Asian elephants, Gaur and golden Langurs. It is also the only protected area in Bhutan that supports the chital deer. The sanctuary has the largest stand of natural Sal forests and forms a contiguous ecosystem with the adjacent Indian protected areas of Petu Reserve Forest, Buxa Tiger Reserve, Ripu- Chirang Reserve Forest and Dhaneshi Ridge.

Biological and socio-economic surveys have started in the park. In addition, work on boundary demarcation of the park is already underway. A management plan will be written after all baseline information had been gathered. The plan will serve as a guide for the management of the Sanctuary in the next 5 years.

SPECIES

The ecological and biodiversity integrity of the country is still largely intact owing to the good conservation practices of Bhutan. Nevertheless, due to rapid socio-economic development taking place in the country, it will become increasingly difficult to provide adequate protection to wildlife in the next few decades.

Throughout 2008-2009, WWF Bhutan species program focused on addressing issues such as human-wildlife conflict, trans-boundary illegal trade and habitat fragmentation. During the year, US \$ 217,321 was spent towards conservation of key species in B2C2.

I. Monitoring of Snow Leopard in B2C2 and across its range:

A 3200 km2 area across the Jigme Dorji National



Park was extensively surveyed to monitor snow leopard. The goal of the survey was to re-establish and create an updated range map for the species. During the survey, putative samples of the snow leopards were collected. The DNA extraction, Polymerase Chain Reaction (PCR) - a technique used to amplify a single or few copies of a piece of DNA across several orders of magnitude and genotyping work is being conducted at the University of Montana, USA. Once complete, more information will be available on Snow leopard distribution, abundance, livestock predation and prey density.

Similar survey work and camera trapping exercises revealed presence of snow leopard in three other protected areas i.e. Toorsa Strict Nature Reserve, Bumdeling Wildlife Sanctuary and the newly established Wangchuck Centennial Park. During these surveys it was also re-established that Bhutan is the only place where the tiger and snow leopard

habitat overlap. Staff capacity in scientific survey techniques has also improved with frequent staff training provided to staff during the survey period.

II. Human Wildlife Conflict – Farmers breathe a sigh of relief!:

Every year farmers in most parts of Bhutan face persistent threat of crop depredation from wild animals such as wild boar, deer, monkey, sambar, bear and elephants. WWF has joined hands with the National Post Harvest Centre (NPHC) to develop a simple battery operated sound device to keep away the wild animals from crop fields. During the reporting period, a total of nine such sets were installed in Zhemgang, Mongar, Trashiyangste, Samtse and Trashigang. A trial run of these sets across the country revealed fewer incidences of wildlife damages to crops.





III. Developing and Strengthening of antipoaching program in Bhutan:

To give impetus to the anti-poaching capabilities of the government of Bhutan, an anti-poaching initiative aimed towards sensitizing decision makers on illegal wildlife trade issues, building capacity, preparing a national anti-poaching strategy, establishing poaching related database at the anti-poaching unit in Nature Conservation Division was started.

Three strategic activities currently under progress are 1) Establishment of information networks at strategic locations in the country, 2) Enhancement of regional cooperation forum (e.g. ASEAN, SACEP, SAARC) to address trans-boundary trade and trafficking and 3) Strengthening of national enforcement agencies capacity to address poaching and wildlife illegal trade.

SUSTAINABLE LIVELIHOOD

Livelihoods initiatives seek to conserve biodiversity through economic development of local communities by offering alternative livelihood opportunities. Integrated Conservation and Development Program is widely adopted across the country as a tool to achieve biodiversity conservation while fulfilling the aspirations of the people living in and around protected areas in Bhutan.

Livelihood initiatives at Thrumshingla National Park (TNP):

To reduce dependency on fuel wood, the park has introduced biogas technology in Ungar village located in the south east part of the park. This initiative, while aimed at reducing fuel wood consumption has also shown to improve health and sanitation conditions of rural homes.

CONSERVATION THREATS: GAME AND RETALIATORY KILLS



स्मिन्यवे देनुग्रम्भेसम्बन्धस्य स्मिन्य गर्देन्य





बेममञ्जूर्मेनमन्द्रिन क्षेत्रेन सर्वेन क व्याप्येन व्यवस्थी





The village also benefited from the supply of swiss brown bulls. In addition, the farmers were trained in piggery, dairy management and fodder development. In all, 36 households benefitted from this programme.

