

Economic and environment activities

(A Case Study of Gramin Sudar Community Forest User Group, Morang)

**A Project Work Submitted to the Faculty of
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Requirements for Master Degree**

By

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RECOMMENDATION LETTER

This thesis entitled "Economic and Environmental Activities (A Case Study of Gramin Sudar Community Forest), Morang, Nepal." is prepared by Chandika Parajuli under my guidance and supervision. I, hereby, recommended this thesis for acceptance.

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LETTER OF APPROVAL

This project work entitled **Economic and Environmental Activities** (A Case Study of Gramin Sudar Community Forest Byarbana VDC) submitted by Chandika Parajuli has been accepted for requirements of Master of Arts in Rural Development by the evaluation committee.

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LIST OF ACRONYMS

CF	-	Community Forest
CFDD	-	Community Forest Development Division
CFUG	-	Community Forest User Group
DDC	-	District Development Committee
DFO	-	District Forest Office
FA	-	Forest Act
FPR	-	Forest protection Rules
FUG	-	Forest User Group
GSCF	-	Gramin Sudhar Forest
GSCFUG	-	Gramin Sudhar Community Forest User Group
LFR	-	Leasehold Forest Rules
MOFSC	-	Ministry of Forestry and Soil Conservation
MOPE	-	Ministry of Population and Environment
MPFS	-	Master Plan for the Forestry Sector
NA	-	Nationalization Act
NPC	-	National Planning Commission
PFR	-	Private Forest Rules
UG	-	User Group
VDC	-	Village Development Committee
WB	-	World Bank

CHAPTER - ONE

INTRODUCTION

1.1 Background

It is being saying Nepal is very rich in the matter of resources and socio economic potentialities through the utilization of its own natural granted gifts. Nepal is a rich country in natural resource as forest, water minerals etc. these natural resources are being used for fuel wood, fodder, timber, medicines and compost manure, electricity, drinking water, irrigation and for various purpose.

It has long being said that green forest is the wealth of Nepal. There contributes to preserve soils and habitats, balance weather, and keep the environment stable. It is already estimated that 37 percent of total land in Nepal is covered by forest and in that, only 15 percent of the forestland has a crown cover forest. Everyone knows that the rural people are totally dependents on forest for their livelihood. Forest resource not only support agriculture and livelihood farming but also offer great potential resources for development (IUCN, 2000:12)

Especially, Master Plane for the Forestry Sector 1988 (MPFS) was lunched with the administrative commitments. Then the Forest Act 1993 AD came in to effect. These sorts of policies and laws contribute the role of empowerment and enhancement of local communities to forest resources development. This community forest program was spread all over the country when this thinking was realized in a very sensitive and responsible manner. This concept was developed to ensure equitable income distribution and decision making authority as well as socio economic development with participatory approach (Khadka, 2000:3).

This plan is basically headed toward empowerment, participation, equal distribution of income, gender equality of disadvantages group of community. According to Community Forest Development Division (CFDD) 1991, the policy of Community Forest (CF) programme to manage basic needs, participate local people and hand over forest to Community Forest User Group (CFUG) through making able to manage forest sustainability. The division also started that 32 percent of the total land area can be converted in to community forest and 27 percent non-forest area of total land area can be developed considerable to community forest area to total land area can be developed considerably to community forest area through this programme (Dahal, 1998:4).

This study is aimed to analyze the socio economic activities and changing situation of CFUG and environment sustainability through community forest development programme. This study is targeted to poor people for their livelihood & way of life through maintenance of environment and bio-diversity.

This Gramin Sudar Community Forest is located at the eastern part of Morang. This forest covered 1400-hector land and around 500 households are engaged for their livelihood. 3500 number of population is directly related with the socio economic activities of Gramin Sudar Community Forest. This forest is considered as the habitat of all scarce animal and plants having low altitude. This forest has various economic and environmental potentialities with having high bio-diversity maintenance. This research is targeted to identify these entire mechanisms.

1.2 Statement of the Problem

The problems, which are being arisen now a days concerning forest are serious in our country. The legislative and administrative efforts are not the solution of these problems. Being unsystematic management to forest development, people are facing the problem of good utilization of all forest resources. The major problems of this study are as follows:

1. Mainly over exploitation of forest without being conscious to other is becoming main issue of forest deterioration that is indirectly or directly related which affect to the human life as well as bio-diversity mechanism of natural process.
2. The major problems can be the lack of grass, fodder, dry leaves, fire wood, timber, water sources, fresh air, natural scene, environmental balance, different scarce places and herbs through deforestation.
3. These above described activities and the things, which are directly related to human life. So, the people including woman, children use to spend much of their time in collecting and managing these things for their livelihood. Forest is main source of livestock and agricultural farming. Spending much of there time and things for these activities they can not afford time and other things for these activities they can not afford time and other things for education and income generating activities.

Above these described problems have been ruling in our country not having any other alternatives for socio-economic activities to raise the poor people's life. If we manage our own resources in effective way, the conditions of people may get change.

Therefore, this study helped to identify the impact of FUG economically & environmentally to the particular area. This study also focused to the poor who are totally dependent on forest. They do their activities depending up on the forest for their livelihood. This study also explored the poor and marginalized member of representative of FUG. How they have been benefited economically and how are they environmentally affected. Similarly their activity participation on decision making, planning and resources utilization pattern is also found. This study covered all activities of FUG of Gramin Sudar Community Forest

The area where this study is focused up to now no studies have been taken place so this study become fruitful and base at local planning process of policy makers, planners, donor agencies and development planners.

This study is focused on there problems to strengthen the idea to reduce the problems. This research targeted to solve these problems through identifying the solution and destination of good natural resource management.

1.3 Objective of the Study

The general objective of this study is to identify the economic and environmental activities through development of community forest. The specific objectives are as follows:

- i. To identify the economic activities of user group in Gramin Sudar Community Forest.
- ii. To analysis the FUG participation in bio-diversity conservation.
- iii. To identify the impact of Gramin Sudar Community Forest on socio-economic and environmental life of local community.

1.4 Scope and Limitation of the Study

The main purpose of this study is to fulfill the requirements of Master Degree in Rural Development. This study confined within the limited area and some focused problems of people. There are many households in the forest user group but only 30 head of household are taken as responsibility for key information. The researcher being the student, the time and

money is very limited to cover all the aspect and area of this research so the area, subject matter, and other variables are very limited.

This study specially covered the socio-economic and environmental activities of Gramin Sudar Community Forest user groups of Braybana VDC Morang District. This study has taken the selected area of community forest and its user group. The ethnical consideration is also highly prioritized.

Significance of the Study

This study has its own importance because where this study has taken place no other research work have been carried out yet regarding community forest. The documents of this study identified the people and its exact on community and environment and the importance of the forest preservation. This study is more focused on those determinants, which are the indicator of the development. That information will be fruitful information for solution for the problems. This study become additional information and knowledge about community forest and create the importance and awareness about environmental and bio-diversity preservation as well as socio-economic activities.

The research has been the base for grass root level planning for rural development and has been additional information for policy makers, academicians, local leaders, and local environmentalists and for every sorts of planning process. The CF programme has received the highest priority in the forestry of Nepal. Community forest policy in Nepal combines on environmental objectives to protect against land degradation, desertification, and deforestation with economic and socio objectives to meet the people's basic need for fuel wood, timber, fodder, and other forest productions on a sustainable basis. Forest contributed to food production through effective interaction between forest and farming practice.

1.6 Organization of the Study

The study is organized on five chapters. In the first chapter, brief introduction of background of study problem is outlined. It is then followed by statement of problem, objective of the study, scope and limitation of the study, significance of the study.

