

**UNDERSTANDING ENVIRONMENTAL CHALLENGES  
THROUGH THE PRISM OF HUMAN SECURITY: A  
COMPARATIVE STUDY OF NEPAL AND BHUTAN**

SYNOPSIS OF THE THESIS SUBMITTED TO JADAVPUR UNIVERSITY  
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## **SYNOPSIS OF THE THESIS**

Most of the twentieth century the concept security was monopolised by state security. However, this definition and nature of security have been under more and more criticism during the 20th century, especially in the last 20 years. What exactly needs to be protected both academically and practically has been the focus of this debate. Yet the historic emphasis on the state is still present. Nonetheless, the discussion of security has grown beyond military issues to take into account others, including the economy, the environment, health, gender, and culture. The new dimension of security that thus emerged is 'Human Security' which was possibly because of convergence of several factors after the cold war. The term Human Security is mostly associated with Human Development Report 1994 on Human Security drafted by Mahbub ul Haq.

Environmental Security can be described as the availability of natural environment that is healthy for both humans and the environment in the future. When natural resources are overused and cause environmental damage, there is less availability, which in turn causes violence and dispute. However, there should be a discussion about environmental security because of the growing issues with climate change, sea level rise, deforestation, greenhouse effect, depletion of earth's limited resources, declining agricultural system and ozone layer holes. These issues require immediate attention in order to be resolved.

There is an urgent need to address increasing environmental issues, such as deforestation, climate change, agriculture, water scarcity, hydropower construction and pollution. The world's population is expected to surpass nine billion during the next fifty years, the production of the global economy may grow five times faster than it does now, and the scarcity of natural resources will drastically worsen. Aquifers, rivers, and other resources will likewise face extensive depletion and degradation in the next generation. Thus, environmental security has swiftly emerged as a crucial concern in this new phase of security studies. The main aim of this research work is to probe into the environment challenges in Nepal and Bhutan through the lens of Human Security.

### **Rationale of the Study**

The main aim of this research work is to probe into the major threats to the non-traditional security of these two countries. Taking environment as a major aspect of research it tries to understand the link between Human Security and Environment Security. The study addresses

the issues related to Human and Environment Security in Nepal and Bhutan. While the concept of Human Security was introduced in the year 1994, it was only two decades later Nepal adopted the concept of Human Security and started engaging in it. However still Nepal fails to give enough importance to Human Security in its developmental policies and planning programmes. There is a research gap in Bhutan's Human Security too as there is a very limited or no work done in this aspect. Though Bhutan has given more emphasis to Gross National Happiness of the people over its Gross Domestic Product but a more comprehensive work is to be done on the aspect of Human Security.

### **Statement of the Problem**

Human Security is still a contested concept. Although after the end of cold war the focus shifted from traditional notion of 'State Security' to 'Human Security'. There always emerges a question of 'security for whom' 'security for what' and 'security by what means' Out of the seven areas which UNDP has highlighted as a threat to Human Security, this research will take into one area of concern i.e. environment security and will try to analyse the different environmental challenges in Nepal and Bhutan which often leads to human insecurity. Bhutan's vulnerability to climate change has mainly been the fragile mountain environment and dependence on agriculture and hydropower for economic development. Hydropower has been the main source of revenue for Bhutan government and disruptions in hydropower from climate change can lead to outsized economic impacts. Whereas, in Nepal as well climate change is one of the main concern to the environment. The objective of the study is to understand the link between environment and the Human Security as how environment challenges can have a direct impact on Human Security.

### **Research Gap**

The human dimension has now come into the security studies debates, but there still remains problem in defining Human Security. A more cohesive definition of Human Security would be helpful for research. The above-mentioned literature has been mostly focused on the environmental impact on the security of the nation. It has not focused exclusively on how environmental degradation can be a threat to the daily lives of people living in that particular area. Though the term environmental security came into existence in the 1960s to 70s it has then been gradually gaining importance in relation to the larger security discourse. The work done is basically related to environment as threat to the nation. There has been meagre work on how environment challenges can be a major concern to Human Security and to understand

environment security from a Human Security perspective. This research will be focusing on the dimension of environment as a threat to Human Security and also to understand the link between Environment Security and Human Security in Nepal and Bhutan as both the countries are facing environmental challenges, since not much work been done in this region, therefore this research will try to fill in the literature gap, also this research will be a comparative study of the two countries.

