



# Development Progress



## Bhutan's success in conservation:

### Valuing the contribution of the environment to Gross National Happiness

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## List of abbreviations

<b>BFTEC</b>	Bhutan Trust Fund for Environmental Conservation
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization
<b>GDP</b>	Gross Domestic Product
<b>GEF</b>	Global Environment Facility
<b>GHG</b>	Greenhouse Gas
<b>GNHC</b>	Gross National Happiness Commission
<b>GNP</b>	Gross National Happiness
<b>ICDP</b>	Integrated Conservation and Development Project
<b>IUCN</b>	International Union for Conservation of Nature
<b>MoA</b>	Ministry of Agriculture
<b>NEC</b>	National Environment Commission
<b>NGO</b>	Non-governmental Organisation
<b>RGoB</b>	Royal Government of Bhutan
<b>SEA</b>	Strategic Environmental Assessment
<b>UN</b>	United Nations
<b>UNDAF</b>	UN Development Assistance Framework
<b>UNDP</b>	UN Development Programme
<b>UNEP</b>	UN Environment Programme
<b>UNPEI</b>	UN Poverty Environment Initiative
<b>WWF</b>	World Wildlife Fund (now Worldwide Fund for Nature)

# 1. Introduction

**'Bhutan has one of the most ambitious conservation plans the world has ever seen' (Crossette, 2007).**

Unlike in many developing countries, where the environment has remained a low priority for public investment and policy formation, the government of Bhutan has long placed environmental conservation at the core of its development strategy. All major development initiatives are evaluated thoroughly in terms of their environmental impact. The country therefore provides important lessons for the international community on how to mainstream environment into national development planning and how to balance the demands of globalisation with the importance of maintaining natural heritage and the environment.

This story of progress describes how a country committed to cultural and religious preservation has developed a successful approach to sustainable development and environmental conservation. Understanding how environmental progress has been made needs to take into account Bhutan's historical context and its overarching approach to development, as captured in the concept of Gross National Happiness (GNH).

## 2. Context

Bhutan is a small kingdom, approximately 38,000 km<sup>2</sup> in size, in the eastern Himalayas, bordered by India and China. It used to be one of the most isolated countries in the world: only in the 1970s did it begin to open up to outsiders. The country has gone to great lengths to preserve its Buddhist culture, and the monarchy has strongly promoted sustainability and the protection of the environment as top national priorities. Bhutan's commitment to sustainability is manifest through its unique development philosophy, which looks beyond gross domestic product (GDP) growth to measure progress, and in so doing values environmental sustainability as an integral component of development.

Geographically, the country is made up of extremely diverse terrains. The northern region of the country consists of an arc of eastern Himalayan alpine shrub and meadows reaching up to high mountain peaks of over 7,000 m above sea level. The Black Mountains in the central region form a watershed between two major river systems. Central and southern Bhutan are dominated by forests; most of the population lives in the central highlands. The climate varies with the altitude, from sub-tropical in the south to temperate in the highlands, with a polar-type climate in certain areas, with year-round snow.

Although Bhutan's economy is one of the smallest in the world, it has shown rapid GDP growth in recent years. In 2007, the country had the second-fastest-growing economy in the world, with an annual GDP growth rate of 22%. This owed primarily to the commissioning of a large hydroelectricity project and the export of this hydroelectricity to India. The importance of hydropower gives Bhutan an incentive to conserve the forests that protect the headwaters of the river catchments: the forest cover provides river water flow regulation and sediment retention, two essential ecosystem services on which hydroelectricity production depends (Zhongwei et al., 2007). Aside from the sale of hydropower to India, Bhutan's economy is based on agriculture, forestry and sustainable tourism. The rugged landscape, which has made the building of roads and other infrastructure difficult, and lack of access to the sea mean that the country has not had significant agricultural trade with its neighbours.

These contextual factors (centuries of isolationism, topographical extremes that hinder trade, large hydroelectric potential and a reliance on natural resources for livelihoods) have helped to support Bhutan's commitment to sustainability and environmental preservation and have led it to maintain one of the most intact ecosystems in the world. Bhutan's environment is not simply something to protect: it also serves as an important asset for development and poverty reduction.

