

## **Is National Environment Conservation Success a Rural Failure? The Other Side of Bhutan's Conservation Story<sup>o</sup>**

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*At a great risk of provoking mainstream happiness theories and theorists, this paper argues that economic development is the key to increasing happiness, especially in rural Bhutan. It identifies national conservation policy as primarily responsible for decreasing the food security of rural households. Since the positive impacts of environmental conservation dominate our development discourse as well as government documents, this paper discusses the negative impacts of conservation policy on the wellbeing of farmers. It argues that Bhutan's 'middle path' approach to development is an extreme path biased towards conservation of the environment at all costs. The impact of national conservation policy on subsistence livelihood is 'asymmetric' since one season's or year's harvests are often lost to wild animals in one single night. It contends that the indigenous resource management system is holistic and sustainable, and that what is not sustainable is the modern resource management regime that has been blindly applied across the country without considering unique local contexts. It also highlights the inadequacy of conservation science to address the human aspect of the ecosystem and the politics of Himalayan environmental crises. It concludes with some policy recommendations.*

### **Introduction**

We must recognize that some of the measures that we have taken to protect and preserve the environment and biodiversity may also have contributed to its erosion. The establishment of nature reserves and protected areas has introduced lines of demarcation between humans and nature that formerly never existed. The introduction of rules and regulations that must be respected have stripped some locations of their mysticism and prevented the communion with nature that was once common. Our beliefs that we should manage our biodiversity and environment in

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<sup>o</sup> The views expressed are mine, not of the Centre for Bhutan Studies.

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accordance with international standards may have unwittingly contributed to a hardening of traditional attitudes, perception and values.

-- *Bhutan 2020: A Vision for Peace, Prosperity and Happiness*, 1999, p.87.

Gross National Happiness (GNH) continues to be viewed from lenses of different academic backgrounds and individual orientations. Its potential for diverse conceptualisations, interpretations, appropriations and abuses would have been lost through imposition of one intellectual hegemony, had it not been for equally competing theories that are being developed around the concept.

According to the results of the National Population and Housing Census 2005, only 3.3 percent of the Bhutanese population are 'not very happy' (OCC, 2005),<sup>1</sup> while on the other hand 31.7 percent of the people are living below the national poverty line of Nu. 740.36 per person (NSB, 2004). The above statistics are suggestive of a low correlation between poverty and happiness in Bhutan.<sup>2</sup>

The law of diminishing returns of money in increasing happiness may be true of the industrialised countries, but only increased financial opportunity and security can exponentially increase the happiness of the Bhutanese people at their current level of socio-economic development. No form of happiness could be conceivable, except for a few Himalayan Buddhist yogis, without first fulfilling the three basic necessities of life, namely food, clothing and shelter. Assuming that all rural farmers have warm clothes on their backs and roofs over their heads, meeting food shortages during critical summer months is a big problem in many villages. A key factor that prevents rural farmers from achieving food sufficiency is the country's conservation policy and legislation.

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<sup>1</sup> 51.6 percent reported being 'happy' and 45.2 percent 'very happy'.

<sup>2</sup> The percentage of population living below the national poverty line (consumption of Nu. 1096.94 per person) has decreased to 23.2 percent, according to *Poverty Analysis Report 2007* published by National Statistical Bureau. The statistics was not available at the time of writing this paper in November 2007.

Farmers' expectations from socio-economic development vary depending on regions, districts, gewogs, villages and even households in a village. While some villagers are yet to have a good footpath or mule track, others expect their farm roads to be blacktopped or broadened, and some even complain about conditions of existing motor roads. Of many problems facing rural Bhutan, the wildlife depredations of crops and livestock is the most serious one. Its impact is asymmetric since a year's or season's harvests are eaten by wild animals in a single night. For the majority of farmers, development (*yargye gongphel*) would mean the government's intervention in saving their harvests from wild animals. However, this does not suggest a single explanatory factor for the rural poverty, nor deny benefits of the environment, especially for subsistence farmers. It rather suggests a direct link between the conservation policy and the subsistence livelihood.