### **OBJECTIVES OF THE STUDY**

1. To analyse the link between Environment Security and Human Security.
2. To identify the major environmental challenges affecting human security in Nepal and Bhutan
3. To critically examine the institutional responses to the issues of environmental Security in Nepal and Bhutan

### **RESEARCH QUESTIONS**

1. How does environment play an important factor in human security?
2. What are the major environmental issues affecting human security in Nepal and Bhutan?
3. How do government and various institutions respond to the environmental challenges in Nepal and Bhutan?

### **RESEARCH METHODOLOGY**

The study is in the qualitative research combining both descriptive and analytical methods. The literature relies on various sources both primary and secondary. Secondary data sources included number of national and international published books, articles and journals. Further, both published and unpublished reports, papers and articles available with various government and private agencies was extensively utilised in the study besides the secondary published material. Primary data collection was done by snowball method. Interviews were conducted at the official level. Various organizations, NGOs and Research institutes related to environment were interviewed. Government offices officials of forest department, environment and climate department, water department of both Nepal and Bhutan were interviewed in order to understand the policies that has been initiated by the government in

the field of environment. Field visits was conducted taking into account the three geographical region that included the Hilly, Terai and the Himalaya region and questionnaire was distributed to the to the local people to understand the ground reality and their awareness on the said topic.

## **SUMMARY OF THE CHAPTERS**

The first chapter titled, “Introduction to the thesis” deals with the introduction of the study. The chapter main focus is on the background, rationale, statement of the problem, research questions and objective, literature review, research gap and research methodology.

The second chapter titled, “Human Security, Environment and the Challenges of Development” This chapter has argued as how the concept of security was monopolised by state security. The chapter has also dealt with the factors that have highlighted the importance of Westphalia system. The cold war dynamics has also been explained as how this has led to the change in the notion from state security to human security. The concept emergence of Human Security has been discussed in detail. Freedom from fear and freedom from want as a conceptual framework has been discussed taking in account Japan and Canada. It has identified the seven approaches to Human Security and taking one aspect that is environment security this study has been elaborated. Human Security and Human Rights the link between these two concepts has been explained. Further, Human Security has been explained in relation to Human Development. This chapter has discussed the emergence of the concept of Environment Security and has made an attempt to link it with Human Security. It has also addressed the developmental issue and has related it with Human Security and Environment and lastly this chapter has also discussed about sustainable development.

The third chapter titled “Human Security and Challenges to Environmental Security in Nepal” This chapter began by discussing the political history of Nepal. The chapter has addressed the Human Security issues in Nepal. The chapter has also incorporated the date from the field visit in Nepal and government offices such as Ministry of Forest and Environment, Kathmandu, ICIMOD Kathmandu, The Research Centre for Applied Science and Technology (RECAST), under Tribhuvan University, Tewa and WWF. For field visit the three geographical region was taken into account, the Himalaya Region, Terai Region and the Hilly Region. One district from each geographical region was taken into account. The three

districts were Taplejung, Jhapa and Ilam. The data collected from the field visit has also been analysed.

The chapter has also addressed the MDGs and SDGs goals and have analysed how far Nepal has been successful in achieving the goals. The chapter has further addressed the environment security issues in Nepal. It has discussed in detail about the issues such as climate change, its impact on agriculture, deforestation and hydropower. The chapter has also talked about the women participation on environment conservation with the help of some NGOs. Further it has examined the India and China influence on Nepal and how can that affect or be an aid in the development of the country.

The fourth chapter titled “Human Security and Challenges to Environmental Security in Bhutan” This chapter began by discussing the political history of Bhutan. The chapter has also incorporated the field visit to different government institutes in Bhutan such as Ministry of Energy and Natural Resources under this the Department of Environment and Climate Change, Water department, Forest department and Centre for Bhutan and Gross National Happiness Studies. It has discussed the first Human Security project in Bhutan as the country lacks in addressing the issues of Human Security and it has also been noted that in their policies there is little or no mention of the concept Human Security. In contrast it has talked about Gross National Happiness which is the guiding philosophy of Bhutan. The chapter has also dealt with the MDGs and SDGs of Bhutan and has analysed how far Bhutan has been successful in achieving the goals. The chapter has discussed the various environmental issues in Bhutan as it had done in the previous chapter taking into same parameters into account. It has also discussed about women participation and the India and China influence on its development projects.