Alternative Energy Program- Enhancing Local Stewardship Forest:

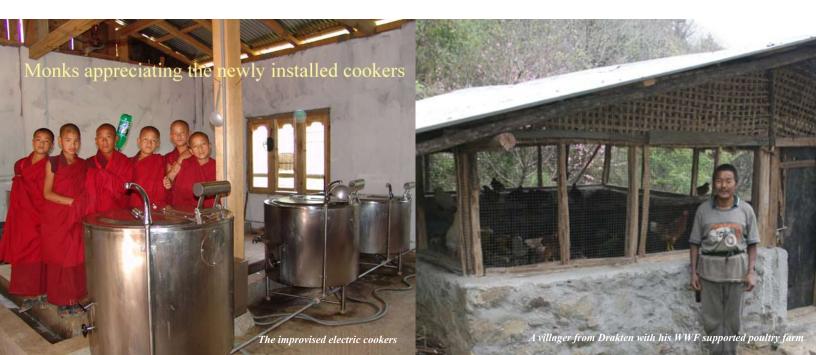
Following successful introduction of electric bulk cookers in larger institutions across the country, WWF signed an agreement with the Ministry of Home and Cultural Affairs to install similar systems in religious institutions around the country. During the reporting period, a total of 22 bulk electric cookers were installed in different monasteries in the districts of Lhuentse, Trashigang, Sarpang, Pemagatshel, Punakha and Thimphu. The result with this intervention has been the reduced consumption of fuel wood. In Dechenphodrang monastery alone, the monastery now spends Nu.

9000 per month as electricity tariff as against the purchase of five truckloads of firewood every month costing Nu. 36,000. Similar responses have been reported from other monasteries who have partnered with WWF. Plans are underway for the entire monastic body around the country to switch to electric cooking system.

Drakten Geog, Trongsa:

Drakten geog in Trongsa district lies within the biological corridor between Thrumshingla National Park and Jigme Singye Wangchuck National Park. The 350 households in the geog are primarily rice farmers. Food shortages are widespread and though every household has livestock (cattle, pigs and poultry), the productivity is low due to inferior breeds and improper management practices.

The forests in and around Drakten geog are important habitat for Tigers, golden langurs, Himalayan



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black bears, common leopards, as well as several ungulates and birds. WWF has been working in Drakten since 2004. Some of the achievements in Drakten include the reduction of demand for firewood, enhanced income for the community through rearing of piggery and introduction of vegetable cultivation, and greater understanding of environmental issues by the people through concerted environmental education programme.

EVENTS ACROSS FY09

Tourism workshop in Paro:-

WWF helped to co-finance a sustainable tourism workshop organized by the Tourism Council of Bhutan (TCB), in Paro in December 2008. At least 70 participants, comprising of both local community members and district officials, were present in the meeting.

Regional Cordyceps Conference in Bumthang:-

A three day conference on Cordyceps management and marketing was held in Bumthang from 20- 22nd April, 2009. Initiated by the Ministry of Agriculture in Bhutan, key government officials, along with scientists from various governmental and non-governmental institutions from China, India and Nepal attended the meeting.

Among many other issues discussed, the main topics covered were marketing practices of the species in different participating countries and concerns about transboundary cooperation. This initiative was highly appreciated by all participating governments and has led to the understanding that similar programme should be continued including issues such as wildlife trade reappraisal.





National Parks & Wildlife Management Workshop from 9th to 11th June, 2009:-

A three-day workshop meeting was held in Thimphu to provide a forum for consultations on how to better manage Bhutan's natural heritage and combat wildlife crimes. The workshop was attended by important stakeholders from various departments under the Ministry of Agriculture and other affiliated stakeholders.

Support to UWICE academic program:-

WWF has been closely involved in the development of the Ugyen Wangchuck Institute for Conservation & Environment (UWICE). Over the years, the institute with WWF's support has built up its ICT resources including a library.

UWICE was inaugurated on 13th August, 2008 by the Minister of Agriculture, Lyonpo (Dr.) Pema Gyamtsho. The institute aims to be a research apex and a forum for seminars and workshops on sustainable environment management in the country and in the region.

CRITICAL ECOSYSTEM PARTNER-SHIP FUND (CEPF) PROJECTS

CEPF ecosystem profile were first developed based on extensive research and stakeholders consultations organized by BirdLife International in collaboration with WWF, the Centre for environmental Education, and the Ashoka Trust for Research in Ecology and the Environment (ATREE). Realizing the importance of Eastern Himalayas region, CEPF started its functioning in Bhutan in 2007. Some of the major CEPF projects in the year were:-

I. Study on Bazzania Bhutanica:

A rare and critically endangered species of Liverwort Bazzania Bhutanica has been reportedly





found in the ravines of Buduni (a small farming community) in the southern district of Samtse.

Studies are being carried out to ascertain the credibility of its existence, while at the same time derive information regarding its status, ecosystem and threats. Once the studies are complete, databases will be developed for conservation references.

II. The Status of Agarwood (Aquilaria malaccensis) in Bhutan:

Bhutan is known as one of the best Agarwood producing countries in the world and also has a high extraction rate for commercial purposes. It is listed as "endangered species" by ICUN and threatened by habitat loss.