## 3. Description of progress

Bhutan's environmental progress is deeply rooted in the country's overall development strategy. Its development philosophy captures the importance of environmental wellbeing, which is one of the four main pillars of the country's approach to development.

### 3.1 Bhutan's national development philosophy

The term 'Gross National Happiness' was first used in 1972 by Bhutan's former King Jigme Singye Wangchuck. The King made a decision to preserve Buddhist values and to retain a balanced relationship with the natural environment. Instead of measuring development on the basis of economic growth alone, GNH broadens the concept of development and includes the following four pillars:

1. The promotion of equitable and sustainable socioeconomic development;
2. The preservation and promotion of cultural values;
3. The conservation of the natural environment; and
4. The promotion of good governance.

GNH acknowledges the importance of economic growth, but also recognises that there is more to measuring development beyond this one indicator. Although it is not easy to capture and maintain moral values in development, Bhutan has benefited from this balanced and careful approach. The national philosophy has been the unifying force behind the country's five-year planning cycle and lies at the core of its long-term development vision 'Bhutan 2020: A Vision of Prosperity, Peace and Happiness'.

It is common practice for countries to focus on environmental protection through 'safeguarding', or mitigating the adverse impacts of development projects on the environment (Brown and Annandale, 2010). Bhutan instead maintains a strong commitment to environmental sustainability as a primary objective of the development process. This in effect turns development on its head: instead of applying environmental safeguards on top of development plans, Bhutan's approach has been to put environmental sustainability at the core of development and apply development strategies on top of this.

Bhutan's commitment to environmental sustainability can be observed through the following key indicators of progress:

- Proportion of land under protected area status;
- Proportion of land under forest cover;
- Creation of sustainable conservation finance;
- Progress towards mainstreaming environmental concerns into development;
- Reliance on hydroelectricity power for domestic use and export; and
- A 'low impact, high value' approach to tourism.

## 3.2 Specific outcomes of progress

### 3.2.1 Increasing proportion of land under protected area status

Bhutan created a system of national protected areas in the 1960s, which covered the majority of the northern and southern regions of the country. The system was reviewed several times between 1983 and 1991 with the help of the then World Wildlife Fund (WWF) Bhutan programme (Rinzin et al., 2009). In 1995, the protected area system was revised for better ecological representation and realistic management, with a total of nine protected areas (four national parks, four wildlife sanctuaries and one strict nature reserve).

Today, Bhutan has 10 formally protected areas which cover over 29% of the country (Table 1 and Figure 1). The 10th protected area, the Wangchuck Centennial Park, was added by the new government of Bhutan in June 2008 as a tribute to the unprecedented leadership shown by Bhutanese monarchs in conservation. The park has an area of 3,736 km<sup>2</sup> and is the second-largest protected area in the country after the Jigme Dorji National Park (MoA, 2008).