The fifth chapter “Comparative Study of Policy Responses to Environmental Security in Nepal and Bhutan” The chapter start with addressing the similarities that these two countries share. The chapter has addressed the BBIN initiative. It has also discussed the issues of lhotsampas. The chapter has discussed and analysed different policies and act related to environment in Nepal and Bhutan.

The sixth chapter titled “Conclusion to the Thesis” This Chapter combines all the knowledge and insights gathered in the earlier chapters. The chapter covers research findings and aims to address every research questions posed in the introductory chapter.

## **RESEARCH FINDINGS**

The present study has attempted to respond to the research questions posed in the introductory chapter in the following manner:

*How does environment play an important factor in human security?*

The relation between environment and Human Security is a contested one in the modern world. Human Security, as a concept is centered around people, it puts the individual at the core of analysis. As a result, it assesses various conditions that endanger survival, dignity, and livelihood, and identifies the point at which human existence is extremely threatened. A multi-faceted understanding of insecurity is also the foundation of human security. As a result, human security requires a more comprehensive understanding of risks and covers factors that contribute to insecurity, such as those pertaining to political, social, economic, food, health, and environmental security.

The notion of environmental security encompasses a wide range of matters related to the relationship between human welfare, security and development, as well as the function that the environment and natural resources can perform throughout the spectrum of peace and security. Humans rely on the earth's ecosystems and the benefits they offer. The benefits provided include clean water and food, controlling climate regulation and diseases, offering cultural services like aesthetic pleasure and spiritual satisfaction and supports in primary production and soil creation. Degradation of these benefits can significantly impact human well-being.

The change in the environment can have direct impact on the livelihood and the security of the people. For instance, scarcity of water leads to insecurity, which adds to a decline in the production of food. In some situations, it may also result in a food scarcity. The environment has an impact on every area of human security, from food scarcity to the risk of natural disaster. The consequences of environmental damage are multidimensional. Furthermore, the change in the environmental is evident in several parts of the world, such as rising global temperatures and shifting weather patterns. Environmental changes, according to experts, have a massive impact on humanity in general.

The degradation of the environment causes human insecurity. When biodiversity is taken into account in relation to human security and well-being, several benefits are frequently possible. By keeping our ecosystems intact, we can lower our risk of contracting infectious diseases

and encourage higher agricultural yields by ensuring that pollinator populations are healthy. Forests preservation benefits the quality of the air, removes carbon from the atmosphere, and provides home for a variety of species.

By concentrating just on threats, one misses opportunities relating to the environment that might be used to enhance human security. Well-being of the people, livelihood and chances for fulfilment can all benefit greatly from protecting and improving the environment. Ecosystem integrity is expected to mitigate vulnerabilities, but degradation of the environment raises the likelihood for impoverishment, displacement, and disempowerment. The environment is directly related to the existence and well-being of all people, especially the most impoverished, in developed and developing countries as well.

The impact of environmental degradation on human well-being and security has increased globally because of the exponential expansion of human activity since the Industrial Revolution, posing a challenge to the secure working environment for humans. Threats from the environment are related to how they affect human security in general, including dimensions of productivity, well-being, and survival. Social ties and people are prioritized as targets that need to be protected against environmental dangers.

The relationship between human security and environment security are closely linked. It is therefore necessary to establish techniques for dealing with environmental degradation while also preserving human security. This research has specifically dealt with the environmental challenges in two countries i.e. Nepal and Bhutan. Though very limited work is done on this aspect one cannot deny environment challenges can have a long term impact to the Human Security of that particular region

*The major environmental issues affecting human security in Nepal and Bhutan?*

Nepal and Bhutan, located on the southern Himalayan slopes, share many similarities but also have significant contrasts in geography, socioeconomics, and politics. According to the World Bank, 'Nepal is among the poorest nations in the world', with 57% of its 30.5 million citizens living on less than \$2 a day (in purchasing power parity, or "PPP") as of 2010. In comparison Bhutan is classified as a lower middle-income country, with roughly four times Nepal's gross national income and just 10% of its 738,300 inhabitants dwelling on less than \$2 in 2007 (in PPP). The economy of Nepal is primarily agrarian, with 80% of people earning

a living from agriculture and forests. Tourism also serves as an important source of revenue in Nepal.