Though listed as protected species, information on its population status and spatial distribution of the plant in Bhutan is scarce. In order to create documentation of the species, studies were carried out in parts of Haa, Wangduephodrang, Zhemgang, Pemagatshel and Samdrupjonkhar districts. Sample mother seed trees in natural forests and plantations were identified for future propagation in other parts of the country.

III. Red Data Book for Flowering Plants of Bhutan:

This project will fill the information gap on the flowering plant species of Bhutan by evaluating the flowering plant species of the country using the IUCN list. A checklist of species was prepared in volumes of nine floras with names, their location, uses, ecological characteristics, vernacular names, etc. Field visits to different parts of the country were made to collect and document the plant species.



IV. Probable existence of Woolly Flying Squirrel (Eupetaurus cinereus):

The existence of woolly flying squirrel, an endangered species (EN) on the IUCN Red List of Threatened Species in Bhutan is highly debatable. Though there is no historical data to suggest its presence, the country may be one in the range countries including Tibet and India to host them, especially so in Jigme Dorji National Park.

Through one of CEPF's projects a detailed distribution survey and habitat findings is being carried out to detect their presence and provide contributions to conservation of the species and its habitat.

V. Rufous-necked Hornbill (Aceros nipalensis):

Categorized as vulnerable species by IÛCN, the rufous-necked Hornbill is one of the most threat-ened species in the world. Through CEPF grant, a survey conducted in Thrumshingla National Park

revealed that their cluster density is highest in the sub-tropical, moist, broadleaved forest. However, the individual sightings are recorded highest in the cool-broadleaved forest.





An 'affair' between the Royal Manas National Park and its admirer



Elisabeth Meeker and her mother Withrow Meeker are friends of Bhutan and are partners of WWF's conservation works in Bhutan, especially at the Royal Manas National Park.

Elisabeth Meeker first traveled to Bhutan in 2007 along with her mother, Withrow Meeker. The highlight of their trip was a visit to Bhutan's Royal Manas National Park (RMNP), and inspired by the beauty and conservation potential of Royal Manas, the Meekers made major philanthropic commitments dedicated to helping WWF's efforts in the area.

In 2009, Elisabeth spent some time volunteering with World Wildlife Fund in Bhutan, and she had the opportunity to revisit Royal Manas.

Royal Manas is inaccessible from Bhutan by car, and visitors to the park must first enter India to gain entrance to the park via Galephu. Beyond being difficult to reach, the park was closed to tourists for a number of years owing to risks posed to travelers by separatist groups from across the border.

Both Elisabeth and Withrow were struck by the possibilities for conservation in Royal Manas National Park. Its very remoteness and inaccessibility provide a measure of protection to the landscape, and its biodiversity promises a rich yield of scientific discovery. While visiting the park, they rode elephants to look for tigers, saw golden langurs, and floated downriver for more wildlife viewing. Again and again they had the impression of an untouched, virginal reserve – more is unknown about Royal Manas National Park than is known. Simply cataloguing the flora and fauna of the park is a dauntingly big job.

The Meeker family values conservation and scientific research and, recognizing their good fortune in gaining access to the remote and rustic park, committed themselves to helping WWF study the park's biodiversity and advise the government of Bhutan how to open this beautiful park to lucrative eco-tourism without spoiling the natural beauty of the park. As Withrow Meeker noted, "Manas is a stunningly beautiful and biologically rich area. The people living and working there are passionate about and proud of Manas. The protection of Manas, as the leadership of Bhutan and WWF are desirous of doing, could provide a showcase of environmentally essential planning for the betterment of Asia, if not the world. It was a pleasure for me to return in 2009 and volunteer for 4 months for WWF and I was fortunate to have numerous adventures and experiences"



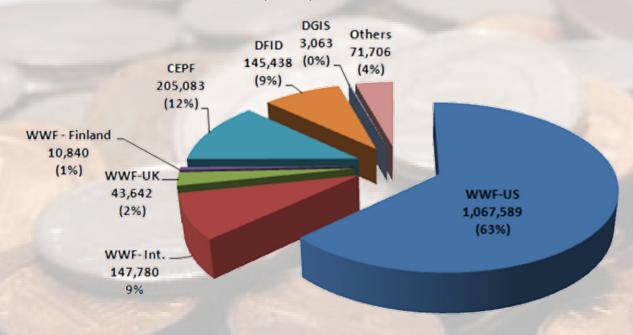
WWF Bhutan new office building opening:

Honorable Minister for Agriculture, Lyonpo (Dr) Pema Gyamtsho and WWF US President Mr. Carter Street Roberts jointly inaugurated the new WWF Bhutan office building on the 10th of April, 2009. The building not only signifies the three decades of conservation works that WWF has done in the country but also the close and excellent relation that it harbours with the Royal Government of Bhutan.



Financial Report

Revenue for FY '09 (US\$)



Expense for FY '08 (US\$)

