



AN EXPLORATIVE ANALYSIS ON ENVIRONMENTAL CONSERVATION
UNDER GROSS NATIONAL HAPPINESS

BY

MISS SINGAY WANGMO

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DEGREE OF MASTER OF ARTS
(ASIA PACIFIC STUDIES)
COLLEGE OF INTERDISCIPLINARY STUDIES
THAMMASAT UNIVERSITY
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THESIS

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ENTITLED

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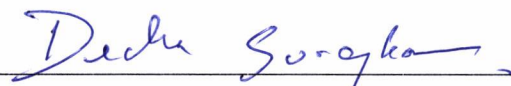
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ABSTRACT

Recognizing the importance of environment, the government of Bhutan places highest emphasis on the conservation as one of its development paradigms under the realm of Gross National Happiness (GNH). Being a small developing country, people living in rural area which make up the most major part of Bhutan's population are dependent on natural resources such as forest. Over the years this dependence has led to pressures on the use of resources sustainably and deforestation. Evidently, this could have an adverse impact on the government's commitment to maintain high level of forest cover. Using Elinor Ostrom's theory, this study evaluates the policy, institutional and management changes that implies the use of common resources such as fuelwood within the forestry community following an increase in the use of fuelwood. Prior to 1969 the management system was largely traditional and customary. Gradually it transitioned on sustainable development and participatory forest management. However, the policy that nationalized all types of forests acts as hindrance regarding sustainability of forest governance by communities in the long term. The paper concludes that GNH influences the environmental policy by making it more enabling but it's influence seems to be more on conservation. And with regard to the coherence of the policy, it needs to be improvised in correspondence with Ostrom's guideline. GNH was

initiated in hopes a for greater good, but it still has progress to be made especially with regard to implementation. Policy recommendation and suggestion for further studies are briefly highlighted as well.

Keywords: Community Forestry, Rural People, Fuelwood, Forest, GNH



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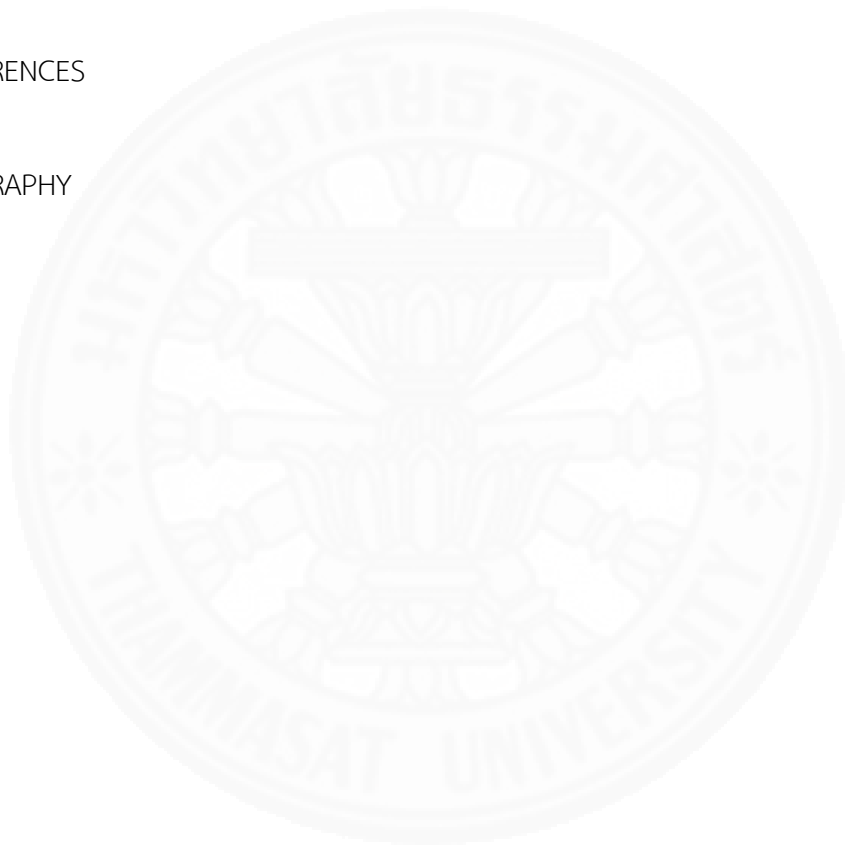
Miss Singay Wangmo

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Bhutan is a small country located between two superpowers, China and India. Its mountains are known to have the most rugged terrains in the world which also makes it home to the highest peak named Jhomolhari. The country is also blessed with other natural resources such as rivers, lakes, and valleys. Having said that, about 70 percent of the country is covered with forests which place it as one of the ten greenest countries in the world (National Statistic Bureau, 2014). Hence, natural resources are of key importance in the everyday livelihood of the Bhutanese people.

Bhutan has seen developments in its government structure where it has smoothly transitioned into constitutional democracy from absolute Monarchy. The prevalence of democracy is not a new occurrence, as democratization had emerged in various states for decades. With this transition in government structure, this tiny South Asian country with the population of 774,830 (World Bank, 2017) had seen the power being decentralized among the people. Throughout time, the Bhutanese are also known for its fierce protection of its tradition and culture.

The inaccessible mountains of various heights and ridges isolate the country from the world given its geographical setting. But ever since Bhutan abolished its isolationist policy, huge economic progress took place. In fact, according to the ADB (2017) it is one of the countries in Asia that is noted for its fastest rising economies given that the economy is based on the utilization of clean energy which in turn overcomes the negative impacts of climate change. This fast-growing economic feat is attributed to the culture, that was defined as “a source of defining development strategies of one’s own pace” (Ura, 2004).

Bhutanese culture and development policies, such as the Gross National Happiness (GNH) are greatly influenced by Buddhism in which it is centrally rooted

on. Such concept is built upon four pillars, namely *Good governance, Environmental conservation, Preservation and promotion of culture and Sustainable and equitable socio-economic development*. Each pillar depicts factors of Bhutanese people's well-being wherein the term "well-being" here indicates the fulfilling conditions of a "good life" in accordance with the morals and values put down by the concept of GNH. These domains are further classified into nine indicators articulating the various features of GNH with more insight and to guide the GNH measurement, indices and screening tools (Center for Bhutan Studies, 2012).

The fourth King of Bhutan Jigme Singye Wangchuk gave more emphasis on the preservation of environment and culture. It was during His reign when the decision-making process was decentralized so as to enhance participation of the people in the formulation of development policies, thus strengthening local institutions. With that, District Development Committees (*Dzongkhag Yarge Tshogchungs*) and Block Development Committees (*Gewog Yargye Tshogchungs*) were established in 1981 and 1981 respectively whereby all members are elected democratically. One of the most notable outcomes of this change was manifested in 1998 when the executive powers held by the king were passed down the Council of Ministers (Wangmo, 2010).

Today, a country's economic and development performance is measured by Gross Domestic Product (GDP) making it the most traditional way that the world has conformed to. But realizing its inability to capture the social well-being, several countries have already found their own way in measuring well-being. For instance, in 2008, unsatisfied with the current state of progress measurement, "The Commission on the Measurement of Economic Performance and Social Progress" was formed at President of French Republic request, Nicholas Sarkozy steered by Joseph Stiglitz, Jean Paul Fitoussi and Amartya Sen. Long before that, Human Development Index (HDI) was put forward in 1990 and Genuine Progress Indicator alike, to measure and give a bigger perspective on the state of the well-being (Anielski, 2001).

Therefore, the world today has been seen to be very much concerned on economic development given its huge emphasis on GDP growth, sacrificing the happiness and well-being of citizens. Because of that, other countries such as Bhutan deviated from paying importance on economic development, focusing more on

creating a condition for the well-being of the people. In the heart of Bhutan's development policy is GNH which in a nutshell emphasizes on the need for contentment and well-being over fast development and material wealth.

A profound concept of happiness in a Buddhist context is a state of mind in the absence of gratification of desire, a sense of universality, continuity, and endurance. It is not grounded in the sensual gratification or in the extremity of life. The Gross National Happiness (GNH) is a human-centered, aimed at obtaining a better understanding the well-being of the people in Bhutan with an economy based on altruism in collaboration with solidarity and balance rather than the destruction of the environment and limitless economic growth. It is "founded on the belief that happiness can be achieved by balancing the needs of the body with those of the mind within a peaceful and secure environment, it requires that the purpose of development must be to create enabling condition through public policy" (Mathur, 2017).

Out of the four pillars under GNH, the core of this study will be on environmental conservation which is considered as an important basis for Bhutan's development policy, an important feature of Bhutanese principles and equivalent to the identity of the nation. For this reason, it is important to do an in-depth analysis on it as a very limited study has been done on this matter, therefore, this study hopes to lay down a foundation and open up a new perspective for future researchers as a basis to analyze other pillars of GNH.

Even with the strong commitment to conserving environment and policies directed to protect, there are a lot of destructive challenges to environment such as illegal logging, Wild life poaching and mining which in itself is a threat to conservation and in turn an impediment as Bhutan believes an interdependence on environment is an approach to happiness (Schroeder & Schroeder, 2014).

1.2 Research Question

‘How did GNH influence the formulation of environmental Policy in Bhutan?’

1.3 Objectives

The overall purposes of this thesis are

1. To structurally analyze how GNH influence has in the formulation of Bhutan’s environmental policy.
2. To determine the coherence of the environmental policy with the concept of GNH and its extent.

1.4 Significance of the study

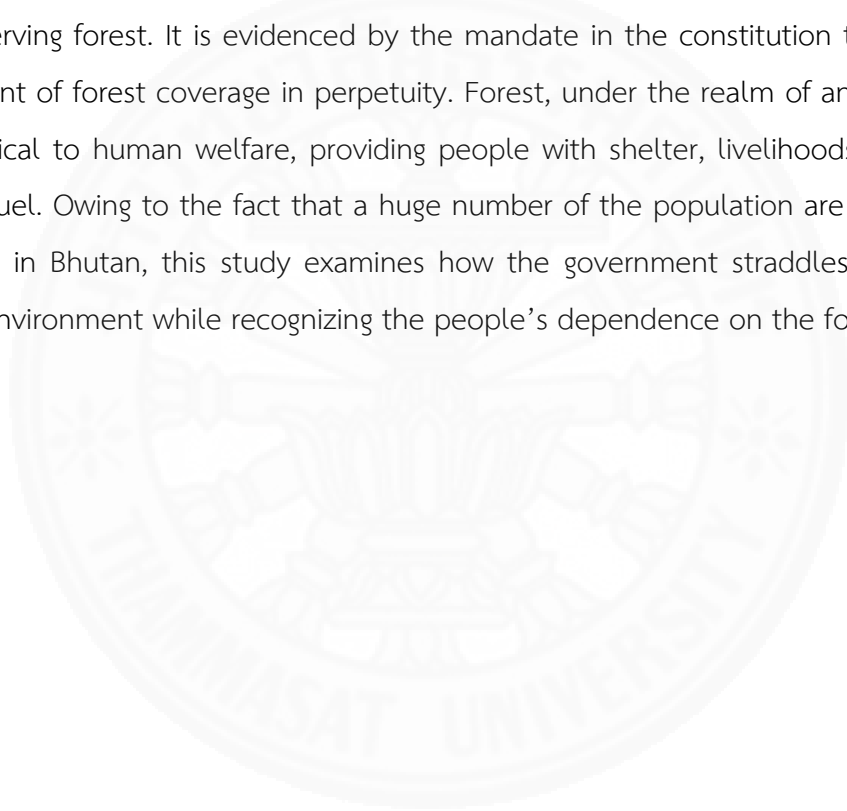
The significance of the study can be explained in three aspects. First, this study investigates how the policy of GNH influences in the conservation of the environment. Consequently, this research also addresses how Bhutan straddles between the conservation policy and meeting the basic necessity of the rural people. Lastly, this study will contribute greatly to the benefit of the people living in rural areas who embodies a significant part of the population in Bhutan. Considering the greater demand and the huge reliance on the use of fuelwood, it justifies the need for more effective policies under the realm of environmental conservation pillar.

1.5 Scope of the study

As can be seen, there are looming threats to the environment even though the government of Bhutan has strong commitment principles. All the threats mentioned above are important to be addressed in their own right, however the scope of this study will be on the consumption of fuelwood. Bhutan’s population is

predominantly made up of the rural population and with consumption of fuelwood being more of a rural phenomenon, it is of significant importance to shed a light on this issue. Moreover, it is also important to note the presence of conflict between conserving and allotting resources sustainably so as to uphold the conservation values and to keep people happy who are depended on the use of fuelwood for their daily purposes.

Amongst the four pillars of Gross National Happiness, this study focusses on environmental conservation. The country is known for its strong obligation to conserving forest. It is evidenced by the mandate in the constitution to preserve 60 percent of forest coverage in perpetuity. Forest, under the realm of an environment, is critical to human welfare, providing people with shelter, livelihoods, water, food, and fuel. Owing to the fact that a huge number of the population are reliant on the forest in Bhutan, this study examines how the government straddles in conserving the environment while recognizing the people's dependence on the forest.



CHAPTER 2

INTRODUCTION: HAPPINESS AND THE CONCEPT OF GROSS NATIONAL HAPPINESS (GNH)

This chapter is presented in four parts. The first part explores the viability of the concept of happiness as an end in a public policy as opposed to economic development as an end. The second part moves on to give a brief insight of the background of GNH's origination, then studies the relationship between environmental conservation and its connection to contributing to happiness. After laying down the foundation and positive connection of conservation and happiness, the third part of this chapter highlights on the existing threats that Bhutan is facing under the pillar of environmental conservation, more specifically forestry. Overall, this section provides a justification for placing environmental conservation under the four pillars of GNH wherein the government of Bhutan believes that conservation of the environment is one way to achieve the happiness of the people.

2.1 Happiness as a Goal and as a Moral Concept

Happiness is an individual business, a personal matter, but under the point of utilitarianism, the aim is to achieve “the greatest happiness for the greatest number of people”. In the similar lane, according to Sithey, Thow, & Li (2015) the philosophy of GNH is also viewed as a collective phenomenon apart from its several dimensions such as holistic, balanced progress and spiritual, material, physical or social needs.

