Environmental Preservation and Development in the Kingdom of Bhutan: Utopia or Inspiration?

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Understanding the context: Introduction to Bhutan and Gross National Happiness

Bhutan is unique, in many ways. It covers an area of 38,394 square kilometers, with a population of only 700,000 -79% of whom live in rural areas- and a very low population density of about 16 persons per square km[1]. It is located in the high mountain range of the Himalayas, landlocked by the Asian giants of India and China; the terrain is rugged[2], with alpine peaks to the north and subtropical plains in the south. Bhutan, as of now, has one of the highest percentages in the world -almost 50%- of managed protected areas[3], and it is the last safe haven of Tibetan Buddhism, whose principles profoundly shape every aspect of social, political and even economic life. Formally a Kingdom, the country has enjoyed the leadership of an enlightened royal family, which from the early 1950s has guided Bhutan through an intense process of nation-building and political reforms. By enhancing decentralization and promoting people's

1 CIA World Factbook 2011; European External Action Service, "Country Strategy Paper, Bhutan 2007-2013 and mid-term review 2011-2013", European Commission and EC Delegation to India, Nepal Bhutan, Brussels / New Delhi, April 2010, both based on official Population & Housing Census of Bhutan, 2005.

2 Only about 10% of land surface is used for permanent cultivation or human habitation – source UNCTAD 2011 UNCTAD, (2011) Who is benefitting from Bhutan's liberalization in Bhutan? UN Publications, New York / Geneva.

3 Under different categories, i.e.: 27,4% total operational parks; 12,2% not yet operational Torsa Strict Natural Reserve and Khaling Wildlife Sanctuary; 9.7 % total biological corridors; overall area protected: 49,1% – source: Royal Society for Protection of Nature (Bhutan) (2010), Thimphu.

representation and participation in the political process, the royal family has literally "imposed" the transformation of the country from a theocracy to a young democracy, which culminated in the adoption of the first democratic constitution and first direct parliamentary elections in 2008.

Political reforms have been high on the agenda of the country's leaders in the last two decades, but economic development has also been a significant target, given the [continuing] low living standards of many Bhutanese, 24% of whom live below the absolute poverty line[4]. In this regard, since the early 1970s Bhutan has conceived a distinctive developmental policy aiming not just at increasing locals' purchasing power or national economic output (e.g. GDP), but more importantly at improving the general quality of life, the "happiness" of its people: the policy, commonly referred to as "Gross National Happiness" (hereinafter GNH), is then based on a holistic approach that targets "citizens' satisfaction" in every relevant domain of their lives both as individuals and as members of society. It constitutes the rationale of every aspect of Bhutanese governance and tends to inform the very essence of Bhutanese modern national identity.

Centered upon the belief that all human beings seek happiness in one way or another, the concept promotes collective happiness of the whole society as the ultimate goal of development. Deeply influenced by Buddhist philosophy which values the interconnectedness of and harmony among all sentient and non-sentient components of the universe, GNH maintains that true development of human society takes place when both material and spiritual advancements complement or reinforce each other. In other words, it states that the means must always be considered in terms of the end, and therefore every step in material development must be measured and evaluated to ensure that its benefits are not just short-term, financial ones. Real development is in fact achieved only through a sustainable balance between economic, social, emotional, spiritual and cultural spheres. GNH emphasizes that the country's present pursuit of development should not cause misery to future

4 National Statistics Bureau, Poverty Analysis Report 2007 (2007), Royal Government of Bhutan, Thimphu.

generations, other societies, or to other sentient beings, as understood in the Buddhist concept.

The government of Bhutan claims to operate through strict adherence to the four pillars of GNH which include equitable and sustainable economic growth, preservation and promotion of local culture, promotion of good governance in the form of democracy and, last but not least, conservation of the natural environment.