**Table 1: Protected areas of Bhutan**

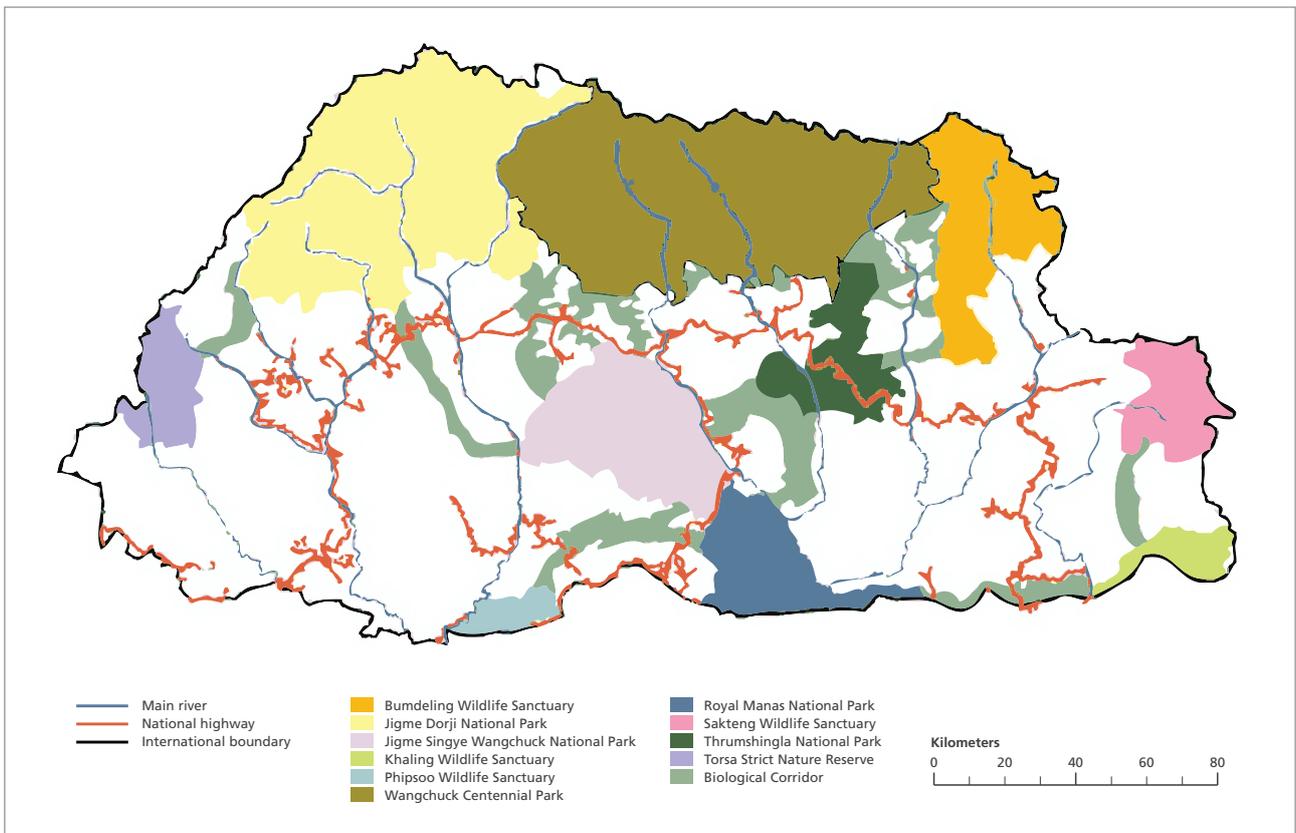
Protected area	IUCN category
Torsa Strict Nature Reserve	I
Jigme Dorji National Park	II
Jigme Singye Wangchuck National Park	II
Royal Manas National Park	II
Thrumshingla National Park	II
Bumdeling Wildlife Sanctuary	IV
Phipsoo Wildlife Sanctuary	IV
Sakten Wildlife Sanctuary	IV
Khaling Wildlife Reserve	IV
Wangchuck Centennial Park	unknown

Note: IUCN = International Union for Conservation of Nature.

Sources: MoA (2008); NEC (2008).

An additional 9% of Bhutan has recently been bequeathed as a 'Gift of the Earth from the People of Bhutan', increasing the nation's protected area coverage from 29% to 38% of its total land area. This establishes land for wildlife corridors between protected areas to create a conservation landscape that extends across the country in an effort to avoid habitat fragmentation.

**Figure 1: Bhutan's national protected areas and biological corridors**



Source: [www.bhutantrustfund.bt/parks-of-bhutan](http://www.bhutantrustfund.bt/parks-of-bhutan).

Unlike many developing countries, which tend to assign protected area status to certain regions and yet do little follow-up in terms of management and enforcement, Bhutan has made significant steps to ensure that the protected areas and the rest of the forest cover remain intact. Over the years, the government has issued several acts, decrees and policies that provide a legal framework for the measures taken by the parks' management to achieve conservation goals.

