

**PARTICIPATION OF DISADVANTAGED PEOPLE (DALIT) IN WATERSHED
MANAGEMENT: A CASE STUDY OF BAGMATI INTEGRATED WATERSHED
MANAGEMENT PROJECT, MAKAWANPUR DISTRICT, NEPAL**

by

Dandi Ram Bishwakarma

A thesis submitted in partial fulfillment of the requirements for the degree of Master of
Science

Examination Committee

Dr. Gopal B. Thapa (Chairman)
Dr. Michael Zoebisch
Dr. Reidar Dale

Nationality
Previous Degree

Nepali
M. Sc. in Civil Engineering (Hons.)
Tajik Polytechnic Institute, Dushanbe,
Tajikistan, USSR

Scholarship Donor

Danish International Development Assistance
(DANIDA)

Asian Institute of Technology
School of Environment, Resources and Development
Thailand
August 2002

333.716
BIP

R
333.716
BIF

12178

Acknowledgement

I take this opportunity to extend my profound gratitude and sincere appreciation to Associate Professor Dr. Gopal Thapa, chairperson of my thesis advisory committee for his invaluable guidance, constant encouragement, regular inspiration and immense support in the attainment of academic pursuit at AIT. I would like to extend my profound respect and deepest gratitude to my thesis advisory committee members Associate Professor Dr. Reidar Dale and Associate Professor Dr. Michael Zoebisch for their constructive comments and valuable advice at several stages of the research.

I am profoundly indebted to Danish International Development Agency (DANIDA) for providing me scholarship and research grant. I am equally indebted to Asian Institute of Technology for providing me an opportunity to pursue master study in the field of Regional and Rural Development Planning. My sense of gratitude goes to CARE Nepal for encouraging me by providing leave and financial support during my study period at AIT. Sincere thanks and appreciation are also due to Mr. Basanta Rimal, National Co-Director and Mr. Mike Hawkes, Technical-Director of Bagmati Integrated Watershed Management Program (BIWMP), Dr. Shibesh Regmi, Country-Director of Action Aid Nepal and Feminist Dalit Organization (FEDO) for their help in my fieldwork.

I extend my sincere gratitude to all villagers who untiringly responded my series of queries and made this study possible. Special thanks goes to Mr. Udaya Narayan Mishra, Social Mobilizer, and Mr. Nabaraj Pudasaini, Ranger of Palung sub-watershed field center for their constant help in logistic arrangements at the field. I am thankful to other BIWMP staffs, who provided me information regarding the research.

My deep appreciation goes to my batch-mates with whom I worked in the computer lab sharing ideas and valuable comments and spending time till the morning during the data analysis and report writing period. I also would like to extend my thanks to Rural Development, Gender and Resources Program Secretariat Office of AIT.

Last but not least, my heartfelt thanks to my beloved wife Durga Sob for love, endurance and constant support. Her constant and significant contribution to Dalit people of Nepal is an inspiring source of this research. I owe my daughter Deeptirani and my parents for their patience of being out of me during my study at AIT. I equally indebted to my brother Jog Bahadur who constantly took care of parents and family.

Written by
by Dandi Ram Bishwakarma


29/10/2012

Abstract

People centered management approach has been emphasized in several integrated watershed development and management projects in Nepal, including the Bagmati Integrated Watershed Management Program (BIWMP). Due to differences in abilities, attitudes and perceptions of watershed settlers, securing active and equitable participation from all caste/ethnic groups has been a growing matter of concern for development workers and researchers. This research examined socially disadvantaged group's participation in community organizations, planning and implementation and in benefits sharing of activities implemented by BIWMP in Palung sub-watershed of the northern Makawanpur district.

Both qualitative and quantitative information were collected through secondary and primary sources. A total of 217 households from all caste groups were surveyed through questionnaire, group discussion and key informants survey conducted over a period of three months.

Findings of the study revealed that the socio-economic status of the settlers closely follows the caste/ethnic hierarchy. Dalits, who lay at the bottom of the hierarchy, were minority populace and the most disadvantaged. Their traditional occupations were gradually deteriorating and they had less access to development resources. Their involvement in community organizations was low, they remained to be silent followers of the rules, regulations, and decisions made by the majority caste/ethnic groups. Most of the groups were not helped much by the project for their capacity building. The majority of project activities were planned and implemented based on informal contacts. The project staffs were their own target oriented. Thus there was a gap in people's preferred and implemented activities. Several foot-trail construction projects that could not help to improve the economic condition of Dalits were implemented. Irrespective of caste/ethnicity, people's participation was mostly limited to labour contribution, which provided some income earning opportunity to settlers. The project did not pay attention to activities enabling to improve their household economy. Activities like saving and credit scheme, income generation activities and awareness raising training and extension service could not provide much benefit to Dalits. Most of them did not get as they had no idea how to use it and their risk bearing capacity was very low as compared to other caste/ethnic groups. Dalits could not collect even wood required for charcoal making, as they were deprived from the membership of the project supported community forest user groups. The project had not properly disseminated information about its health and sanitation activities. All these combined with the project's inability to address disadvantaged groups' problems had led to deprivation of Dalits from most benefits of the watershed management project.

Nevertheless, there are possibilities to improve the socio-economic status of Dalits so as to enable them to contribute to watershed management. This entails empowerment of Dalits is essential through the provision of special package program consisting of income generating activities suitable for Dalits, promotion of pro-Dalit community organizations, strengthening capacity of community groups, participatory project planning and implementation, participatory monitoring and evaluation, and promotion of pro-disadvantaged attitude among the project staffs.

Table of Contents

Chapter	Title	Page
	Title Page	i
	Acknowledgement	ii
	Abstract	iii
	Table of contents	iv
	List of Figures	viii
	List of Tables	x
	List of Appendix	
	Acronym	
1	Introduction	
1.1	Background	1
1.2	Problem Statement	2
1.3	Rational of the Study	4
1.4	Research Objectives	5
1.5	Scope and Limitation of the Study	6
1.6	Conceptual Framework	6
2	Literature Review	
2.1	Definition, Scope, and Dimensions of Participation	9
2.1.1	Participation as Contribution	12
2.1.2	Participation as Organizing	12
2.1.3	Participation as Empowerment	13
2.2	Stage and Types of People's Participation	14
2.2.1	Participation in Planning	14
2.2.2	People's Participation in Decision Making	14
2.2.3	Participation in Implementation	15
2.2.4	Participation in Monitoring and Evaluation	15
2.2.5	People's Participation in Benefits Sharing	15
2.3	Classification of Participation	16
2.3.1	Degree of Voluntariness	16
2.3.2	Ways of Involvement	16
2.3.3	Intensity and Frequency of Activities	17
2.3.4	Effectiveness of Participation	17
2.3.5	Persons Involved in Participation	17
2.4	Determinants of People's Participation	17
2.5	Justice and People's Participation	18
2.6	Understanding of Social Diversity in People's Participation	20
2.7	The advantages of People's Participation in Resource Management	21
2.8	Disadvantaged Group (Dalit) in Mainstream of Nepal's Development	22
2.9	Approaches to Measure People's Participation	23
2.9.1	Methodological Adjustments	23
2.9.2	Indicators of People's Participation	24