This paper intends to briefly analyze the core significance of Bhutan's environmental policy, which, as said, constitutes one of the four pillars of GNH, with a particular focus on forest management. Local policymakers have done much to actively preserve the local ecosystems by creating a regulatory framework that is undoubtedly unique in its scope and stringency. GNH in general and its rigid set of environmental regulations in particular has, up to now, been a successful but very "Bhutanese" phenomenon, being closely linked to and defined by the local value system, animist and Tibetan Buddhist beliefs, geographical features, limited size of its population and primordial stage of economic development. Although highly desirable in principle, then, it is indeed unlikely, as of now, to see identical policies transferred and applied to the same extent to different geographical, cultural and economic contexts especially in the West, without requiring structural paradigm shifts and imposing currently unachievable constraints. That, however, does not undermine the value of Bhutanese environmental protection as a unique model and precious source of inspiration: gradually, single aspects of these policies -such as qualitative assessment of development and proper, comprehensive valuation of environmental resources and their interconnectedness- could be adapted to different dimensions, hopefully distributing their concrete benefits far beyond the Kingdom of Bhutan.

Environmental preservation: Tradition and modern frameworks

Bhutanese have always revered nature, even before the advent of Buddhism in the 8th century A.D. The ancient Bon religion, which preceded Buddhism in the area, worshipped natural elements and sites as abodes of spirits, gods and invisible beings. The spread of Buddhism further reinforced the relevance of the environment and the close spiritual connection between society and nature: the fundamental principle of "*tendrel*" states the interdependence of all

phenomena, intricately entwined by a complex network of spiritual relations, and the importance of maintaining their harmony to guarantee universal order. Nothing is permanent and nothing exists independently; all is in constant flux and at the same time united in synergy. The Bon and Buddhist traditions combined represent the foundations of the profound respect that, throughout the centuries, Bhutanese have spontaneously paid to the environment as the realm of spiritual entities, each playing an important role in a wider system.

This solid cultural background, together with geographical and political isolation, contributed to the resilience of these principles until globalization and modernization started posing a new threat, pressing the local authorities to formulate new measures to protect the local "way of being". I n 1972 the then king Jigme Singye Wangchuck, the fourth of the ruling dynasty of monarchs, conceived the idea of Gross National Happiness (GNH): a philosophy, as well as a concrete set of policy guidelines, proposing a shift towards a different way -both quantitative and qualitative in nature- to evaluate, measure and pursue sustainable human development and wellbeing. Thereafter, protecting the natural ecosystem of Bhutan became, not only a moral obligation imposed by local cultural traditions, but also a crucial governance target—hence an official administrative requirement—and a necessity urged by modern science.

The GNH recognizes that GDP and other similar measurement methods fail to address the issue of wide, "social" costs and of the interdependence of natural ecosystems, as they are limited to a private-cost perspective and oblivious of all the consequences that occur beyond the immediate production-consumption dimension. Spiritual and ethical considerations aside, what recent preservation frameworks ensure is actual consideration for the many wide-ranging, intangible but still economically worthy services that nature delivers, including, for instance, people's general satisfaction and wellbeing deriving from preserving the "existence value" of nature. In the Bhutanese view, development and environmental preservation must be pursued simultaneously, as they complement each other and are indeed equally relevant: in order for growth -in the holistic sense of the term- to be sustainable, resources must be managed and used wisely, in consideration not only of their immediate market-value, but of the wider set of benefits they may distribute to current and future generations. It is this imperative to

adopt a perspective that transcends the mere financial "here-and-now", that addresses not only the particular needs of the single parties of a contingent commercial transactions, but values wider ranges of benefits, incorporating the whole society, and taking into account the legacy to future generations.

It must be noted that this approach is not just an idealistic pursuit for Bhutan, but is perceived as an actual, very "economic" necessity, an attempt to avert the possible tragic economic consequences of narrower, income-maximizing approaches which ignore the costs of factors like land degradation, deforestation, improper waste disposal, climate change or abuse of chemicals in agriculture.

Use of natural resources

Resource management in Bhutan, in general, aims to consider all the different "demands" existing for the same resource, and protect the full value of any service, tangible or not, immediate or future, that nature may deliver.