In Nepal, for example, approximately two-thirds of families use firewood for cooking and heating, and the average household spends about 50 days per year collecting firewood. Given the amount of reliance on natural resources, it is reasonable to predict that exploitation of natural resources, such as deforestation, makes rural households environmentally and economically vulnerable to sustaining their livelihoods. The problem is likely exacerbated further by the lack of alternative economic opportunities at the local level. The primary causes of deforestation and forest degradation in Nepal are typically attributed to overharvesting of fuel wood and fodder, forest fires, and timber extraction. In the past, Nepal's forestry resources have declined since there was no suitable policy to direct the establishment of the sector's institutions, laws, and operations. Historically, political and economic factors have influenced Nepal's forestry policies more so than ecological ones. Thus, basic concerns of forest/biodiversity protection, green economy, and localized adaptation and mitigation of climate change should be the focus of research and development in the forestry industry in order to produce more practical policies and programs.

According to the Women's Environment and Development Organization (WEDO), there is growing recognition that climate change is a significant danger to global security and a major human security issue. While everyone is impacted by climate change, regardless of color, caste, ethnicity, sex, or financial level, impoverished countries, communities, and individuals are more severely affected, and the effects of climate change exacerbate already-existing inequities. The impact on the world's poor will be particularly bad, impacting their security and means of subsistence disproportionately. Seventy percent of people who live in poverty are women. They consequently tend to be the ones who suffer the most after natural disasters. Women are often disregarded in contributing to climate change solutions and overall human security.

As stated in the International Institute for Environment and Development (IIED) paper, vulnerable areas and populations that are vulnerable will be most severely impacted by climate change due to its propensity to multiply threats and the intrinsic susceptibility of those whose human security is uncertain to any additional hazards. Communities that are already experiencing violence, weak institutions, poverty, food insecurity, and the spread of

illnesses will find it difficult to adjust to the effects of climate change and will worsen the existing problems.

Nepal is ranked as the 4th most vulnerable country due to the impacts of climate change. Nepal's climate and disaster risks are likely to worsen impacting people, economic growth, the environment, and advancements in development. Over the past 40 years, landslides and floods have been the most common dangers; as climate change accelerates, these disasters are predicted to increase.

The agriculture sector in Bhutan, comprising forests, employs around 60% of the population and accounts for nearly 17% of GDP in 2010. However, in Bhutan just about 3% of the country's land is accessible for farming. Bhutan's government considers hydropower to be the most important economic sector, accounting for approximately 21% of GDP and 45% of income. It also produces nearly all of the country's electricity needs.

Bhutan today has over 51.44% of its land area under protected area management and over 69.71% of the country under forest cover as a result of wise leadership and a strong tradition of environmental protection and preservation. While many parts of the world have experienced frightening deforestation rates, Bhutan's forest cover has actually increased over the last decade. The 73rd session of the National Assembly in 1995 demanded that the country keep 60% of the country under forest cover at all times.

One of the nation's most vulnerable to climate change worldwide is Bhutan. There are some 2,700 glaciers in the landlocked, mountainous nation, and they are starting to melt, creating landslides and floods in an already vulnerable ecology. Around 80% of the people in this country make their living from agriculture; hence due to climate change significant impact can be seen in agricultural land and produce.

One of the world's most diversified forest regions, Bhutan's forests are vast, untouched, and only seldom disrupted by human habitations, in contrast to many other Himalayan regions where forests are frequently found in small patches encircled by land. But this does not apply to the eastern and southern foothills, where there is a practice of shifting farming and the density of the population are high. A number of factors, including the distribution of State Reserve Forest Land and forest conversion for the development of hydropower projects, mining, agriculture, and quarries, and the construction of electrical transmission lines, are the main causes of deforestation and forest degradation in Bhutan.

Human-Wildlife Conflict is also one of the challenges that both the country faces.