3	Research Design	
3.1	Methodological Approach of the Study	27
3.2	Research Type and Level	27
3.3	Selection of the Study Area	27
3.4	Sources and Methods of Data Collection	28
	3.4.1 Secondary Data	28
	3.4.2 Primary Data	28
3.5	Sample Design	29
	3.5.1 Grouping of Caste and Ethnicity	29
	3.5.2 Sampling	29
3.6	Data Analysis	30
4	Characteristics of Study Area and Project Profile	
4.1	Biophysical Condition	34
	4.1.1 Topography	34
	4.1.2 Climate	34
	4.1.3 Drainage	35
	4.1.4 Natural Vegetation	35
	4.1.5 Soils	35
	4.1.6 Land use	35
	4.1.7 Population and Settlement	36
4.2	Socio-economic Structure	36
	4.2.1 Family Size and Sex Ratio	36
	4.2.2 Age Structure	37
	4.2.3 Education	37
	4.2.4 Employment	38
	4.2.5 Occupation	39
4.3	Economic Condition	41
	4.3.1 Relative Economic Status	41
	4.3.2 Land ownership	42
	4.3.3 Farm Production and Productivity	43
4.4	Peoples' Dependency on Forest Resources	44
4.5	Accessibility and Market	44
4.6	Institutional Setup	45
	4.6.1 Involvement of District Line Agencies and NGOs	45
	4.6.2 Involvement of Village Development Committees	46
	4.6.3 Community Organizations Initiated by Others than BIWMP	47
	4.6.4 BIWMP Induced Community Organizations	48
4.7	Bagmati Integrated Watershed Management Program Profile	49
	4.7.1 Background	49
	4.7.2 Bagmati Watershed Area	49
	4.7.3 Program Area	50
	4.7.4 Mission and Objectives of BIWMP	50
	4.7.5 Activities Under BIWMP	50
	4.7.6 Expected Results of the Programs	51
	4.7.7 Project Operation	52
	4.7.8 Project Organization	52
	4.7.9 BIWMP's Strategy	54
	4.7.10 Disadvantaged People in BIWMP as Targeted Beneficiaries	54

5	People's Involvement in Community Organizations	
5.1	Group Formation Process	55
5.2	Representation	56
5.3	Group Meeting	58
5.4	Peoples' Perception of BIWMP Induced Community Groups	60
	5.4.1 Representation in Groups	60
	5.4.2 People's Sentiments	62
	5.4.3 Perceived Role of Community Groups	63
6	People's Participation in Planning and Implementation	
6.1	People's Participation in Planning Process	67
	6.1.1 Pre-planning Consultation	67
	6.1.2 Need Assessment	69
	6.1.3 Prioritization of Needs	71
6.2	People's Participation in Decision Making System	73
6.3	People's Participation in Implementation	74
	6.3.1 Contribution Sharing	74
	6.3.2 Forms of Contribution	76
	6.3.3 Gap in Planned and Implemented Activities	78
6.4	People's Perception of Planning and Implementation	79
	6.4.1 Perception of Approach	79
	6.4.2 Effectiveness of Activities	81
	6.4.3 People's Perception of Roles of Project Staff	83
7	Distribution of Project Benefits	
7.1	Distribution of Benefits From Income Generating Programs	85
	7.1.1 Purpose of Benefits	85
	7.1.2 Approach to reach disadvantaged people	86
	7.1.3 Membership of Income Generating Groups	87
	7.1.4 Distribution of Credit Facility	88
	7.1.5 Multifold Benefits of Income Generation Program	91
	7.1.6 Adequacy of Credit	93
	7.1.7 Utilization of Loan	95
7.2	Benefits from Infrastructure and Soil Erosion Control Activities	95
	7.2.1 Distribution of Benefits from Infrastructure	96
	7.2.2 Immediate Benefit at Construction Period	97
7.3	Benefits from Training and Extension	98
	7.3.1 Non-Formal Education	100
	7.3.2 Skill Development	100
	7.3.3 Conservation Awareness Creation	101
7.4	Distribution of Benefits from Agricultural and Forestry	102
	7.4.1 Agriculture	102
	7.4.2 Forestry	103
7.5	Allocation of Benefits from Health Program	104
7.6	Perception of Benefits	105

8 Summary, Conclusion and Suggestions for Improvements

8.1	Summary of Findings	108
8.1.1	People's Participation in Community Organization	109
8.1.3	People's Participation in Planning and Implementation	109
8.1.4	Distribution of Project Benefits	110
8.2	Conclusion	111
8.3	Suggestions for Improvements	112
8.3.1	Developing Pro-Dalits Community Organizations	112
8.3.2	Strengthening Capacity of Community Groups	113
8.3.3	Participatory Planning and Implementation Process	113
8.3.4	Provision of Special Package Program for Dalits	114
8.3.5	Participatory Monitoring and Evaluation System	114
8.3.6	Promoting Pro-disadvantaged Attitude among Project Staffs	114
8.3.7	Further Research Suggestions	115

References	116
-------------------	-----

Appendices

Appendix A: Coordination Schema	121
Appendix B: Questionnaire	123
Appendix C: List of People Interviewed and Groups Discussed	136
Appendix D: Supplementary Text and Figures	137
Appendix E: Supplementary Tables	138
Appendix F: Photo Illustration	154

List of Tables

Table	Title	Page
3.1	Sample size by caste/ethnicity	30
4.1	Area under different land use type and slopes of Palung sub-watershed	35
4.2	Settlements in Palung sub-watershed by composition of community steepness of land	and 36
4.3	Sex composition and family size	37
4.4	Population by age and caste/ethnicity of sampled household	37
4.5	Economically active and dependent population by caste/ethnicity	39
4.6	Main occupational structure of economically active people	39
4.7	Distribution of Dalit households according to type of traditional income	40
4.8	Number of non-Dalit households under service provided by Dalits on the basis of annual lump sum remuneration	41
4.9	Relative economic status of settlers as perceived by themselves	42
4.10	Average landholding size by type and caste/ethnicity	42
4.11	Land tenure systems (in <i>Ropani</i>)	43
4.12	Activities planned and implemented under the VDC/Wards during fiscal years of 2000/01-2001/02	47
5.1	Representation of people in executive committees of community groups	57
5.2	Actors who selected/nominated group members for all type of community groups by caste/ethnicity	57
5.3	Frequency of meeting of community groups	59
5.4	Selection of meeting agenda	59
5.5	Reasons for participation in group meetings	60
5.6	People's satisfaction with representation of different caste/ethnic members in BIWMP induced community groups	61
5.7	Members' satisfaction with representation of different caste/ethnic members in community groups	62
5.8	Feelings of people as group member	63
5.9	Perception of leadership and work division of community groups	64
5.10	People's perception of community group's role in maintaining caste and gender sensitiveness in group	65
5.11	Members' satisfaction with transparency of group funds	66

6.1	Sources of information about BIWMP used by settlers	69
6.2	Activities demanded by settlers individually or through community groups (multiple choice based on responses)	72
6.3	Decision-making criteria by composition of group	73
6.4	Role of communities and the project in activity implementation	75
6.5	Local people's contribution to the project activities	78
6.6	Perception of performed role of community groups in planning, implementation and group decision	80
6.7	Distribution of respondents claiming the saving and credit as first effective activity among the BIWMP implemented activities	81
6.8	Income generating group members' opinion about credit rule and regulation	82
6.9	Distribution of respondents claiming the foot-trail improvement as most effective activity among the BIWMP implemented activities	83
6.10	Extent of cooperation of project staff as perceived by the people	83
7.1	Membership by caste/ethnic groups	87
7.2	Population of IGG members by household economy status	88
7.3	Households who had received loan	88
7.4	Pattern of loan distribution in income generating groups (IGG) where Dalits represent	89
7.5	Average amount of loan distribution by caste/ethnic group	90
7.6	Economic level of loan takers	91
7.7	Purpose of loan	92
7.8	Adequacy of loan provided by the project	94
7.9	Strategies adopted to cope with inadequate loan provided by the project	94
7.10	Utilization of loan by caste/ethnicity of loan takers	95
7.11	Proportion households who had benefited from construction activities as of fiscal year 2000/2001	96
7.12	Contributions made by community and project for FY 2000/2001	97
7.13	Selection of training/workshop participants by type of group	99
7.14	Literacy class participants by caste/ethnicity	100
7.15	Income generation related training attendants by caste/ethnicity	101
7.16	Distribution of attendants of the awareness creation trainings/ workshop	102
7.17	Community forest management	104
7.18	Attendance of health camp	104