The human-wildlife conflict is not a new problem. The National Assembly has discussed it many times. It forms the main plot of many Bhutanese folktales. If folklore is a mirror of the past, then our ancestors had a poetic justice when wild animals that either kill domestic animals or destroy crops were avenged in the end. Today, the government extends a legal protection to wild animals,<sup>3</sup> while our farmers remain exposed to the mercy of wildlife and the long arms of national conservation laws.<sup>4</sup>

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<sup>3</sup> The Nature Conservation Act of 1995 protects: Asian Elephant (*Elephas maximus*), Clouded Leopard (*Neofelis nebulosa*), Golden Langur (*Presbytis geei*), Musk Deer (*Moschus chrysogaster*), Pangolin (*Manis crassicaudata*), Pigmy Hog (*Sus sylvanicus*), Snow Leopard (*Panthera uncia*), Takin (*Budorcas taxicolor*), Tiger (*Panthera tigris*), Wild Buffalo (*Bubalus bubalis*), Black-Necked Crane (*Grus nigricollis*), Monal Pheasant (*Lophophorus impejenuis*), Peacock Pheasant (*Polyplectron bicalcaratum*), Raven (*Corvus corax*), Rufous-Necked Hornbill (*Aceros nepalensis*), Golden Mahseer (*Tor tor*), Spotted deer (*Axis axis*), Gaur (*Bos gaurus*), Leopard (*Panthera pardus*), Leopard Cat (*Felis bengalensis*), Himalayan Black Bear (*Selenarctos thibetanus*), Red Panda (*Ailurus fulgens*), and Serow (*Capricornis sumatraensis*).

<sup>4</sup> Forestry Act of 1969; National Forestry Policy of 1974 (1979, 1991 revisions); Nature Conservation Act of 1995; Livestock Act and By-Laws, 1980; Land Act of 1979; Mines and Minerals Management Act of 1995; Rules and Regulations for Trekking in Bhutan of 1996; Pasture

The loss of farmlands through a ban on *tseri* cultivation aggravates the problem, especially without any restriction on the population explosion of 22 animals species protected by the National Conservation and Forestry Act of 1996 (hereafter NCFA 1995). No well-intentioned government's policies could be more damaging to farmer's livelihood than the conservation policy that is biased towards preservation of environment to the detriment of the farmer's efficiency and productivity.

A real index of farmers' wellbeing could be the number of sleepless nights spent guarding their crops, the number of livestock and quantity of crops lost to wild animals, precious farm labour wasted ingurading crops from wild animals both during day and at night, and also in obtaining permits for firewood and timber for house construction, and acreage of farmland encroached by forests.

### **Environmental conservation as a development discourse**

Let me begin with how the official interpretation(s) of GNH included environmental conservation to become an unavoidable concept in our development discourse. The word 'happiness' first appears in the Sixth Five-Year Plan (1988-1992) document where it is mentioned that a comfortable house is a source of security, "happiness" and contentment for rural people. It was not until the Eighth Five-Year Plan (1998-2002) that "Gross National Happiness" itself was first mentioned. Economic growth, it states, is useful only to the extent that they can contribute to Gross National Happiness.

The Planning Commission (1999, pp.51-90) was the first organisation to provide an official interpretation of GNH, in that it identified five central tenets of GNH, namely (1) "balanced and equitable socio-economic development", (2) "environmentally

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Development Act of 1997; Biodiversity Action Plan for Bhutan, 1998, (updated 2002); National Environment Assessment Act of 2000; Environmental Assessment, 2000; National Ecotourism Strategy of 2001; Biodiversity Act of 2003; The National Environment Act of Bhutan, 2007; The Revised Land Act of Bhutan 2007.

sustainable development”, (3) “human development”, (4) “culture and heritage”, and (5) “governance”.

“Environment conservation” has been proposed as one of the four platforms for pursuing GNH, together with “economic development”, “cultural promotion” and “good governance” (Thinley, 1999). It was followed by the government’s announcement in 2005 of “conservation of environment” as one of the four key areas for pursuing GNH (Thinley, 2005). The Tenth Five-Year Plan (2008-2012) guidelines has adopted, after the cabinet approval, the four pillars of GNH as the core values (PC, 2005). The environment conservation has indeed been the objective of the past five five-year plans (sixth to tenth).

Similarly, Karma Ura (2005) identifies “environment conservation” as one of the guiding principles of development, alongside self-reliance, balanced development, decentralisation, and cultural preservation. “Ecological diversity and resilience” is one of the nine domains the Centre for Bhutan Studies (CBS) is currently studying to develop GNH indicators to guide public policy and programmes. The eight other domains are (2) psychological wellbeing, (3) health of the population, (4) education, (5) time use and balance, (6) community vitality, (7) cultural diversity and resilience, (8) living standard, and (9) good governance.