Half of the Bhutanese population depends on subsistence farming[5]; they, more than anyone else, are aware of the importance of nature's preservation. Soil is needed for crops, water for irrigation, cattle for milk, manure and meat; forests supply timber, fuel, forage, traditional medicines and leaves shed by trees are used as natural fertilizer: these are all services that are provided spontaneously thanks to an intact ecosystem. Traditionally, farmers and herders have had customary rights to access natural resources: ancient rights must now be integrated with modern environmental regulations to promote sustainable use of resources without hampering necessary growth.

On a national scale, resources are indeed used for socio-economic development: forests are grown for carbon sequestration, but also harvested for the products they bear, and cut for wood (timber). Water of major river systems is piped to households and industries, and represents a vital economic resource for the nation, which generates most of its income in the form of hydropower, produced with the technical assistance of and then largely exported to

5 The agricultural sector accounts for 17% of Bhutan's GDP – source: CIA World Factbook.

neighbouring India. Tourism is crucial for the country, which implies that natural beauty is a true "asset", while exposure to nature is viewed as a basic necessity for locals as well, since it is considered an important factor in enhancing wellbeing and lowering the incidence of heart disease and depression[6].

Tourism alone may have the potential of completely changing the economic scenario of the country, but, in consideration of GNH's vast array of equally important components, the sector is managed according to a "low environmental impact, high value" criterion: visitors, who are heavily taxed (up to 220 USD per day) and screened through expensive and cumbersome visa procedures, are accepted only for limited stays organized through local tour operators several weeks in advance. The sole access point to the country for foreign tourists is the international airport in Paro, but only the national airline (Druk Air) is authorized to connect Bhutan with very few selected cities in neighbouring Asian countries[7]. There is therefore very limited choice for consumers and no relevant competition, and that determines a scenario in which, essentially, only upscale visitors can afford the trip; they usually tend to be environmentally conscious groups or individuals who are ready to pay the significant "travel costs" to enjoy the environmental and cultural amenities of Bhutan.

The most significant of such amenities, coveted by visitors and cherished by locals, is the large, pristine forest coverage, which more than other resources has defined the Bhutanese identity and the local socio-economic structure for centuries.

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6 Louv, R. (2005) Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder, Algonquin Books.

7 Druk Air only connects Paro with Bodh Gaya, New Delhi, Kolkata, Guwahati, Bagdogra / Siliguri (India), Bangkok (Thailand), Dhaka (Bangladesh), Kathmandu (Nepal). Druk Air's fleet includes overall 3 planes as of July 2010 (2 Airbus 319-115 and 1 ATR 42) - source: Druk Air Official Website www.drukair.com.bt.

The case of forest management

Around 73% of Bhutan's territory is covered with forests[8], most of which lie within the o 49% of land officially proclaimed national park, natural reserve, wildlife sanctuary or biological corridor[9]. The role of forests is crucial in the development of the country and in maintaining a diverse ecosystem, but the pressure on them is increasing exponentially: the road network is expanding, the demand for timber for urban construction is rising, together with industrial dependence on wood[10] and human settlements and livestock inevitably exert a significant influence too, with high danger of over-extraction of timber, firewood and non-wood products.

Forests in Bhutan are managed either as "Forest Management Units" (FMUs), i.e. for commercial logging and subsistence of local communities, or as protected areas for conservation.

The latter tends to protect the tangible and intangible values that the forest ecosystem offers. Most importantly, it allows opportunities for ecotourism and recreational activities to emerge, and maintains water resources, a crucial function considering the importance of hydropower for the economy of the country: forests, in fact, keep groundwater reservoirs full and naturally filter river waters. Safeguarding the ecosystem ensures that these cycles can actually renew themselves. The principle of "sustained yield" drives the management of FMUs: using a reference to the banking system, this approach essentially guarantees that only "interests" are

8 64% excluding "scrub" forest – source: National Statistics Bureau (2007), Government of Bhutan.

9 Pradhan, R., Royal Society for Protection of Nature (Bhutan) (2010), Bhutan's natural heritage: a legacy of the monarchs, Royal Society for Protection of Nature, Thimphu.

