

Environmental conservation in Bhutan: Organization and policy

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Abstract—This article is about Bhutan's success in conserving natural resources and the environment through its organizational and public policy perspectives. At the same time, it analyses the weaknesses and strengths of Bhutan's policy and organizational management in environmental conservation. The integration of the sustainable development approach and the Mahayana Buddhism philosophy has led to the creation of the Gross National Happiness (GNH) which is an important concept that drives the Bhutan government to pay more attention to environmental protection. The close relationship between the Bhutanese and the environment is in accordance with the old beliefs and the influence of Buddhism has contributed to the successful implementation of the government's environmental policy. In addition, the driving force behind the environmental policy has been to design an organizational structure that promotes public participation in order to truly reflect the problem and contribute to sustainable solutions. Integrating indigenous ideas with international principles and building public participation, which indicates Bhutan's success in driving environmental policy, is an important finding of this work.

Keywords: Bhutan, environmental conservation, environmental policy, public participation

Introduction

The land of the Thunder Dragon is a state located in the eastern part of the Himalayas. The country currently has a total area of 38,394 square kilometres. The northern border is adjacent to China, while

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the southern, eastern and western borders are adjacent to India. Bhutan, therefore, is a small, landlocked country (Singh 1972). Most of Bhutan's area is highlands and valleys. However, the country is rich in natural resources, especially rivers. Bhutan's climate is influenced by the Himalayas, which can be classified into three climatic zones: the Great Himalayan Zone, the Inner Himalayan Mountain and the Valley Zone, and the Southern Foothill Zone (Fraser, Bhattacharya, and Bhattacharya 2001). However, this country has a flat area, which contributes to its agricultural system, especially in the southern and eastern regions. One of the characteristics of Bhutan is inaccessibility because of geographical factors such as dense forests, high mountain ranges and climatic conditions such as a severe winter and heavy rainfall. All of these factors make the country inaccessible with poor connectivity from the east, west, and also from the north. Biodiversity is another important feature that has made Bhutan different from other countries, while on the other hand the Bhutanese way of life which is to live in harmony with nature has created a unique identity for the country.

With the physical geography of Bhutan, the economic characteristic of the country remains in agriculture, while the proportion of hydropower development is likely to increase. Bhutan's economic growth is not progressing as it should do based on the World Bank's economic figures. However, with its policy and geographical characteristics, the economic policy guidelines are different, promoting development alongside the conservation of natural resources and the environment. The development policy of this country has led to this research being focused on environmental preservation through institutional policies and structures. Moreover, Bhutan is known for negative carbon emissions. Bhutan has been able to achieve the Kyoto Protocol goals for reducing carbon emissions within the country and improving the forest areas. This situation of Bhutan is different from many countries. These reasons attract me to do research on how Bhutan is able to achieve negative carbon emissions through a public administrative framework that nobody has ever studied before.

This article uses a qualitative research methodology to study and analyse the effects of sustainable development and public participation through policy setting and organisational structure. The research is based on secondary sources such as textbooks, journals related to

Bhutan and environmental issues, and information related to Bhutan prepared by International Organizations. The analysing method of this paper is based on documentary reviews that can reflect the environmental policy of the country. The limitation of this study is the lack of in-depth interviews with public policy analysts in Bhutan. It is expected that this study will bring a better understanding of Bhutan and how the environment is conserved in this country.

**Sustainable development and Gross National Happiness:
The impact on Bhutanese environmental policy**

After many cross-border ecological problems, the environment has been increasingly watched and examined by international societies and academic circles, especially with studies on international environmental cooperation issues. The focus is on the large shared natural resources of mankind like the oceans and the atmosphere (Dunne, Kurki, and Smith 2013). A major turning point for the international environment regime was the publication of a report on *Sustainable Development* in 1987 by the World Commission on the Environment and Development. The report defines the pattern of development by describing sustainable development as a “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). It also understands it as a development that does not discriminate against future generations (O’Neill 2009, 15). Sustainable development can refer to the capacity to be able to continue to meet the demands of society for goods and services of all kinds in future years (Gane 2007, 1-2). Moreover, it can be understood through the relationship between economic development and the environment. This is a development model that focuses on balancing natural resources and economic growth so that they can be implemented in parallel (Asefa 2005, 1).