Today, ‘GNH’ or ‘happiness’ litters pages of most government or private publications as well as public speeches at a great risk of reducing it to a mere political slogan.

Environmental conservation will continue to be the cornerstone of Bhutan’s development policy for all times. It has become a fundamental aspect of Bhutanese values, almost synonymous to the national identity. The official GNH was born with an umbilical cord connected to the natural environment, which brings us to the question whether we should breastfeed the child (GNH) or continue relying on the umbilical cord.

### **Our conservation success is a rural failure**

Bhutan adopted a ‘middle path’ approach to development in 1990 for promoting sustainable development. It is supposed to strike a correct balance between environmental conservation and

development. The term is blessed with a 2500 years old event in the life of the Buddha. It is said that the Buddha, on hearing a boatman advising his son that a beautiful music will be produced only if strings of a harp are neither too tight nor too slack, took a middle path between the former palace luxury and a six long years of extreme asceticism and self-mortification, and finally attained the Enlightenment.

The conservation success, as a result of the middle path, is clear from our forest cover and size of the protected areas, the rich biodiversity of the country and the donor assistance provided for conservation. The conservation efforts and achievements are often described in superlative terms. Discourse on conservation often conjures up an image of Bhutan as the forests with a country, not the country with a forest. Most conservation documents and publications have many results and ‘facts’ to boast.<sup>5</sup> However, the affluence of our ecosystem makes a glaring contrast to the poverty of our farmers. Our “pro-poor development policies and intervention” have not been effective in reducing the rural poverty (PC, 2006). In 2003, 31.7 percent of the country’s population was found to be living below the national poverty level, down from 36.3 percent in 2000, with the richest 20 percent of the population consuming almost eight times more than the poorest 20 percent (PC 2005; NSB, 2004). That poverty is a real problem in Bhutan irritates us from our calm-abiding life of denial: “extreme poverty and hunger are virtually unknown in Bhutan” (PC 2005). A regional comparison, particularly with Nepal, has been our consolation. We have often used fulfilment of a basic requirement of food, clothing, and shelter as yardsticks of success as if we are still hunter-gatherer societies. Yet nothing could be scarcer than food, especially during farming months. More than four decades after the launch of the First Five-Year Plan in 1961, poverty

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<sup>5</sup> “An environmental leader”, “one of the ten global biodiversity ‘hotspots’”, “requiring by law to maintain a minimum of 60 percent forests cover”, “35 percent of total areas under protected areas”, “home to 7000 species of vascular plants, 46 species of rhododendrons, 260 species of orchids, 201 mammals species, 700 birds species”, “black necked cranes and white bellied heron habitats”, “net sequester of green house gases”, “an acupuncture point in the leviathan body of our ailing planet” (Thinley, 2007; NEC, 2005; NSB, 2004; PC, 2002).

alleviation has been identified as the main objective of the Tenth Five-Year Plan (2008-2012) that will be pursued through strategies of rural development, balanced regional development, development of the private sector and infrastructure (PC, 2006, p.6) – the same old strategies of all past five-year plans.

**Protected areas and exposed farmers: revisiting the middle path approach to protect farmers**

Any government publication on environmental conservation, especially by the National Environment Commission (NEC) and Ministry of Agriculture (MOA) should logically begin with how the indigenous natural resource management systems unsustainably exploits natural resources, and then gone on to provide enough justifications for introducing borrowed conservation legislation. However, most publications acknowledge the role of the people and their strong conservation ethics in preserving the natural environment. It explains factors such as Buddhism, its interdependence, and pre-Buddhist nature worship as having been responsible for sustainable use and preservation of the environment. It applauds indigenous resource management institutions<sup>6</sup> and practices<sup>7</sup> that have evolved through centuries of interactions with natural world, informed by Buddhists' respect for nature and interdependence that promotes diversity. There are adequate reasons to trust the local management and appropriation of the environment, but not enough reasons for forcing borrowed legislations on the people. The application of one forestry policy across the country irrespective of unique local contexts, and the replacement of indigenous resource management systems with modern institutions are affecting the farmers' ability to make a descent living through subsistence farming.

For a nation of farmers, the importance of the natural environment for subsistence farming cannot be denied. It is for

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<sup>6</sup> *Risungpa* (forest caretaker), *misungpa* (forest fire vigilantes), *chhusungpa* (domestic and irrigation water caretakers).