In the second chapter, a short account of relevant literature are dicussed. The third chapter describes methodology of the study that contains research design, universe and

sample size, nature and source of data, data collection techniques and tools, and data analysis.

The detailed analysis and presentation of data has been carried out in the fourth chapter. And finally, summary, conclusion and recommendation of the study is presented in the fifth chapter. On the last part, bibliography, questionnaires and annex are included.

CHAPTER - TWO

LITTERATEUR REVIEW

The number of community forest is rapidly increasing day by day since the establishment of community forest policy in Nepal and the realization that the conservation of forest is the conservation of soil, water, wood, vegetation animals, birds, insects, which are elements of the whole eco-system and the bio-diversity conservation. And that programme is fulfilled through the development of community forest programme. So, different research and studies took place on different topics and time to know the reality of community forest. Some literatures are reviewed here to know the existing status of community forest in Nepal and its economic and environmental aspects.

FAO (2001), *State of the World Forest*. Rome: FAO, p33.

Regarding the forest of world, this book clearly mentioned the scenario of forest globally that the world has about 3870 million hector of forests. In which 95 percent are natural forests and only 5 percent are artificial of plantations. And 30 percent of world land is under forest area. America has the largest percentage of the world' forests. Two third of the word's forests are located in only ten countries. The distribution of the forest area per person I very low. So, this book concludes defining the need of the conservation of forest areas.

IUCN (1991), *A Legislative and Institutional Framework for Environmental Management in Nepal*. Kathmandu: IUCN, p 54.

This book states that where the concept of community forest is realized the people of that area are getting the economic and environmental benefit mostly through the activeness of foreign aid projects such as the Nepal Australia Forestry Project (NAFP), the Asian Development Ban (ADB), FINNIDA and a number of other donor agencies have been providing the financial, technical and other resources for the proper management and good implementation of Nepal's forest programme.

Malla, Y.B. (1998), *Directions for Community Forest Management in Nepal*. Kathmandu: Australia Forestry Project Nepal. p 4.

This book highlights that the community forest programme is mainly concerned with the management and use of forest resources to al the forest user groups equally. For the

extension of this programme the emphasis should be given on building consensus rather than simply accepting majority decisions and the villagers should be made aware of the programme through planning and management of the forests and distribution as well as the use of the forests. The writer has given the stress on the managerial aspect of the forest through which the benefits can be achieved.

Donald, A. and Rai, Navin Kumar. (1992), *Readings in Social Forestry and Natural Resources Management for Nepal*. Kathmandu: HMG Ministry of Agriculture-Winrock International, p278.

In this book, the writers seem more concerned with community participation which is a process in which people are encouraged to realize that they themselves have the abilities, energies and some of the resources to take initiatives to improve their lives. And writers focus to the marginalized people, landless people, helpless people, disadvantaged people including women and children that these people are suffering from the various problems especially the fuel needs of women. To solve this problem and to encourage the above described people for the income generating activities and to improve their living standards through the conservation and well utilization of their own local resources, the community participation is necessary. This approach is being fulfilled through community forest projects, which requires the community participation.

Kayastha, Baban P. (1991), *Elements of Community Forestry in Nepal*. Kathmandu: Mrs. Sabitra Devi, p. 53.

He evaluates the essence of community forest where the community forest meets the needs, problems and aspirations of the local people. They have some the beliefs, which may be religious, or other else but the main tendency towards forest is resource, which is renewable. The strategies for community forestry development vary from place to place and it is used to be based on the socio-economic conditions of the community. regarding these conditions of the community the role of the forests in fulfilling local needs must be given preference. Energy, food, and shelter are the urgent needs of rural people. In many of the places these needs are fulfilled by improved management of forests and by creating plantations of fast growing valuable species. Especially the main advantage of the forest conservation can be gained through crop production and animal husbandry. So, the forest can fulfill the daily needs of the people through well management of its resources.

ICIMOD (1998), *Integration Geometrics and Participatory Techniques for Community Forest Management*. Kathmandu: ICIMOD, p 13.

This book is very serious for the degradation process of forest. And it points out the elements, which are responsible for the problem. It states that one potential mechanism for preventing forest degradation is to increase community involvement in the management and ownership of forest resources and the central theme of community forest is returning forest resources to the local community, allowing them to manage the resource and directly benefit from it. So, the real consumer and preserver of forest is community therefore community approach is main element for conservation.

MOPE (2001), *State of the Environment*. Kathmandu: Ministry of Population and Environment, p 42.

This book clearly defines that community forest programme have proved to be a successful policy initiative for addressing land on degradation problems and participating the local people in the main stream of natural resources conservation, particularly the forests, soil, water, and bio-diversity resources. This programme is being most successful programme for the environment and economic activities, which reflects the benefits. The policies are formed targeting for ensuring proper land use planning, implementing integrated package programmes that includes vegetative agronomic and water management measures as well as establishing linkages between stakeholders and networking the agriculture, forest, livestock, and water resource. These all above polities or targets are linked with the community forest programmes.

MOPE (2001), *State of the Environment*. Kathmandu: Ministry of Population and Environment, p 50.

Another part of this book is described saying that the community forest has a great potentiality for additional economic benefits to local communities through the managed utilization of forest resources because this approach is granted gift to local communities. And it is a potential method of environment conservation and sustainable development of the nation.

MOPE (2000), *State of the Environment*. Kathmandu: Ministry of Population and Environment, p 29.

This book reports that the estimation is that there is a potential of 1,876,300 hector forested and have 1,585,800 hector non forested land which can be developed as community forests. Similarly, 2,313,100 hector of Nepal's current national forest can also be considered potential community forest. The above data are the significance evidences of the community forest policies. This policy is regarded as the best policy for environment conservation and stability and the forest area can also be expanded very smoothly without harming human habitats.

Shrestha, Kanhaiya Raj. (2002), *Forest and Vegetation types of Nepal*. Kathmandu: Natural Resource Management Sector Association programme.

In this book, he states that the progress of handing over forestland to community forest user groups is remarkable praiseworthy and rewarding. Transformation of the ecosystem a result of community forest, is visible in a number of districts. It has greatly impacted upon the quality of forests in terms of species composition and the growth of forest is rich and valuable for bio-diversity through community forest approach. He also highly focuses the importance of community for utilization and conservation of local properties through handing over.

Khadka, D.K. (2000), *Community Forest in Nepal*, Unpublished a Seminar Paper. Kirtipur: Central Department of Geography, p. 24.

This paper discusses about the importance of community forest programme, which is being popular in country because people are showing their interest in forest management. people's participation is the best way to mange and protect community forest. There are various problems to the develop the community forest programme but there are many effort yet to be made in this regard. Current government policy for community forest and the interest of various donor agencies in forest management activities are helpful to increase the community forest area in Nepal.

CIFOR (2001), *Trees, Moons and Daal Bhat in Nepal*. In Center for International Forestry Report 2001, CIFOR, pp 26-27.

This report highlights the need of the forest conservation through which the rural people are fulfilling the means of their daily food from forest. So, the community forest programme of Nepal has established more than 10,000 community based forest user groups which have significantly increased forest covering. This is the strategic effort to maintain the environment conservation and bio-diversity maintenance.

CIFOR (2001), *Secondary Forests are Available in Asia*. In CIFOR Report 2001. CIFOR, p. 15.

This article is reported on the basis of changing situation of forest conservation strategy that the forests are gradually becoming to change in the countries like Nepal, India and China where original forests remain for environmental local livelihood and industrial purposes. So, the realization is becoming towards the welfare of the rural people and the environment of the nation through their regeneration and wise management of forests.

Haley, David. (2002), *Community Forest in British Columbia*. In *Forests Trees and People* no. 46. Sweden. P 59.