List of Maps and Figures

Figure	Title	Page
1.1	Conceptual Framework Used for The Study	8
2.1	Basic Framework for Describing and Analyzing Participation	11
3.1	Research design employed for the study	31
3.2	Location map of the study area	32
3.3	Sketch map of Palung sub-watershed, the study area	33
4.1	Educational status by caste/ethnicity	38
4.2	Organizational structure of BIWMP	52
4.3	Organizational chart of District Soil conservation Office	53
6.1	Project planning process as provisioned by BIWMP	70
6.2	General implementation process of project activities	76
7.1	People's overall satisfaction with BIWMP's support	107
7.2	Extent of satisfaction with BIWMP's support by caste/ethnicity	107

Abbreviations

AIT	Asian Institute of Technology
BIWMP	Bagmati Integrated Watershed Management Program
BTRT	Begnas Tal Rupa Tal
CEC	Committee for European Commission
CEPREAD	Center for Environment and Policy Research Extension and Development
CERD	Committee for Elimination of Racial Discriminations
CFUG	Community Forest User Group
DANIDA	Danish International Development Assistance
DDC	District Development Committee
DSCO	District Soil Conservation Office
DSCWM	Department of Soil conservation and Watershed Management
FAO	Food and Agriculture Organization
GTZ	German Technical Cooperation
HC	Hamlet Committee
HH	Household
HMG/N	His Majesty's Government of Nepal
HRW	Human Right Watch (USA)
IGG	Income Generation Group
INGO	International Non-governmental Organization
MLD	Ministry of Local Development
NGO	Non-governmental Organization
PMPCL	Plaung Multi Purpose Cooperative Limited
PRA	Participatory Rural Appraisal
VDC	Village Development Committee
WCAR	World Conference Against Racism

Chapter 1

Introduction

1.1 Background

Nepal has sharp physiographic, climatic and societal contrasts, despite its small area. About two thirds of the country is composed of hills and mountains comprising many watersheds ranging from large river basins to micro-watersheds of small rivers. Watersheds are in a state of physical and deterioration due to over-exploitation of natural resources have caused very deleterious impacts on the environment and the socio-economic well being of the settlers (Thapa 1993; Sharma, 1996). About 90% of the hills and mountain settlers still are practising subsistence farming and their income is comparatively low than national average (Wagley and Bogati, 2000).

Implementation of an integrated watershed development and management (IWDM) programs and projects are essential to address the watershed degradation problem, as there is close interaction between water and land resources and socio-economic environment (Dixon and Easter, 1986). Accordingly, the Department of Soil and Water Conservation (DSC) of Nepal has implemented several projects with the assistance of international agencies like, FAO, JICA, DANIDA/CARE Nepal, Commission of European Communities (CEC), and GTZ. Emphasis on people participation remains central and largely common in all types of activities related to watershed management (Wagley and Bogati, 2000).

Watershed management, being a process where by natural resources are managed in conjunction with human use, it focuses on people centered development, as people's livelihood has to be key concern to any development thrust (Dixon and Easter, 1988). Now days it is commonly understood that active participation of all people regardless their social and economic classes is indispensable for sustainable watershed development and management (Thapa, 2001). Moreover, it is essential not only for ensuring the sustainability of the program impacts, but also for people's contribution for efficiency and effectiveness of programs, organization and empowerment of participating people for their self-reliance (Dale, 2000). Therefore, absence of all people's participation in the programs/projects can have more serious implications in terms of distorting people centered planned development, including integrated watershed development and management.

Due to difference in perceptions and attitudes and abilities of Nepalese people, active and equitable participation from all peoples affiliated with different societal groups have challenged to the development program and projects (MLD/N, 2001). Basically, this challenge has been experienced due to Nepalese socio-economic structure, which is highly dominated by feudalistic culture and power relations among different societies stratified into a caste structure, originated from the Hinduism (Bista, 1991; Gurung H, 2002). So, the caste structure denotes a system of rigid social stratification into ranked groups defined by descent and occupation and treated as *racism* like in other South-Asian countries (HRW, 2001). The societal structure, highly fragmented by caste system has led to create extreme disparity in qualities of life of peoples belonging to different castes and occupational backgrounds (Cameron, 1995; Team Consult, 1999).

Scrutiny of the history of the caste tends to be a field of interest to anthropologists. Basic knowledge about the system is important for watershed planners in order to promote a sustainable and socially balanced watershed development and management. The caste system is based on the Hindu Varna system. Although the concept of Varna system originated in the *Rig-Veda*, one of the ancient scriptures of Hinduism, *Manusmriti*, had restrained the classical four-tiered Varna system and defined it with discriminatory principles--castes as a societal hierarchy, and be treated accordingly. The evolution of the caste system is preceded in such a pace that it began to be considered sacrosanct and the practices of its tenets became the fundamental part of Hindu religion. This system was reinforced by the state through stratification of social groups into lower and higher castes based on their traditional occupation. Even after the abrogation of the discriminatory caste system in 1963/64, it is still deeply rooted in the Nepalese society and it exerts a strong influence on all aspects of life. Even, a person's occupation, name, food, and social interaction are often determined by caste. With the change of development thrust overtime, the potency of the caste system varies throughout the country, being strongest in rural areas where different castes typically live in individual villages or separate communities (INSEC, 1993; Team Consult, 1999).

The societal relationship, largely influenced by gender, class and caste determines the scope of development (Dale, 2000). Therefore, a key element of participatory approach to IWDM is to understand: who gains most from which elements of the resources, at what cost, to whom and with what short and long term consequences, and who loses? And, all these questions should be addressed in view of the pervasive caste system. Thus, it is necessary to understand clearly whether or how the caste system has influenced people's participation in watershed development and management.

1.2 Problem Statement

Disparity among the people is a growing concern in developing countries, including Nepal. Several agencies, organizations and scholars (CERD, 1999; INSEC, 1993; MLD, 2001; HRW, 2001; Sob, 2001; Lawati, 2001) have claimed that some social and economic classes like Dalits¹ and Tribes² have not benefited from most development activities and elsewhere. They are socially and economically most disadvantaged in Nepal. Their living condition is very poor as these people are being steadily excluded from the participation in mainstream of development.

A global report from the Human Right Watch (2001) presented in the World Conference Against Racism (WCAR) held in Durban, South Africa underlines:

"Development indicators closely followed caste lines. Without a single exception, the lower the caste, the lower the life expectancy, the literacy rate, years of schooling, and per capita income; Dalits are not sufficiently selected or they do not represent in the functional groups meeting like community forestry groups, mother groups, water users groups on one side and, those who represent to these groups can not go into meeting rooms. They stay outside and listen to proceedings from there."

¹ Castes traditionally considered "untouchables", are also interchangeably called "occupational castes" or "Dalits". They are traditional artisans engaged in metal works, tailoring, shoe-making and sweeping works.

² Ethnic tribes communities, some time called minorities, include like Magar, Tamang, Rai, Gurung, Tharu,...

Such claims also found to be relevant to the sector of watershed development and management. Ignoring the problems associated with project implementation and institutional arrangement that promote the people participation is the common weakness of many of the existing watershed management efforts (Thapa, 2001). This problem is much manifested in the case of diverse community and diverse physical conditions of watersheds, although people's participation approach has embodied in all kinds of watershed development and management programs and projects in Nepal.