As a general concept, happiness appears to be embraced by the majority of the people and looks to be more valued than the pursuit of money, but it also carries the connotation of being a passive state whereby it is tied to a level of affluence. To pursue happiness and well-being as the goal of public policy obviously raises a lot of questions and criticism because happiness is a private realm, it is subjective and validity of how it can be measured is the question. But it has also drawn some scholars to look at it differently that conform to the idea that the

happiness is not associated with the affluence and wealth. Blanchflower and Oswald (2004) reveal that Richard Easterlin, who introduced the Easterlin Paradox, was amongst the first few to study about the reported level of happiness in the United States. His argument was based on the fact that individual well-being is similar across countries irrespective of rich and poor, and that reported happiness did not associate with GDP per capita. The Easterlin Paradox was tested by Blanchflower and Oswald (2004) and their findings revealed levels of well-being over the last quarter of a century had decreased in the US and Britain which is consistent with the Easterlin Paradox. The moral theory of pursuing happiness is objected on pragmatic grounds of its unfeasibility but Veenhoven (2004) finds that the objections do not apply as happiness is useful both as a public and individual goal. The author also mentions the greatest happiness principle by Bentham (1789) who states that “We should aim at the greatest happiness for the greatest number which is termed as Utilitarianism” and the other being Rule Utilitarianism meaning, following rules that are morally correct.

Jigme Y. Thinley, Bhutan’s previous Prime Minister and an advocate of GNH states, “We have now clearly distinguished the ‘happiness’ in GNH from the fleeting, pleasurable ‘feel good’ moods so often associated with that term. We know that true abiding happiness cannot exist while others suffer, and comes only from serving others, living in harmony with nature, and realizing our innate wisdom and the true and brilliant nature of our own minds” which resonates with Aristotle’s Eudaimonia, as he supports conservationist approach to be happy, a necessary condition for human flourishing which Aristotle believes is happiness. Duncan (2010) reflects on the similarities of utilitarianism that Bentham (1789) hold in the happiness/Eudaimonia as an ultimate goal. But by contrast, he mentions that the non-western concept of Gross National Happiness is different as it stems from a Buddhist concept which advocates detachments and not all about individual happiness.

Moreover, he mentions Aristotle’s statement that the very existence for the state is to assure the continuation of its members and to achieve ‘the good life’ (eudemonia). Likewise, Bhutan’s legal code that dates back to 1729 says “if the

government cannot create happiness for its people, there is no purpose for the government to exist”.

2.2 The Origin of Gross National Happiness

The philosophy of GNH, as a concept began around 1970, introduced by the fourth King of Bhutan who declared that “*Gross National Happiness is more important than Gross National Product*“ but it was not until 1996 that it made an official debut (Munro, 2016). So, the concept is fairly new. Tideman (2004) states that Buddhism emphasizes the interconnectedness among humanity and to nature, but he clarifies that Buddhism does not reject wealth instead it considers them useful.

But Priesner (1999) makes an extensive study and explores other factors that shape the policy. The author argues that Bhutan’s development policy evolved from its unique socioeconomic, history and political circumstances. He mentions that Bhutanese lifestyle did not change much from their ancestor four decades ago. Majority of the people were farmer and barter system was the only means of getting a surplus and money was not known at all but gradually developed its social organization providing health and education free to the people. He mentions that Bhutan’s successful development at its own pace is largely due to the factors like unique history, geopolitical and sociological circumstances. Bhutan abandoned the policy of isolation in 1959, therefore, Priesner argues that the concept emerged from the structures of Bhutanese society built upon a Buddhist and feudal set of values. Nonetheless, the abandoning of isolation was not voluntary.

In addition, self-reliance and paternalism are factors as the country’s topography and trading via barter system with neighboring communities formed a self-sufficient way of living. Also, with very few demands from the state, the societal system was characterized by the feudal system than state Paternalism and that the evolution of GNH is from its socio-economic framework, unique history, culture of the pre-1959 period (Priesner, 1999).

2.3 Gross National Happiness and Environmental Conservation

The concept of relationship between environment and well-being traces to the work of American socio-biologist Wilson (1984) who introduced the “Biophilia hypothesis” - the belief that there is an innate affinity between nature and human, who mentions that human with loss of direct contact with other nature, other species and life in general, will result in the occurrence psychic deprivation and degradation of human mind. Building on Wilson’s statement, MacKerron & Mourato (2013) gives traces on connections between nature and well-being, discovering that participants in the study are notably happier in all natural or green habitat types, concluding his study that environmental quality does matter in relation to people’s happiness.

Coincidentally, Bhutan believes that happiness comes from protecting the environment and conserving it which is in line with the studies done by Wilson (1984) and MacKerron & Mourato (2013). Bhutan’s environmental policy is based on the concept of conservation. Therefore, recognizing the importance of environmental conservation, Bhutan has placed it at the center of its developmental strategy.

Similar to how Buddhism contributed in shaping GNH, it also contributed in shaping the environmental policy of Bhutan. It seems to lie in the metaphysical heritage that ascends from the age-old beliefs and sentiments. As Nelson (2008) explains the term “Deep Ecology” invented by Norwegian philosopher Arne Naess, nature has intrinsic value in itself, its richness and diversity. It advocates the spiritual connections to the earth’s living system and a moral obligation to protect them. Supplementing the “Deep Ecology” concept, Rinzin (2006) reports that the relationship between sustainable development and Bhutanese society is founded on a harmonious existence with the natural system, which is projected by beliefs that mountains and forests are homes of Gods and deities. Therefore, perturbing any pristine environment or wildlife would infuriate the deities bringing ill luck, sickness and death.

Priesner (1999) notes that around 1961 it was set as a resolution by the National Assembly that trees should be exempted from being taxed in order to

discourage felling. The preservation policy was even more emphasized when the government declared sanctuaries, parks and forest reserves as protected areas.

According to Zurick (2006) conservation is not restricted to the environment, but traditions, culture, and values are also included. Specifically, aimed at developing without sacrificing the quality of environment; therefore, Bhutan's environmental policy is in direct accordance to the country's concept of GNH, moreover GNH has been integrated in the policy-making in project and national level since 2008 via screening tools and project selection tool (Ura, Alkire, & Zangmo, 2011).

2.4 Threats to Conservation

Bhutan in many ways, is a leading exemplar for environment conservation, but with that said, the commitment to conserve is not without any threat. The very prospect of remaining carbon neutral, under combating climate change, in perpetuity is challenged by growing urbanization, industrialization, and an increase in vehicles. Likewise, major environmental problems such as unsustainable agriculture, deforestation, overgrazing, infrastructure, and mining are some of the threats that obstacles the conservation commitment (Royal Government of Bhutan, 2012). Some of the main problems recognized in the forest resources include over-harvesting such as fuelwood due to cold weather for the purpose of cooking and heating, overgrazing, timber for constructions, medicinal purposes, shifting cultivation and poaching (ICIMD,2000).

Hardin's Tragedy of Commons, garnered a huge discussion on the common resources and resource degradation. Hardin's argument that propounds the common resources are insufficient since individual does not act in an optimal way in a society, is reflected in the case of fuelwood consumption in Bhutan.

2.4.1 Over Consumption/Extraction of Fuelwood

Consumption in this context is defined as the utilization of wood for the purpose of cooking, heating and extraction is the utilization of wood for other beneficial purposes for the rural people such as timber.

Fuelwood is the primary source of livelihood for a huge number of people, especially for the poor and the main domestic fuel in rural areas in developing countries. In Bhutan, the availability of firewood at the national level is said to be self-sufficient but falling short at the village level because of the concentration of settlement depending on the favorability of the location (Forest Resources of Bhutan, 2000). Considering that the fuelwood is readily available source of energy for most people, the Ministry of Agriculture (2009) reported Bhutan as one of the highest to consume fuelwood in the world.

Throughout the country, reliance on firewood as a fuelwood has been prevalent historically and more than 85 percent of forest resources are being consumed in the rural areas which are beyond the yearly allowed out of from total wood from operable areas (Forest Resources of Bhutan, 2000).

It is noteworthy that the use of firewood is not confined in rural areas in Bhutan but in urban areas, offices and businesses as well (Sangay, 2011). Consequently, some part of forest areas are subjected to the unsustainable practice of yielding fuelwood and that also results in deforestation which largely has been blamed on fuelwood consumption. It is also in short supply because of immense forest use (Norbu & Giri, 2004). As the country transitions from the agricultural rural economy into middle -income economy, the requirement for firewood also escalates placing heavy pressures on forest resources (Dhital, 2009).

Problems like felling of trees for cowsheds, construction, toilets, fuelwood and ploughs for an agricultural purpose are quite rampant which the government had warned years ago that felling of trees is a threat to happiness (Williams, 2009).

2.4.2 Overgrazing

Livestock is an important part of Bhutanese agricultural system, contributing to 10 percent of the GDP. Cattle are owned by 90 percent of the households and the practice of livestock grazing in forest is an age-old tradition (Norbu, 2000). But, cattle grazing is seen as a grave danger to the environment and a constraint on the proper management of forest. It has been found that due to unsustainable grazing, some lands are susceptible to erosion, thus the condition of

grazing land has caused numerous conflicts amongst herding communities as well. Moreover, plans and policies for rangeland as a source of fodder, has been reportedly least emphasized (Ministry of Agriculture, 2009). An empirical study done by Wangchuk et al., (2014) reveals that some respondent admits the presence of excessive grazing practices on forest likely resulting from animals grazing areas in the forest.

According to Mari (2006) grazing continues to be an imminent threat to conservation and a sustainable forest management but reveals that Bhutanese do not consider grazing as an environmental threat as opposed to environmentalists and foresters. Even though compared to countries like India and Malaysia, fuelwood consumption signifies a high number of forest removals in Bhutan.

Grazing is also often recognized as the cause of deterioration of forest condition, slow regeneration and for causing ecological disasters. Some of the challenges noted are lack of representation in the policy and the priority given by government for the protection of forest. Such incidences of “common resources” and problems related to that can only be solved by engaging local people in the management of forest resources (Roder, Gratzler, & Wangdi, 2002).

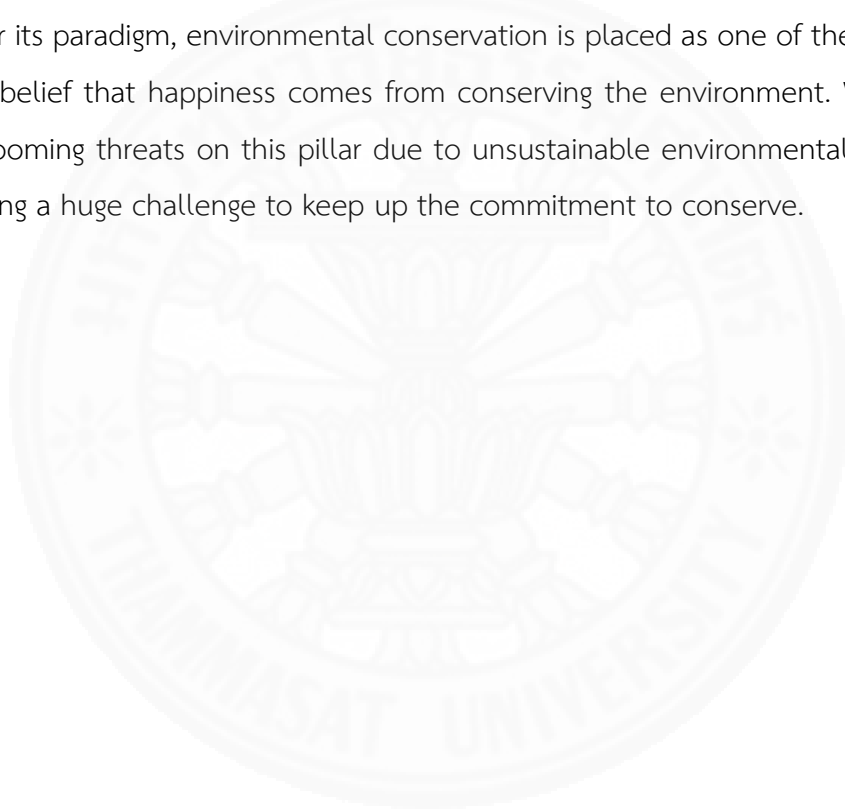
2.4.3 Forest offenses and Wildlife Poaching

The Department of Forests and Park Services (2016) states that one of the most common forest offense pertains to hunting and poaching of wild animals, smuggling and illegal sale and misuse of timber products and collection of non-wood forest products. The driving causes for such environmental crimes are prosperous construction sector, high value for medicinal species in the market and expansion of farm roads. Shifting cultivation, known as *Tsheri* remains has been an important age-old land use practice particularly some part of the regions. It doesn't have a detrimental impact on environmental degradation but prolonged cultivation and fallowing of land is of a serious concern and currently the government has banned on such practices (National Biodiversity Strategies and Action Plan of Bhutan, 2014).

Besides that, wildlife offense is also a growing concern and a threat to species conservation. Considering the illegal wild-life trade is lucrative globally, the highest number of such activity is found in Asia (WWF, 2016). In Bhutan, poaching is

becoming a rampant activity, especially across the government reserved forests, especially the musk deer which is identified as the most poached species (Bhutan Observer, 2011). However, much progress has been made as the Department of Forest and Park Services reveals that poaching and illegal wildlife trade is not as rampant as it used to be (Chezom, 2017).

In summary, happiness as an end in the policy is not a new concept. The concept's existence dates back to the era of famous philosophers such as Jeremy Bentham and Aristotle. Bhutan started its GNH inception in the year 1970. Under its paradigm, environmental conservation is placed as one of the pillars. This is on a belief that happiness comes from conserving the environment. With that said, the looming threats on this pillar due to unsustainable environmental problems are creating a huge challenge to keep up the commitment to conserve.



2.5 Theoretical Framework

This theoretical framework as shown in the figure 2.1, provides a basis for analysis applicable to this which is explained below.