<sup>7</sup> Restriction or ban (*dam*) on resource appropriation of hills, mountains, rivers etc., during certain months of the year for sustainability and religious reasons.

this reason that the indigenous knowledge systems have acknowledged its importance much earlier than modern science, in that the man-nature relation accommodates an invisible world of innumerable deities, gods and spirits, as a third dimension. The indigenous view of natural resources has always been holistic. Lham Dorji's (2004) study of the traditional resource management systems in different regions shows that the Bhutanese people had managed natural resources on a sustainable basis for centuries. The traditional resource management systems have evolved through local initiatives and participation. It has strengthened social ties among the peoples and laid foundation for the community-based organisations. The systems had certain rules, regulations and procedures for resolving inter- or intra-village conflicts in the use of forests and non-forests products. For example, the people of Bji Gewog in Haa restrict cattle grazing in certain pastures to allow for the regeneration of fodder plants. Similarly, the people of Bardo in Zhemgang observe a five-month long *sadam* (restriction) on six traditional pasturelands to allow grass and fodder regeneration. Almost all villages have institutions like *resungpa*, *mesungpa* and *chhusungpa* to enforce sustainable management of local resources.

“Bhutan’s forest policy places strong emphasis on conservation above all other considerations” (Giri, 2005). Most communities blame modern forestry laws that do not give a permanent, inheritable and transferable right to the community, and with the loss of community rights and control over the forests, indigenous knowledge systems and community-based natural resource management regimes have disappeared. Earlier, it was community or private ownership that made the people accountable to their environment. The people enjoyed a balanced, harmonious and respectful relation with nature until the modern legislations favoured nature to the extent of denying farmers their traditional livelihood through restriction on resource appropriation, encroachment of farmland or protection of wild animals that destroy crops and kill livestock. We have favoured



the preservationists' position of having forests free of (or minimising) human settlements.<sup>8</sup>

It is time to revisit the 'middle path' and "our strict and uncompromising approach to environment conservation" (PC, 1999, p.88) by accounting the needs of the rural farmers. No natural resource whatsoever could qualify as a wealth which instead of increasing, decreases the people's wellbeing. The government's socio-economic statistics, common sense and lived experience provide enough evidence to support a direct relation between the rural poverty and forest cover. For example, Zhemgang district that has the highest percentage of forest cover (86 percent forests) and 44 percent of its area under three protected areas is the poorest district in the country.

The increasing number of protected areas, beginning with the first one established in 1966 and the addition of six in 1974 and five more in 1983, is impressive, except that the human aspects of these protected areas have been poorly studied. The present protected system of four national parks, four wildlife sanctuaries, one strict nature reserve, and 12 biological corridors, altogether constituting about 35 percent (14,800 sq. km) of the total geographical area of the country (NCD, 2004), was created by using the World Conservation Union (IUCN)'s classification guidelines. The IUCN's definition of a protected area<sup>9</sup> clearly points out that the management regime need not necessarily be a legal one, but includes "other effective means" such as traditional and customary laws or ownership. But the modern management systems imported from the West (adapted at best) had no place for our traditional resource management systems and practices.

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<sup>8</sup> In the conservation-preservation debate, the conservationists understand the word 'conservation' to mean that humans will continue to use a resource as long as its sustainability is ensured, while the preservationists' position suggests that areas be set aside free of any human presence.

<sup>9</sup> The IUCN defines it as: "An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means".

In reality, the government has been mostly responsible for forest exploitation, whereas the traditional uses of forest resources by farmers were largely sustainable. The institutionalised exploitation of forests, especially in the south, preceded the First Five-Year Plan by almost a decade. The forestry department was instituted in 1952 as the first government's department to 'exploit' forests, then the most visible and available natural resource (NCD, 2004). Bhutan's first modern legislation, *Bhutan Forest Act of 1969* (hereafter BFA 1969), was enacted mainly to stop further exploitation of forests.

Although the government's exploitation was restricted to forests accessible to motor road, BFA 1969 nationalised all land under forests (except those owned privately) and declared them as Government Reserved Forest, with restricted community rights to graze livestock, collect firewood, timber, and leaf-litter. The direct consequence of the overnight ownership transfer from the individual households/community to the state is the restriction on the appropriation and loss of community ownership and accountability. The revised forest policy (1991), while making the management more participatory through decentralisation policy, gave the highest priority to forest conservation, as did the 1974 policy.