Realizing the importance of people's participation, the provision of involvement of all social groups has been made in all most all watershed management plans (Wagley, 1997). But, the results of evaluation studies conducted after the termination of the projects do not confirm that claims made by authorities in-charge of project planning and implementation. For example, the Begnas Tal Rupa Tal (BTRT) project ran for 14 years, was recognized as a model project (Bogaty, 1996). Evaluation studies done by Buffum (2000) revealed the following:

"Among 105 CDCC many of them have not been sustained. Most Dalit CDCCs have become inactive, they stopped having meetings; and most members have no idea about their group fund/savings; some of Dalit members out-migrated to the market centers for seeking the job.....Although, BTRT made a strong effort to develop linkages between the various groups and the relevant HMG line agencies at the district level, except for the CFUG, non of the other groups have been able to maintain these linkages and obtain support when required. Dalits were not included in any of the local CFUG." (Buffum, 2000).

These findings implied that disadvantaged people were marginalized or they were not provided a fair share of the project benefits. Similarly, a mid term evaluation of the Upper Anandkhola Watershed Management Project (UAKWMP) in Syangja revealed that:

"... only 9.3 % Dalit households have gained tap water, while their population ratio is 18%. In another case, the UAKWMP has had plan to support 10 Dalit groups, which is achieved, but 35 non-Dalit credit groups were formed simultaneously without project plan." (King et al. 2001)

Although, the development and conservation activities do not provide much benefit to Dalits and other tribes people, they contribute their labour free of cost, while they have to work as wage labor or on others' farm to feed their family members. These peoples are the one who provide workforce for watershed management project implemented construction activities. Since labor contribution by all watershed settlers is mandatory in all projects, these suppressed groups of people have no choice other than silently following the rules imposed on them (Sob, 2001).

The government has made provision of all social group's participation in programs and side by side many of the national and intentional organizations are investing to the upliftment of poor, tribes and Dalit people. The effort, firstly, to ensuring the benefits of disadvantaged groups of people was made in project policy in BTRT after the CARE adopted Disadvantaged Groups (DAG) strategy, which intended to target to the people who are historically—socially-economically—educationally disadvantaged. However, the criteria fixed for the DAG rarely recognized the consequences of historical and social discrimination as other economic and educational has diluted it's spirit. As a result no significant impact have been found. Contrary it has increased gap between the people

belonging to different social and economical classes (MLD/N, 2001). The ample gap between written plan and real implementation is common in the development programs/projects (Thapa, 1993; Thapa, 2001; Sharma, 1996; Buffum, 2000). Although participatory plan is prepared, undemocratic representation in bureaucracy, inter-bureaucracy conflict, lack of project cadres representing from disadvantaged groups in project and programs authorities do lessen the effectiveness of the plans while implemented (Team Consult, 1999; Hocking 2000). The problem is exaggerated in case of participation of disadvantaged people due to almost non-representation of Dalits and disadvantaged people in the political as well as administrative arenas of national and local levels. They remain hardly involved in the planning of development projects (HRW, 2001). As a consequence, the disadvantaged people remain continually powerless and deprived and impoverished.

1.3 Rational of the Study

The word "participation" has become a catchword in many resource management, poverty alleviation and people empowerment projects. Although the promotion of participation and participatory processes in development projects and programs is not new, evaluation of participation particularly from equity perspective is still in its infancy. Multilateral and bilateral development agencies have only recently begun to recognize the needs for evaluating the people's participation (Oakley 1984; Uphoff 1992). However, the increasing popularity of participatory methods in resource management has not been evaluated critically. Empirical studies on the impact of public participation in project activities are very few, and the available empirical evidence is still inconclusive (Jensen, 1996). Factors leading to greater community participation and project effectiveness need to be explored through scientific studies of projects/programs, which will contribute to formulate appropriate project design for further fullest use of community participation as vehicle for greater effectiveness (Poudyal, 1990).

Several watershed management projects have been implemented in Nepal. The existing faulty or ineffective efforts in the people participation approach in watershed management projects have increased the concerns to development workers to understand on real "active and equitable participation" (Lal, 2000; Wagley and Bogati, 2000).

In order to manage integrated watersheds in a balanced and sustainable way, the watershed development efforts must be designed based on an analysis of diversity and potential conflicts of interests (Jensen, 2001). All social groups should participate actively and get benefit equally to ensure sustainable development and management of watersheds. Inclusion of mitigating measures biased towards the disadvantaged sections while recognizing the entire community in the watershed area as the target group is utmost, because unless the rural poor and disadvantaged people are given the means to participate fully in development, they will continue to be excluded from its benefits (FAO, 1992; Jensen, 2001; MLD/N, 2001).

Mustering all social groups' participation in the development process remains as a major challenge in the field of development of Nepal (MLD/N, 2001). Regarding the issue of people's participation, in general, and socially disadvantaged people's participation in particular, many human rights activists, advocacy institutions and awareness campaigners have articulated this issue, but they are confined the field of political and human rights issues. Little attention has been paid to study socially disadvantaged people's participation

in watershed conservation and development programs. Moreover, attention has also not been paid to study whether the project benefits were equally and equitably distributed among to people belonging to different social strata (Hocking, 2001). Therefore, this study is a step forward in the pursuit of filling these gaps. Results of the this study will be useful for planners and practitioners as well as community leaders who are involved in designing and implementing participatory watershed management programs and projects.

1.4 Research Objectives

The overall objective of this study is to examine socially disadvantaged groups' participation in participatory watershed development and management project. The specific objectives of the research are as follows:

- 1) To analyze different caste groups' involvement in community organizations initiated by the watershed management project.
- 2) To analyze different caste groups' participation in watershed management planning and implementation.
- 3) To assess benefits that different caste groups got from the watershed management project.
- 4) To suggest participatory management framework conducive for active participation of all caste people in watershed management activities.

1.5 Scope and Limitation of the Study

Participation is affected by wide range of factors. It is more complicated in the case of integrated watershed development and management, in particular. Because, a watershed management strongly interact equally with different societal people and natural resources. The social differences that matter with regard to natural resources vary from one social group to another depending on their caste, class, gender, age and religion composition (Adolph, and Oppen, 1997).

This study has been conducted in one sub-watershed from northern Makawanpur district, namely Palung sub-watershed. Which is developed and managed by the Bagmati Integrated Watershed Management Project (BIWMP). The BIWMP, known as a highly resourceful project in Nepal, is running under joint management of Government of Nepal and Commission of European Communities (CEC) since 1986 and has relatively rich information system including GIS database (BIWMP, 2001). The proposed study area represents typical mountain watershed located at central mid hills of Nepal.

As much attention has so far not been paid to study equity aspect of peoples' participation in watershed management, this study will make an attempt to cover overlooked aspects of diverse social dimensions linking to the management of watershed. It has focused on the societal complexity, including different caste group's participation in decision-making and benefit sharing. The study has carried out in-depth analyses through both qualitative and quantitative methods.

The watershed management project is running in fourth year in the study area. Therefore, not enough project's activities have been reached to the stage of evaluation. So, this has covered people's involvement in community organizations initiated by the project,

participation in planning and implementation of selected components and benefits that emerged due to the watershed management project.

1.6 Conceptual Framework

The explicit emphasis of this study on evaluation of the extent of, exploration and explanation of the factors of disadvantaged people's participation in planning and implementation of watershed management activities necessitates a conceptual framework that is applicable to the empirical context; the adoption of a theoretical framework; and the stressing of the dynamic quality of participation.