At the same time, Bhutan’s development model is based on Mahayana Buddhism. The main idea is to live in harmony with nature and not create problems for nature. We can say that the concept of Mahayana Buddhism is quite similar to the concept of sustainable development, although it is a religious concept. Bhutan has tried to integrate these two theories into a framework for national development. This led to

the introduction of Gross National Happiness (GNH). King Jigme Singye Wangchuck is an important person who introduced this idea to the people of Bhutan. He said that “Gross national happiness is more than Gross National Product,” meaning that Bhutan’s economic development should not focus on economic growth alone but also on the well-being of the people of Bhutan (Kharat 2016, 119-21). The key variables that need to be considered are sustainable and equitable socio-economic development; environmental conservation; the preservation and promotion of culture; and good governance (Givel 2015, 102-104). Therefore, the concept of GNH extends beyond sustainable development, in particular the emphasis on the development of equality, cultural preservation, and the promotion of development on the basis of indigenous thinking.

However, GNH has been widely criticized from a variety of angles, particularly by economists, as it is still experiencing problems in framing explicit indicators (Phuntsho 2016, 597-99). Moreover, this concept is also seen as a government propaganda effort to tackle ethnic minorities and human rights abuses (Arora 2014). At the same time, the application of this concept over the past decades is seen not to have helped to improve the quality of life for the Bhutanese. This is evident from the fact that over 0.9 million people are still living below the poverty line (Economist 2004). Although there is a resonance about the effectiveness of this Bhutanese development concept, the government continued to pursue this policy even when it changed to democracy. Conservation and the preservation of natural resources and the environment were raised as one of the cornerstones of the development of Bhutan’s GNH strategy, impacting environmental policy.

So, there are many questions as to why the Bhutanese state continues to use this policy for development, although there is still much controversy. In addition, Bhutan is also trying to push for its own development path to be adopted in other countries, substituting GNH for GDP. Although Bhutan’s economic development, which combines the concepts of Mahayana Buddhism and sustainable development, has been criticized, the fact remains that Bhutan’s economy has grown at an annual rate of 8.42% from 1980 to 2016 (World Bank 2017). At the same time, statistics have shown that Bhutan’s forest area accounts for 71% of the total area in 2016 (Ministry of Agriculture and Forests 2017, 4). These facts seem to oppose criticism.

Bhutan's GNH strategy reflects the importance of ecology and the environment within the country. In the context of public administration, the fact that one policy is defined in the country's master plan or strategy shows the order and importance of the policy (Coenen 2009, 165-67). Consequently, the reason for the conservation of natural resources and the environment are identified in GNH, reflecting the importance of public policy towards this issue in the implementation of policy and practice (Gross National Happiness Commission 2013). Overall, Bhutan has introduced the GNH concept as a new economic indicator that seeks to balance economic development and environmental protection in line with the United Nation's concept of sustainable development. The GNH concept, based on Mahayana Buddhist philosophy, is framed as a major development master plan for the country. GNH is also an important strategy for Bhutan to achieve its development goals. In addition, GNH is also a major master plan that has a great influence on Bhutan's environmental policy guidelines that will be presented in the next section.

Environmental policy: issues and prospects

The concept of sustainable development aims to strike a balance between economic development and environmental conservation. At present, environmental policy has become a more publicized concern due to the expansion of the concept of sustainable development in many countries, including Bhutan. Although environmental policy is a matter for many countries, policy design and policy implementation are different. Bhutan is one of the countries in which environmental policy design is based on the integration of indigenous concepts and global development approaches. This promotes the work of this study under the framework of sustainable development, creating novelty and also contributing to the learning of future development approaches. Considering the policy implementation approach under the concept of public administration, we found that the policy has been mapped from the national level to the ground level, driven by strategies, policies, plans, programs, and projects (Seshadri 2005, 1-3). Bhutan is also pursuing environmental policy based on the same strategic management concept.