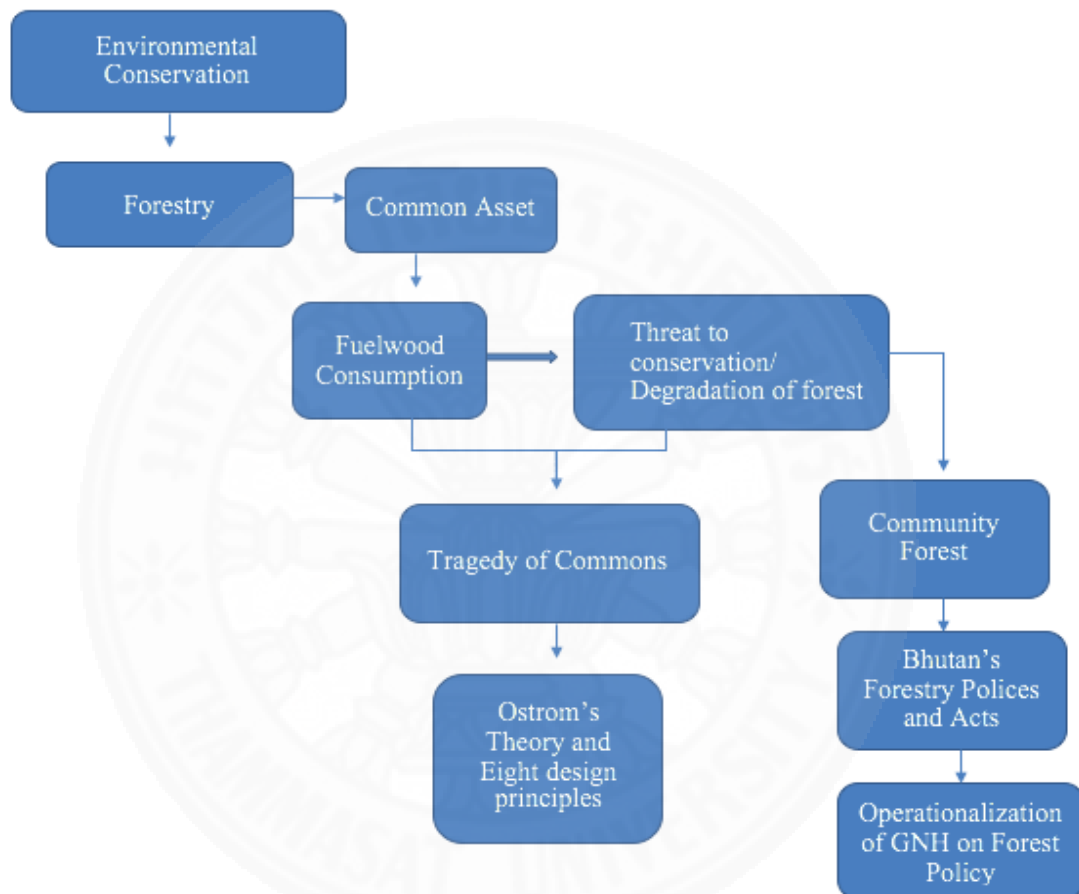


Figure 2.1 Theoretical Framework collected by the author.

Environmental conservation has always been at the heart of development in Bhutan that is in line with the policy of GNH. Environment embodies all our natural surroundings, such as land, waters, air, plants and many other things. Bhutan's conservation effort, rules, and regulations may be stringent or in place, but it is not without any problems. Expectedly so, one of the issues that the Secretary of the National Environment Commission (NEC) of Bhutan, Ugyen Tshewang, raised his concern addressing the issue of "The Tragedy of Commons" and the adverse impact

it will have on the quality of air, shortage of water, traffic congestion, waste generation and land degradation (Tobias, 2011).

Considering that the natural resources are shared by many, every individual is driven by self-interest to exploit the common to his/her advantage which as a result will lead to the depletion of resources called 'Tragedy of Commons' (Hardin, 1968). According to Hardin (1968) there are two possibilities to solve this issue to either privatize the commons or allow government imposes rules and regulations. But in contrast, Ostrom (1990) posits that the resources can be managed even without the presence of regulatory authority and privatization, and subsequently her studies were important for the management of forest and promote conservation.

The policy of Gross National Happiness (GNH) and Ostrom's theory point to the intimate links between the well-being of the people that comes from conservation and the efficient use of natural resources that leads to conservation. Moreover, they also have a semblance of being people centered. Ostrom's theory has contributed to management of resources and conservation especially at a local level (International Union for Conservation of Nature, 2014). Similarly, environmental policies in Bhutan have been especially focused towards conservation under the paradigm of GNH. However, with respect to GNH, the approach has a top-down characteristic as opposed to Ostrom's theory which rests on bottom-up approach. It is a general belief and there are theories that prove that conservation does lead to happiness of the people. Therefore, Ostrom's theory not only helps in contributing to the conservation of the resources but it also helps ensure the happiness of the people. The theory is a people centered just as GNH is but the approach that Ostrom has adopted seems more appropriate as it helps succeed in two most important objective that GNH advocates as well, that is conservation and happiness of the people. Thus, this thesis will discuss in detail how the environmental policies under GNH fares well with Ostrom's theory.

2.6 Research Methodology

The method adopted in this study is qualitative approach with an objective to analyze and explore the influence of GNH on environment policy. Moreover, with the only handful of researches done on this topic, the literature review is not in abundance. Therefore, categorically this study remains an exploratory, hence qualitative approach is suitable.

This involves the employment of Ostrom's core theory which is based on her community's rights to the use of common in order to examine if the forest policies indicate whether the commons are assigned to resource users themselves in general as the GNH entails happiness as a collective prospective. This would also help examine the coherence of environmental policy with GNH. With the help of Ostrom's Eight Design Principles, the objective is to study of the Acts and policies fits well with the Design Principles and make suggestions and comments if necessary.

The rationale behind the use of Ostrom's theory to determine the coherence of environmental policy under GNH is because Ostrom's theory and her Eight Design Principles are considered one of the most coherent and influential in checking the effectiveness of institutions and sustainability of forests in a way that supports local livelihoods (Ostrom, 1999). Secondly, as mentioned above, Ostrom provides Design principles to avert the tragedy of the commons. In similar lane, Bhutan has abundance in natural resources such as forest, and 69 percent of the population in Bhutan are predominately made up of rural people who are reliant on the forest for their livelihood (Royal Government of Bhutan, 2009), hereafter RGoB. Therefore, it is apt to adopt Elinor Ostrom's theory and her principles to study how and where Bhutan's conservation policy fares well in line with Ostrom's theory, which would in turn determine the coherence of the Environmental conservation pillar as well. Moreover, the theory very well captures the main essence of the policy GNH, as it's main focuss is the happiness of the people and the conservation of natural resources which is what the theory helps succeed in doing so. The research methods employed in this study is content analysis primarily based on primary data such as policies and acts, secondary data, government documents,

reports and newspapers in order to analyze how Gross National Happiness (GNH) has influenced the policy-making in the environment.

2.6.1 Documentary Research

To study the environmental policy as a whole would be near impossible given its vastness; therefore, more focus will be given to forest as it constitutes an important part of the environment. In order to study how the environment policies are structured to solve this problem, it is suited for this study to adopt a documentary research as it helps conceptualize an idea of how it addresses such problems and, in the hindsight, examine if GNH as the main guiding policy leads to happiness of the people in the context of environmental pillar. To examine the influence of GNH on the environmental policy Acts and Policies such as, The Constitution of Bhutan, *Thrimshung Chenmo* (Supreme Law) (1958), Bhutan Forest Act (1969), National Forest Policy (1974), Forest and Nature Conservation Act (1995), Community Forest Guideline (1996), Forest and Nature Conservation Act (2006), Forest and Nature Conservation Rules (2017) will be examined. This is also to see how the policies were before and after GNH was introduced so as to see whether there is any influence at all.

2.6.2 Secondary Data

In order to get a close overview of the original ideas, events, and research, the primary data used in this study include first hand or contemporary accounts of events and the publication. The documents consist of government files retrieved from official websites NEC (National Environment Commission), GNHC (Gross National Happiness Commission) and RGoB (Royal Government of Bhutan). Any articles or news that touches upon either of the topics of relevance to this study's objective will be made use most notably from local newspapers and media outlets.

CHAPTER 3

ENVIRONMENTAL STATUS

This chapter seeks to give a general background on the environment scenario of Bhutan. It then presents the legal and institutional framework in order to understand how the system works and the hierarchy of decision-making body. This chapter will explain and examine the policies with regard to forest specifically the use of fuelwood with an objective to study whether the forest policies accommodate the right of the rural people to access forests. For that matter, this chapter explains the theories by Ostrom followed by acts and policies related to forestry and use of fuelwood in Bhutan. The focus of the chapter will be on community forestry policies and in order to facilitate better understanding, below are the main areas on the analysis on policies and acts. It will be followed by addressing the strengths, weaknesses, and gaps in the acts and policies focusing only on community forest, use of fuelwood and conservation.

Recognizing the importance of environmental conservation, Bhutan has placed it at the center of its developmental strategy. Bhutan is ranked amongst the top ten highest species densities and a biodiversity hotspot along with the large percent of protected areas and forest cover in comparison to countries in Asia. It is also widely believed by the scholars that Bhutan symbolizes “last best chance” for the conservation (Gillison, 2012).

The ten protected areas are with biological corridors that inhabit vulnerable takins, endangered animals and also various bird species. Rigid conservation practices and well maintained protected areas are the reason why Bhutan has various thriving rarest animals in the world. The Himalayan country is dubbed as one of the few countries that mandate 60 percent of forest cover in the constitution in all times to come. Due to the commitment to conserve the environment and rich biodiversity, Bhutan’s forest absorbs three times more CO₂ emissions than its population creates, making it the only carbon negative country in the world (Tobgay, 2016).

The quality of water and air is rated from very good to excellent. For instance, air pollution has often been considered in terms of its health implication. In this light Diener, & Lyubchik (2016) compares air quality, water quality and environmental protection in 11 countries in which Bhutan scored 92 percent in air quality, equivalent to top country Denmark, 81 percent in water quality and 95 percent in environmental protection, scoring the highest of all countries. The authors further illustrate Bhutan's performance in social well-being, whereby it scored 89 percent against Denmark with 91 percent being the highest. But with regard to environmental well-being Bhutan scores the highest with 89 percent. It is suggested that Bhutan's high standing on these variables might be related to social and environmental variables.

3.1 Overview of Environmental Policy of Bhutan

The RGoB prioritizes environmental conservation, management of the environment and environmentally sustainable development. Even after centuries, Bhutan has kept the conservationist effort intact, in hopes to continue living in harmony and to retain it for the future generations whereby such practices have been attributed to enlightened leadership and the conservation ethic of the Bhutanese people.

A recent study done by National Environment Commission (2016) reveals that the country is known to have 80.89 percent of the total land area under forest and more than 51.40 percent under protected areas. The study mentions that to address environment issue, the government responds to it on a national level, environmental agreements, and institutions at both the regional and global level.

Environmental conservation largely comes from being a Buddhist country in which, conserving nature and the virtue of life; and in the system of giving back to nature what one has taken from it is what defines the Bhutanese way of life. Furthermore, the RGoB's commitment to maintaining a greenhouse gas net sink status was lauded by the United Nations Environment Programme (UNEP), for its

effort in environmental issues that sets an example for the rest of the world (BBS, 2012).

As early as mid-60's the government set its path to protect and pass laws to preserve the environment. The Forest Act of 1969 is known to be the first law passed by the National Assembly, which paved the way for management and conservation of nation's forest (Phuntsho, 2011, p. 1). The Act articulated that all unclaimed land to be government's forest reserve, and forbidden felling and burning of trees as a result of shifting cultivation other activities like fishing and hunting. All forestry activities were nationalized in 1979 with an objective to protect the forest from over felling.

Bhutan's forest policy is considered to be different with policies in other countries, as it prohibits the sale of timber and considers it a secondary importance. Apart from the policy, environmental law and instruments are based on old age tradition in which laws, policies, and regulations are formulated to ensure environmentally sound development. Currently, the environment legislations are mostly on the protection of wildlife and conserving forest (United Nations Environment Programme, 2001).

The public policy GNH, that Bhutan stands by, is based on four pillars out of which conservation of the environment is placed under it. It is to ensure that the development activities are carried around without hampering the biodiversity and natural environment. It is on the premise that well-being of social, economic, spiritual and environment should complement with development so as to reinforce each other. In short, the development philosophy of Gross National Happiness (GNH) implies a sustainable development (Royal Government of Bhutan, 2012).

3.2 Institutional Framework

The structure of institution plays an important role in achieving national goals for the management of national assets such as environmental conservation and forest management. National Environment Commission (NEC) is regarded as the top institution for decision making on matters related to the environment, chaired by the

Prime Minister and other relevant ministries to ensure and guide development processes so that impacts on the natural environment are minimized. It was established in 1989 after getting separated from the Planning Commission under the Royal Command of the Fourth King and became an independent body (South Asia Co-operative Environment Programme, 2002).

With regard to the management of forest and policy formulation, it is under the purview of Ministry of Agriculture which is the foremost government organization comprised of Department of Forest, Department of Agriculture, Department of Livestock, Council of Renewable Natural Resources Research and Extension, Food Corporation of Bhutan and various non-departmental agencies. The Department of Forests established in 1952 manages the country's forests, regulates access, protects forest resources, enforce restrictions amongst others. It has four functional divisions namely forest resources Development Divisions, Social Forestry Division, Nature Conservation Division and Forest Protection and Utilization Division.

Figure 3.1 shows the organization of the Forest Department. The activities of forestry are decentralized whereby the Dzongkhag Forestry Office (Provincial Forestry Office) is responsible for afforestation, reforestation, Social Forestry and community forestry.