Participation is defined as "the organized effort to increase control over resources and regulative institutions in a given social situation on the part of groups or movements hitherto excluded from such control" (Rudqvist and Woodford-Berger 1996). It is highly beneficial in economies of scale, higher productivity, reduction of costs and increase in efficiency as well as building the democratic organizations and sustainability of project interventions (FAO, 1990). Nevertheless, the intention of the people's participation varies according to nature of projects and programs. Because, participation in development projects and programs is widely seen as both a means and an ends depending on the perspective applied as participation in *what*, *who* participate, and *how* the participants are involved found to be central for the analysing framework for people's participation in people centered development (Uphoff et al. 1991; Dale, 2000).

The proposed study, thus, considers a concept embodied with several components and factors. Those are: the extent of people's participation depending mainly on the extent of cost and benefits; decision making; empowerment; acceptance of project activities; and people's capacity. Their linkages in the conceptual framework are described below.

Motivational factors that determine people's perception whether participate or not rely on cost and benefit which primarily rely on type and extent of rewards particularly: service outcomes that provides immediate tangible benefits in form of cash, materials; emotional; ideological; and negotiable benefits for the participating people (Miller, 1988 cited in Pongquan, 1998). The cost and benefit also interact with decision-making factor of participation (Uphoff, 1991).

The decision making relies on institutions that embodied of people's involvement in form of representative of particular caste and class, culture of conflict, level and skill of communication, commitment towards goals and it's procedures as well as power difference among the people (Poudyal, 1990). The power difference is a reflection of difference in people's economic status, political power, and fragmented caste structure and its historical discriminatory culture (Bista, 1990; HRW, 2001).

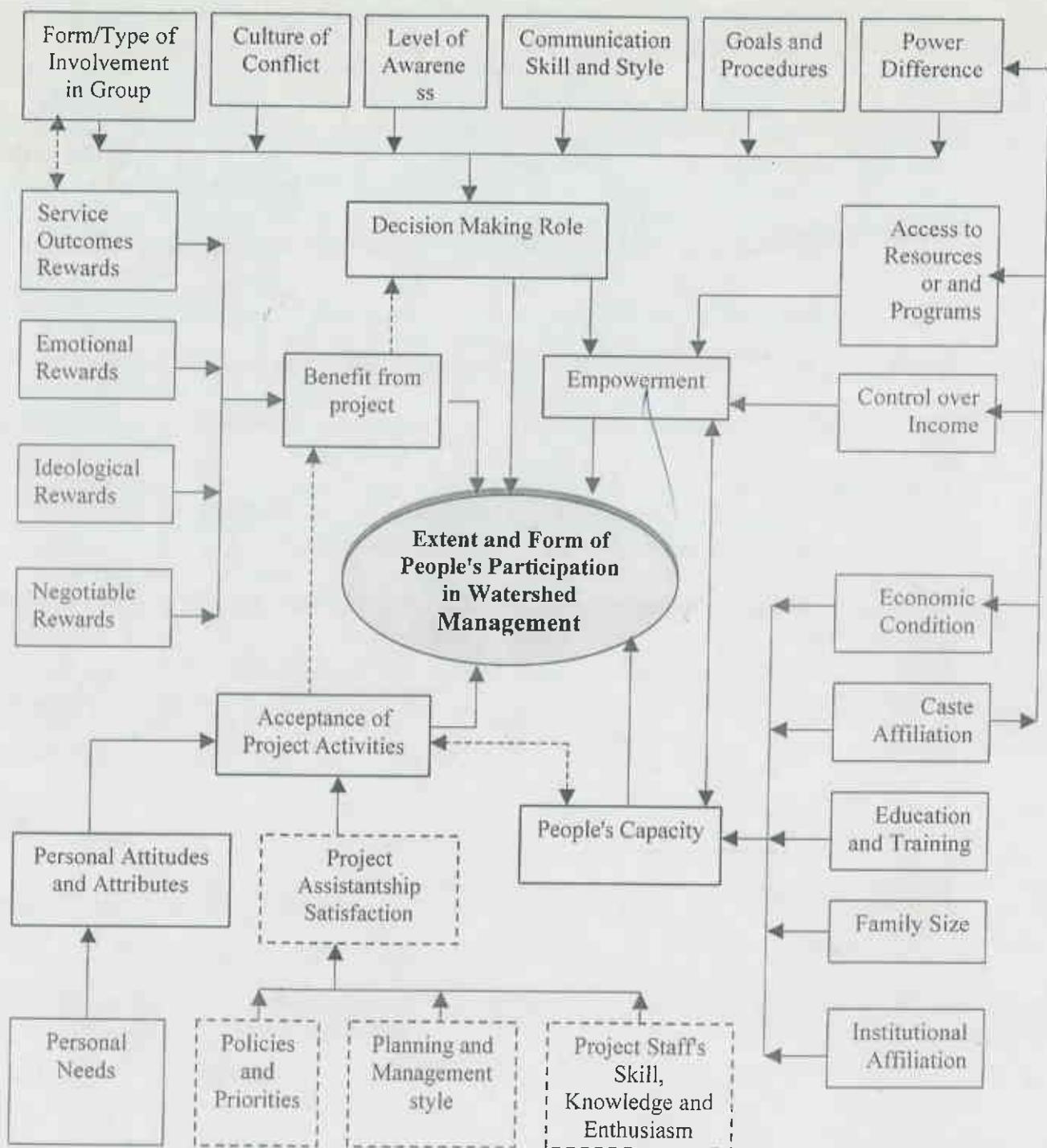
Basically, the form and conditions of rights of all people in access to resources and control over income leads to determinacy of level of empowerment of participating people in the project activities. Empowerment tends to be primarily applied for disadvantaged groups of people, and is usually linked to a vision of more equal living conditions in the society (Dale, 2001). Moreover, the empowerment is strongly linked to equity, and rights and dynamic capacity of the participating people (FAO, 1990; Rudqvist and Woodford-

Berger, 1996). It has also been linked with decision-making in institutional context of any given societies (Smith, 2001).

Household features such as family size, level of education, economic condition, institutional affiliation and caste representation collectively contribute to the extent of capacity of a household and its individual member to be self-reliant (Poudyal, 1990). The capacity, in further, indirectly contributes to the acceptance of project activities, because, the acceptance possesses risk to the people whether accept or not. The capacity has also linked with empowerment as the empowerment attributes of dynamic capacity of the participating people changing overtime (FAO, 1990).

Awareness among the people of different societal groups plays vital role in active participation. Personal awareness and his/her needs are the sources of development of personal attitudes and attributes towards of acceptance of project activities (Karl, 2001). So that, given information to the people regarding importance of the program increase the level of people's consciousness, which affects to the degree of acceptance if project activities that influences to voluntariness in the participation. The project assistantship can facilitate to ensure the acceptance of activities and sharing of benefits by all caste groups through its policies, priorities, planning and management style as well as increased skill, knowledge and enthusiasm of project staff (Eade, 1997). Ultimately, all above will contribute to the equitable people's participation in watershed management activities.

A schematic diagram of conceptual framework used for the study is given in figure 1.1 below.



Legend: Project's authority People
 Direct linkage \longrightarrow Indirect linkage \dashrightarrow

Figure 1.1: Conceptual framework used for the study

Chapter 2

Literature Review

This chapter includes the concept of people's participation evolved over time its purpose and determinants in the perspective of equity in socio-economic diversity. In such perspective the chapter further describes people's participation in community organizations, decision making and benefit sharing linking with the context of rural/ community development in Nepal. Empirical indicators and methodological steps have also been referred to acquire the knowledge of to measurement of the extent and form of people's participation.