Each national park has created a management plan based on the government's legislative guidance. These plans include three basic management tools: zoning of park areas, law enforcement and integrated conservation and development projects (ICDPs). Park areas are zoned with the aim of developing ecologically and economically viable land use both in the park and in adjoining areas in order to protect wildlife in the parks and simultaneously meet the needs of resident communities without harming the parks' ecosystems. The system includes core zones, multiple use zones and buffer zones. The core zones are fully protected areas (no human-related use permitted); multiple use zones have the aim of encouraging socioeconomic development for the local community (normal farming activities are allowed, and the zones include areas for settlement, agriculture, forest utilisation and grazing); and buffer zones are areas established to provide an additional layer of protection at the margins of protected areas, where restricted use of natural resources is permitted (Rinzin et al., 2009). The government's overall policy objective is to integrate nature conservation into economic development plans, with an emphasis on communities living within the protected areas and the buffer zones (ibid).

### 3.2.2 Increased proportion of land under forest cover

The government has also focused on sustainable forest management. In the 1960s, Bhutan sought to develop its forests as a source of revenue by promoting the lumber trade. Timber extraction increased significantly in the 1980s. The government then decided to shift its forest priority away from revenue generation towards environmental protection to align it with the country's general development philosophy. The National Forest Policy of 1991 implemented restrictions on tree felling, created new afforestation programmes and declared all non-private forest land to be government-owned forest reserves in order to mitigate the adverse effects of commercial logging. In 1995, the National Assembly decreed that 60% of the country would remain under forest cover in perpetuity. Accompanying this decree was an amended 1995 Forest and Nature Conservation Act which supported the creation of new protected areas, asserted the protection of certain species and biodiversity conservation and created provisions for communities to continue to access forest resources and social forestry (Uddin et al., 2007; personal communication with Lam Dorji, 2010).

Given its uniquely strong commitment to environmental and ecological integrity, and the knowledge that natural resources serve as an immense asset that can be utilised sustainably for socioeconomic development, Bhutan decided to integrate its environmental ethos into its Constitution. Article 5 of the 2008 Constitution of the Kingdom of Bhutan (Box 1) takes the 1995 National Assembly decree one step further and stipulates constitutionally that a minimum of 60% of land must be maintained under forest cover in perpetuity. The Constitution mandates the Royal Government of Bhutan (RGoB) to ensure ecologically balanced sustainable development while promoting justifiable economic and social development. Article 5 also specifies the responsibility of all Bhutanese to protect the environment, conserve its rich biodiversity and prevent ecological degradation. The significance of this far-sighted constitutional pledge is intended to ensure the long-term sustainable use of natural resources.

#### Box 1: Bhutan's National Constitution Article 5 – Environment

1. Every Bhutanese is a trustee of the Kingdom's natural resources and environment for the benefit of the present and future generations and it is the fundamental duty of every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation including noise, visual and physical pollution through the adoption and support of environment friendly practices and policies.
2. The Royal Government shall:
  - (a) Protect, conserve and improve the pristine environment and safeguard the biodiversity of the country;
  - (b) Prevent pollution and ecological degradation;
  - (c) Secure ecologically balanced sustainable development while promoting justifiable economic and social development; and
  - (d) Ensure a safe and healthy environment.
3. The Government shall ensure that, in order to conserve the country's natural resources and to prevent degradation of the ecosystem, a minimum of sixty percent of Bhutan's total land shall be maintained under forest cover for all time.
4. Parliament may enact environmental legislation to ensure sustainable use of natural resources and maintain intergenerational equity and reaffirm the sovereign rights of the State over its own biological resources.
5. Parliament may, by law, declare any part of the country to be a National Park, Wildlife Reserve, Nature Reserve, Protected Forest, Biosphere Reserve, Critical Watershed and such other categories meriting protection.

Source: [www.constitution.bt/TsaThrim%20Eng%20\(A5\).pdf](http://www.constitution.bt/TsaThrim%20Eng%20(A5).pdf).

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Today, over three-quarters of Bhutan is covered in forests. Not only has this healthy forest cover been maintained over time, but also, according to the Food and Agriculture Organization (FAO) Forest Resource Assessment, it is increasing as a result of reforestation initiatives. Tree planting on degraded and barren forest land has been a longstanding policy activity of the Department of Forestry and has been a regular feature in all the five-year plans, with approximately 2,500 ha planted per plan (NEC, 2008). The FAO has estimated that, in 1990, Bhutan's forests (and 'other wooded land') covered 77% of the land area; by 2000, this had increased to 80%; by 2005, 81% (Meyfroidt and Lambin, 2010).