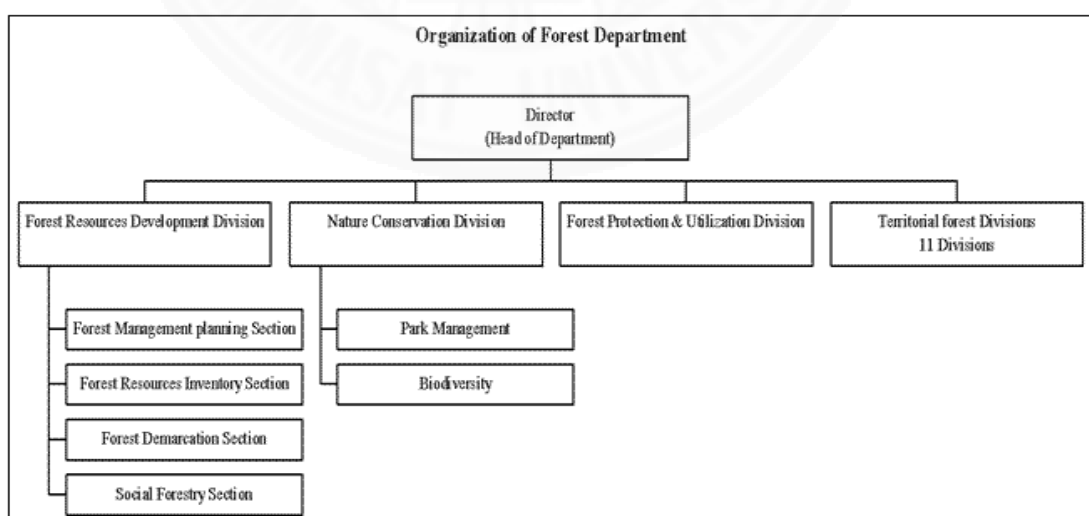


Figure 3.1 Institutional Organization

Source: Dhital (2009)

Regarding GNH related organizations, Gross National Happiness Commission is responsible for mainstreaming government planning, policy-making, and implementation. It is a sole focal organization assigned with the undertaking of inculcating GNH into ministries and their programs. Apart from that, it also organizes five-year planning, and reinforces public policy in line with the policy-making protocol. Moreover, it is also assigned to ensure that “GNH principles are mainstreamed into policies, planning, and implementation along with gender, environment, climate disaster, and poverty.” These tasks assigned to GNHC which is pertinent as a part of an agreement between GNHC and the government (Ura, 2015).

3.3 Policy Making in Bhutan

The development trajectory occurred rapidly since 1961, during the reign of the Third King with the introduction of the five-year plans. The rapidity of development is attributed to the leadership of the Kings who had played a vital and a central role in national policies in pre-1998.

As the only country that follows a philosophy embedded in religious tradition and institution, values such as empathy, regard for life and nature, harmony, cooperation and presence of progress over material attainments have had an effect on policy-making as well. Due to Bhutan’s location and the vulnerability that comes along with it, drove the tiny Himalayan to preserve its culture and Bhutanese values which was in turn perceived essential so as to maintain independence and survive amongst the giants hence GNH has been serving as a philosophical foundation for the policy-making process. It is important to note that the efforts to operationalize GNH were only made in 2008.

Bhutan’s Planning Commission was established in 1971 and re-formed as the GNH Commission in 2008, in which the National Environment Committee also existed within the Planning Commission (RGoB, 2012, p. 23) the Prime Minister as the Chairperson. The central level planning process begins with the overall objectives and strategies to achieve those objectives through sectoral and local development plans. GNHC, the central planning body, issues policy guidelines and indicative plans

and based on consultations and budget constraints, the proposals are submitted and revised. In order to ensure well-coordinated and informed policy making, the Policy Protocol was formulated and the use of screening tool was made compulsory. On the whole, all policies and its approval process are managed by the GNHC Secretariat, with Cabinet approval.

Recognizing the inefficiency and shortcoming of the old policy protocol, the GNHC distinguished windows of opportunities for the integration of cross cutting issues in the beginning of the policy formulation. Therefore, the GNHC revised the old protocol with an objective to encourage the sectors to come up with goals of their policies in order to contribute to GNH-outcomes and not only focus on specific issues alone, as it was found that issues related to environment and others cross cutting ones were neglected to be addressed by the specific sectors (Department of Local Governance, 2015).

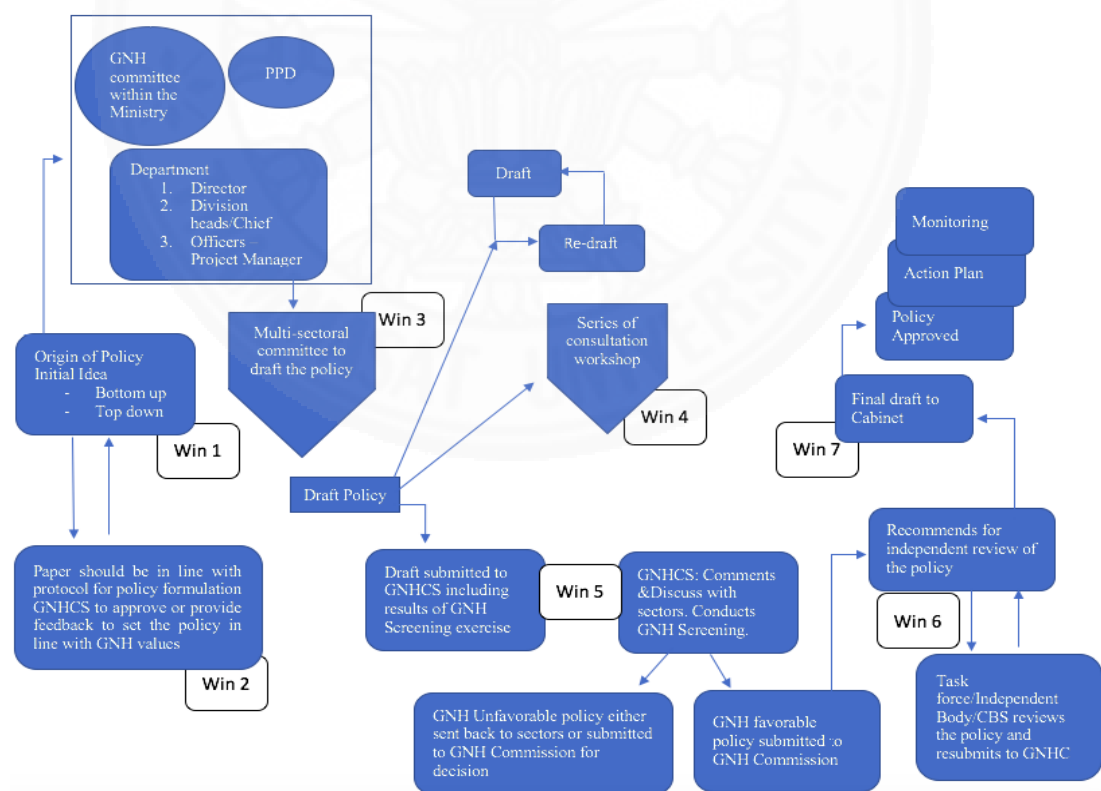


Figure 3.2 The Process of Policy Development in Bhutan

Source: Mainstreaming Gender, Environment, Climate Change, Disaster, and Poverty, (2015)

The Figure 3.2 shows a broader picture of the policy-making process in different components with different players, stages, and activities.

The policies stem from various lines of ministries whereby the approval process is overseen by GNHC. The initial tasks go into searching for “windows” within the policy-making so as to mainstream and provide opportunities to assess the policy and interventions labeled “WIN xx” (Brown, Lhamu, Wangyel, Tshering, & Dorji, 2012).

It is mandatory for all public policies to be approved and adopted in line with the policy protocol for policy formulation. It requires a three-page concept note by the proponent sector which is then submitted to the GNHC for review and endorsement prior to drafting the policy. The process on the whole consists of 23 extensive ways leading up to the policy formulation to eventually contribute towards the outcome of GNH.

The policy formulation begins with the proponent agency such as ministries screening the draft policy and comparing the results with the GNHC Secretariat. But before the policy screening, first, a bilateral session between GNHC secretariat and the proponent agency is held to address the significance of certain GNH indicators against the policy proposed, followed by the screening of the policy by proponent agency and GNHC. The results are discussed during the screening meeting in which stakeholders of minimum 15 participants are present, apart from that, proponent agency’s focal person, an environment representative and other external stakeholder are involved in the screening exercise with the Cabinet entitled as a final authority for new policies that pass the screening. Ever since the policy screening tool had been officially utilized, there were several policies that had not been approved by the Cabinet in the basis of not contributing to GNH values after the policy screening (Ura, 2015, p. 13).

3.3.1 GNH Policy Screening Tool

In 2008, GNH Index was created with an objective to “capture the essence” of GNH” and “help track national progress”, and by definition it is “ a critical evaluation tool for results based planning to ensure that development truly

contributes to the achievement of GNH” (Ura, Alkire, & Zangmo, 2011) and it consists of nine domains namely *Psychological wellbeing, Health, Education, Time Use, Cultural diversity and resilience, Good governance, Community vitality, Ecological diversity and resilience and Living standards*. But in 2011, Bhutan’s Centre for Bhutan Studies released an updated GNHI consisting of 33 indicators and 9 domains which is based on Alkire Foster Methodology of multidimensional measurement in order to measure the national well-being by each person, each indicator (Oxford Poverty & Human Development Initiative, n.d.).

When GNH Index was first created in 2008, a set of policy and project screening tool were also established altogether to track the development progress over time and also to help provide a route to the formulation to project and policies in coherence with the values of GNH. There are 26 criteria of GNH Policy screening (Ura, 2015) as shown in figure 3.3, and the screening question consists of questions that have 4 points on the scale ranging from 1 to 4, in that 4 indicates a positive score, 3 indicates the neutral score, 2 denotes uncertain and 1 denotes negative, as show in figure 3.4 below. It is mandatory for every policy to pass through the screening questions. This is done to assess their applicability in developing the morals of GNH (Centre for Bhutan Studies & GNH, 2017).

1. Equity	14. Water Pollution
2. Economic Security	15. Air pollution
3. Material well-being	16. Land degradation
4. Engagement in productive activities	17. Conservation of plant
5. Decision-making opportunity	18. Conservation of animals
6. Corruption	19. Social support
7. Judiciary efficiency	20. Family
8. Judiciary access	21. Nature
9. Rights	22. Recreation
10. Gender Equality	23. Culture
11. Information	24. Values
12. Learning	25. Spiritual pursuits
13. Health	26. Stress

Figure 3.3 Criteria for GNH Screening Tool

Source: The Experience of Gross National Happiness as Development Framework (2015)

Stress			
Will increase levels of stress in the population	Do not know the effects on levels of stress in the population	Will not have any appreciable effects on levels of stress in the population	Will decrease levels of stress in the population
1	2	3	4
Negative	Uncertain	Neutral	Positive

Figure 3.4 Example of screening questions, out of all that covers Nine domains

Source: Center for Bhutan Studies (2015)

In case of how it is being evaluated, if for instance Policy A is being examined on its impact on stress levels, culture and physical exercise, the policy will only be screened consisting of three questions, in which it has to score at least 9 as the average score accepted, if it scored below neutral, then the policy is either reviewed or rejected (Centre for Bhutan Studies & GNH, 2017).

3.4 Forestry in Bhutan

Forest conservation is economically important and essential for human existence and wildlife protection. The relationship between forest and environment calls for special attention as forest plays a significant role in sequestering carbon, curbing greenhouse gas emissions and withstanding global warming and climate change. Forest conservation is the preservation of not only forests but also the functions of an ecosystem, along with its biotic and abiotic components. It is also important to recuperate, like any other natural resources susceptible to get affected by extreme weather incidences and human intervention, therefore in order for the conservation to take hold.

Forest in Bhutan is the largest land cover and natural resources in Bhutan blessed with rich natural resources and rugged topography with settlement mostly in the valleys (Dhital, 2009). Bhutan has been blessed with rich natural resources which

is an important national asset that could potentially promote the well-being of rural livelihood and curb poverty. With 73 percent of the country under forest cover, it is estimated to have over 800 million trees and is listed amongst top twenty most forest coverage and the highest proportion of forest cover in Asia (Gawel & Ahsan, 2014).

3.5 Community Forestry in Bhutan

Community forest (CF) is a participatory management of forest where some part of government reserved forests is distributed over to a group of local users for ownership, sustainable utilization, and management. CF strongly contributes to poverty reduction and sustainable use of forest resources if managed properly with proper policies in place.

Forests were managed by the local communities prior to 1950s as open access but were technically controlled by the local authorities. Nonetheless, there were several projects, but the government only began the CF program in 2000 (Samdrup, 2011). After the community forest management plans took off, more number of communities came forward to engage in the forest management. As of 2015, there are 600 community groups across the country that are handed over to the rural communities (Zangmo, 2016).

Community forestry is representative of what Bhutan envisions which is sustainable management and conservation objective. It is not only about the importance of benefiting to the rural people, but it is also largely about the being significant to acting as a carbon sink. Moreover, the forests are also important to maintain country's ecosystem.

The scheme to include local people in forest management began after the Royal Decree of 1979. Since then, it has undergone several changes paving way for the benefit of people residing in rural areas. The main principle of establishing such management of forests is to develop the livelihood of rural people and lessen poverty which is basically a rural phenomenon. Through selling of timber, firewood, and others but the main reason for the people to willingly participate in community

forestry program is so they can gain secure and easy access to fuelwood (Phuntsho, 2011).

However, it is said that most of the community forests are too small to meet the needs of household fuel consumption on a sustainable basis (Siebert & Belsky, 2013). Community Forest Management Groups (CFMGs) shoulder the responsibility to protect from poaching, illegal activities, prevention of forest fires, sustainable harvesting of forest products and many more. These responsibilities were previously carried out by forestry personnel. Rasul & Karki (2007) quoted in Kinley (2009) executed an evaluation of community forest management tactics in countries like India, Nepal, Bangladesh, and Bhutan. They inferred that Bhutan had a low participation by communities and also low involvement in governance and social development.