From the experience of his research and study he reports that community forests provide a vehicle for economic development based upon local initiatives innovation and entrepreneurship. They can help employment opportunities, increase public awareness and support for forest management activities. Community Forest is the way to get success of development and it is the strategy to take the people in mainstream of national activities which is the best process to make community aware.

Ojha, Hemant and Bhattarai, Basundhara (2001), *Understanding Community Perspectives of Silvicultural Practices in the Middle Hills of Nepal*. In *Forests Trees and People* no. 44 Sweden. P 60.

Both of them seem aware and have assured that the establishment of community forest is the process to provide the opportunity for communities to build and strengthen their governance skill and capacity. The community forest is about responsibility taken by natural resources dependent communities for managing local natural resources sustainably and equitably. And they highlight the increasing greenery, wildlife, fresh air and water through the government, forest user group enhancement of the forest contributes to beautifying the

overall landscape, an attraction for tourists and recreationists which will in turn benefit the local economy.

Adhikari, J. R. (2001), *Community Based Natural Resource Management in Nepal (With Reference to Community Forestry)*. In *Environment (A Journal of the Environment)* vol 6 no 7. Kathmandu: HMG Ministry of population and Environment, pp 20-21.

This research has the review that the community based natural resource management has attribute to the management of common property resource mainly forest pasture village common land and overall management of natural resources. The writer also points out that the successful example on community based natural resource management is Nepal's unique community forest. This article also provide some suggestions and guidelines for good foundation of forest that the people's indigenous knowledge, local organization, institutions; national policies are the main elements for natural conservation. Today's community forest programmed of Nepal is considered as one of the most successful examples of community based natural resource management initiative. These kinds of programmes seem to be viable option for conserving, improving, using and the management of natural resources in Nepal.

Bajracharya, M.K. (1999), *Nepal Nature's Paradise*. In T.C. Majupuria (ed). India: M. Devi, pp 115-116.

This article mention about the policies led by the government that the forest department should manage major forest tracts and the rest activities should be left to the local communities ensuring, the forest property is to the community. From his article we can claim that the establishment of new policy of community forest is the example of effective forestation where as in the previous decades, forests were declining but now a days the covered area of the forest is being increased. And the forests are being able to supply fuel wood, fodder and timber and on the other hand the conservation of the forests from the point of view of community are able to support economic and environmental balance for life of common people.

Barlett (1991), *A Viable Strategy for Meeting Forest-Development and Conservation Objectives in Nepal*. Kathmandu: Nepal Australia Forestry Project, pp 13-14.

In this book, writer elaborates his experience from this project that the community forest can be an important strategy for facilitating rural development. Besides, providing many economic benefit it also provides many tangible environmental benefits to local

communities. The writer states from the experience of research in Kabhrepalanchowk district user group that they are able to use the fund from sale of the forest in many forest development activities. This process shows that the managed forest programme can facilitate the local area as well a national development activities without harming the environmental balance.

Dr. Maharjan. M.R. (2003), *Why Right Based Approach in Community Forestry*. In Reflection of Care Nepal vol 8 no. 2. Kathmandu: Care Nepal, pp 7-9.

This article deals with few inequalities in decision-making process, share to benefits and in other activities, the poor marginalized and Dalit groups are still not adequately satisfactory level. The writer expresses that currently the agreements about equity are seen in almost discussion of community forest, which is powerful theme in community forest debates as a justification for sustainable community forest for the well-being of the rural communities. This article seems more consensus for efficient management and equitable sustainable community forestry. The people's participation, accountability, equal access to all pro-poor, marginalized groups in decision making process in community forest and cast dialects, religious, culture and their norm and values should be recognized and respected for the active participation of all users in community forest. Pointing out many of the weakness and failure ness in community forest, the writer concludes his article saying that community forestry is the control and management of forest resource by the users groups who use them in multi-dimensional ways for the well being of their communities.

Kandle, B.N. (2003), *Community Forestry Means of Sustainable Livelihoods*. In Reflection of Care Nepal vol 8 no1. Kathmandu: Care Nepal, pp 25-26.

This article highlights stressing about the advantages of forest through its participatory conservation with the help of community forest people can improve their economic status through their community forest through establishing saw mill and small scale furniture based cottage industries. Therefore community forest has evolved out of the fact that forest can neither be conserved nor be managed without the active participation of rural people. He states that all users are equally responsible for protection, management and utilization of their forestry resource and the fund generated from community forest.

FAO (1993), *Forestry of Selected Countries in Asia and the Pacific*. vol 115. Rome: FAO, p 90.

This evaluates the fact figure of forest in Nepal and the realization in formulation and implementation of forestry policies must be undertaken as lessons for correction from past experiences. The policies must meet the public demand. All sorts of policy instruments, analysis of problems and adoption of appropriate technology and fair implementation must meet the need and demand of people. Then only the result contributed to economic welfare and environmental sustainability will be progressing in the future. This book also highlights the policy, which is undertaken to the communities, is the solution of environmental problems as well as economic problems. So the community forest development programme is extended.

Shrestha, Kumud. (1998), *Towards a New Programme for Forestry Resource Management*. In Ban Ko Kankari (Information of Forest) vol 8 no 2. Kathmandu: International year of the Mountains, p 48.

This article states that the community and leasehold forest programmes will also be given the responsibility of protecting the peripheral larger area of production forests. This will help control encroachment of the core national forest production.

Sharma, A.R. (2003), *Glamour and Gripses of Community Forestry Impact on Income Distribution*. In Ban Ko Jankari (Information of Forest) vol 1 no 2, Kathmandu: International Year of the Mountains, pp 12-13.

Through his research findings, this article concludes that community forest slightly reduces rich-poor gap but any hasty conclusion can also be erroneous and premature. Based on the analysis of findings, he states community forest has a critical role in the subsistence living of land-poor households. He finds that the community forest also trickles to poor households. For this benefits the managerial capacity of government, institution, NGO's and other civil societies of community are responsible.

Archarya, K.P. (2001), *Managing Forests in Community Forestry in Nepal*. In Ban ko Jankari (Information of Forest) vol. 11 no. 2. Kathmandu: International Year of the Mountains, p3.

He states in his article in the late 1970's the theory of Himalayan Environmental Degradation greatly influenced the forest development programme and the heart of

community forest in Nepal is the development of partnership between the local communities and the government. Further he says active community forest management will provide direct benefits to people and subsequently will improve people's participation.

Gautam, A.P. and Webb, E.L. (2001), *Species Diversity and Forest Structure of Pine Plantations in the Middle Hills of Nepal*. In Ban Ko Jankari (Information of Forest) vol 11 no. 2 Kathmandu: International Year of the Mountains, p 16.

From their research findings they states that the best management model to meet the dual goals of achieving conservation of biological diversity is community forest. On the other hand this process optimizes economic benefits to the local people through management of themselves. So, this article has emphasized on the conservation of forest for economic and environmental benefits through local communities.

Singh, V.P. (2002), *Active Versus Passive Management Issues for Sustainable Development CFM Midhills Nepal*. In Ban Ko Janakari (Information of Forest) vol 12 no 2, Kathmandu: International Year of the Mountains, p 69.

After his survey he has recommended; Increasing opportunities for more resource utilization through substituting the passive management practices by active management which is necessary to keep the forest conditions in dynamic state to fulfill the growing and changing needs of the society. And from his observation in this area community forest he has found that the user group have positive attitude towards the community forest programme. Most of the user group members are satisfied with the community forest activities.

Khanal, K.P. (2002), *Under Utilization in Community Forest Management*. In Ban Ko Jankari (Information of Forest) vol 12 no 2, Kathmandu: International Year of the Mountains, p 26.