The forest cover provides an important resource for the rural poor in terms of fodder, fuel wood and building material. While the sector contributes a small share of the country's GDP, its indirect contribution to overall development and economic growth is much larger, as it provides protection and maintenance of soil and water. This is particularly important given Bhutan's high reliance on hydropower for domestic use and export, which contributes to 20% of national GDP (GNHC, 2010).

### 3.2.3 Creation of sustainable conservation finance

Along with national policy decrees and legislation, the Bhutan Trust Fund for Environmental Conservation (BT FEC), founded in 1991, has played an important role in forest conservation and management. This was the world's first environmental trust fund, established as a collaborative venture between the RGoB, the UN Development Programme (UNDP) and the WWF, with an original endowment of \$20 million to finance conservation programmes in Bhutan. Additional funding has since come from the Global Environment Facility (GEF) and the governments of Denmark, Finland, the Netherlands, Norway and Switzerland. In May 1996, it was legally incorporated in Bhutan under Royal Charter.

BT FEC has created an organisation that provides grants for long-term conservation, supporting environmental programmes of the government and a local non-governmental organisation (NGO), the Royal Society for the Protection of Nature. These grants aim to build local capacity to manage forests and protected areas, improve awareness and public support for conservation and integrate economic development with environmental conservation to ensure a sustainable future for Bhutan.<sup>1</sup>

BT FEC also helps to establish the necessary legal, institutional and technical frameworks to expand implementation capacity. In addition to international co-financing, it has leveraged external financial assistance for Bhutan-based conservation programmes in five priority parks. Since 1992, it has spent over \$11 million to build institutional and human capacity in the national parks.

### 3.2.4 Progress towards mainstreaming environmental concerns into development

As Bhutan's overall development ideology focuses on environmentally sustainable development and the interconnectedness of poverty, health, development and the environment, there has been a significant push to ensure environmental concerns are 'mainstreamed' or integrated into all plans and policies. In 2000, the Environmental Assessment Act was passed in order to create procedures for the assessment of potential effects of strategic development plans, programmes, policies and projects on the environment (essentially mainstreaming environmental concerns into development plans). In 2002, Bhutan introduced a Strategic Environmental Assessment (SEA) regulation (RGoB, 2002) which sits beneath the Environmental Assessment Act of 2000. This requires that any agency that creates, modifies or implements a policy (including the five-year plans) must perform an SEA before the proposal is adopted by the government.

Bureaucratic delays affected the implementation of the SEA regulation, which led to the National Environment Commission (NEC) identifying a lack of environmental mainstreaming as one of the main shortcomings of the 9th Five-year Plan. Given their scope, the national development plans are an important opportunity to integrate sustainability issues fully into the planning process. NEC suggested the mainstreaming of environmental issues at the planning stage of strategic plans, programmes and policies in all future five-year plans. In response, the 10th Five-year Plan (2008-2013) guidelines demonstrate a commitment to mainstreaming, considering the environment as a crosscutting issue that is interconnected with poverty reduction.

NEC's environmental mainstreaming activities have focused on capacity building in central government agencies, including the development of a training programme to help the writers of sector chapters of the 10th Five-year Plan. Training has included general awareness raising in line ministries that have not traditionally been used to thinking about environmental issues, and a specific requirement during training for participants to rewire sector objectives, targets and indicators as originally provided to them in the 10th Five-year Plan guidelines (Brown and Annandale, 2010).

<sup>1</sup> [www.bhutantrustfund.bt/](http://www.bhutantrustfund.bt/).

The Gross National Happiness Commission (GNHC), previously the National Planning Commission, which formulates overall development strategies and coordinates all sectoral policies and programmes, is now an active proponent of environmental mainstreaming. It has embraced the task of integrating environmental considerations into all sector development plans and is incorporating specific language to this effect in the GNHC Planning Manual, which guides sectors in the formulation of sector development plans for inclusion in national development plans. The 'Poverty Environment Mainstreaming Guidelines', which aim to 'put into perspective poverty and environment issues in the context of economic development', were completed in 2009. They aim to build on and integrate NEC's existing environment mainstreaming guidelines and will be included in the GNHC's guidelines as part of the overall guidance issued to line ministries in preparing five-year sector development plans in preparation for the 11th Five-year Plan (UN, 2009).