2.1 Definition, Scope, and Dimensions of Participation

Definitions and concepts of participation in development have evolved over time. Their roots can be traced back to community and popular participation, promoted mainly by NGO in the 1950s and 1960s. In the late 1970s and early 1980s, multilateral agencies, such as FAO, ILO and UNRISD, also began to promote popular participation in development projects and programs (Rudqvist and Woodford-Berger, 1996). Many researchers and scholars have also given concept on participation. Uphoff et al. (1979) presented conceptual framework covering broad dimension of the participation serves basic concept of the participation (Figure 2.1).

Several definitions of participation made by Cohen and Uphoff (1979), Pongquan, (1992), Cernea (1991) are mostly similar in principle, are different mainly in terms of stages of participation. However, while defining the participation, many writers quoted the United Nations Economic and Social Council Resolution (1979) in the discussion. This resolution distinguishes participation of people in terms of (i) contributing to the development effort, (ii) Sharing equitably in the benefits derived therefrom, and (iii) design making in respect to setting goals, formulating policies and planning, and implementing economic and social development programs (Pongquan, 1992).

The concept and definition of participation evolved overtime brought about new paradigm in the development. The term "people's participation" has been defined and used in different ways by various researchers, planners, and administrators. The nature of people's participation in the development process gives rise to much debate regarding the purpose of definition and the modalities since there is not a single universally accepted definition. The failure of many conventional development projects and programs and growing poverty brought a shift away from the modernization paradigm of development in the 1970s. People were identified as the missing element in development efforts. The limited success of many development initiatives was attributed to failure to involve people in the design and implementation of projects and programs (Cernea, 1991; FAO, 1990; Hinchcliffe et. al., 1995; Kottak 1991; Oakley and Marsden 1984; Uphoff 1991; World Bank, 1998).

Overview of several above scholars' studies show that the interpretation of people's participation in practical context varies considerable from one country setting to another, and may even vary between different regions within the same nation (Lisk, 1985). For example:

"People's participation is a means to achieve better project results and consequences. Since people themselves know best what they need, what they want and what they can afford, only close cooperation between authorities and people can result in projects, which satisfy both the people and the authorities. The objective of people's participation is project effectiveness" (Paul, 1987).

"People's participation is a right. People have a right to participate in decision-making, which directly effects their living conditions" (UNCHS, 1983, cited in Phong (2000)).

"Participation means that people are closely involved in the economic, social, cultural and political process that affect their lives. Since the participation requires increased influence and control, it also demands increase empowerment in economic, social and political term" (UNDP, 1993 cited in Phon (2002)).

Uphoff (1979) discussed three dimensions of participation in relation to rural development. The dimensions of "what", "who", and "how" as the basic framework can be used for describing and analyzing development strategy of participation. "What" refers to the kind of participation that should be considered in such development strategy? "Who" especially describes the level participation as local residents, local leaders, government personnel, and foreign personnel? "How" is concerned with the way in which participation takes place, and described by analyzing the basic form, extent and effects of participation. The nature of the activity derives duration of its execution. Besides, whether it is an individual project or concerns the total or some segments of the community differing from the locations the expectation of development agency shapes the forms and extent of people's participation (Uphoff et al. 1979).

This basic framework for describing and analyzing dimension and context of people participation in development work given in Figure 2.1.

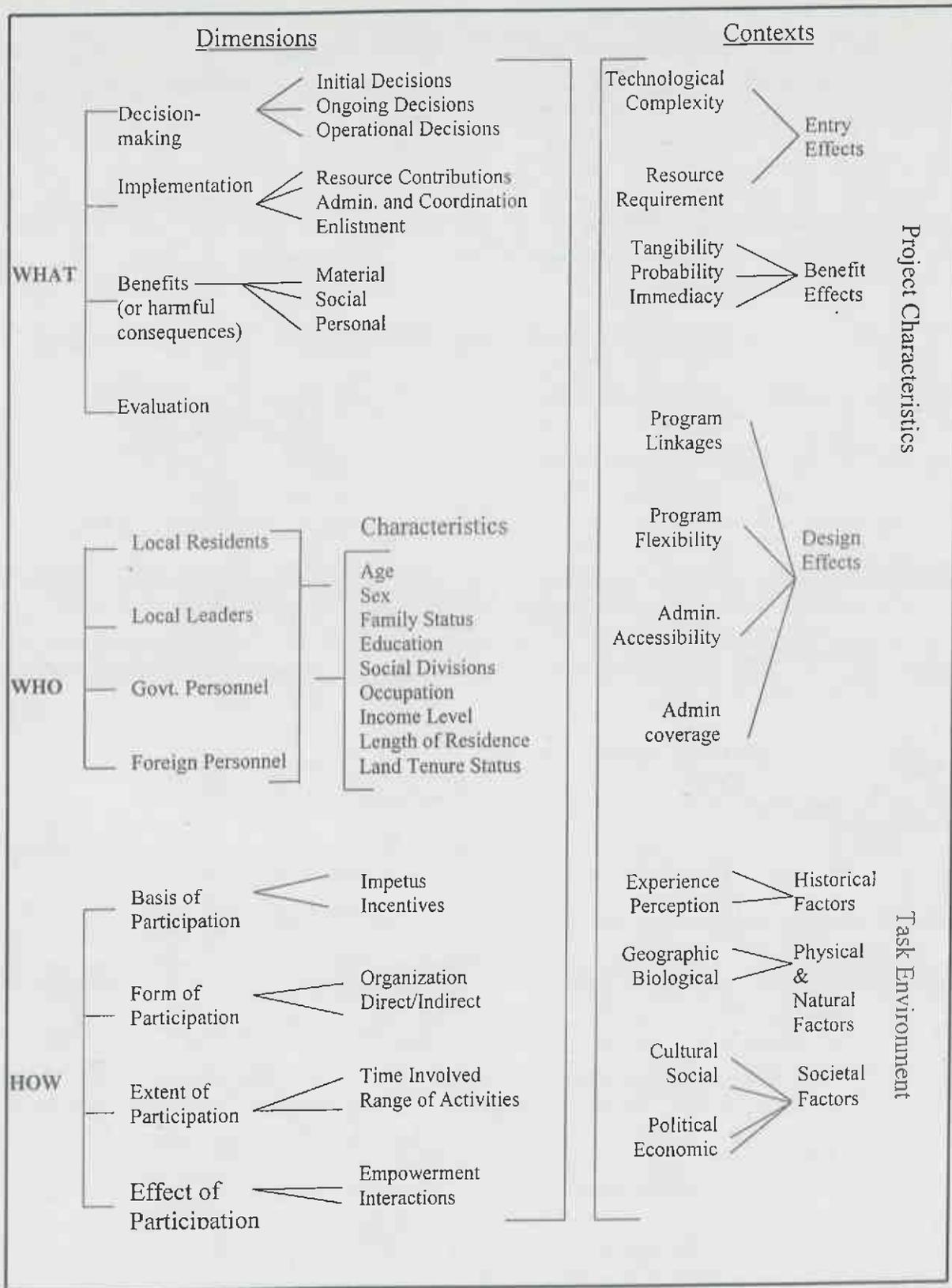


Figure 2.1 Basic Framework for describing and analyzing (rural development) participation
 Source: Uphoff and et al. (1979).

2.1.1 Participation as Contribution

Korten (1980) cited in Vorachakl, (2000)) summarizes a scope of contribution: "People's participation is: contributing to development effort; sharing equitably in the benefits derived; and decision making in setting goals, formulating policies including planning and implementing economic and social development programs". Setty (1991) cited in Vorachak, (2000) added some views on this. According to him people's participation means their total involvement with development agencies in deciding the programs and activities, fixing up of priorities, taking initiative and carrying out the projects as partners by the contribution of their ideas, interest, material, money, labor and time.