Bhutan's major environmental development and conservation

strategy is GNH. The developmental approach in all sectors, which is currently under implementation, is within the framework of GNH. Policy implementation can be implemented in a variety of forms, both informal and formal. Bhutan raises environmental policy as part of the national agenda, as set out in Article 5 of the Constitution, requiring the government to maintain a forest area of more than 60 percent (National Council of Bhutan 2014, 11-12). Under the current constitution, the Bhutanese government has pushed many policies to respond to that goal. The Bhutanese government has a number of laws that are responsible for driving a comprehensive environmental policy on environmental issues such as carbon dioxide emissions, environmental impact assessments, water and waste management. Laws that promote the resolution and protection of environmental issues in Bhutan are numerous, for example, the Environmental Assessment Act 2000, the Regulation for Environmental Clearance of Projects and the Regulation on Strategic Environmental Assessment 2002, the Environment Protection Act 2007, the Waste Prevention and Management Act of Bhutan 2009, the Water Act of Bhutan 2011, the Waste Prevention and Management Regulation 2012 and the National Strategy and Action Plan for Low Carbon Development that was formulated in 2012 (Centre for Bhutan Studies 1999, 20-21). These laws are important tools in driving the country's environmental policy by helping to raise awareness of the effects of climate change, while at the same time limiting its impact in the country. On the other hand, the law is a policy tool that plays an important role in promoting concrete action. Thus, Bhutan's environmental policy is particularly interesting in the 21st century.

In addition to its direct policy of environmental conservation, the Bhutanese government has also set policy in other areas related to resources and the environment such as tourism policy, energy policy, and economic policy. It is well known that Bhutan is one of the major destinations for eco-tourists from around the world who want to experience a natural atmosphere that is still abundant through hiking and trekking. Ecotourism is a matter of concern for the environment and contributes to conservation, education, and study (Fennell 2015). The ecotourism promotion of the government is an environmental policy tool that helps the country to develop and earn economic income, along with the conservation and balance of its ecological system. At

the same time, the government has limited the number of tourists, according to a policy of high value, low volume, which is a policy of the government to maintain the balance between economic growth and environmental friendliness.

In the same way, Bhutan's renewable energy development model is an important part of promoting a more progressive environmental policy in practice. Renewable energy, especially hydropower, is a major export product of Bhutan and makes a lot of money. Bhutan's investment in hydropower projects is key to driving the reduction of greenhouse gas emissions from the power sector. Most of the world's electricity production is based on fossil fuels such as oil, coal, and natural gas. In fact, these hydroelectric projects have exported more than 90% of the electricity to India, resulting in electricity exports being the main export item, earning more than 45% of total export earnings in 2007 (Kharat 2016, 102). The promotion and development of renewable energy in the country is another important mechanism that has made Bhutan's environmental policy more successful in achieving environmental conservation goals and reducing the impact of climate change. At the same time, the economic development of Bhutan under the GNH framework has resulted in the establishment of rules for promoting investment, particularly in heavy industry. This policy has resulted in Bhutan's establishment of dedicated industrial plants that operate in an environmentally friendly way. Most industries are light-based, operated by indigenous peoples and use a small number of resources while at the same time not having an impact on the environment. Industry in Bhutan mainly involves forestry, and the production of herbal medicines, bamboo trade, and handicrafts.

Therefore, Bhutan's environmental policy is not only a specialized operation in environmental conservation under a single ministry or agency. It is a policy integration from all agencies under the same strategy. These have resulted in the implementation of Bhutan's policy differently from those of other countries, where policy integration is lacking, and environmental work is solely under the Ministry of Environment. Bhutan seeks to integrate all the agencies in the country to design a common environmental policy. Although Bhutan has an organization that is responsible for its direct environmental mission, the Bhutanese government considers that environmental issues are the responsibility of every agency because every operation will have

an impact on the environment. The government's efforts to integrate policy have made a significant contribution to driving environmental policy in the same direction. This is an important part of promoting Bhutan's negative carbon footprint.