FNCA 1995, which provides a legal basis to balance between sustainability and resource use by the local communities, and between the present and future generations, has deteriorated the poverty of the farmers. Its significance in relation to the wellbeing of the farmers is the prohibition of killing certain endangered wildlife species which coincidentally are responsible for livestock predation and crop damages. In the Jigme Singye Wangchuck National Parks (JSWNP), out of 76 domestic animals killed by predators in a year, 53 percent were by leopards, 26 percent by tigers, 13 percent by dhole and 8 percent by bears (Wang & Macdonald, 2006a). A 1996 survey of 10 gewogs revealed that wild boars were responsible for 33 percent of all crop damage (Kuensel, 2003). In Lemi village, Trashigang, 35 percent of crops are lost to wild animals from June to October despite constant vigilance day and night (Kuensel, 2005).

### Conservation and food sufficiency

The conservation policy has seriously deteriorated the household's food security directly or indirectly by denying traditional livelihood through restrictions on the use of natural resources for both forests and non-forest products. FNCA 1995 prohibits farmers from cultivating new land outside their land registered land holdings. "Clearing or breaking up of any land for cultivation or any other purpose", among others, in Government Reserved Forests, is punishable with imprisonment. It was common for farmers to appropriate community forests and land through cultivation and other activities in many villages. These lands suddenly became forests after BFA 1969 and FNCA 1995 prohibited cultivation of these lands. In many ways the national goals of food-sufficiency and increasing forest cover is a zero sum game, in that one's increase is other's decrease; an increased forest cover indirectly means decreased land under cultivation.

The ban of *tseri*<sup>10</sup> cultivation by the National Assembly in 1993 has directly increased the farmers' food insecurity. The loss of farmlands through encroachment of forests and a *tseri* ban, especially in some districts, have left farmers with small land holdings to cultivate, and whatever crops they cultivate are lost to wild animals (especially wild boars) whose populations are multiplying due to increasing forest cover and the legal protection given by the government. The religious estates (*chhozhing*) owned by *lhakhangs* and *goendeys* are left fallow because of the menace of wild animals. While we have understood *who* practice *tseri* cultivation, no study has been conducted to understand historical, socio-cultural and economic reasons *why* people practice it, and providing them alternative livelihood. Given the choice, no farmers would practice *tseri*. They are forced by natural and other circumstances to make a simple living. Their living standard has been deteriorated by taking away that source of livelihood.

Farmers in Wamling village of the Upper Kheng make fences around their fields with post and poles abundantly available in nearby forests. Fences protected crops from the wild animals

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<sup>10</sup> Shifting cultivated land.

especially deer, barking deer, wild boars and porcupines in the 1980s and farmers could then harvest most of what they had grown. Today, the forest policy prohibits the felling of trees to make such fences. In 1997, Aaken reported that 23 percent of Zhemgang farmers have stopped cultivating *chuzhing*, 39 percent *kamzhing* and 71 percent *tseri* due to the wild boar problem (quoted in Wangchuk et al., 2001; Wang et al., 2006b). If Bhutan is “greener than it has been in living memory” (Thinley, 2006, p.8), it also means the lands under cultivation is at its lowest. A lack of or inadequate land holding has been found as a determinant of poverty (PC, 2002, p.33).

Due to crop damage by wild animals, all types of land (privately owned) which are located closer to forests have been abandoned. These abandoned lands had turned into forests, thus bringing wild animals closer to the fields and settlements. Earlier, the former *tseri* land and vacant government land served as buffers between wild animals and human settlements, but the loss of these buffers has made depredations easier, and crops and livestock vigilance more difficult and expensive. In JSWNP, 21.2 percent of the households surveyed reported losing about 2.3 percent of their domestic animals to wild animals in one year (Wang et al, 2006a).

What is unequal about the wildlife-human tension is that FNCA 1995 prohibits a so-called a ‘pre-emptive strike’ against wild animals. In other words the law prohibits farmers from killing these wild animals, even wild boars, with crude weapons and methods. They can be killed only during the act of destroying crops or killing domestic animals. Killing outside their fields is punishable with imprisonment depending on the rarity of the species determined outside Bhutan. The law has technically converted areas a few meters away from farmland as safe sanctuaries for wild animals. The compensation scheme started in 2004 does not cover for crop damage by wild boars though the law gives protection similar to the endangered carnivores like tiger and leopards. Compensation is less than even the economic value of the lost animals.<sup>11</sup> The NCD’s acknowledgement that full

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<sup>11</sup> The government is only experimenting with a compensation system for the wild boar problem to stop farmers from killing them. The

compensation would run into millions gives the scale of damage the farmers all over the country have been bearing collectively (Kuensel, 2003).<sup>12</sup>