Following Oakley (1991), Dale (2000) distinguishes participation as contribution to programs and projects. Where, projects have been planned by others, on terms that those others have then determined or at least framed. The contribution may be entirely voluntary or induced more or less strongly. It may be in form of money, material, or unpaid or lowly paid labour. This has been the dominant perspective on participation in most development work, particularly in programs and projects that have been planned and implemented by government agencies.

As examined by Thapa (2001) due to conventional planning process of watershed development and management projects implemented by DSCO, government of Nepal a large gap in planned and implemented activities was found. People's contribution was limited only within labour contribution in many projects under the DSCO, which burden to disadvantaged people.

2.1.2 Participation as Organizing

Participation of people in development works is the other side of a coin of organization as Korten (1983) cited in Vorachak, (2000) noted out. Lack of appropriate local organization within the community constrained to generating people's participation in development programs. Dale (2000) expresses nuance that the organizing people in some way broadens effectiveness of development work. He assumed that the participants have at least some influence over affairs of the organizational to which they belong, and one expects that resources may therewith be pooled and better managed. The organization may be externally conceived and introduced, may be formed by people themselves, or may be developed through a combination of external and internal initiatives and contributions. People may sometimes organize in response to an external intervention, in other cases people's organizations may emerge as a result of a process of participation. But, the simply emerged organization may not always possess to provide effective platform to all people involved in its process of emerging. For example, Schrader (1998) cited from Berner (1995) noted that the despite capacity of slum dwellers to form neighborhood associations in their localities they required effective cohesion pattern of shared identity of ethnicity and place of origin. So, the different form of organization may facilitate different form and extent of participation.

Many scholars of community institutions are agreed on that some form of local organization is needed to provide the structure within which local participation can be organized (Ostrom, 1996). Considered disagreement exists concerning how formal such an

organization needs to be, what type of decision-making structure should be created, and what size of groups and representation is best suited to participatory management. Sengupta (1996) argues that diverse institutional arrangements shape the exercise of power and the allocation of benefits as the caste, and class, gender and economic assets differentiate members of same community. Only adequate representation in a group from poor and disadvantaged segment of people ensures balanced exercise of power in a group. Otherwise, mostly self-help groups emerged from the needs of participation may be instrumentalized by influential interest groups and power holders for their particular context, which is harmful for other people in their environment (Schrader, 1998).

2.1.3 Participation as Empowerment

The concept of participation as empowerment has many nuances. People's participation is essential not only for ensuring the sustainability of the program impacts, but also for people's contribution for efficiency and effectiveness of programs, organization and empowerment of participating people for their self-reliance (Dale, 2000). Here, organisation may be seen as a means of empowerment and is often crucial for it. But, by implication of the notion of empowerment, the organizational activities must then be people-centered. Processes of empowerment may still be facilitated by or may even require communication with and support from outsiders, and a range of options for such communication and support exists. Another basic feature of empowerment is that it brings to the surface conflicts of perception and interest, which need to be addressed conscientiously and systematically, but which can hardly ever be resolved through any standard set of actions. In addition, the feature of empowerment in now days has been understood linking with democratisation, good governance, equality, equity, and human rights (FAO, 1990; Rudqvist and Woodford-Berger, 1996). Because, participation is an instrument to break poor people's exclusion political, economic and socio-cultural factors as well as the historical background of the participating people (Abeyrama and Weber, 1983 cited in Pongquan, 1992).

There are three form of empowerment, which households try to gain. They are (i) social empowerment, (ii) political empowerment, and (iii) psychological empowerment. Looking at the forms of participation, a rural poor is along a continuum of empowerment (World Bank, 1996). In this categorization, the rural poor can be:

- *Beneficiaries*: recipients of services, resources and development interventions through such things as community organizing, training and one-way flows of information.
- *Clients*: capable of demanding and paying for goods and services from government and private sector agencies.
- *Owners and managers of their assets and activities*: the highest stage in terms of the intensity of participation involved.

In the connection of disadvantaged people's empowerment, Dale (2000) pointed out that social mobilization is primarily a mechanism of empowerment, although certain activities may not be directly empowering. It involves a broad range of measures for sensitizing disadvantaged people about problems which they are faced with and the societal context of these problems; it commonly promotes organisation of the disadvantaged for increased strength and influence; and it usually involves practical advice and training for combating problems and improving the quality of life (Dale, 2000).

2.2. Stage and Types of People's Participation

Participation is a process, which enables people to organize themselves, to identify needs and share in the design, implementation, monitoring and evaluation of actions as well as in the benefits from them. The actions are generated from resources, which people have access to and may be promoted through assistance by governments and others (Oakley and Mastden, 1984). Perea (1998) cited in Phong,³(2000) summarized the stages and types of participation. All the elements are equally necessary if we are seeking a decisive step in the transformation of the existing exploitation structure of economic reality: participation in decision-making, participation in implementation, participation in monitoring and evaluation, participation in benefit sharing.

2.2.1 Participation in Planning

Planning is the deliberate social or organizational activity of developing an optimal strategy of future action to achieve as desired set of goals, for solving novel problems in complex contexts, and attended by the power and intention to commit resources and to act as necessary to implement the strategy (Alexander, 1992). Liking the planning with increasing degree of people's participation, Bruke (1979) cited in Schrader (1998) outlines five major roles: (i) review and comment of proposed plans by public hearings; (ii) consultation of selected citizens; (iii) advisory of selected citizens into the planning committee; (iv) shared decision-making of planners and participants (partnership in planning); and (v) controlled decision-making, citizens exercising final authority over the planning decisions.

Ensuring participation of disadvantaged people in planning is most challengeable task where the socio-economic and cultural stratification exists. Uphoff (1980) cited in Schrader (1998) attempts to focus on realistic assumptions that most such community participation approaches threatened from local elites who might capture the benefits of the projects, even if the group is homogenous. Moreover, interests of disadvantaged people might be defectively articulated by elites (Asthana 1994, cited in Schrader, 1998). Interventions supported by the project will often have a differential impact on Dalit/non-Dalit groups, and this therefore calls for careful social analysis in identifying and selecting activities to be supported (CARE/Nepal, 2001).

2.2.2 People's Participation in Decision Making

The participation in decision-making is most important in development at all levels (Poudyal, 1990). Participation refers to a process in which two or more parties influence each other in making plan, policies and decision that have further effects on all those making the decision and those represented by them. Unless people's representatives recognize the responsibility and exhibit ability in handling the various stage of the complex process of decision making, there is real danger of deterioration in the quality of decision, which is bound to be reflected in the lower standards of performance, (Mishra, 1992 cited in Phong, 2000).

As people participation becomes widely practices in natural resource decision making a broader and more diverse citizenry is demanding grater voice in the decisions that affect them. Although many organizations attempts people participation, their efforts

often to resolve conflicts, lead to greater support for decisions, or rise the level of trust between citizens and publics (Wondeolleck, 1988 cited in Smith, 2001). People's satisfaction with decisions and support for authorities largely rests on whether or not they feel they have been treated fairly and/or received fair outcomes. This suggests that it is essential for people participation efforts to be conducted fairly in the eyes of citizen (Linda and Tylor 1988 cited in Smith, 2001).

Gastil (1997) highlights from the FAO program experience that among the many decision-making problems, groups encounter with some of the most serious problems. Such as vague or inconsistent goals and procedures, long meeting, unequal groups involvement and commitment, group conflicts, low communication and literacy skills, different communication styles, extreme power differences, poor memory of the group's post and poorly constructed inter-group associations. Besides, there are many different ways of reaching decisions, and only three simplified procedures are consensus, majority, and decision division (Gastil, 1997).