*How do government and various institutions respond to the environmental challenges in Nepal and Bhutan?*

Stakeholders in Nepal and Bhutan, including governments, investors, and NGOs and INGOs, are working together to develop adaptation plans and policies. Their effectiveness depends on meeting local communities' demands and aligning with local responses. .

Nepal has committed to maintaining 45% of the country under forest cover by 2030, but the country has already reached the target of the forest cover. The climate change action plan in Nepal includes 'green, resilient and inclusive development'. Nepal has also aimed to achieve net-zero emissions by 2045. The Nepalese government is currently endeavouring to address the challenges posed by environmental issues, particularly climate change, through the implementation of conventional security measures. Nepal has launched its first National Adaptation Plan a comprehensive plan designed to increase the country's ability to adapt to climate change.

The constitution of the Bhutan Mandates that at least 60% of the country should be forest covered. Hence the forest cover in Bhutan is 69.79%. Bhutan government has passed the law to preserve, conserve and protect the environment. The Parliament of Bhutan has a standing Committee on the environment and climate change. It has a 'National Climate Change Policy' that mainly focuses on carbon neutrality and sustainable development. It has also established strategic partnership to address climate change.

His Majesty King Jigme Singye Wangchuck states that Bhutan needs to choose the middle route towards development. This development acknowledges the need to advance in terms of technology, scientifically and mechanically, grow our economy, while still upholding their rich cultural legacy, our age-old values, and protect our foundation of natural resources.

The government of Nepal and Bhutan both have adopted different policies and acts that have been beneficial in addressing the challenges posed by environment insecurity. It has been observed that all the environmental challenges have not been addressed yet. Therefore there still need strict laws and measures to implement the policies.

## **LIMITATIONS OF THE RESEARCH**

The research has been carried out in two countries i.e Nepal and Bhutan. The field visit has been done in both the countries. In Nepal the three geographical districts were taken into account namely Taplejung in the Himalaya region, Ilam in the Hilly region and Terai in the Plain region. The different government offices in Kathmandu were also visited but in Bhutan the two districts namely samste and chukkha which were to be taken for the field visit was not done as the permission was not granted and also few people responded in Bhutan as the people was also not open about sharing their viewpoints. Nonetheless, the government institutes and officials in Bhutan were interviewed. Some secondary sources were taken into consideration.

## **CONCLUDING OBSERVATION**

Human Security is a larger framework of 'freedom from want and freedom from fear'. Environment Security has emerged as a critical component of Human Security. Both the Himalayan Kingdom states are facing a number of alarming problems that could endanger their very existence in the near future. With climate change causing glaciers to melt and changing weather patterns, as well as unsustainable development methods, the Himalayas are experiencing a wave of destruction that needs to be addressed more comprehensively. So there is a fear of increasing environmental challenges the region has to confront.

All the environment policies in Nepal talks about environment protection and conservation and also the constitution of Nepal talks about the right that every citizen has to stay in a safe and clean environment. The main problem in Nepal has been the implementation of these policies. After the country went into the federal structure, there is a three tire government in Nepal the Central, Province and Local level. It has also been observed that the people at the decision making level fail to communicate the policies to the local people. Therefore there is lack in the awareness level too. The government of Nepal has prioritized environment issues and has worked on environment conservation initiatives but the public is still not aware of the work done by the government as environment issues are rampant in Nepal, so there is a gap between the two which needs to be addressed. If there is environmental problem the ecosystem has to bear it and if we talk about ecosystem humans also gets affected. Therefore while making the policies it is very important to consider human factor as well.

Bhutan talks about environment conservation and preservation. They have the philosophy of Gross National Happiness but their policies lack the mention of the term 'Human Security'. In GNH they have the domain which usually talks about the protection and the conservation of environment. Therefore compared to Nepal Bhutan has much cleaner and safer environment for the people there. The policies there are mostly focused on the preservation of environment with little emphasis on the human. It is important to make environmental policies taking into consideration human factor as well. The issue of freedom from fear and freedom from want has not found mention in both Nepal or Bhutan. In these countries Environment and Human Security has been dealt with two different topics separately therefore limited research is done in the field where environment and human security are linked together. Therefore this research has tried to address this gap and it has the potential for the further research.