3.6 The Constitution of Bhutan

3.6.1 Environmental Conservation as a Constitution Mandate

In order to uphold Bhutan's long-established pledge to sustainable development and environmental conservation as one of the keystones of the Gross National Happiness policy, the Constitution was adopted in 2008 which marked the development of the country from an absolute monarchy to a democratic constitutional monarchy. Recognizing the importance of environment, Constitution has a separate article (Article 5) that pertains to the environment which states that, *'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'*

It also obligates the implementation and support of environmentally-friendly practices and policies. Moreover, the government pledges to protect, and

safeguard the biodiversity of the country and in order to prevent degradation of the ecosystem, a minimum of sixty percent of forest cover for all time.

Furthermore, it states that the, *'The government shall ensure to conserve the country's natural resources and to prevent degradation of the ecosystem, a minimum of 60 percent of Bhutan's total land shall be maintained under forest cover for all time.'* *'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.'*

It is obvious from above statements that Bhutan prioritizes conservation and these strong conservation ethics are clearly reflected in the constitution.

3.6.2 Article 9, Principles of State Policy

It is important for any government to recognize the balance between ecology and anthropocene. The above articles 9 state the importance of environment and vested upon the government and the people to protect it. Thus, reflecting the ecological aspect of it, giving importance to environment. It is also equally important to recognize the well-being of the people. Rightly so, the article under this act states *"The State shall strive to promote those conditions that will enable the pursuit of Gross National Happiness."* Thus, it is reflecting the anthropocentric part of the Constitution.

3.7 Thrimshung Chenmo (Supreme Law) (1958)

Thrimshung Chenmo is known to be the first legal code of jurisdiction in Bhutan introduced by Zhabdrung Ngawang Namgyal, the founder of Bhutan who began his journey to Bhutan in 1616 and ruled the country for 35 years. But it was initiated by the Third King, Jigme Dorji Wangchuk after getting enthroned and enacted at the National Assembly in 1957 which had been perceived as a general law of the country thereafter (Mitra, Wolf, & Schöttli, 2006).

There was no such indication that suggested the village boundaries were defined for management (Webb & Dorji, 2003). In fact, the supreme law prohibited

hunting of wild animals such as tiger, elephant, musk deer etc, but no such prohibitions were put up for the use of forests such as felling of trees, thereby leaving the people off to manage it by themselves on mutual trusts and reciprocity.

After the initiation of this law severe changes were made. In actuality, it was a traditional unwritten customary law that was changed into a formal written law. Moreover, the power that people had over the use of forest resources was shifted to the state after enactment of this law (Penjore & Rapten, 2004).

To iterate Hardin's response to the tragedy of the commons, either privatizing the resources or centralizing it, is the key to solving it. Going by this act, it resonates with Hardin's response. However, the fallacy in his theory is he fails to acknowledge how often the tragedy of commons had been deflected by local institutions and its customs. As Tierney (2009) noted, international and national governments have acted in the name of environmental conservation which in turn brought ruin to the norms and knowledge of natural resources users. However, no research has been done to examine the changes in the patterns of forest users and the act's effect on management associated with the centralization in forest property rights.

3.8 National Forest Policy (1974)

After the nationalization of the forest in the previous act of 1969, the National Forestry Policy 1974 stipulates its objectives on the achievement of self-reliance considering the major contribution to the revenue from the forests. In addition to the mandatory maintenance of 60 percent forest coverage, demarcation of forests, the creation of management plans and afforestation to compensate the loss of forests were also emphasized in this act.

Pertaining to the felling of trees, the 1974 policy points that the Department of Forest will regulate felling of trees and extraction by marking the trees or demarcating the areas. Allowing the trees to be felled more than required at a very tiny rate of royalty for the purpose of construction led to the depletion of forests. Therefore, to regulate the felling of trees by the Department of Forest and to

curb such practices by the individual to resort to such activity, the 1974 policy states that the rates of the royalty had been raised and limited for constructions and other purposes. Forests were not leased to private parties and felling of trees was not allowed without prior marking of the trees by the Department. However, fuelwood was granted free of royalty for domestic purposes in rural areas.

3.9 National Forestry Policy of Bhutan 2009 (Final Draft)

The past policies underwent gradual changes in the emphasis from conservation to bringing the farmers in the forefront. This 2009 policy emphasizes empowering rural communities in managing forests to contribute sustainable forest management as one of the policy objectives. Under the Community Forest section, the 2009 policy lays out set of principles that shall be pursued in order to empower rural communities. Consolidating the community's rights and responsibilities to regulate access and the use of forest resources and to decentralize the management authority from the central government to local communities are being reflected.

This aspect of the community forestry to ensure sustainable use and empower local people is deemed important as Ostrom (1990) mentions that instead of assuming that users of resources are useless without any central authority to protect them from their activities, she places the resources among the common users to work out by themselves. Even though it could go wrong, she suggests it is still benign in comparison to the central system of governance. Another important principle mentioned in this policy is also to manage the community forests so as to achieve the requirements of timber and firewood for local people.

3.10 National Forest Policy 2011

The goal of 2011 National Forest Policy is to manage the forest resources sustainably and equitably to produce social, economic and environmental goods and services while still managing 60 percent of the land under forest thereby contributing to Gross National Happiness. It stipulates

1. “A minimum of 60 percent forest cover is retained across the country, in conformance with the constitutional requirement”

2. Local Communities are authorized in sustainable forest resource management through community management of forests in close assistance with public forest managers to fulfill the forest product needs of local communities, income generation, employment opportunities and to complement conservation and utilization objectives of public forest.

After the nationalization of the forest, there were numerous regulatory limitations which led to only a little progress. However, changes were brought about after the adoption of decentralization policies in the early 1990’s. It was around that time the importance of people’s participation in protection and management of forests was recognized. Therefore, under the Community Forestry provision, its main objectives are

1. Returning privileges and responsibilities for managing forests to community groups.

2. Rising the economic profits from community forests to communities through the sale of timber and NWFPs.

3. Contributing to poverty reduction.

Currently, there are groups of Forest Department staff who are mandated to implement forest policy. There are;

1. Territorial staff, responsible to the Director of Forestry, who has a mandate to manage commercial timber operations in FMUs and illegal activities outside FMUs;

2. Protected area staff, responsible to the Director of Forestry, who have the mandate to manage protected areas;

3. District staff, responsible to the Dzongda, who have a mandate to manage rural timber requirements and sanctions, forest fires, community forestry, allocation of dry firewood to rural communities and small-scale plantations in their Dzongkhag.

Local communities are empowered in sustainable forest management through community management of forest in cooperation with public forest

managers to meet the need of local communities and to complement conservation as well.

The main purpose of this 2011 policy is to set the outline for technical management of the country's forestry, laying out approach for forest management, afforestation, utilization of forest, management of wildlife, regeneration, forest administration and training, investment and government revenue, forest research and publicity (Gawel & Ahsan, 2014). Community Forestry is a key component of the National Forest Policy 2011. In addition to that, it is also to ensure that the forest resources are managed sustainably to provide a wide range of social, economic and environmental benefits while still maintaining the constitutional requirement of a minimum of 60 percent of the country's total area under forest cover (National Biodiversity Strategies and Action Plan, 2014).

At this point, it is important to note that after the introduction of GNH policy screening in 2008, several policies have been withheld after getting screening. But on the other hand, 12 policies were approved, and National Forestry Policy 2011 is amongst them. Under the GNH policy screening tool, the national forest policy scored 77.1 with the neutral score being 69 (Centre for Bhutan Studies & GNH, 2017) indicating it is a GNH favorable policy. The influence of GNH can be seen here since the main objective of this 2011 policy is to conserve and followed by the economic benefits from the forests. Even though the policy of GNH is geared towards conservation under the pillar of environmental conservation and happiness of the people, the interpretation of the policy is emphasized more on the conservation rather than the benefit of the forest that people can derive.

3.11 Bhutan Forest Act (1969)

The Bhutan Forest Act of 1969 is considered to be the first modern legislation of forest policy enacted to protect the forests. Due to extensive forest degradation witnessed in the neighboring countries, it made Bhutan more cautious of the pursuing forest management programs. With the establishment of the Department of Forest in 1952, Bhutan started off with the management of forest and

in 1969, the Bhutan Forest Act was adopted to manage the use of the forest. Recognizing the importance of forest besides aesthetic views and to curb soil erosion, this act was ratified to strengthen the law related to forest, the transit of forest produce, duty leviable on timber and other forest produce.

Bhutan Forest Act 1969 nationalized all forests with an intention to guarantee conservation and equitable access for all Bhutanese people, that no one has acquired a permanent use and has been inhabited. Activities related to the use of land for cultivation, felling, injuring any tree, quarrying of any forest produce, water poisoning, hunting and grazing cattle in new plantations is restricted by His Majesty's Government. Under miscellaneous, the act prohibits felling or damage of trees up to a distance of 600 uphill and 300 downhill of the motorable roads.

This act shows that it is fixated on conservation, which is one of the objectives of GNH. One of the objectives of the policy, apart from the wellbeing of the people is the conservation of natural resources. Nonetheless, it is important to note that GNH officially deputed only in 1996. In pursuant to the previous act and co-incidentally in line with Hardin's response, it made fundamental changes in the rights of the forest and accessibility by transferring the ownership of the forest to the government. This was done so as to conserve the forest since this act is the first one stipulating the requirement for the maintenance of a minimum of 60 percent of the total land area under forest cover of all time. This conservation principle was further strengthened through the formal adoption of the development philosophy "Gross National Happiness" (National Biodiversity Strategies and Action Plan, 2014).

Even though one of the given objectives was equitable access for all citizens, in retrospect it withdraws the user's right to forestry. The third world country, according to Ostrom (1990) nationalized the ownership of forest on a basis of local villager's inability to manage forests, but nationalization meant expropriation. Some of the consequences that came after nationalization was documented in countries like Thailand, Niger, Nepal, and India.

3.11.1 Forest and Nature Conservation Act (1995)

Replacing the Bhutan Forest Act of 1969, the Forest and Nature Conservation Act (1995) under Chapter IV introduces social and community forestry mechanism amongst others which was not present in the previous act. Approved by the National Assembly, it is considered as the most important piece of legislation, provides authority for forestry activities in the country. Therefore, the main objective of this act is to protect and conserve the forest.

It stipulates that *‘the community forests shall be managed in accordance with the rules of community forests and the approved management plan, including the permits, royalties and other charges. Fuelwood or timber requirements are strictly regulated by the District Forestry Extension Officer and the territorial divisions of the Forest Department’*. The Ministry of Agriculture is responsible to make rules for the establishment of community forests on government reserved forest. The Community Forestry Chapter states that:

- *“The Ministry may make rules for the establishment of community forests on Government Reserved Forests.*
- *The rules for community forests may provide for the transfer of ownership of the forest produce in the community forest to appropriate groups of inhabitants of communities adjoining the forest.*
- *The group to which community forests have been transferred shall manage them for sustainable use in accordance with the rules for community forests and the approved management plan.*
- *Permits, royalties and other charges, as well as assistance to community forestry, shall be governed by the rules for community forests.”*

Fuelwood is categorized under ‘Forest Produce’ in the Act, stating that

- *The Ministry may make rules in order to allow the taking of forest harvest without a permit.*

But, a person is allowed to take from nearby areas of Government Reserved Forests if

- *The taking will not rise the danger of landslides, soil erosion or*

other environmental damage

- *Anything taken is for a person's own household use in rural areas*
- *The taking is not controlled by other segments of the act or any other law or rule and*
- *The set royalties have been gathered.*

The Forest and Nature Conservation Act, that replaced the Bhutan Forest Act 1969, reports matters related to the management of forest, the government reserved forest and community forest (Gawel & Ahsan, 2014). Setting a different direction from the previous act, it identifies the customary rights of the local people and allows forestry in private and community forestry. With that, the Department of Forestry under the premise of Ministry of Agriculture is responsible for implementing the 1995 Act.

The most important change made is, the recognition of customary rights of local people to forest use indicating their rights to forest access and community forest also being recognized. This recognition of traditional and cultural rights of the local people reverses the trend set up in the 1969 Act. This indicates that the previous act of centralizing the forest in managing the forest has not have been successful which in turn refutes Hardin's response. The ownership of the forest is being transferred to an appropriate group of populations of communities connecting the forest, reinstating the traditional right to use the forest to the community and private forestry in privately registered lands and community forestry on government forest lands.

However, even though the government of Bhutan made significant changes by recognizing the rural people's rights, the rules are being made by the Ministry of Agriculture. Moreover, this hints at the disempowering of local people's right to makes rules which, according to Ostrom, is an important aspect amongst her Eight Principles.

3.11.2 Forest and Nature Conservation Rules of Bhutan 2006

With an expectation to modify so as to make the rules more flexible and adaptive, it was bestowed under the forest and Nature Conservation Act of Bhutan 1995. The RGoB promulgates the Forest and Nature Conservation Rules of Bhutan 2006, supersedes *all government notifications, circulars, orders and earlier rules*. This act provides the rules and regulations to guide the implementation of the Forest and Nature Conservation Act 1995. *“In Urban areas, firewood to the Armed forces, Monk Bodies and other Institutions are supplied by Forest Development Corporation Limited (FDCL) and is subject to payment of royalty and issue of the permit by the Department”*.

It also stipulates that the first priority will be given to meet the demand for domestic use of fuelwood and then industrial and commercial collections are considered. However, the collection of firewood within protected areas is prohibited, unless with a written permit or authorization. Activities such as getting a dried firewood from the government reserved forest for a domestic purpose is allowed without a permit and free of royalty. The entitlement of the firewood in rural areas is *“one truckload (8 cubic meters of stack volume) per family per year in the areas with electricity connection and two truckloads (16 cubic meters) per year in areas without electricity connection.”* But in order to reduce the consumption of firewood in the country, *“the ministry shall initiate suitable measures/actions in consultation with other Ministries. The area to be allowed for the collection of firewood shall be decided by the Management Plans.”*

Any area of government reserved forests suitable for community forest management can be designated as “Community Forest (CF) if it meets certain criteria under Section 2 (a) of this act. The community themselves select the management committee and a chairperson. The government’s responsibility especially the DFO/PM and the DzFO is responsible for conducting regular monitoring and evaluation of each Community Forest. Each Community Forest Management Group (CFMG) is responsible for the control and management of the CF under the supervision of the Dzongda (provincial executive head) and technical and organizational support of the DzFO (Provincial forest Officer) and DFO/PM.