The role of the civic sector and its interaction with the environmental issue

Bhutan is one of the least developed countries in the world. This fact means that, being a landlocked country, most of the country's land is unavailable for both industrial and agricultural purposes (Gupta 1999, 76-77). Even though the country has a shortage of food crops, it is interesting that the government continues to adopt environmental policies to protect 70% of the country's forests. At the same time, the social mobility of Bhutanese people regarding the shortage of agricultural land strips is not seen in news or information. In contrast, the study found that Bhutanese people are more likely to encourage the government to adopt policies or measures to conserve the environment and encourage intensive measures to safeguard the country's existing forests.

Geography and the environment have a great influence on the way people live in the Land of the Thunder Dragon. Bhutan's economic system is also largely driven by the environment as the core of development in terms of tourism, renewable energy, agriculture, and livestock. The environment in Bhutan also determines the way people live differently according to the weather and terrain conditions. For example, the livelihoods of people in the south of the country depend on a large amount of water to grow agricultural products, while the east requires pasture for livestock. In the same way, the development of hydropower projects in the country requires a large amount of natural stream water to generate electricity for export to neighbouring countries. Hydropower generation is an important industry in the country and generates revenue for the Bhutanese people. Since Bhutan's first five-year plan has been financially supported by India, hydroelectric power plants have become an important means for promoting the country's development (Singh 1972, 114-20). Water resources and the population of Bhutan relate with each other, both in terms of daily living and economic development, in order to increase living incomes. This close

relationship reflects the role of the environment that affects the way of life in the country.

Therefore, the decline in forest areas in the country, which directly affects climate change, has a direct impact on people's livelihood, especially during intense global warming. In addition, climate change and environmental degradation in Bhutan are also critical to the ecological balance and biodiversity. In addition to the effects of environmental problems, which directly create problems for life, Mahayana Buddhist beliefs also have a significant impact on the conservation of the environment in Bhutan. The belief that humans must interact with the environment encourages Bhutanese people to have strong links with nature, leading to the development of a tradition related to nature, especially the worship of forests (Kharat 2016, 28-30). The above two factors are a major reason for Bhutanese people to become aware of the importance of the environment and seek cooperation with the government in forest conservation and rehabilitation.

Organizational identity in environmental policy management and public participation

The environment is the core of Bhutan's development agenda as discussed above. In addition to understanding policies that promote the preservation of the environment in the country as a key mechanism to driving the government's operations, the study of agencies and organisations that serve to drive policy is another important part of understanding the ways in which the environment is preserved in Bhutan. In policy studies, organization is an important factor in turning the policy into concrete action. It is well known that most policies are invented or developed by experts or non-practitioners. The nature of policy delivery in most developing countries is characterized by the top-down process. Organisation as a unit of practice is very important in studying policy issues, including environmental policy (Dinitzen and Jensen 2010, 14-16). Bhutan's environmental policy study cannot neglect to analyse the organisation's performance as agencies that put policy into practice. In fact, many of the environmental agencies in the Land of the Thunder Dragon are responsible for both policy-making and policy implementation in environmental conservation.

Bhutan's bureaucracy, which serves to preserve the environment, is structured in a way that is governed by a commission that serves to push policy and organisation under the authority of the government. The National Environment Commission is the primary autonomous agency of the Royal Government of Bhutan responsible for framing the country's environmental policy. This commission is responsible for designing environmental policy through the integration of many policy aspects. The composition of the commission consists of ministers from various ministries. The Commission has full authority over agencies associated with the environment and it can obtain information and assistance from other government agencies. The Commission also has the mandate to monitor the impact of domestic environmental developments. At the same time, the Commission is responsible for setting the regulatory framework to control the public and private sector for sustainable development goals. One of the Commission's obligations is to coordinate the various agencies in driving policy enforcement and law enforcement to enhance the effectiveness of environmental policies (National Environment Commission 2017). It is therefore a central organization that brainstorms about environmental policy design and reviews policy implications for action.