UNDP, along with the UN Environment Programme (UNEP), has made environmental mainstreaming a major component of the UN Development Assistance Framework (UNDAF) for 2008-2012. Australia has also agreed to participate in the mainstreaming activity, primarily through capacity building for government officials.

### 3.2.5 Reliance on hydroelectricity as a main driver of economic growth

Another indicator of progress is Bhutan's use of renewable resources as its energy base. Almost all of the electricity in Bhutan is generated by hydropower, resulting in one of the lowest rates of fossil fuel use of any country in the world.<sup>2</sup> Hydroelectric power generation is also closely linked to economic development and contributes positively to the country's balance of payments. The importance of the sector in economic development provides a clear link to environmental conservation and management.

This indicator of progress can be framed in terms of Bhutan's reliance on its natural resources as its base for economic growth, as opposed to a more industrial-based economy. Overall, more than half of the contribution to Bhutan's GDP can be attributed directly to sectors dependent on natural resources. This includes (as a percentage of GDP in 2008) agriculture, livestock, forestry 19%; hydropower 20%; tourism 2%; and mining and quarrying 2%.

Altogether, the above sectors represented nearly 43% of GDP in 2008 (GNHC, 2010): natural capital accounts for only 26% of total wealth in low-income countries on average (World Bank, 2005b). As such, Bhutan's natural resources are viewed not as something merely to preserve and protect but as an asset for development and poverty reduction. Investments in a sustainable natural resource base can contribute to poverty reduction in many ways, including through the vitalisation of the rural industry, which can create jobs, and the provision of assets and access for the rural poor (EuropeAid, 2009). Apart from hydropower, the above sectors which rely on Bhutan's natural resources centre on the actual livelihoods of the majority of Bhutanese citizens.

### 3.2.6 Bhutan's tourism policy

Bhutan's tourism development policy has a deliberately cautious approach. It is guided by the belief that uncontrolled tourism will overburden Bhutan's limited facilities and threaten the country's culture, values and environment. As a result, the government has adopted a policy of 'controlled tourism' and focuses on 'high value, low impact' as a guiding principle. Several policies, including the \$200 fee per head per day for cultural and trekking tourists, controlled pricing whereby tourists must come on a package tour, and access only to certain areas, are all designed to restrict accessibility to tourism while ensuring quality services (Scheyvens, 1999). While there is no specific quota for the number of tourists allowed in Bhutan, the volume is limited by the high costs of entry as well as by the capacity constraints of the tourism infrastructure.

Tourism was once a state monopoly, but it has developed into a semi-controlled/semi-liberalised market (Rinzin et al., 2007). This occurred after a major shift in Bhutan's tourism policy in the 1990s when the government decided to privatise the tourism business and open it up to domestic small-scale tour operators. Despite this, the government still has strong control of operating practices and monetary flows in the industry.

### 3.2.7 Other indicators

Bhutan has performed impressively on other indicators in terms of its commitment to environmental conservation. For example, access to safe drinking water and sanitation has improved greatly in recent years. The Bhutan Water Vision, the Water Policy and the Water Act were formulated to create an enabling environment for the efficient management of water resources. In 1990, only 45% of Bhutan's population had access to drinking water; this had increased to 78% by 2000; and to 93% by 2007 (RGoB, 2007).

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In addition, Bhutan has made progress on carbon neutrality. At the Climate Change Summit in Copenhagen in December 2009, the Prime Minister of Bhutan, Lyonchhen Jigmi Y Thinley, announced a commitment to remain a 'carbon-neutral' country. Summarising the declaration, Lyonchhen said,

'This is a declaration made by the Royal Government of Bhutan pledging that for all times to come, Bhutan will remain carbon neutral and that we will continue to follow and be guided by a strong sense of conservation ethics. That we will not produce GHG [greenhouse gases] in excess of what we can sequester but that we will also serve as a carbon sequestration tank for the world in general. And that we would like to be rewarded for this.'<sup>3</sup>

According to the declaration, the most recent estimate in terms of Bhutan's annual GHG emission is around 1.5 million tonnes of carbon, against the sequestration amount of 6.2 million tonnes), leaving a net of minus 4.7 million tonnes (Gurung, 2009).