2006 Forest and Nature Conservation Rule provides rules to guide the implementation of the Forest and Nature Conservation Act of 1995, broadening the scope of community participation and clarifying some unclear provisions (Phuntsho, 2011). However, with that said, even though the CFMGs are given the right to manage community forest, it has to be in accordance with the managed plan approved by Dzongda (Provincial head) with technical and organizational support from the DzFO and DFO/PM. This shows that even though the CFMG has some authority, it is not in accordance with what the rural people want. This resonates with Ostrom (1999) that the thought of users themselves would find ways to organize resources had not been considered in the policy literature. She also notes that participants are involved in making many rules, not all in the sustainable use of resources. This aspect of rural people taking part in rules is what's lacking in this act.

On the other hand, amongst other responsibilities, the CFMG is responsible to afforest the degraded areas within CF which shows the commitment of conservation being reflected in this act. At this point, it is important to note that, the objectives of GNH is the happiness of the people and conservation of the environment. This act shows that the conservation commitment is upheld but the launch of GNH has not played a role in disseminating the authority to local people, indicating an existence of top-down approach. It is also evident under Forest and Nature Conservation Rule 2006, the power to manage plans was shifted from CFMGs to DzFOs, hence revoking the authority of CFMGs as a forest planners and managers. Moreover, CFMG has to undertake the management plans under the supervision of provincial heads and forest officers, which shows the disempowerment of CFMGs. It is important to decentralize more authority of the CFMGs so that there is a proper dissemination of authority to the forest users.

3.11.3 Forest and Nature Conservation Rules and Regulations of Bhutan (2017)

Convened under the Forest and Nature Conservation Act of Bhutan 1995, the Royal Government of Bhutan promulgates the Forest and Nature Conservation Rules and Regulation of Bhutan 2017, superseding all government notifications, circulars, orders and earlier rules. Under this rules and regulations, the

supply of firewood still remains free of royalty ensured by the Gup (Block Leader) that firewood is issued once a year with an entitlement same as the one given in the Forest and Nature Conservation Rules of Bhutan. The Community Chapter states that:

1. The Department may designate any area of State Reserved Forest Land, including degraded and barren areas for improvement, in the vicinity of human settlement, suitable for control and management by Community Forest Management Group (CFMG), as Community Forest (CF).

2. The CFMG is responsible for sustainable management of the Community Forest, in accordance with the approved managed plan.

3. The CFMG shall harvest the forest produce from the Community Forest in accordance with the Management Plan

4. The CFMG shall obtain permit from the Chairman of CFMG for harvesting of any forest produce from the Community Forest

Forest and Nature Conservation Rules and Regulations of Bhutan (2017) superseding the Forest and Nature Conservation Rules 2006, makes the provision easier to implement. For instance, it specifies that forest of any kind, be it barren or degraded shall be designated as a community forest, which was absent in the previous one. It also empowers the community forest management group for the management in accordance to the management plan.

3.12 Community Forestry Guidelines for Bhutan 1996

In the past, there was no recorded information about the ownership and use of forest, however, the customary tenure existed within the local villages. The shift of responsibility from the local community to the state as a result of nationalization of forest in 1969 was introduced with an intention to protect the forest. But, it had negative consequences on the social and environment whereby the villagers lost the feeling of customary ownership of their nearby forests and traditional system of forest protection. Hence, recognizing the importance of involving the community in the management and protection of forest, the Department of Forestry prepared a structure whereby local people were involved in

the forestry. On the other hand, in order to promote conservation, the Department of Forestry declared Coronation day, June 2nd as Social Forestry Day.

Under the community Forestry Guidelines, Community Forestry is defined as “the management based on an agreement between an organized group of forest users (a Community Forest Management Group) and the RGoB.” Community forestry is planned in order to meet the RGoB’s basic development goals of protection, production, and equity. Community Forestry programme is based on principles such as:

1. *Ensure conservation of the forest and then to ensure forest resources are used sustainably to derive economic benefits and contribute to social justice and equity.*
2. *Priority should be given equally to degraded land and to the natural forest that is progressively degrading due to lack of sound management.*
3. *Local wisdom, beliefs, knowledge, skills, and practices will be taken into consideration in the formulation and implementation of community forest management plans. This is to ensure sustainability and reinforce cultural heritage.*
4. *Traditional and indigenous institutions, forest management systems should be identified, respected and built upon. Modifications should be attempted when the workings of the institution or system are in conflict with program goals. (e.g. Inequitable benefit distribution).*

Under the Community Forest Rules 1996, it states that the ownership of the trees and wild plants are vested in the group while the ownership of land and other forest resources remains with the government. Similar to the Forest Policy of 2011, the community forestry guidelines also stressed on ensuring conservation and then economic benefit of the forest.

In conclusion, Bhutan’s forest is of huge significance to the people’s livelihood. People are heavily dependent on it, it is particularly important to Bhutan’s poor, most of whom live in rural areas. As can be seen from the brief analysis of the forestry polices and acts, conservation policies were initiated so as to protect the natural resources. It can also be seen that its policies have progressed over the years from nationalization of the forest in 1969 to setting a goal to maintain 60 percent of

forest coverage in all years to come. One of the most notable progress made came after the introduction of Forest and Nature Conservation Act (1995), that recognized the users right to use forest. The ensuing rules and regulations emphasized on community forestry. These events reveal the steps taken to improve the livelihood of the people. Nonetheless, it is important to note that, these polices still has to be improved and more emphasis should be given to the community forest users/ people involved in the community forestry themselves. The conservation commitment has existed even before GNH was introduced. Nonetheless, after GNH was introduced, the policies have become less stringent and more enabling for the rural people.



CHAPTER 4

ANALYSIS

This chapter will look specifically into the use of fuelwood and the threat it has on the conservation pillar. Consequently, this paper also studies the application and compatibility of Ostrom's Theory with the environmental policy to see how the policy fares well with the theory so as for the government of Bhutan to improvise on the missing or features that are lagging. GNH is not only about the conservation, it is also about creating a condition to make people happy and enhance their well-being. Therefore, this study later looks into the connection between the use of fuelwood and the happiness of the people. Since there is no specific information specifically regarding the connection between the two, there are some indications and link between forestry and the local people. These indications and information help in giving direction to how people feel about the policies with regard to forestry.

4.1 Consumption of Fuel-wood: The Tragedy of the Commons

Fuelwood from the forest is a vital source of energy in rural areas for many developing countries. Fuelwood consumption is related to natural resource management and deforestation. Globally, more than two-thirds of wood are used as wood fuel in Africa and Asia and deforestation accounts to about 13 million hectares per year (Food and Agriculture Organization of the United Nations, 2005).

The Tragedy of the Commons is associated with environmental settings such as rivers, oceans, forest, and animals. The "commons" is any resources shared by a group of people, states and cities. Land for farming, grazing, and wood for fuel and housing are also considered commons. Abundance of natural resources such as pastures, water or forests has a possibility of facing congestion or overuse. Such overuse could lead to difficulties such as the tragedy of the commons.

The yearly fuelwood consumption estimated to be 1.2million cubic meters from the natural forest (RGoB, 2015) indicating significant dependence on the fuelwood

consumption and a threat to forest conservation. Environment conservation has always been at the heart of development policy in Bhutan that is in line with the policy of GNH. Bhutan is blessed with rich natural resources and vast forest coverage which is an important national asset. However, fuelwood consumption accounts for 95 percent and it is the only readily available source of energy for most people living in rural and urban areas. Consequently, 12 percent increase in harvesting has reportedly been due to fuelwood consumption. Bhutan has abundance in wood since 70 percent of the country is forested, but the use of fuelwood contributes to deforestation indicating huge reliance on the forest for people's livelihood. Hence, programs to promote and develop renewable energy technologies were put in place in order to reduce fuel wood demand (RGoB, 2013).

4.2 Threat of Fuelwood Extraction on Conservation in Bhutan

Bhutan is fast developing its socio-economics via development of infrastructure and other mechanisms of economy such as construction of hydropower. In light of these developments, forests resources such as timber, fuelwood etc, are growing on daily basis. Such development activities will certainly put lot of pressure on forest resources. During the 10th five-year plan of Bhutan (2008-13) high levels of fuelwood consumption is noted as one of the challenges for environmental conservation (RGoB, 2009), because of easy access and lack of other alternatives.

Moreover, one of the key environmental issues is high level of fuel-wood consumption amongst others whereby rural people predominately makes up about 69 percent of the population (RGoB, 2009). Traditionally rural people in Bhutan are profoundly dependent on forest resources for the purpose of fuelwood which is an important source of energy source accounting for total energy consumption of 78 percent (Sangay, 2011). Consequently, Bhutan is known as one of the highest domestic fuel use in the world with almost 1.3 tonnes per person (UNDP, 2012).

Fuel-wood is the key source of energy for cooking and heating. In addition to cooking, due to the extreme climate condition, rural people also have to

rely on fuelwood for warmth through the use of 'Bukhari'. Hence, given the amount of population concentrated in rural areas, pressures are mounting on the forest. Moreover, it not only poses threat to the conservation of the environment which leads to deforestation and degradation, but the inefficient use of fuelwood also leads to air pollution and the emission of greenhouse gas.

Throughout the country, reliance on firewood as a fuelwood has been prevalent historically and more than 85 percent of forest resources are consuming in the rural and semi-urban areas which is more than annual allowed out of from total wood from operable areas (Forest Resources of Bhutan, 2000). Fuelwood is obtained from forest management units and requires a permit from the Department of Forest. Some rural residents have joined community forestry management groups so as to avert having to purchase permits and collect fuelwood from community forests (Phuntsho, Schimdt, Kuyakanon, & Tempel, 2011). The people living in rural area consumes four times more than the urban area due to close proximity and easy access. Fuel-wood energy is noted under severe consumption pressures (Bhutan Statistical Services&Environmental Consultancy, 2013).

4.3 The Application of Ostrom's Theory and the Eight Design Principle on Community Forest

A common approach to such problems such as "Common Resource Pool" or "Tragedy of the Commons" is the privatization of property (Hardin, 1968) but that is not the only solution. Hardin's very theory has been challenged by Ostrom et al. (1999) who disputed the Hardin's interpretation that such problems need some sort of authority regulator. In fact, Ostrom (1999) has studied several cases whereby resource users have been able to manage to avoid the common property resource problem.

There are Eight Design Principles which in a brief overview posits that 'Users design their own rules (Design Principles 3) that are enforced by the users or which is accountable to them (Design Principle 4). The users also have graduated sanctions (Design Principle 5) that clearly defines who has the right to withdraw from

a well-defined resource (Design Principle 1) that effectively assign cost proportionate to benefits (Design Principle 2). That way, collective action and monitoring problems tend to be solved in a reinforcing manner. Moreover, there is rapid, low cost, local arenas to solve resolve conflict among users (Design Principle 6), a minimal recognition of the right to organize by a national or local government(Design Principle 7). The Eighth Design Principle may be present in robust systems whereby the common-pool resources are being managed by a large group (Ostrom, 2005).

Ostrom (2012) notes that people are often able to acquire their own methods to develop approaches for managing commons. Particularly, people are often able to define the boundaries of a common pool resource effectively, delineate the rules and effectively enforce it. One of the efficient ways to manage natural resources that she mentions is 'Polycentric' system whereby various entities have some roles to play. For instance, government may play some role by providing information to the resource users or providing assistance with the process of court systems. Moreover, in order to develop a feasible approach, it is important that the resource can be clearly defined and that the rules mangaing the use of the resource are adjusted to local conditions which indicates that the rules imposed from external entity such as government agency are unlikely to be unsuccessful. Because of such attributes of her theory whereby people cooperate when empowered leads to not only conservation of the natural resources but also empowers local users, thus leading to the wellbeing and happiness of the people. In this way, the theory captures the main essence of GNH in which people and conservation are the two most important facets of the policy.

Table 4.1 The applicability of Ostrom’s Eight Design Principles on the Community Forest. Source: Collected by the Author.

		Ostrom’s Eight Design Principles							
		clearly defined boundaries - individuals or households who have rights to withdraw resource units from the cpr must be clearly defined, as must the boundaries of the cpr itself.	Congruence between appropriation and provision rules and local conditions. Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions and to provision rules requiring labor, material, and/or money.	Collective Choice Arrangement – Most individuals affected by operational rules can participate in modifying operational rules	Monitoring - Monitors, who actively audit common-pool resource conditions and user behavior, are accountable to the users and/or are the users themselves.	Graduated sanctions - Users who violate operational rules are likely to receive graduated sanctions (depending on the seriousness and context of the offence) from other users, from officials accountable to these users, or from both.	Users and their officials have rapid access to low-cost, local arenas to resolve conflict among users or between users and officials.	Minimal recognition of rights to organize- The rights of users to devise their own institutions are not challenged by external governmental authorities.	Nested enterprises - Appropriation, provision, monitoring, enforcement, conflict resolution and governance activities are organized in multiple layers of nested enterprises
Bhutan’s Forestry Law, Policies and Regulations	The constitution	X	X	X	X	X	X	X	X
	Thrimshung Chenmo (-) Webb & Dorji, 2003)		X	X	X	X	X	X	X
	National Forestry Policy (1974)	X	X	X	X	X	X	X	X
	National Forestry Policy (2009)	X	X	X	X	X	X	X	X

Table 4.1 The applicability of Ostrom's Eight Design Principles on the Community Forest. Source: Collected by the Author (cont.)