He has founds that community forest is one of the nationality prioritized forest programmes in Nepal. It is supposed by a good legislation for handing over forests previously under state control to local forest user group. People carry out a responsibility of forest management and the people oriented approach to forest management is now common in the mountains and hills of Nepal. Hopefully, the subject will draw more attention in the future so that community forest in the hills of Nepal doe not only contribute to forest regeneration but also contribute to more equitability.

Adhikari, Bhip.york.ac.uk/depts../eeem/resource/adhikari.htm

This study found out that participatory management is often seen as an appropriate solution to reduce degradation and it was thought that granting property right over the local commons would ensure the equitable and sustainable use of environmental resources. When the responsibility of allocating natural resources is delegated to local organization, communities tend to appropriate these resources for the collective community welfare. For the solutions of local resource use problem can be solved through the community based approach. And this approach is adopted by community forest programme. So this programme is one of the best ways of economic and environmental activities through the proper management of local resource of forest.

Shrestha, K.R. (2001), *Forest and Communities.org/community profiles/Nepal.htm*

This fieldwork is focused on community forest and gathered most important information about the strength and weakness of existing institutions and policies of possibilities in community forest to maximized ecological and socio-economic benefit. This research found out that the global development concerning to sustainable development can be led through sustainable forest resource management. There are many issues being raised and debated in this relatively recent development in community forest. This research analyzed present institution and developed suitable arrangements for forest resource conservation, harvesting and utilization involving the use of forest resources for forest regeneration and social rural development. These activities can be maximized ecological and socio-economic benefits in long-term and gives solid foundation for achieving sustainability in community forest.

Ojha, Hemant Raj (2003), *Whitney-award.org/articles/projects/rufford/hemantrojha/html*

This study is focused on the role of communities for bio-diversity conservation in the Buffer zone are of Royal Chitwan National Park. The main objective of this research was to develop a methodology for integrating and bio-diversity conservation in that area. The focus of this study was to facilitate community and their action on conservation and management of species under selection as well as identify policy issues and opportunities in relation to the integration of bio-diversity concerns in community managed forests. In Nepal 11,000 forest user groups have been managing more than 850,000 hectors of community forest. However, they have not incorporated the concept of biological diversity in their operational forest management plans. In addition, most plans are directed towards the timber oriented

management plans. In addition, most plans are directed towards the timber oriented management strategies, ignoring a number of valuable products that are useful to poor communities and their livelihoods. Finally, he recommends that the changes should be induced through the project action creating conversation impact and enhancing bio-diversity based livelihood opportunities.

CHAPTER - THREE

RESEARCH METHODOLOGY

3.1 Research Area

The selected research site of this research is Braybana VDC of Morang District. This VDC is easily accessible with motor vehicle road. Study unit of this research is Gramin Sudar Community Forest of this VDC because it is the protected community forest of this VDC. This community forest has covered 1400-hector land area of forest. There is around 500-house hold that is form the forest user group. Morang last four five years, this community forest collected many ideas how to create its significance through the better management and conservation strategy which resulted in high bio-diversity conservation and economic potential products.

3.2 Research Design

This research has been adopted both the descriptive and exploratory research design. Descriptive research design has been concerned with describing the characteristics of a particular individual or of a group. Community forest user group economic activities, there active participation in bio-diversity conservation and the effect of community forest on user groups both economically and environmentally, has been the descriptive discussion. Exploratory research design finds out some problems associated with the forest and analyzed these problems applying different tools on various problems selected with economic activities and management process of community forest activities and the factor affecting in using patterns has been discussed on the base of exploratory design.

3.2.1 The Universe and Sample Size

As the selection of the study area and the research design, the sample size will be also selected because not all the forest user group members can be surveyed due to the physical as well as technical problems. This community forest consists 500 households and it benefits around 3500 users among 500-house hold including three cast groups 30 heads of the household will be surveyed. The survey will be included 15 heads of household form Bramin, 10 from Mangol and 5 from Dalit

3.2.2 Nature and Source of Data

This research has been field-based study. The primary data like social, economic, environmental conservation and the impact on user group through forest product and the related problems has been affected through field visit. To collect these data the interview method has been applied through structural questionnaires by the researcher himself. Regarding these primary information, the secondary data as available relevant writing documents e.g. village profile, user group constitution, operational plan, district forest office publications and other related national as well as international documents, publication and report has been the key information in the preparation of this project document.

3.3 Data Collection Technique and Tools

The following technique and tools has been use for the collection of primary data: household survey, socio-economic data like cast/ethnic composition, landholding, agricultural activities, farming tools and types, food production etc has been collected through household survey. Especially the head of the household is taken for key respondents of this research. Structure questionnaires have been used for all the information to cover the above objectives. Thirty heads of the households has been surveyed for the collection of information. The interview method has been applied for the house hold survey regarding this source and tools of information collection, other like formal and informal group discussion, individual interview, key informants interview, observation tools has been applied to know the bio-diversity mechanism.

3.4 Data Analysis

As discussion above, the data has been collected through various source using various data collection techniques and tools. Both the qualitative and quantitative data has been collected from field visit. Information related to population distribution, education economic activities and some forest products would be quantified. The related quantitative data has been tabulated and identified through the percentage distribution. Quantitative data has been discussed analytically based on findings. Qualitative data has been systematized concerning the issue of economic and environmental activities of community forest.

CHAPTER - FOUR

INTRODUCTION OF GARMIN SUGAR COMMUNITY FOREST AND FUG

This Gramin Sudar Community Forest is located at the eastern part of Morang district. This forest has many types of valuable components including economic and non-economic. This forest was called dense forest before 2035 but when the referendum was declared in 2036 B.S. then the deforestation took place in great manner. In the period of 2042 to 2045 B.S. people conserved this forest with naming fire line when the democracy was restored in 2046 B.S. the multi-party system began and the deforestation trickled down to fulfill the party interest. As the result good timber product trees were destroyed. Again in 2048 to 2052 B.S. this forest was conserved with it' rename of Kanapokhari where the deforestation was reduced in great manner (GSCF, 2057).

When the activity of community forest was spreading all over the country with getting success in a natural resource conservation and community development, this forest is also forwarded for community forest in 2056 B.S. Before this, a lot of conservation strategies were exercised as to keep guard, plantation, boundary demarcation where the people used to pay salary and used to collect all the costs as needed for it (GSCF 2057).

The location of this forest is attached with four sides as follows:

East : Sita Cha Dhara Community Forest

West: Karoun Community Forest

North: Janata Community Forest

South: Settlement of People.

This forest has covered 1400. Land area and around 500 household are engaged for their livelihood. 430 households are registered and rest of them are not real consumer household of this forest. 3500 number is people are getting benefit from this forest product resources. Regarding the direct beneficiary aspect of this forest to the community, the other environmental functions are also related with this forest. The biodiversity conservations is fulfilled with its good habitat of all scarce animals and plants. The water source is also maintained. Similarly, the social environmental aspect is also related with this forest through the name of Sansari Puja (DFO 2002). After handling over the forest to forest user group, this forest has typically changed in different matters. Some of the options were interviewed on the

basis of priority that the respondents have given their response in comparative perspective that the situations is quite changed after the initiation of the community forest programme. Due to the plantation strategy, this forest changed into thickness. This shows the conservation and storage of resources conservation of natural resource and wildlife seems more attractive from these results, natural beauty and scenic attraction of this forest are upgrading very smoothly. All these responses can be considered that all the resources and potentialities of forest are conserved through the initiation of community forest programme and the quality as well as the quantity also added through this conservation strategy.