10 46% of registered companies in Bhutan are "forest-based" against a mere 17% of "agriculture-based" – source: Forest resources Development Division (2005), Forest Resources Potential Assessment for Bhutan Part II: Results, in collaboration with Bhutan-German Sustainable RNR Development Project, Thimphu.

harvested while the "capital" is left standing[11]. In fact, the amount of timber taken from the forest over a year must be equal to or less than the forests' annual growth, which is strictly monitored by local authorities. Only 14% of Bhutan's land produces timber suitable for construction, whereas the rest is protected, or too steep, sparse or young to harvest. The sustainable yield method guarantees around 260,000 cubic meters of timber for construction and 530,000 to be used as a household energy source[12]. Wood is still the primary source of energy in Bhutan: in 2007, 725,000 tons of firewood were consumed, 75% of which constituted residential use, while the rest was used by the industrial, agricultural and service sectors. Given the ancient Tibetan Buddhist traditions, a relatively small but consistent quantity is also used for cremations.

Rural residents tend to consume up to 10 times the amount of wood of urban residents, and other variations occur according to the climate of each region of the country; timber and firewood from FMUs are allocated and supplied at subsidized rates to rural residents. To guarantee self-sufficiency and equitable distribution of the primary source of energy, wood logs cannot be exported, but are auctioned by the Natural Resources Development Corporation Limited for use within the country; export of value added wood products (e.g. furniture) amounts to Ngultrum[13] (Nu.) 300 million. The country, due to the local environmental constraints, in addition to the high cost of labour and transportation is currently importing around Nu. 125,000 million worth of wood each year[14].

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11 Royal Society for Protection of Nature (Bhutan) (2010), Bhutan's natural heritage: a legacy of the monarchs, Royal Society for Protection of Nature, Thimphu.

12 Ministry of Agriculture (2009), Guidelines for agricultural debris burning or pile burning, Royal Government of Bhutan, Thimphu.

13 Currency of Bhutan since 1974, equal in value to the Indian rupee.

14 National Statistics Bureau (2007), Statistical Yearbook of Bhutan 2007, Royal Government of Bhutan, Thimphu.

Forest economy and poverty alleviation

Forests play an important role in alleviating poverty, which is, in Bhutan, a mostly rural phenomenon, with around 40% of rural inhabitants living below the poverty line. Many poor Bhutanese do not own private land and depend largely on forest resources, which are not limited to timber and firewood, but include many of the so called "non-wood forest products" (or NWFPs) such as edible wild foods, traditional medicines, materials for tools, crafts, dyes, fodder etc.

To avoid "tragedies of commons", overexploitation and poaching, the Department of Forests has recognized the role that a certain degree of local ownership can play as a strong incentive for people to properly take care of their resource base. Since 2006, in fact, 10 or more households can apply for the so-called "Community Forest Management Group" and be allocated an exclusive portion of forest to use for wood and non-wood resources. Under this program, communities are trained in sustainable forestry, and their activities periodically surveyed by government officials. Each area allocated depends on availability and intended use, but is usually capped at 2.5 hectares per household. This programme, as of July 2007[15] included 103 community forests managed by 5662 households covering 0.5% of Bhutan's forest, but by 2013 the Government plans to extend it to about 8%, allowing up to 70% of the rural population to actively participate in forest management, benefit from much needed resources in a sustainable manner, improve their livelihoods and contribute to overall environmental conservation.

Access to forest resources

In general, access to forest resources in Bhutan, until 1969, was not regulated, thus being de facto free and open, or regulated according to traditional management systems many of which were based mainly on spiritual principles and religious beliefs.

To avoid overexploitation, regulations were introduced and evolved with an inevitable heavy focus on timber: since the 1969

15 Forest Resources Development Division (2007), Proceedings of the National Workshop on Development of NWFPs in Bhutan, Department of Forest, Ministry of Agriculture, Royal Government of Bhutan, Thimphu.