National Forest Policy (2011)	X	X	X	X	X	X	X	X
Bhutan Forest Act (1969)	X	X	X	X	X	X	X	X
Forest & Nature Conservation Act (1995)	X	X	X	(+) Chapter IV, Section 17(C)	(-) Chapter III, Section 10(B)	X	X	X
Forest & Nature Conservation Rules and Regulation (2006)	(+) Chapter (IV), Part B, Section (27)	X	X	(+) Chapter (IV), Part B, Section (31)	(-) Chapter (IV), Part B, Section (27)	X	X	(+) Chapter (IV), Part B, Section (39)
Forest & Nature Conservation Rules and Regulations 2017	(+) Chapter (III), Section (27)	X	X	(+) Chapter (III), Section (86)	(+) Chapter (XIII), Section (397)	X	X	X
Community Forestry Guidelines for Bhutan 1996	(+) Chapter(II), Section (2.1)	X	X	(+) Chapter 1, Section 1.4 (c)	X	X	(+) Chapter (1), Principle (1.5.3, k)	X

X = Principle missing in the Forestry Laws and Policies of Bhutan, (+) = Principle present in the Forestry Laws and Policies of Bhutan, (-) = Contradicts Ostrom's principle.

Forest resources are considered a common property and open to any user. This very assumption coupled with the human nature for self-interest is susceptible to the “Tragedy of the Commons.” The question of how the forest can be conserved is of huge significance considering the strong conservation policies of the environment being prioritized by the government of Bhutan. But it is not going to be left unchallenged as Bhutan also grapples with problems that stem from the increase in population, infrastructure development and other purposes (Dhital, 2009).

As can be seen in Table 4.1, some of the policies found in the acts and policies (mentioned in the chapter 3) fit into some of the Eight-Design Principle of Ostrom, while some are clearly missing. The Constitution of Bhutan does not have any principles of Ostrom mentioned therefore, under all the Design Principles, it is indicated as missing. Nonetheless, the absence of those Ostrom’s Principles in the Constitution doesn’t embody what a constitution is. The provision of the importance of environment and the well-being of the people is given in the article thus reflecting the balance between the importance of the well-being of the both environment and the people. The Supreme Law ‘*Thrimshung Chenmo*’ as stated above is a general law and does not as such mention specifically anything about Community Forestry. Nonetheless, the indication (-) is given under the Ostrom’s first Design Principle because there are no defined boundaries whereby the users can manage the forest. This contradicts with Ostrom’s First Principle as she mentions that the users need a clear defined boundary whereby the users can manage their own forestry within a boundary. This Law also nationalized all the forest therefore, this explains why all the Design Principles are missing. This is because with nationalization comes strict government control there by leaving little room for the villagers to act on their own devise.

Similarly, the National Forestry Policy (1974), (2009) and (2011) does not have any of the Ostrom’s Principles. In fact, the National Forestry Policy (1974) has no provision of Community Forest, nonetheless the government made progress in the 2009 and 2011 Policies. However, since those are policies, it only mentions about community forest, objectives and the emphasis on the consolidation of the user’s rights and responsibilities. Hence, these policies have no provisions about principles

that resonates Ostrom's Principles. Similar to the Supreme Law, the Bhutan Forest Act 1969, is the first modern legislation of forest policy. The Act nationalized all the forest with an intention to conserve and protect the forest. Due to the government control, it failed to recognize the user's rights and responsibilities, hence under this Act, all the missing provisions are indicated as 'X'. Nonetheless, with the government of Bhutan improvised Bhutan Forestry Act (1969) with an of introduction of Forest and Nature Conservation Act (1995). The Department of Royal Government manages the forest resources as mentioned under Chapter II Section 4 but users themselves are responsible to manage their own community forest which is indicated by the (+) sign under the Design Principle Four. However, under Chapter IV, Part B, Section (27), contrary to Ostrom's graduated sanction of first involving giving an information to the violator of the rule, this act mentions 'imprisonment or giving fine' as a sanction. Hence, the (-) indicator. The Forest and Nature Conservation Act (1995) is the first act to have introduced and emphasized Community Forest. Thus, explains the progress made over the years of several Acts and Law that has been implemented by the government.

The progress is also evident by the Forest and Nature Rules and Regulation (2006) with the presence of at least three Ostrom's Design Principles. Under this Rules and Regulation, the users manage their own forest resources on the defined boundaries indicated by the (+) sign under the Design Principles One and Two. For the Design Principle Five, the Rules and Regulation only mentions the offenses, therefore it remains unclear as to what the sanctions are. As for the Design Principle Seven, similar to Ostrom's suggest, the government of Bhutan is endowed with the responsibility to support, assist and take care of the condition of Community Forest.

In addition to the Forest and Nature Conservation Rules and Regulations (2006) Chapter IV, Section (27) the Forest and Nature Conservation Rules and Regulations (2017), gives specification as such both degraded and barren areas in the vicinity of human settlement as being suitable for the control and management of the Community Forest. Similar to the previous Rules and Regulations, the users have the right to manage their own forest under Chapter III, Section (27), hence indicated

by (+) sign, followed by the Design Principles Four and Five. Under this Rules and Regulations, the graduated sanction involves first a fine, compensation, seizure and prosecution in court law. Even though this provision does not exactly resonate with Ostrom's Design Principles 5, there is an attempt at giving a step by step sanction as opposed to the sanctions mentioned in the previous law, Acts and Rules and Regulations.

The Community Forestry Guideline (1996) was introduced after realizing nationalization of forest under Bhutan Forest Act (1969) had led to the loss of customary rights of the users. Therefore, this guideline made huge progress after the 1969 Act by restoring the user's right. Thus, the Design Principles 1,4 and 7 are indicated with (+) sign. According to the table 4.1, Forest and Nature Conservation Rules and Regulations 2017 and Community Forestry Guidelines (1996) has no contradiction with any of Ostrom's Design Principles and has three (+) signs. Thus, indicating that these two regulations are better compared to the others. This also shows that the government of Bhutan has progressed its forestry laws and policies ever since it started its first one. Nonetheless, as mentioned above, the missing Principles are significant in making the users participate in the community forestry, hence, the regulations can be further improved.

As can be seen from the Table 4.1 the Laws, Policies, Act and Rules and Regulations neglects an important provision of users getting involved in making and modifying rules if it seems inappropriate to their local condition or if the rules seems easily breakable by the users. The Design Principle Six where by the user can a rapid access to low cost arena to resolve conflicts is not reflected in any of the law and policies but Dorji et al., (2003) states that village elders and leaders are the most commonly used low-cost medium whereby the conflicts are resolved by involving elderly people and leaders which is considered the cheapest method of resolving conflicts.. And the Gup (Block Leader) is the highest authority where the local disputes can be taken informally. Considering all the policies and the Design Principles, Community Forestry Guidelines (1996) and Forest & Nature Conservation Rules and Regulations (2017) seems to be more suitable policy amongst others as it consists of at least three of Ostrom's Design Principles.

As a country that took on a different path from others by embracing a holistic policy such as GNH, should also be able to take a strong hold in the rural areas. Moreover, since conservation is placed as one of the pillars it is essential to decentralize the responsibilities and functions amongst the users themselves in a more inclusive manner. The policy lacks in two important aspects because community members do not involve neither in making rules nor in modifying it.

Owing to the fact that local people are extremely reliant on forest for their livelihood, the phenomenon of the tragedy of commons could have larger implications on the livelihood of the rural people. In this case Bhutan's environment policy is met with the conflict between conservation and allocating natural resources properly in order to avert this phenomenon. The policy of Gross National Happiness is a top-down approach as opposed to Ostrom's bottom-up both aimed at conservation and well-being of collective people. Evidently, forest policies especially community forestry under the realm of environment conservation does lack an aspect of bottom-up approach.

The evolution of forest policy from the nationalization of forest in 1969 to transferring the ownership to the communities in 1995 shows an attempt at bringing the local communities at a forefront of the policy. Even though studies have shown the conservation of environment to be helpful for people's well-being, the environmental policy in Bhutan lacks in respect to giving the rural people the full right in terms of using natural resources, as it is mostly regulated by the government. A bottom-up approach, including community participation, is touted as great approach to ensure positive impact on the future of forest resources of a country. This disempowerment of rural forest users refutes the principle of Gross National Happiness because it subtly affects the well-being of the people. Therefore, given the prioritization of conservation of environment, Bhutan has proven its commitment to conserve which is commendable, nonetheless, it further needs to shift its importance on the rural people in line with the Ostrom's Eight principles. It is important to both conserve and derive benefits from environment conservation thus people have to take a lead role in the management of the Community Forests.

4.4 The Connection of Fuelwood Consumption and Local Happiness

To understand the connection between fuelwood and happiness of local people, it is hindered by the lack of information. However, there are some indications and link between fuel-wood consumption and the local people. In the Eleventh Five-year Plan, the government of Bhutan revised a new electricity tariff whereby the rural consumers are provided free electricity for three years. This was done so as to encourage the rural community to cut down on the use of fuel-wood for environmental and health reasons (RGoB, 2013). The government also put up programs that will promote biogas plants as alternative source of fuel for cooking and reduce fuel-wood demand. But such programs and the people of rural area are faced with several challenges, these include lack of policy and regulatory framework for promoting other renewable sources of sustainable energy, lack of capacity at local level, lack of awareness amongst the players on the benefits of using clean energy, lack of resources and financing and lack of community participation and sense of ownership (Tshering, 2006). Therefore, people are left with no other option but to resort to consuming fuel-wood which not only makes their life difficult but also affects their health. In addition to that Subba (2017) reveals that 84.67 percent of total energy is consumed for heating and cooking purposes from fuelwood alone, which shows that the consumption is still quite high and consequently it often attributed as the main cause of deforestation (Ali & Benjaminsen, 2004). Similarly, in some part of eastern Bhutan, fuelwood consumption has been blamed for deforestation (P.Norbu & Geeri, 2004).

In most parts of Bhutan, local people are poor farmers who are mostly reliant on the natural resources. Wood is an asset and in this respect Community forests plays a pivotal role. GNH is defined through a top-down approach, possibly limiting the relevance of issues for most rural Bhutanese, which represents significant percent of the country's population. And the top-down decision regarding forestry is being viewed by the farmers as negatively affecting their livelihood (Samdup, Udo, & Zijpp, 2014). The poor people tend to be at a disadvantage if the policies are not inclusive. The institutional arrangements of the local management have strongly

influenced how policies affect local people. Moreover, the increase in forest offences with regard to the collection of firewood has remained the same while the offences with regard to Timber transaction has decreased which indicates there must be something lagging behind in the policies when it comes to the collection of Fuelwood (MoAF, 2015).

With development and forest policies geared towards conservation, the rural communities have faced difficulties accessing forest resources. Considering how the rural people's livelihood is heavily reliant on forest eco-systems, including fuelwood, non-wood forest products, construction of timber etc., in 2009 the forestry sector only accounted for 2.89 percent share of GDP. This indicates injustice to the importance of livelihoods of the poor people (Lama & Dorji, 2017). Moreover, in relation to that, the screening of National Forest Policy 2009 that was approved by the Gross National Happiness Commission scored low in the field of equity and justice in terms of access (Gross National Happiness Commission, 2008).

In addition to that, the 2015 GNH index shows that farmers are less happy than other professions in both 2010 and 2015 survey (Centre for Bhutan Studies & GNH Research, 2016, p. 2). People living in urban areas are happier than rural areas. The 2015 survey report shows that only 38 percent of people in rural areas are happy whereas 50 percent of people living in urban areas reported to be either deeply happy or extensively happy. Moreover, categorically by occupation only 33 percent of farmers were reported happy and 64 percent of civil servants were happy followed by other occupations. It is interesting to note that the level of income is not among one of the contributing factors to unhappiness in Bhutan, in this context to farmers. It is revealed that one of the biggest contributors to unhappiness are a lack of sense of fundamental rights and lack of access to key services among other reasons. The 2015 GNH index report also reveals that the less happy people in Bhutan believe the government is as not being supportive significantly.

Bhutan is known as an agrarian society and the local people that make up a large portion of the population is unhappy then the government needs to rethink its development plans. The GNH Survey findings show that those who should be benefitted the most are left behind. Hence, this shows that it is important for the

policy to emphasize farmer's needs. These are some of the signs that inadvertently point to not only how rural people reflect on the effect such policies have on their lives, it also points to the influence of GNH on the environment is mostly geared towards conservation.

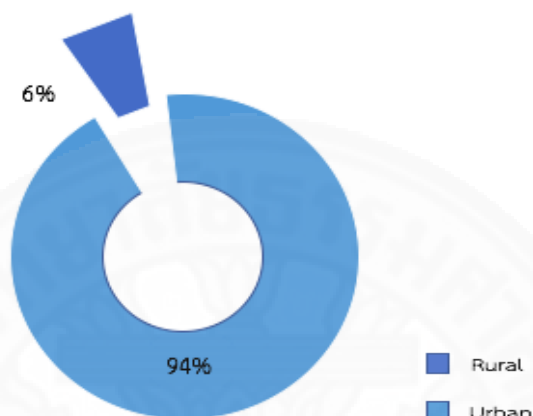


Figure 4.1 The Consumption of Fuel-wood in Rural and Urban area
Source: Bhutan Statistical Services&Environmental Consultancy (2013)

The Figure 4.2 shows that the consumption of fuel-wood is higher in rural areas whereas lower in the urban areas. This is mainly due to alternative energy options in the form of electricity, kerosene in urban areas.

Energy Sources	Rural			Urban		
	Monthly Expenditure	Monthly Per Capita Spending	Annual Per Capita Spending	Monthly Expenditure	Monthly per Capita Spending	Annual Per Capita Spending
Electricity	15,365,303	36.1	433.4	27,020,326	134.1	1,609.1
LPG	16,129,185	37.9	454.9	15,186,997	75.4	904.4
Kerosene	607,202	1.4	17.1	258,199	1.3	15.4
Firewood	15,423,254	36.3	435.0	1,866,421	9.3	111.2
Others	213,636	0.5	6.0	-	-	-
Total	47,738,580	112.2	1,346.5	44,331,943	220.0	2,640

Figure 4.2 Per Capita Expenditure in Energy in Rural and Urban area
Source: Bhutan Statistical Services&Environmental Consultancy (2013)

The above Figure 4.3 shows the per capita expenditure in energy. The people living in rural area consumes four times more than the urban area. In urban areas, the consumption is less because of easy availability of alternative options in place of fuelwood. The increase in the use of fuel wood shows people are becoming more dependent on it. The more the dependency on the fuelwood it shows that the government's initiation of alternative option is either taking too long or the challenges are not being figured out. Moreover, it is evident that the firewood consumption is as high as electricity in rural area. This makes up a large proportion of the expenditure, therefore the policy restricting firewood has significant burden for people, ultimately making them worse off.