### **3.3 Assessing progress against the criteria of scale, sustainability and equity**

Bhutan's commitment to the environment occurs at the national level, and is likely to be sustained over time given that environmental integrity is embedded fundamentally in its overall approach to development. Bhutan has done more than simply safeguard the environment against destructive development and economic projects. Rather, it has used environmental sustainability as a starting point for development. The indicators of environmental progress are therefore likely to be sustainable over time. Moreover, BTFEC enables a sustainable financial source that can continue to support Bhutan's environmental outcomes.

Research has been carried out to examine how conservation policies affect the everyday life and economic activities of local communities so as to be able to assess how equitable conservation policies have been in their application. The study by Rinzin et al. in 2009, which included a field survey involving 210 local residents in two national parks, indicates that there is significant support for nature conservation in local communities. This is despite the fact that conservation policy and park regulations have significant effects on their economic activities, including through restrictions on the use of forest products, bans on agricultural practices such as shifting cultivation on which communities have depended historically for their livelihoods and the loss of crops to wildlife.

Bhutan's conservation policy does, however, make an effort to protect and incorporate communities and their livelihoods into policy. The displacement of resident local communities from park areas is not allowed so, if there is a group of communities within the core zone, further zoning of land use within that zone is required. The concept of zoning has tried to address specific conditions, such as traditional rules on grazing rights and the communal use of forests. Moreover, ICDPs are used as a development tool to enhance the socioeconomic potential of local communities living in park areas. National policy is also increasingly aiming to include communities in national park management.

However, issues still exist, and the livelihoods of local communities are often impacted negatively by the conservation policies enacted by the government. One result of Bhutan's growing protected areas system has been an increase in human-wildlife conflict, with wildlife threatening local residents' livelihoods and necessitating supplements to their farm income (Gurung and Seeland, 2008). Government compensation appears to be inadequate, however (Rinzin et al., 2009): it is paid only for livestock that have been killed by endangered species, with none given for crops damaged or livestock killed by other predators. Interviews with local people and some park officials have shown that there is no institutional funding mechanism in place – the current inadequate compensation scheme is funded entirely by private donations from foreign individuals, and administrative procedures appear to be complicated and lengthy (ibid).

While there are some economic benefits for rural communities as a result of conservation, such as from investments in ICDP activities and the development of services and employment opportunities provided by the parks, communities are facing constraints to their economic activities owing to conservation rules and regulations. The long-term success of conservation goals may not be achieved fully if an appropriate compensation scheme is not worked out to address the adverse impacts of conservation policies on rural livelihoods.

Ecotourism has been proposed as one method to help mitigate such potential adverse impacts (Gurung and Seeland, 2008). However, to date, most of the benefits of ecotourism seem to have gone to the government and urban elites (Scheyvens, 1999). A reorientation of the tourism industry to provide more direct opportunities for local communities to get involved, alongside sustainable financial compensation mechanisms, would help to ensure that conservation policies do not unfairly impact the lives of communities living in and around protected areas.

<sup>3</sup> [www.bridgetobhutan.com/blog/?p=871](http://www.bridgetobhutan.com/blog/?p=871).

## 4. Drivers of progress

There are several factors in explaining Bhutan's strong ethic in environmental preservation. These include both the contextual factors that encouraged the country to embark on its unique path towards sustainable development, and specific factors of progress that have been instrumental in Bhutan achieving key environmental outcomes.

### 4.1 Contextual factors

Several contextual factors have helped to inform and guide the unique sustainable development pathway that Bhutan has chosen. The country's rich cultural background and natural heritage, its history of isolationism, its low population, its lack of arable land (extending to only 4-16% of the country), its extremes of terrain and resulting lack of infrastructure and its natural endowment of hydropower potential have all helped to shape this approach to sustainable development.