The present system of obtaining permits (for fuel wood and rural timber for house construction, repair, renovation, and extension) is bureaucratic and lengthy, wasting many precious man days of farm labour. For example, the process for obtaining rural timber permit for constructing a new house is as follows: a farmer first travels (for hours or a day) to his gup's office (lucky if the gup is in) to get a form. Whether he will get the form quickly will depend on his relations with the gup. After getting the form, he looks for a Dzongkha literate person to fill up the form with all necessary information. After the form has been filled, it is submitted for the gup's verification (gup takes his time). The form is then sent to the district headquarters for the dzongda's signature. The signed form then goes to the territorial division for the divisional forest officer's approval. The approved form is next sent to the forest range office for issuing the permit. The permit is then sent to the forest beat office where dates for tree-marking are discussed. After the end of this long process, the farmers are allowed to fell trees. The process for obtaining the forest products for rural consumption like firewood, poles/posts for fencing and prayer flags, and other produces are equally long, except it goes directly from the gup to the range, territory or parks offices whichever is applicable, by skipping dzongkhag administration. The above formality has been designed as a check and balance system for reducing the misuse of subsidised rural timber in some districts, but its application in all districts, irrespective of the local contexts, is a big harassment to the people.<sup>13</sup>

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compensation paid for horses dropped from Nu. 6,000 to Nu. 3,500, and from Nu. 10,000 to Nu. 7,000 for mules. The compensation for the jersey cows remained same at Nu. 7,500.

<sup>12</sup> NCD has initiated a study of the relationship between wild boars and wild dogs and their depredation of crops and livestock respectively, but the study's result may not be available for another two decades.

<sup>13</sup> Imagine a bereaved family member travelling to district headquarters for processing permit for prayer flag posts.

Sita Giri (2005) explains how the JSWNP is denying traditional livelihood to the Monpas of Jangbi, Wangling and Phumzur (40 households, 261 populations) in Trongsa. This indigenous people, often considered the original inhabitants of Bhutan, have a long association with the forests. Forests provided most of their needs through hunting-gathering activities, besides agriculture, which is not well-developed. Cane and bamboo handicrafts, and chirpine resin, are their main sources of cash income. The Monpas have managed their natural resources through indigenous institutions for centuries. The indigenous forest management institutions and systems controlled over-extraction of forest resources as well as equitable sharing of resources, and resolved conflicts arising from the use of forest resources among the villagers. The institution of *menyer* (village forest guard) has traditionally managed forests by ensuring adequate fuel wood and timber to everyone and enforcing *ridam* (restriction on forests appropriation) during summer months. Similarly, water was managed by a *chunyer* (water caretaker) who enforced the traditional water rights and distributed irrigation water, whereas *zhingnyer* (crop damage arbitrator) resolved dispute arising from the crop damage, declared farming season, enforced the season's regulation, and assessed crops damaged during the season. They followed certain restriction such as prohibiting harvesting of bamboo, cane, fern, mushroom, orchids and wild tubers during the closed season; allowing bamboo plants to complete their full life cycles; practising selective harvesting so that the best quality and required quantity of canes are harvested; collecting only edible young fern shoots; collecting dead, injured and deformed trees for firewood; imposing a ceiling (ten numbers) on a number of *pacha*<sup>14</sup> each household can harvest since *pacha* has a slow regeneration capacity; prohibiting fodder collection in summer (May to September) to ensure regeneration of fodder trees. Certain species of trees are cultivated and protected for religious, cultural and economic values. Abodes of local deities such as large trees, rocks, plants and trees, water bodies, and groves are not intruded. There are many sacred groves where it is a taboo to damage or cut trees. Coincidentally, most of the sacred

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<sup>14</sup> Shoot of canes consumed as vegetables.

groves form watersheds of these villages. The Monpas enjoyed free access to the forest resources. They practiced *tseri* cultivation extensively in their own land as well as in the government's land. They harvested honey and collected resins for cash income. The collection of timber and firewood for household use was easy. There was no restriction on appropriating these resources.

But Forestry Act of 1969, FNCA 1995 and now JSWNP have made resource appropriation difficult. Once the state became the owner of forests the Monpas have to obtain permits and pay royalties for fuel wood, timber and other products, which were once their traditional rights. *Tseri* cultivation was banned.