The use of fuelwood ensues hard labor of first, collecting the wood which one farmer complains that it takes up to two hours, one hour to heat up the stove and another hour for preparing meals (UNDP, 2012). The rural people are reliant on wood for their livelihood because there are no other alternatives and have to depend on it even though it comes with a lot of hard work. Moreover using fuelwood as an energy for cooking and heating also affects the health of the people. This indicates that the rural people are dependent on fuel-wood because there are no other easy alternatives other than that. In some cases, people might prefer the use of fuel wood over other alternatives, for them the government should recognize the importance of their rights of natural resources and frame policies according to that.

On the other side, the questionnaires that are used to express and examine the happiness of the people does not indicate any importance in the access or equity of rural people regarding the use of natural resources. In fact, it indicates an emphasis on the conservation. For example, under good governance, people are asked to rate the performance on protecting the natural resources but no indication of rating the performance of government on giving equal and fair access or recognizing their right for the use of natural resources. In addition, people are also asked whether they feel responsible to conserve the natural environment. Questions like these that are geared towards conservation indicate that the government in the pursuit of conservation fails to recognize the rights of the local people.

In a nutshell, Gross National Happiness has two main objectives under its premise: (a) to create a condition to make people happy and (b) to conserve the environment. Seventy percent of Bhutan is forested but the amount of fuelwood consumption primarily for heating and cooking in Bhutan acts as a threat to the conservation pillar. With that, the forest policy under the realm of environment conservation also lags in the important aspect. This is evidenced by the applicability of Ostrom's theory where by the lagging those aspects are because of the presence of government control. It does not align with Ostrom's theory as she stipulates that communities on there are aware of their needs and their responsibilities and that government may play a role in providing assistance with process of court systems. Regarding the happiness of the rural people, the 2015 survey clearly shows that the rural people are mostly unhappy when compared to other cohort of people.

Hence, this chapter concludes that the rural people consume fuel-wood because there are no other alternatives and the ones that prefer the consuming fuel-wood over others are faced with strict regulations and sanctions. Fuel-wood consumption in rural area is huge in comparison to the urban areas because of less availability of other alternatives. Consumption of fuel-wood is a difficult task as it affects health and consumes lot of time, thus making the lives of the rural people difficult, and affecting their well-being as well. This is not to say that the government has sidelined the rural people in terms of providing alternatives. There are policies and programs that are aimed toward providing other options to rural people so as to reduce their dependency on the fuel-wood yet, there has not been any major changes in the consumption rate so far. A large proportion of rural people live in poverty although there is an abundance of well-endowed forest, and people are reportedly unhappy due to policies and program's lack of empowering people. This resonates with the rural people's reason for being unhappy "Lack of fundamental rights" being noted as one of the reasons for unhappiness for rural people. The consumption of fuel-wood in rural area is notably higher in the rural than the urban area. It is evident that fuel-wood is a necessity in the rural people's lives. Considering that, it is important for the government to recognize the importance of empowering rural people with proper regulations in place.

CHAPTER 5

FINDINGS AND POLICY RECOMMENDATION

5.1 Conclusion

The rural people in Bhutan are heavily depended on natural resources like forest. After the centralization of the forest, Bhutan later realized that the key to sustainable management of forests and conservation is the participation of the users themselves. Bhutan's forestry acts and policies underwent a gradual change of emphasis in the management of the forest. Bhutan nationalized the forest in 1969 which resonates with Hardin's suggestion that helped with the protection of forests but had an adverse effect on social and environment as mentioned in the Community Forest Guidelines (1996). This refutes Hardin's theory.

Even though the belief that the conservation leads to happiness of the people has been widely illustrated in theories, it has not been the case in terms of environmental conservation leading to happiness in Bhutan. Bhutan is endowed with abundance of natural resources, such as forest, yet rural people are reportedly unhappy due to the regulations that contributes to the lack of empowerment of the local people to use natural resources. With proper strategy and guideline, the rural community can be empowered without compromising the mandate of 60 percent forest coverage in all times to come. Rural people's daily routine starts with the consumption of fuel-wood for the purpose of cooking and heating. Even if the government fails to provide an alternative in of place fuel-wood immediately, the regulations where by people's right to access wood should be recognized.

Some data shows that the rate of dependence on fuelwood is comparatively higher in rural areas, and the illegal activity for the collection of fuel-wood hasn't changed. The regulations on forestry needs to be revisited and made more flexible. With that said, it is vital to have a necessary balance between

ecological importance and Anthropocene; the importance of environmental conservation and well-being of the people.

Hence, it is safe to say that the challenge in GNH lies in its total inability to empower people to be an agent of their own collective action because in a nation that pursues happiness as a goal should make things like rights, liberties and other democratic principles viable now that Bhutan is a constitutional democratic country. The top-down approach also puts the state and the decision makers to adopt policies that may not be apt for the people, for instance, nationalization of all forests in the country which subjugated local people of their right to forest resources in which according to Ostrom would not be the right way.

The purpose of this study was to determine the influence of Gross National Happiness policy on environmental conservation and the coherence of it with the concept of GNH. The main question that drove this study is 'How does GNH influence the formulation of environmental policy?' The primary data that were used are the policies and acts of forest policy which is nested under environmental conservation pillar and Ostrom's Eight Design Principle to examine the coherence of the pillar.

For the first objective, the findings from the study reveals ever since GNH was introduced in 1974 and officially debuted in 1996, the aim to conserve has been displayed well before GNH came into the picture. However, after GNH was debuted, the emergence of empowering local people for their own rights has been emphasized which goes to show the influence of GNH. Given the theories and the belief that is embedded in the concept of GNH that posit conservation is a way to happiness, it justifies strongly to place environmental conservation as one of the pillars.

However, the policy of GNH in pursuit of happiness in line with those belief influences the conservation policy strongly through these policies and acts that indicates an imbalance, inadvertently or not, disregarding the rights of the people to use natural resources. GNH also influences the environmental policy by laying out less stringent measures by at least recognizing the rights of the user but, it still has to improve in terms of empowering the users. The policy has two main

objectives, that is to conserve environment and ensure the wellbeing and happiness of the people. But it lags in creating a balance between the two, wherein it is important to have a balance between anthropocentric and ecological benefit of the environment. While it is commendable that the government of Bhutan takes serious measure to conserve the environment, it is important to have a balance in giving the priority to the people as well as conserve the environment.

For the second objective, the paper applies Ostrom's Eight Design Principle to check the coherence of GNH. The reasons why this paper uses Ostrom's Design Principle are first Ostrom's theory and her Eight Design Principles is considered one of the most effective means to check the effectiveness of institutions and sustainability of forests in a way that supports local livelihoods. Secondly, as mentioned above, Ostrom provides Design principles to avert the tragedy of the commons. In similar lane, Bhutan has abundance in natural resources such as forest, and 69 percent of the population in Bhutan are predominately made up of rural people who are reliant on the it for their livelihood (RGoB, 2009). Therefore, it is suitable to adopt Elinor Ostrom's theory to study how and where Bhutan's Conservation policy fares well in line with Ostrom's theory, which would, in turn, determine the coherence of the Environmental conservation pillar which is one of the focuses of the study.

The evolution of forest policy from the nationalization of forest in 1969 to transferring the ownership to the communities in 1995 shows an attempt at bringing the local communities at a forefront of the policy. What lacks in the system going by Ostrom's theory is the three important Design Principles whereby it involves users taking up an important responsibility which is either missing or not applicable due to the presence of government's role. In that regard, Ostrom (1990) mentions that collective action by local communities that are accountable for the mobilization of resources prevent free-riding and forest sustainability.

Against this backdrop, it could also be concluded that the coherence and the extent of this pillar with GNH remain questionable as it is essential to embrace the issues of farmers who compose the backbone of the Bhutanese population. If the government of Bhutan regulates and monitor the harvesting of fuelwood through

community forestry management in accordance with all Elinor Ostrom's Eight Design Principles, it could not only meet the need of the people but also provide incentives to manage forest properly and ultimately meet the environmental conservation objectives of Bhutan. This would, in turn, fulfill the main objective of Gross National Happiness at large which is the happiness and well-being of the people.

In conclusion the findings reveal that Gross National Happiness has environmental conservation as one of the important pillars, but the environmental conservation does not seem to have an impact that it is meant to have, which is to create happiness for the people. The philosophy of gross national happiness is an overriding policy that support the environmental policies. GNH influences the environmental policy by making it more progressive and more enabling but it's influence seems to be more on conservation side there by failing to empower the users even though the traditional rights have been restored. This goes to show that GNH has successfully set itself as an agent for conservation but has lagged in fulfilling the other main objective which is the wellbeing of the people.

5.2 Policy Recommendation

Policy actions are key and requires a policy response to prioritize peoples need first. Gross National Happiness is a holistic policy and it should be inclusive of all the people in the country. The policy of GNH is relevant but the top down approach of GNH needs to be revisited and reconsidered. For a developing country like Bhutan, it necessitates a bottom up approach so as to embrace people from the rural areas that are currently being sidelined. It is also important for the government of Bhutan to bring people in the forefront of policy making and more emphasis should be given on policy implementation. Moreover, it is a people centered policy framework, but the involvement of people in the policy making process is mostly absent. The government of Bhutan could start by the revisiting of policy concerning the use of natural resources and improve in aspects that's has been lagging so far.

5.3 Suggestions for Further Studies

With all the attention that the policy has garnered, it has become increasingly important for Bhutan to show that it is actually being implemented at home. This research only focusses on one pillar and the influence of GNH on it. For further studies, this paper suggests for the other three pillars to be studied in a similar manner so as to further strengthen the policy of GNH.



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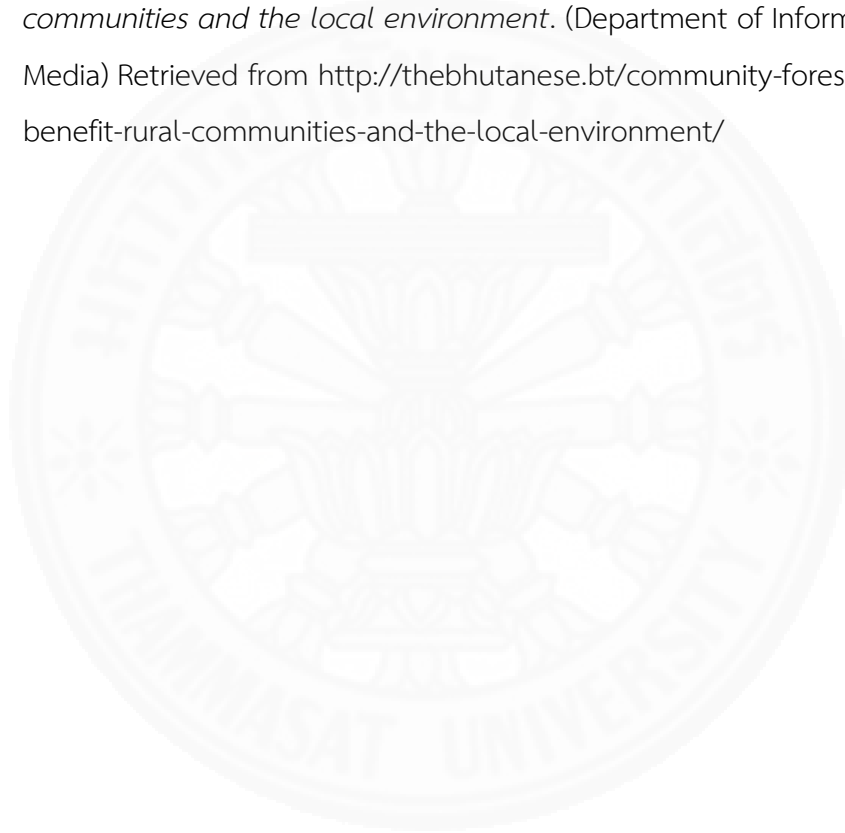
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Scholarship & Awards	2016-2017: Recipient of Thammasat University Scholarship for Academic year 2016 2011: Recipient of Dean’s List for Academic Excellence 2010: Recipient of Dean’s List for Academic Excellence 2008: Winner of Regional Essay competition, organized by Youth Volunteer In Action of Bumthang, Bhutan
Publications	<p>Royal Thimphu College. (2010). <i>November Light: Anthology of Creative Writing from Bhutan</i>. (S. Wangmo, D. Saday, P. Wangchuck , U. T. Lepcha, & N. Kaul, Eds.) Bhutan: Royal Thimphu College.</p> <p>Wangmo, S. (2010). <i>A Sliver of Hope</i>. In N. Kaul, D. Saday, S. Wangmo, S. Das, P. Wangchuck, & U. T. Lepcha (Eds.), <i>November Light: Anthology of Creative Writing from Bhutan</i>. Thimphu, Bhutan: Royal Thimphu College.</p> <p>Wangmo, S. (2012, April 13). <i>Waste management Project</i>.</p> <p>Wangmo, S., Das , S., Dorji , R., Choden, T., & Choden, Y. (2013, October). <i>Nation Celebrates The Royal Wedding</i>. (S. Wangmo, Editor) Retrieved from RTC Reporters Reporting events in Bhutan.</p>
Work Experience	2013-mid 2016: Volunteer English Teacher at Pathumthani Technical College. 2012: Policy and Coordination Division intern under National Environment commission Panelist at the literary festival, “Mountain Echoes” 2011 2010: Co-editor of a book “ November Light: “An Anthropology of Creative Writing from Bhutan” Tour Guide at Bhutan Reisen 2009 (Intern)