Table No. 1: Percentage Distribution of Caste of FUG

Caste Type	No. of Peopled	Percentage
Brahman	15	50
Chhetri	6	20
Janajati	6	20
Dalit	3	10
Others	0	-
Total	30	100

Source: Field Survey, 2006

Through this table the caste composition of Gramin Sudar Community Forest User Group can be categorized with dominant caste Brahman where 50 percent of total FUG is covered by them. Chhetri and Janajati are 20 percent and Dalits are 10 percent. This picture shows there are 4 castes who are being participating actively in forest resources conservation, management and consumption.

Through the interview of respondents, the education status of the FUG is that the 70 percent of total are literate. This education situation is higher than the national education. Remained 30 percent are still illiterate that they have not access in reading and writing skill. And the literate FUG's educational attainment is described as below.

Table No. 2: Educational Status of FUG

Level of Education	No. of Respondents	Percent
Illiterate	9	30%
Under S.L.C.	6	20%

S.L.C. level	6	20%
Intermediate	5	16.66%
Bachelor	3	10%
Above Bachelor	1	3.33%
Total	30	100%

Source: Field Survey, 2006

The educational attainment is that 30 percent are still illiterate, 20 percent of total FUG are under S.L.C. and 20 percent have just passed S.L.C. Only 16.66 percent have passed intermediate level. 10 percent have passed bachelor and 3.33 percent have passed above bachelor. This scenario of education shows the satisfactory and the wave of education is being spread this area also.

The other mechanisms at FUG are common as all rural community have. The family type of FUG is both nuclear and extended where 40 percent have the nuclear family and 60 percent have extended family. The main occupation of this FUG is agriculture and livestock farming. The role of traditions and cultures in this community seem very vital.

2.2 Economic Activities of GSCFUG

There are various types of occupation of FUG of this forest which relates in income generating activities. The economic activities includes both non-forest and forest product activities, which help to FUG by providing economic support in their daily life. The occupation of FUG, distribution of land, farming type and their relation with forest is clearly defined below which shows the development and economic activities with the development of community forest. The support of community forest is highly contributed in economic activities of FUG. The economic activities are described below.

Table No. 3: Percentage Distribution of Occupational Status of FUG

Types of Occupation	No. of People*	Percent
Agriculture	30	100
Livestock	30	100
Business	3	10
Service	2	7
Labour	6	20

Source: Field Survey, 2006

* Some of the respondents have ticked more than one option or item.

As all rural people's occupation this GSCFUG's occupation is also devoted to agriculture and livestock farming where all respondents do this activity of fulfill the hunger of stomach and some of them are doing for commercial purpose. In business sector there are only 10 percent and 7 percent are engaged in service. 20 percent of total FUG also do labour for additional income source. Other occupations except agriculture and livestock are being done simultaneously with framing. Agriculture and livestock farming are main occupation of them. And pasture land is another variables of livestock farming. These all variables are being fulfilled by their forest through its main potential aspect. As rural life required all the equipments needed for livestock management and agricultural practices are also grants of forests. So we can claim that the community people or the FUG have the intimate, relationship with forest for their farming procedure.

Using Pattern of C.F

All the respondents believe that they are using this community forest for agriculture, livestock farming and for other resources. Irrigation process is also maintained through this forest for the related community. Other resources as timber, house roof material, firewood compost manure, coal and medicinal herbs are the main products of this forest which all FUG are getting well. These all things are providing to all FUG for economic benefit. Main economic activities are related with this forest products. These activities signifies about the daily activities of common rural people. Most of the people are getting the main materials as firewood for fuel, fodder for livestock and compost manure for fertilizer purposes denoted the main role in domestic life. FUG claim that their agricultural farming is increasing through the development of community forest. GSCF also support in educational sector, road maintenance and making bridge. In education sector this forest made two building in two difference school. More than 40 kilometer road constructed, gravel and maintenance.

Time Matter

Time is evaluated at everywhere in expensive manner. Time factor is highly associated variable in being's life. All of the respondents replied in the question about time that it is saved and became easy in availability of materials and distance is quietly changed that the potentiality of forest products is becoming richer and richer. The time is saved due to

easiness to collect the above mentioned things for their daily domestic life. Particularly time is saved in firewood collection, manure collection and fodder collection. The save time is being used in various income generating and other domestic purpose. The alternative economic activities can be generated or launched through the saved time. So, time is vital factor for any activity or particularly in economic activity.

Types of Livestock Farming

As having main occupation is agriculture, the general type of livestock are found here. The FUG are not more conscious in commercial farming but they are adopting the traditional method of farming. The livestock types are cow, ox, buffalo, goat. All respondents use to farm their animals. Some are engaged in goat, pig, chicken are the main additional source of income. These economic activities are being done very traditionally with traditional means of production and method.

Types of Crops

As livestock farming, the crop farming of FUG and the community is also traditional. Only 10 percent people use to farm with improved breed. Most of respondents do not use the modern way of production. 20 percent people are chemical fertilizers and rest of them use compost manure. Basically, the major crops of the farming are rice, maize, oil based, Dal based crops. These crops are considered only the means of food for domestic purpose of respondents. These crops are fulfilling the demand is food directly or indirectly to the people. These agricultural activities are being done only for the purpose of food or to fulfill stomach but not for commercial purpose. These are the basic farming varieties of this forest user group.

Relation between Farming and Forest

All of the respondents claimed that there is much relation between farming and forest. They additionally identified that without forest there is not possibility of existence because all the activities of daily life are associated with livelihood. Way of living and source of living are being exercised in this forest by FUG. Especially agriculture and livestock farming is highly attached with forest. Farming is associated with forest in the case of that the agricultural resource or variables as nutrient components, water source, organic manure, and other fertilizer components are being fulfilled through this forest. So this forest is supposed to

be the contributor of agricultural farming. The fodder manure are another potential aspects of forest for livestock farming.

Table No. 4: Fodder Need Per day of FUG

Amount of Fodder (in Bhari)	No. of People	Percent	Average
1-2	9	30	3.16
2-3	4	13	
3-4	7	23	
4-5	8	27	
Above 5	2	7	
Total	30	100	

Source: Field Survey, 2006

According to the FUG the actual need of fodder to them is in average 3.16 Bhari per day. Where 30 percent people need 1-2 Bhari, 13 percent need 2-3 Bhari and 23 percent need 3-4 Bhari, 27 need 4-5 Bhari and 7 percent need more than 5 Bhari. Except community forest other required fodder, is fulfilled through their own land. In rainy and summer season their own land became successful in providing much fodder and the rest of these season the community forest is responsible for it.

Table No. 5: Firewood Consumption of BCFUG in last Year

Amount of Firewood (inBhari)	No. of People	Percent	Average
50-55	3	10	65
55-60	5	17	
60-65	8	27	
65-70	9	30	
70-75	2	7	
Above 75	3	10	
Total	30	100	

Source: Field Survey, 2006

This table shows that the economic activity related to firewood of FUG is being exercised in high manner that annually each household is taking 65 Bhari in average. Similarly 4182 Bhari is required every year from the community forest. 10 percent as respondents are taking 50 to 55 Bhari and 17, 27, 30, 7 and 10 percent FUG are taking 55-60, 60-65, 65-70 and above 75 respectively. This sorts of economic attachment is highly associated with forest.

Table No. 6: Forest Product Resources Based Industries

Types of Industries	No. of People	Percent
Furniture	6	20
Iron based	3	10
Bamboo based	9	30
Medicinal	3	10
Soap	3	10
Total		

Source: Field Survey, 2006

The FUG are involved in these sectors except agriculture and livestock farming for their better income. This table shows the income generating activities which are exercised by GSCFUG with the conservation and the utilization of community forest. The source of materials for their home industries is this community forest. 20 percent are involved in furniture industries. 10, 30, 10, 10 percent are involved in Iron based, bamboo based, medicinal and soap based industries respectively. This involvement of FUG shows the economic activities are being exercised through the development of community forest.