In particular, Bhutan's late modernisation enabled it to remain on a more subsistence-based track and prevented its rich natural resource endowment from being exposed to external interests (personal communication with Lam Dorji, 2010). Moreover, this late entry into development allowed Bhutan to learn from the mistakes of other countries, particularly in terms of the management of natural resources. Seeing the immense pressure development placed on natural resources in other South Asian countries, the country applied lessons learnt to its own context (ibid).

Bhutan's religious context is another important factor that has encouraged strong environmental stewardship (personal communication with Bruce Bunting, 2010). Buddhism has a major influence on the lives of the Bhutanese and appears to have been a strong influence on attitudes towards nature conservation (Rinzin et al., 2009). According to a survey conducted in two of Bhutan's protected areas, most survey respondents said that they saw the forests as a valuable source of spiritual health, and that this was one reason necessitating their conservation (ibid).

Other important factors that have been important in shaping Bhutan's approach to development include the recent democratisation and decentralisation of the government, giving rise to more opportunity for creativity and effective governance. Additionally, the small size of the country allows for greater intimacy and accountability (Europe Aid, 2009).

### 4.2 Specific factors of progress

One element instrumental in Bhutan's success in environmental conservation is **national leadership and ownership**. National leaders could have oriented the economy towards quick profit-seeking activities and viewed forests as an immediate source of foreign currency, but instead foresaw their value in terms of ecosystem services and the preservation of culture. Bhutan's national leadership has also ensured that conservation measures are integrated into all national policies and measures. In particular, King Jigme Singye Wangchuck was instrumental in ensuring national prioritisation of conservation. His development philosophy assigned high value to environmental preservation and it was during his reign that the Forest and Conservation Act was enacted and many components of the national protected area system were established (personal communication with Lam Dorji, 2010).

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Bhutan's unique development philosophy, stable governance and national leadership situation has helped to create a strong sense of ownership. There is evidence of this when observing the country's selective approach to donor relationships and more generally in the clear and determined path created in order to reach the **national development vision of GNH** (EuropeAid, 2009).

Another factor that has been key in Bhutan's progress has been the **inputs of the international community**, in particular international donors and WWF. WWF has worked with the government to establish sustainable natural resource management and the protected areas system properly.

The reliance on **hydroelectricity** as an economic driver has also been an important component in the preservation of natural resources, as it simultaneously necessitates a sustained natural resource base and avoids more polluting energy sources. The economic benefit of hydroelectricity has helped to secure Bhutan's environmental and developmental goals simultaneously. Related to this, trade with neighbouring countries such as India has created a demand for this form of power generation, which has led to subsequent investment in the conservation of forests that protect the headwaters of the river catchments.

## 5. Conclusions

The Namibia case adds to the weight of evidence that, over and above its intrinsic ecological benefits, conservation management has the potential to generate real wealth over a long time horizon and also create real gains for disadvantaged groups.

### 5.1 Key lessons

- Bhutan's story of progress highlights the importance of cultural and spiritual heritage in shaping how a nation governs its natural environment and, more broadly, how it approaches development. Through strong national leadership, and by learning from other countries' mistakes in natural resource management, Bhutan has achieved a sustainable path towards development which relies on its natural resource base as an irreplaceable asset. Bhutan's unique development path has broken the mould for how progress can be framed and has thereby created value in environmental services that are often overlooked and undervalued in more conventional/neo-liberal approaches to development.
- Bhutan offers an important lesson to the international community in terms of how it has been able to open its borders and engage with the international community while still maintaining its rich natural heritage and pristine environment.

### 5.2 Challenges

- Several commentators have highlighted the need to strengthen the role of community participation in nature conservation policies in order to ensure that rural livelihoods are not impacted adversely.
- Sustainable financial compensation mechanisms would help to ensure that conservation policies do not unfairly impact the lives of communities living in and around protected areas.
- Finally, a reorientation of the tourism industry in a way that provides direct opportunities for local communities to get involved and benefit from this sector has yet to be secured.

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