JSWNP has fulfilled its conservation objectives, but at the cost of the Monpas. The forest cover increased due to the ban on *tseri* and decreasing incidents of forest fires. The increase in populations of wild animals like wild boars, bears, monkey, sambar and deer increased crop damages, in addition to livestock predation. Not more than 60 percent of the Monpas practice agriculture and they depended mostly on handicrafts (57 percent) and resin tapping (23 percent) for cash income. But the ban on resin tapping by the park management has significantly reduced their income. In 1995 the park management revived the *menyer* institution with major modifications only to become the park's informants, instead of managing the community resources for the wellbeing of the people. *Menyer* became an outsider, responsible to the park, not to the community.

### **Politics of the Himalayan environmental crisis**

Protected areas have historical antecedents in the forests reserves created for timber extraction, royal games, and recreational hunting for colonial officials in Asia and Africa (Orlove & Brush, 1996). It was in the 1970s that the biodiversity protection (through protected areas) became a global concern, with a focus on preventing species extinction (*ibid.*, p.329).

The conservation biology and wildlife management academic courses in developing countries' are patterned after the courses of the industrialised regions like North America (Saberwal & Kothari, 1996). Because the parks and wildlife sanctuaries in North America do not have human settlements, the courses have a little

or no social science and humanities components to address human dimensions. A blind application of the first world's lessons in contexts of the developing countries did not work since millions of peoples derived their livelihood from forests under protected areas. The result is the continuous conflict between humans and wildlife and between local population and state institutions over the access to and use of these resources.

That Bhutan is a mountainous country makes the courses and science of conservation biology more irrelevant. Since only 9.1 percent of the world's protected areas classified by biome are located in mountains (Smethurst, 2000), ecology science is biased against the mountains and must be studied separately, because,

Mountains are elaborate environments characterized by complex topography, multiple ecological zones, and built-in biological diversity. These three characteristics are linked, and they play a role in understanding mountains. High places are topographically diverse: Changes in elevation, slope, and sunlight are compressed into relatively small areas, leading to spatially concentrated variations in temperature, radiation, wind, moisture availability, and soils. Physical distinctions create different ecological zones or altitudinal zonation-belts of terrain where climate, soils, and vegetation are similar. Typically, every 100 meters in elevation gained is equivalent to a 100 kilometer change in latitude (ibid., pp.38-39).

Smethurst's survey of 282 articles on the mountain study published in *Mountain Research and Development* journal revealed that one-third of the articles focused on physical process, followed by natural resource development and management (30.1 percent), and only 9.2 percent are about the human element of mountains, including local people. So the interaction between humans and mountains is poorly studied. Whether or not conservation students are trained to deal with the human dimension of ecological science is a big question. The mountains studies rarely discussed social and political problems, and any studies of human adaptation to mountain environments used a systems approach rather than a detailed study of human interactions with their environment. What is hampering the holistic understanding of unique mountains geography are differing interests of



academia, non-governmental organizations, the United Nations, and research communities (ibid.)

Smethurst's critiques of the Himalayan environmental degradation theory is of interest to Bhutan. The theory championed by Eckholm in 1975 – that Himalayan farmers are responsible for environmental catastrophes facing northern India and Bangladesh – is “simplistic, untenable, and unsupportable with any reliable data” which provides the basis for plain peoples to make claims on mountain peoples. The theory ignores the findings on how Japan and Switzerland have successfully managed common-property resources using traditional methods for hundreds of years. The reasons why this invalid theory persists, according to Smethurst, is because it serves powerful downstream interests by attracting substantial flow of international assistance for flood control projects, while on the other hand the mountain people bear strict environmental regulations through the creation of protected areas through international development assistance. He also notes that many problems facing mountain environments are result of states making claims on mountain nations, often disguised as development or environmental preservation.

Similarly, Aris (1990) wrote that though the popular conception of the Himalayan crisis and its causes has been challenged by a number of experienced researchers, a strong conviction of the crisis still exists, and the cures aimed at relieving only external symptoms are made by persons outside the regions who have little contact with the peoples within the region. The relations between the natural environment and the history, the spiritual values and attitude of the Himalayan people are totally neglected.