There are other production of community forest except above-mentioned materials which belong economic matter. Respondents are getting these materials from forest also denoted economic benefit through these materials.

Table No. 7: Consumption of Additional Source of FUG

Types of Materials	No. of People*	Percent
Medicine	10	33.33d
Fruits	7	23
Vegetable	3	10

Source: Field Survey, 2006

* Respondents ticked more than one item or option

The materials i.e. medicinal herbs fruits and vegetables definitely belong with economic activities and are most essential things for rural people, where 33.33 percent

respondent are taking medicinal herbs through this forest and 23 percents of respondent are getting vegetable through it. And only 10 percent people are taking fruits. Vegetable is the main potential product of this forest, vegetable as Tama, Niuro and mushrooms can also be used for sale additional income.

Bio-diversity of GSCF

According to the respondents of Gramin Sudar Community Forest the management and maintenance of bio-diversity of forest is highly improved after adaptation of community forest programme. Different types of scarce species including plants and animals are conserved highly. The rate of increasing numbers in plants, animals and birds species is becoming effective through the good maintenance of forest. The species which are listed here through overall observation and discussion with FUG are good examples of bio-diversity conservation.

In this forest, the species of plants which supports to fodder or fodder product varieties are around 40. The timber product species consists 45 and the plant varieties of vegetable and fruits consists around 10. The main plant varieties which are considered as scare are the medicinal herbs found in this forest. From these, varieties, Harro, Barro, Amala, Tejpat, are the scarce specie which are found in this forest. There are around 30 species of fauna including both animals and birds. Around 17 species of birds and 13 species of animals are found in this forest. From there species Suga, Dhakur, Sal and snake are the endangered species which are found in this forest. The detail number of species is listed in Annex-B.

Table No.8: Process of Participation in Bio-Diversity Conservation

Process of Conservation	No of People*	Percent
Planting tree	25	83.33
Boundary	30	100
Making Aware	21	70

Source: Field Survey, 2006

* Respondents ticked more than one item.

FUG participation in forest resource management seems very effective through various processes such as planting, boundaring and making people aware. Where 83.33 percent respondents are participating in planting process which helps for better resource management and 100 percent are helping in boundary making activities. 70 percent

respondents are participating in awareness making process to people and each member of community. These processes to protect bio-diversity are best methods. These activities are helping bio-diversity conservation in better way.

Table No. 9: Types of Plants in Forest

Types of Plants	Percent
Timber Product	50
Non-timber	35
Medical Herbs	15
Fruit	5
Vegetable	5
Total	100

Source: Field Survey 2006

Respondents are aware towards plant for planting seems normal because 65 percent plants common and only 35 percent are scare. Another great aspect of forest bio-diversity is there are various types of plants. The timber producing plants cover 50 percent where fodder (non-timber product), medicinal herbs, fruits and vegetable products, cover 25, 15, 5 and 5 percent respectively. This table shows balance among all resources.

Affecting Factors and Constraints in Bio-Diversity Conservation

Bio-diversity conservation is very complex matter in it itself needs balance natural habitat. As this fact the natural calamities always disturb this mechanism and result bad effect in bio-diversity conservation various affecting factors which affect the bio-diversity conservation of this forest are floods, natural disasters, cultures traditions etc. 50 percent factor is flood and 30 percents goes to natural disasters. Remaining 20 percent is responsible with cultural and traditional matters.

As the affecting factors there are some constraints in planting of trees which are seeds, nursery protection management. Where 30 percent I related with seeds and 20 and 50 percent is related with nursery, protection and management. These are the main factors and constraints in Bio-diversity conservation.

Cultural Relation with Forest

Apart economic and natural environmental activities, the social environmental activities are also related with this forest. As the respondents presentation as their ideas and through this report supposed as the following symbol of God.

Table No. 10: Socio-Cultural Relation of FUG

Types of God	No. of People*	Percent
Kuldevata	12	40%
Sansari Mai	24	80%
Banyar	-	-

Source: Field Survey, 2006

* Respondents ticked more than one item.

Through this table the respondents are highly attached with cultural and traditional activities to this C.F. 80 percent of total FUG are supposing this forest as Sansari Mai and 40 percent are worshipping supposing as Kuldevata.

Related Problems with GSCF

There are various problems which are being the obstacles for forest conservation and proper utilization. These problems are the voice of FUG. These problems are as follows:

Table No. 11: Problems of GSCF

Types of Problems	No. of People*	Percent
HMG Procedure	20	67
Local dispute for resource consumption	10	33
Ethnic, dalit dispute	7	23
Current need	21	70
Distribution dispute	8	26
HMG tax policy	5	17
Political pressure	12	40
Conflict	15	50
Corruption	6	20

Source: Field Survey, 2006

* Some Respondents ticked more than one item.

Respondents argue for better forest resource management and bio-diversity conservation that there are such problem as HMG procedure, local dispute for resource consumption, ethnic Dalit dispute in participation, current need, distribution dispute HMG tax

policy, political pressure, conflict and corruption. In these problem 67 percent respondents believed to HMG procedure and 33, 23, 70, 26,17, 40, 70, 20 percent believed local dispute, ethnic dispute, current need, distribution dispute, HMG tax policy, political pressure, conflict and corruption respectively. These are considered as main problems in forest management and resource mobilization.

Economic Impact of FUG

Through the all data and information of GSCFUG collected through respondents concerning to economic activities all table and description show the great potential aspects using pattern of economic resources. The economic impact on user group and a community can be viewed that all the resource and wealth which are being used by the user group signifies economic benefits. As the fuel wood, fodder, compost manure, timber, medicinal herb, vegetable, fruits and other potential aspects are being considered economic activities of user group and community. Except these activities and dependency of FUG on these matters for their economy. These sorts of dependency and using pattern of forest contributed to community as great economic impact or benefit. The following points are the key points of economic impact.

- Main occupation of FUG are considered the agriculture and livestock farming are highly dependent on forest and without forest resources these activities cannot foster well. So, this dependency shows main economic impact on user group and whole community.
- The construction materials as timber, house roof material and the material for dam are other potential resources of forest which are being used. This using pattern express excellence economic impact on user group.
- Other materials coal, medicinal herb, vegetable fruits are the nice indicators of economic impact or user group and community.
- Furniture, bamboo based, iron based, medicinal herb based industries, soap based industry are running through the forest product resources which shows high economic impact on user group.
- Average 3.19 Bhari fodder is being gained through this forest per day which is main indicator of economic and helps in livestock farming and development.
- 100 percent people are dependent on agriculture and livestock farming where forest provided required resources which is the economic impact on user group.

- 65 Bhari fuel wood is gained from this forest by each household annually. This shows dependency for fuel wood for their economic benefit.
- Around 33 percent respondents are getting benefit of medicine, 23 vegetable and 10 percent respondents are taking fruits from this forest which shows another economic impact on user group and community.
- Leaf for ceremonial function and other sources shows high rate of economic impact on community. These above mentioned source of forest are the means of economic impact on FUG and community. All the activities are related to economy and are the means of human existence in daily domestic life. The way of life and daily activities are highly associated with forest which are the good economic potential aspects of forest to people. The forest is used for various purpose which is used for economic purpose. The fulfillment of need of domestic life concerns the economic activities which is performed by forest. These all associated grants of forests to people and community are the economic impact of forest on FUG.
- Construct V.D.C Office.
- Four person employment.
- To providing Ghar for bee keeping.
- Arising fund for blind student is there stationary requirement.
- Extent electricity in health post.
- To work collaboratively with local saving instution is order to farm high bridge cows, goats.
- To provides firewood mandatorily in weeding and other cultural festivals.