Apart from formal organizations that play an important role in designing and implementing environmental policies into concrete action, the people's sector is another important factor in driving environmental policy towards a more pragmatic approach. This is a unique character of Bhutanese organisational structure. The people of Bhutan have a strong environmental commitment, especially in their participation in the environmental activities. Bhutan's forest law provides the opportunity for the community to manage some of the forest areas in cooperation with the government agency. The people have a highly active role in managing their own community forests for the daily living of all people. At the same time, the environmental awareness of Bhutan's urban and rural population is likely to grow as a result of increased attention to environmental law and environmental policy. Bhutanese people feel that having environmental laws and policies is a necessity for the country to strike the balance between economic and environmental development (Dolkar et al. 2013, 1-3). This commitment has resulted in greater participation by the people of Bhutan in implementing the policy. This type of cooperation is an important

part of the implementation of the concept of public participation, which seeks to focus on the people as the center for problem solving (Creighton 2005, 7-8). Therefore, we can describe the organizational structure of an environmental mission as an integrated network of various sectors, such as the government, private and public sectors. This behaviour does not appear in the environmental operations in other countries, especially the role of people in managing forest areas and being involved in policy design. Although the concept of public participation has not been around for long, most Bhutanese people have long been involved in driving the environmental movement in the country. This can be explained by the Mahayana philosophy, which focuses on helping other people and creating a better society (Kathuria 2007, 93-94). This is different from the concept of public participation which is based on the expansion of democracy.

The people's sector is a very important actor that has been promoting and supporting Bhutan's environmental policy in practice; the role of the people of Bhutan in the implementation of the law and environmental policy, as well as the involvement of the public in the issuance of opinions and planning for environmental projects. For example, Bhutan's ecotourism program provides opportunities for the community to plan and promote tourism at the regional level to balance the number of tourists with the capacity of nature (National Council of Bhutan 2016). This is a very clear expression of the Bhutanese people towards environmental conservation. It must be acknowledged that the growth of the democratic system in Bhutan after 2008 played an important role in strengthening the people's sector and achieving greater public participation in addressing the country's problems. Promoting public participation is a fundamental democratic principle that requires people to design their own way of life and government policies. The Bhutanese people's participation in environmental policy is an important indicator of Bhutan's democracy but it is also a testimony to the fact that people can help the government to put its policies into practice.

Conclusion

In a multitude of countries, the environment may be just a basic resource that is being used for the economic development of the

country. The environment has become the only raw material in industrial production systems to generate revenue growth for the people of that country. For Bhutan, the environment is more than the basic raw material used for economic development because the environment in Bhutan is like a family that nourishes the people of the country for continuous growth. The environment has become a part of Bhutanese life because of the relationship between the people and their environment from birth to death. According to Mahayana Buddhist belief, human beings and the environment are all part of one whole and cannot be separated. Mahayana Buddhism is an important philosophy in Bhutanese life, so it influences the worldview, perception, and relationship between the Bhutanese and the environment. This concept has resulted in Bhutan's high respect for the environment, leading to the enactment of many environmental laws and guidelines for nature conservation. At the same time, Bhutan's economic way of life needs the environment to drive the economy in order to generate revenue for the country and its people. This has resulted in the change of natural and environmental conditions and global climate change, which has had a serious direct impact on Bhutan.

As a result, environmental issues are not just about natural resources but they also mean the stability of life, culture, and religion. This has resulted in a markedly different implementation and incentive for implementing environmental policy in Bhutan from other developing countries. At the same time, the Bhutanese government has made great efforts to implement the Universal Declaration on Sustainable Development, along with the integration of local knowledge. Gross National Happiness is a prominent feature of Bhutan's development, which seeks to use the Mahayana Buddhist philosophy of peace, friendship, and harmony combined with the concept of sustainable development. It is a policy of the environment and development, with a Bhutanese-style knowledge, combined with a universal concept. Bhutan's environmental policy is particularly interesting in integrating all the agencies involved in environmental policy design through the National Environment Commission, which plays an important role in the success of policy implementation. In addition, the driving force behind the environmental policy is to design an organizational structure that promotes public participation in order to truly reflect the problem and contribute to sustainable solutions. The integrating of

indigenous ideas with international principles and building public participation, which indicates Bhutan's success in driving environmental policy, is an important finding of this work.

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