### **Conclusion and policy recommendations**

It is impossible to eliminate this old human-wildlife conflict, but it is possible to reduce it. If the conservation policy is mainly responsible for increasing the problem, then the problem can be mitigated by changing the conservation policy. This paper in no way denies the importance of the natural environment for the wellbeing of the country. It is the tangible wealth of the people,

what Phillips calls “an invaluable inheritance from the twentieth century” and “a vital insurance policy for the twenty first” (2003, p.5). Its importance has been overemphasised in our legislation, policies and programmes. This paper only suggests a small shift in our conservation policy to account for needs of the farmers and make their subsistence living a little easier. Sustainable development is possible even after relaxing the tight nooses of the conservation laws, though it may not necessarily increase forest cover.

The relations between the people and the government will be different in post-2008 Bhutan. The greatest threat to the environment will arise when the frustrated farmers know how to (mis)use their electoral power to gain access to their natural resources. This potential problem can be stopped by revisiting our ‘extreme’ conservation approach

If the national parks are to succeed, the concept of a park must be first planted in the minds of farmers who depend on forests for their living. It must begin through their initiatives while the government can provide financial and technical assistance. Their co-operation and participation is important for the long-term sustainability of the parks. The present protected systems (consisting of national parks, wildlife sanctuaries, nature reserves and biological corridors) have been established through a top-down approach without involving the local communities who rely on forests under the protected areas. There are many conservation failure stories in Africa where a similar approach had been used.

We need to engage the people in all aspects of the management and harvesting of park resources, and recognise their indigenous resource management knowledge and systems by incorporating it into our borrowed resource management system. No individuals, institutions, governments or donors like World Wildlife Fund (WWF) would care more about the environment than the local people themselves. They are the legitimate as well as effective guardians of forests, and they should be looked on as assets not as handicaps to conservation. Everywhere, indigenous peoples have been reliable allies of conservation. The local people would be more reliable than conservationists in protecting protected areas by transferring the ownership and accountability to them. At the moment, without rights to ownership and use,

communities are not encouraged to manage natural resources in a sustainable manner, while the government manages it to the point of denying the people their traditional rights.

We need to set up an institution similar to National Environment Commission (NEC) to look after the social and cultural impacts of development activities, and to train more social scientists. This will help our conservationists to deal with human population dynamics. The social aspect or social impact assessment is missing in our development programmes.

We need to establish an institutional framework to report, assess, and compensate damages to livestock, crop, death and injuries to human lives by wildlife. At the moment the whole country hears about these problems if the media reports them. The compensation must match the economic damage because the loss of domestic animals like horses or mules is more than the economic value of compensation schemes. They are almost as vital to community economic security as members of households. The current compensation scheme is less than the actual livestock damage, and distinction is made among predators. The current Integrated Community Development Projects that provide subsidised CGI roofing, barbed wires for fencing, solar panels etc., must be expanded to offset indirect sacrifice and loss on the part of farmers.

The present conservation legislation does not differentiate different groups of human users and applies a one-thumb rule which fulfils the principles of equality, not equity. The actual relation between local community and natural environment varies between societies, over time and across places. Moreover, there is a huge variation in levels of socio-economic development among regions, districts, gewogs, and villages and households, the direct results of unbalanced development (not necessarily by design but due to accidents of geography, resources, locations etc.) The conservation laws have to distinguish between the villages which have access to motor roads (where exploitation and misuse of subsidized rural timber is possible) and remote gewogs and villages (where the labour cost of felling of trees is more than the economic value of timber). Application of differential laws will achieve the principles of equity. The application of the same bureaucratic requirements for obtaining permits for fuel wood and

timber for rural house construction is harassing farmers of remote villages where there is no possibility of exploiting forests unlike in urban areas where rural timbers are sold illegally.

*Tseri* cultivation has been practiced by some of the poorest farmers in eastern and central districts. Helplessness, not choice, had forced them to rely on the *tseri* for their livelihood. If forests cover has increased at the cost of their traditional livelihood, alternative livelihood must be provided.

The rural villages have never been attractive to retain the farmers and as a result the rural-urban migration is continuing unabated. Relaxing the conservation policy is one way of making the rural life little attractive.

Eco-tourism is possible only if all three factors (the travel industry, tourists, and the conservation community) are present. The current tourism policy permits the exploitation of the conservation community. The earning from 'servitude' (sale of local produce, porter charge, and hire of mules for trekkers etc.) is the only financial benefit to the local communities. We may need to change the way tourism business, especially ecotourism like trekking and bird-watching, is done by empowering the local people to charge the tourists or investing a certain percent of the tourists revenue in respective community.

Until such times as guns replace bows and arrows, chain-saws replace axes, and motor roads replace foot paths all over Bhutan, Bhutanese farmers can be trusted to manage and use their own environment.

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