Environmental Impact on FUG

Regarding the economic impact of forest on community and FUG, there are other some environmental impact which is increased with the conservation of forest. This forest is also functioning the environmental activities which has contributed for the balance of natural products and regulation of all resources. This forest highly supports in all economic activities of people and community through its bio-diversity maintenance and proper conservation strategy of FUG. There are some environmental impacts on FUG and community which are as follows:

- Participation in conservation of bio-diversity shows the balance among all eco-systems and living organisms.

- Natural beauty is increased through the better conservation and plantation of forest.
- Mill forest is the good habitat of 200 species of plants, 30 species of animals and 20 species of birds.
- There are scarce types of organisms are conserved a monkey, snake and other plants as Harro, Barro, Amala etc.
- Medicinal herbs are another gifts of this forest which shows good environmental impact on FUG and community.
- Water resources is also maintained through the conservation of forest which turns in balance to environment.
- The industries which are running are the non polluted and environmental friendly though the forest product materials which are the key foundations of good environmental impact of Gramin Sudar Community Forest on community.
- Social environmental relation is also associated with the forest because the cultural relation is highly attached with it where 80 percent supposing as Sansari Mai, 40 percent as Kuldevata. This shows great dependence on forest not only economically but also socio-culturally. This is also environmental impact on FUG and community.
- User group have their own images to the forest which is also another type of social environmental impact on community.
- 50 percent plants are related with timber product and 35, 15, 5, 5 percent related to non-timber, medicinal herb, fruits and vegetable products respectively which shows the balance among plants. The protective and regulative functions of environment seems not disturbed.
- So, this forest regulates all the protective, regulative and constructive functions of environment both economically and environmentally. The above mentioned impacts are good examples of forest in all matters to human activity.
- Providing assistance of Rs 1000 for the members who want to manufacture gobar Gas plant.
- Providing toilets ring for the members in Subsidies amount.

CHAPTER - FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

After the various activities to the forest sector, the government realized that the real owner of the forest is the community people where they were supposed as the destroyer. From this realization, the government acted the policy which is community forest programme. This programme is being spread all over the country and is being the good example of community development approach. This programme is focused to participate all local people including, minor, marginalized, excluded class and disadvantage group. This focus is helping to fulfill the livelihoods of people.

As the economic potentialities the main another potential aspect of forest is to maintain the environment. All the environmental factors of this earth is associated with forests. Forest performs the various activities as protective, regulative and constructive. For the soil conservation, water cycling process ecosystem and bio-diversity aspects and all other aspects to strengthen and regulate the human life as well a all biological existence, forest is considered the key factor.

Various research and literatures have discussed related to community forest to know the economic potentialities and environmental potentialities of forests. Through the literature review, the concept of community forest, user group, economic activities, environmental activities, bio-diversity conservation and its impact on user group and community were reviewed.

This Gramin Sudar Community Forest is located at eastern part of Morang district in Braybana VDC, Koshi zone Nepal. This forest has covered 1400 ha land and around 500 households are engaged for their livelihood. 3500 number of population is directly related with the socio-economic activities of Gramin Sudar Community Forest. This research gathered information and data through field visit of this research unit area. The main research objectives were to identify economic activities of GSCFUG, to analyze the FUG participation in bio-diversity conservation and to identify the impact of Gramin Sudar Community Forest on socio-economic and environmental life of local community. Most of the FUG are literate. After handling over forest to user group this forest has typically changed in various matters, so the resources capacity became high. The occupation of FUG is mainly agriculture, livestock farming, business service and some of them do labour. This forest is being used in

various matters as firewood, fodder, compost manure, house roof material and timber. Except these materials various home based industries are running with the help of this forest like, furniture, iron-based, bamboo based, medicinal herbs based. The source of vegetable, fruit and medicine is also required through this forest. To collect these things the expenditure of time has typically changed that the time is saved in various matters after initiation of community forest programme. Actually these are considered the economic activities of GSCFUG with forest.

Regarding these activities some environmental friendly behaviours are also exercised that the maintenance of bio-diversity is becoming very successful through this community forest. Various scarce plants and animals are making the habitat to this forest. The process of participation in bio-diversity conservation of FUG seems satisfactory through planting, boundarying and making aware to community people. There are various types of plants in forest including timber, non-timber medicinal herbs, fruits, vegetable products.

Except these characteristics there are various obstacles which are being the main problems to this forest for better conservation and management. The cultural and traditional FUG are taking this forest for their cultural image. These are the main findings of this research concerning this community forest.

5.2 Conclusion

As the research target of this study various economic benefits and environmental behaviours are being formulated by FUG of this forest. The FUG of this forest are from Braman, Chhetri, Janajati and Dalit where most of them are literate. The extended family type is dominant in this community. Various cultures and traditions are prioritized by the user group. After initiation of community forest programme, this forest is quietly changed in various matters as in forest thickness, natural beauty, storages of resources and conservation of bio diversity. The occupation of FUG is mainly agriculture and some of them do business and service. For additional income source some of FUG are doing labour activities in various sector.

The main economic activities of FUG in Gramin Sudar Community Forest are particularly agricultural, livestock farming and other home based industries. All of the FUG are involved in agricultural and livestock farming with the help of fodder, irrigation channels, compost manure, fuelwood and other resources from this forest. With the support of these things agriculture and livestock farming is getting success. Other economic activities related

with forest as the home based industries signify economic activities of FUG with the help of community forest. Iron based, furniture, medicinal herb based, bamboo based and soap based industries are making based to this forest for raw materials which are the indicator of economy and are also required for additional income from forest. These are main findings of this research. Another aspect of this research in the environment of forest. The bio-diversity is conservation very effective through various activities. Except these relations, the social relation with this forest of FUG is highly attached where most of them are worshipping as incarnation of God. The problems are very general which are being obstacle in fostering various economic activities. Thus, thee are the main finding of this research.

5.3 Recommendations

Based on the finding of the study, following recommendations are suggested:

- Alternatives of daily needs must be forwarded which are taking from forest. The current trend of using resources leads loss of resources so the alternatives will minimize in resource use.
- Woman participation is very low so increase woman participation.
- Ethnic dispute with Dalit must be eradicated through effective participation strategy.
- There are some distributional disputes among FUG members so these activities or disputes should be avoided through equal distribution of forest resources and products.
- Other economic activities related with community forest products ought to be launched on the basis of economy where it is possible.
- Small micro-hydro project can be established through the water source.
- User group of this forest has no sufficient knowledge of forest management. So more trainings and instructions should be conducted in this field.
- Training materials of technical aspects should be provided to user community as reference material.
- Current HMG tax policy and other procedures seems obstacle for promotion of forest so these activities must be freed to all FUG and CF.
- Social and cultural relation is highly attached with this forest of FUG, so policy for thee activities must be forwarded right now.
- Bio-diversity is highly protected in this forest so the scare plants and animals must be recognized and policy for conservation should be forwarded.

- Nursery for plantation is needed so this strategy should be forwarded.
- Conflict causes people do not go freely forest so solution conflict problem.
- There is little corruption to solve the corruption.
- Maintenance Kanapokhari pond and develop picnic spot.
- Domestic animal are freely enter this community forest so boundarying this forest.
- During last 5, 6 years, the forest is well protected. Socio-economic and environmental aspects of this forest are leading in balance way so other alternative and more effective strategies must be taken for rise in resource both qualitatively and quantitatively.