Bhutan Forest Act, its harvesting, for any purpose, has to be authorized by Divisional Forest Officers, who conduct assessments and forward recommendations to the Directorate General of the Department of Forests at the Ministry of Agriculture in Thimphu, where requests are further evaluated on the basis of sustainability principles, and where a precise allotment and royalties plan is applied, in case of approval.

Regulatory systems become more difficult to conceive and implement in regard to non-wood forest products, given the number of species and products used for a wide range of purposes across remote rural areas. The conclusion reached by the authorities has been to allow free harvesting of NWFPs for subsistence, but to conduct resource assessment and issue proper authorizations for any NWFP to be marketed. The reality is that inventory and resource assessments of NWFPs is today extremely complicated and expensive for the Bhutanese administration; hence, de facto, the Department of Forests is forced to overlook small scale harvests for local markets, focusing instead almost exclusively on relevant commercial operations of wider impact. The total value of non-wood forest products is impossible to calculate, as it almost always dissolves into the vast, hard-to-monitor "informal" economy, occurring mainly at rural, household level. Preserving the ecology of such resources is indeed important, as it is important to safeguard the livelihood of those who rely on them. Bhutan is at present engaged in constant consultations with international researchers and experts to improve its assessment and inventory methodologies in this field.

Conclusion

At present, environmental protection as a pillar of Gross National Happiness can be considered successfully implemented in Bhutan, and unique in terms of scope, thoroughness and enforceability. It must not be forgotten, however, that this represents a phenomenon closely related to the specificities of the local context.

Its peculiar geographical features distinctively mark Bhutan's ecology, making strong environmental preservation a concrete necessity more than an abstract exercise of virtue. Conservation's roots go deep into ancient spiritual and religious traditions that, over centuries have reinforced the local reverence for nature, representing a solid foundation for modern legislative frameworks.

An extremely small population and its very low density favours a sustainable control of the potentially distortive dynamics of economic development, especially in its current initial stage. It remains to be seen how these frameworks will be able to withstand the increasing pressure that, despite the "advantages" of local demography, modernization will inevitably impose. Urbanization, desire for economic advancement and for better standards of living are tendencies that even a small society will express more and more, especially considering the increasing influence of global cultural and economic trends, which have now started penetrating the once coveted curtain of isolation that "protected" the country for decades. It must in fact be considered that TV and internet services were introduced in the country only in 1999, and tourism allowed, although with strong restrictions partly still in place today, only in 1974. This new found openness may pose a threat to the future resilience of the cultural and religious base on which most of the policies rely.

The current effectiveness of environmental policies is undoubted, but the capability of ensuring the maintenance of the natural capital while at the same time providing for people's growing needs in a sustainable fashion, will have to monitored.

For these reasons, it is probably unlikely to see these policies exported elsewhere and applied to the same extent in contexts based on different value systems, undergoing different stages of development, dealing with other demographic and geographical challenges. But the core principles of Gross National Happiness and environmental conservation cannot be ignored. GDP and other merely quantitative, financial indicators have fallen short of considering the many qualitative factors that contribute to truly sustainable progress. Moreover, even within a merely economic perspective, they have failed to account for all the values and costs that exceed the limited, "here-and-now" dimension of immediate consumer-producer transaction.

Nature does provide many valuable services spontaneously, but their exploitation cannot be without liabilities, their renewability can't be assumed or taken for granted, as it instead depends on sustainable approaches that respect natural cycles and allow them to perpetuate. All interventions on said natural cycles and ecosystems have chain effects that can reverberate across space and time,

affecting, and literally "costing" present and future generations immensely.

In dealing with natural resources, short-term perspectives limited to one's own backyard or private interests are not sustainable any longer, because it is now clear that consequences are usually de facto *un*-limited, weighing heavily on the whole global society.

As of now, the merits of GNH and its model of environmental protection transcend figures, indexes and borders: while concrete applications may differ in depth and scope, it seems inevitable that, sooner or later, this fundamental paradigm shift will reach far beyond the pristine Himalayan valleys of Bhutan.