Executive Summary

This study was carried out during three months from Falgun to Basishak of 2063 at Gramin Sudhar Community forest located at the eastern part of Morang District. This research is targeted on various economic and environmental activities which are being regulated through this forest. The research objectives were i) to identify the economic activities of user group ii) to analyze the FUG participation in bio diversity conservation and iii) to identify the impact of Gramin Sudhar Community Forest both socio-economic and environmental aspects. The limitation of this study is limited to the particular area of this community forest and the user group and their activities which related to economic and environmental aspects. This study has its own importance in the field of natural resources management as other research documents.

This research is based on social science research methodology. The primary data were collected through field visit and secondary data were collected from various official sources and publications. The research area of this study is Gramin Sudhar Community Forest of Morang District. The research design of this study is both descriptive and analytical. Regarding these methods of research the sample size was 30 respondents from 500 households. The sample size was determined as the lottery method of random sampling method. To collect the data household survey and interview method were adopted. For the bio-diversity the observation of forest and consultant techniques were applied. Gathered data were analyzed through tabulation and percentage distribution as well as descriptive methods were qualified where as necessary.

The conclusion of this research, can be summarized as that 100 percent of FUG are getting benefit economically through fuel wood, fodder, compost manure, timber, house roof material and other things. 80 percent of FUG are making base for their resource. For the home based industries and 66 percent people are taking medicinal herbs, fruits and vegetable. Through this forest. These are the economic activities of FUG and its impact on community the environmental aspects of this forest is that the both common and scarce types of species are using this forest for their habitat. The process of participation in bio- diversity conservation seems active through their response and observation of forest. And 100 percent of FUG are worshipping this forest for their cultural and traditional relation. There are some problems which are very general. The amusing aspect of this forest is that all have one image to this forest. These described activities signify great attachment with forest of FUG both Socio-economically and environmentally.

To reduce the problems the HMG policy must be forwarded for better management of this community forest. The alternative income generation activities and improved technologies must be forwarded for this community and people. These are recommended for the better balance of resources of community forest.

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QUESTIONNAIRES

1. Name of the head of the household:.....
2. Age:
3. Religion:
i. Hindu ii. Christian iii. Muslim iv. others.....
4. Caste:
i. Brahman ii. Chettri iii. Magar iv. Matuwala v. Dalit
vi. others.....
5. Language:
i. Nepali ii. Tharu iii. Magar iv. others.....
6. Education:
i. literate ii. illiterate.
7. If literate, what is your educational attainment?
i. under S.L.C. ii. S.L.C. iii. intermediate iv. bachelor
v. above bachelor
8. Marital status:
i. married ii. unmarried iii. divorced iv. separated v. widower/widow.
9. Family number:

Male:	Female:	Total:

10. Family type:
i. nuclear ii. extended.
11. Family occupation:
i. agriculture ii. livestock farming iii. business iv. service v. labour
vi. others.....
12. What type of livestock you farm?
i. cow/ox ii. buffalo iii. goat iv. sheep v. poultry
vi. all above vii. others.....

13. If agriculture & livestock farming how much land do you cultivate?

Biga	Katha
1-2	1-5
2-4	5-10
4-6	10-15
Above 6	Above 15

14. What type of crops you plant?

- i. rice ii. wheat iii. maize iv. oil based crops v. all above
vi. others.....

15. What do you think the relation between farming and forest?

- i. much ii. less iii. no relation iv natural.

16. What do you find the difference after establishment of community forest?

- i. forest thickness ii. conservation of natural resources ii. natural beauty
iv. wild life conservation v. all above vi. others.....

17. For what purpose you use this community forest?

- i. agriculture ii. livestock farming iii. irrigation iv. timber v. house roof
vi. fire wood vii. compost manure viii. coal ix. medicine x. all above
xi. others.....

18. Do you find the time is saved after establishing community forest of collect the above things?

- i. Yes ii. no.

19. If yes, mostly in what matter?

- i..... ii..... iii..... iv.....

20. Is really the forest conserved after community forest programme?

- i. yes ii. no.

21. What the thing you are getting from it most?

- i..... ii..... iii.

22. Do you think your agricultural farming is increasing with community forest?

- i. yes ii. no.

23. if yes, how?

- i. through fodder ii. compost manure iii. fuel wood iv. all above v. others.....

24. Do you think your livestock farming is increasing with community forest?

- i. yes ii. no.

25. What type of animal species do your farm much?
 i. cow/ox ii. buffalo iii. goat iv. sheep v. poultry
 vi. all above. vii. others.....
26. How much fodder do you need per day?
 i. 1-2 bhari grass ii. 2-3 bhari iii. 3-4 bhari iv. 4-5 bhari v. more than 5
27. From where your fulfill it?
 i. own land ii. community forest iii. both iv. others.....
28. Do you think the grass problem has been reduced after the initiation of community forest programme?
 i. yes ii. no
29. Do you think water source is also maintained through community forest?
 i. yes ii. no.
30. Any industries are running with the help of it?
 i. ghatta ii. water mill iii. micro-hydro project iv. others.....
31. Any home based industries are running in this community with the help of community forest?
 i. furniture ii. iron based iii. bamboo based iv. medicine based
 v. others.....
32. Do you have any of these industries? If yes, what type of industries you have?
 i..... ii.....
33. Any other income generation activities are running with the help of community forest?
 i..... ii.....
34. In any other purpose community forest is saving the money of yours?
 i. medicine ii. fuel iii. vegetable iv. fruits v. all above vi. others.....
35. After community forest, any difference in bio- diversity maintenance do your find?
 i. yes ii. no
36. If yes, in what matter?
 i. animal species ii. plant species iii. birds species iv. all above
 v. others.....
37. Is really increasing the number is above things?
 i. yes ii. no.
38. What types of scares animals/ birds/plants are conserved in this forest?

- i. ii. iii. iv. v.
39. How are you being participated in forest resource?
i. in planting process ii. boundary process iii. making aware v. others.
40. What types of plants are being planted in this forest?
i. timber product plants ii. non-timer product plants iii. medical herbs
iv. others.
41. In what types of plants you are aware?
i. scares ii. common
42. What effects to the bio-diversity conservation?
i. natural disasters ii. cultures/traditions iii. floods iv. landslide.
v. others.
43. What is main constraint with planting trees?
i. seeds ii. protection & management iii. land iv. others.
44. Any cultural/traditional / ritual activities are related with this forest?
i. yes ii. no.
45. If yes, what is it?
i. forest as bhanyar ii. as a Kuldevata iii. as Deurali iv. Kalika Malika Devi
v. others.
46. What are the problems related to the community forest?.....
47. What other activities can be launched through this forest product?.....
48. What do you say about this forest, in conclusion?

ANNEX B

List of Plants Animals and Birds Which are found in Kalika Community Forest

Fodder	Animal	Tree/Fruits	Medicine
Kumbi	Bandel	Mango	Titepati
Bas	Dear	Amba	Neem
Tik	Monkey	Kamona	Toprejhar
Epillipe	Snake/Cobra	Phadir	Ghee Kumari
Mango	Snake/Karat	Jamuna	Harro
Kathmiro	Snake/Dhaman	Kussum	Barro
Amba	Snake/Harara	Mushroom	Datiyon
Sirish	Snake/Dhodai	Niuro	Kaulo
Bakina	Snake/Sirisha	Tama	Timber
Dipale	Eagle	Moranga	Sal
Tatari	Crow		Saj
Phethari	Rupee		Sissoo
	Pigeon		Satisa
	Parrot		Kumbi
	Gidda		Tatari
	Jurali		
	Bhagara		
	Peacock		
	Fox		
	Banbirallo		
	Fista		
	Sparrow		
	Kalij		