2.2.3 Participation in Implementation

Implementation is the actual transformation of what has been put on paper during the planning process into physical structure, social welfare improvements. This cannot be separated from the planning process (Rondinelli, 1981). So the participation in implementation may also occur through mobilization of people in project activities. The process of mobilization of people may be both coercive and voluntary. As in decision-making, participation in implementation requires some initial activities such as creating an infrastructure and building up of knowledge of implementation. People can participate at the stage of implementation by enlisting them in an ongoing activity such as joining in a development program, which is already being implemented. If one expects effectiveness and equity in people's participation it is necessary to provide incentive to the poor people who have daily earning for food might be stopped by their involvement in implementation (Schrader, 1998).

2.2.4 Participation in Monitoring and Evaluation

Monitoring and evaluation is an important activity during implementation operation and after completion of projects. Monitoring allows the management to become aware of difficulties as they arise. The main objective of monitoring a project is to adjust the course of action in accordance with actual development. Thus an effective means of getting feedback on the actual working of the project has to be established. The self-evaluation of a project by its beneficiaries is significant in improving the benefits that could be obtained from the project. When groups engaged in participatory self-evaluation, they should become able to recognize and know better their strengths and weakness and should become motivated to build on the first and minimize the often not known by the group or are not accepted by them as realistic and valid Perea (1998) cited in (Phong, 2000).

2.2.5 People's Participation in Benefits Sharing

The people's decisions whether participate or not in the developmental activities is calculated on the basis of benefits and cost involved (Miller, 1988, cited in Pongquan, 1992). Miller (1998) discussed four kinds of rewards related to participation: emotional reward (e.g. friendship and parses); ideological reward (e.g., good citizen); negotiable

reward (e.g., exposure useful in another context) and the reward of service outcomes. On the other side the benefits that a project perceived may also anticipated on the input cost provided in line with a project. The input cost includes upfront costs to the donor and other stakeholders involved in identifying and engaging with each other participation entails opportunity costs for all the stakeholders (Clayton et. al., 1994; World Bank 1996). These may be particularly high for the beneficiaries, especially marginal groups and women, and may add to the work burden or decrease in leisure time. Potential costs could also include the risk that participation may not yield expected results and benefits, or even that it may unintentionally cause harm to the community or specific groups within the community (McAllister, 1999).

Both individual and society may gain benefits from the people participation (FAO, 1990) as they may exert on the kinds and magnitude of benefits for themselves from the development works that is planned. Their interests largely are determined by the perceived benefits and costs of the problems and its resolution (Dale, 2000). So, the "higher is the expectation of benefit from the activity the higher is the rate of participation" Poudyal (1990). In spite, the differences in benefits to the people often align themselves with specific social groups or community sectors, and many will have economic basis (Korsching, et al., 2001).

2.3 Classification of Participation

Following Uphoff and Cohen (1979) formulates different form of participation. Some principle and types of participation are follows:

2.3.1 Degree of Voluntariness

Degree of voluntariness indicates how the people are involving in the task of projects, programs or any works. Basically two ways of motivations plays role, i.e. self decided or influenced by others forcefully or convincing. So the voluntariness includes free participation, spontaneous participation, induced participation, and forced participation. The free participation takes place when an individual involves herself/himself on a voluntary basis in a specific participatory activity. The spontaneous participation takes place when an individual starts to participate on her/his own conviction without being influenced via extension or via persuasion by other institutions or individuals. The induced participation takes place when a person starts to participate after he/she is convinced via extension programs or other influences to voluntarily participate in a certain group activity. The forced participation can emerge in the form of either of these two types: forced participation by law, or forced participation resulting from socio-economic conditions.

2.3.2 Ways of Involvement

Two ways are distinguished, namely, direct and indirect participation. The former takes place when a person herself/himself performs a certain activity in a participatory process such as taking part in meetings, joining a discussion, or providing her/his own labor for projects. The latter happens when a person delegates her/his participatory rights, for instance, taking decisions, to another person so that the latter can represent her/him in participatory activities at a higher level.

2.3.3 Intensity and Frequency of Activities

Based on the criterion of frequency over time, two degrees of participation are identified, namely, (i) intensive participation, which is mobilized when there is a high frequency of participatory activities, such as regular group meetings to perform certain activities; and (ii) extensive participation, which takes place when there are irregular meetings or other participatory events at long intervals.

2.3.4 Effectiveness of Participation

The extent to which set objectives or targets are met serves as the criterion to distinguish between the following two manifestations: (i) Effective participation, which denotes participatory activities that have resulted in the realization of all the objectives for which the activity through participation was undertaken; and ii) Ineffective participation, which occurs when none, or only a small number, of the objectives are realized for which the participatory activity was started.

2.3.5 Persons Involved in Participation

This classification is subject to the same principle of "who" as mentioned in the basic framework of Cohen and Uphoff (1979). Persons involved can be identified as: members of the local community, local residents, local leaders, government personnel, residents in the community, non-residents, outsiders, residents in the community, non-residents, elected representatives of the community.

2.4 Determinants of People's Participation

Active involvement of people in the various stages of the planned development process is indispensable (Poudyal, 1990). The stages of process comprise of formulation of goal and objectives, research and inventory, plan preparations, acceptance of plan, implementation and evaluation. Complete participation is achieved once a person, directly or indirectly, is involved in all six steps of the planned development process (Pongquan, 1992). In the regards of extent of participation, Poudyal (1990) stressed that scope, capacity, needs, and expected benefits influence the participation in the development activities. And, the people's capacity is determined by six elements: i) economic condition, ii) education/training, iii) caste and ethnicity, iv) age structure, v), family size, and vi) institutional affiliation. Abeyamma and Weber (1983) added some sociological/anthropological views on the regards of factors that mobilization of the people in development project is difficult if social groups are not homogenous in terms of caste/ethnicity, economy, and other socio-cultural features.

Awareness among the people of different societal groups plays vital role in active participation. Motivational factors that determine people's perception whether participate or not, rely on type and extent of rewards (Miller, 1998 cited in Pongquan, 1992). Given information to the people regarding importance of the program increase the level of people's consciousness, which affects to the degree of voluntariness. If information is not given to the people then the people do not participate in any stage of participation. For

example, most of the villagers are not participating in ward and village assemblies because they were not informed (Shrestha, 1992 cited in Phong, 2000).

Gurung (1981), as he examined, the time convenience is equally significant factor for the rural poor. The rural population, basically involved in agriculture cannot involve in participation in any activities during the period of their heavy involvement in agriculture fields. Forced participation by law or resulting from socio-economic conditions has been found in such cases. In addition, clearly he found that the willingness to participate among the rural people was greater where the people could see immediate benefits from the project in which they were going to participate.

Adhikari (1996), Team consult (1999), Bhattachan (2002) added more affecting factors on the ground of structure found in Nepal's rural society as follows:

- People are more likely to participate in traditional form of participation,
- The ratio of participation may higher in income generating programs rather than infrastructure
- The non-Dalit takes part actively in community development

But, in contrast the USA based Human Right Watch (HRW) have revealed in a world report (2001) that participation of Dalits in any kind of development activities in Nepal have been lessened due to caste based discrimination, that compelled Dalits to stay aside of any groups meeting and listen to proceeding from there. CARE/Nepal (2001) also substantiated that project incentive to Dalits promotes their participation and immediate benefits determines the extent of participation in infrastructure activities.

2.5 Justice and People's Participation

How do people evaluate the fairness of decisions? Social psychological theories and research suggest that both the decision outcome and process by which that decision is reached affect perceptions of justice (Hegtvedt and Markovsky, 1995 cited in Smith, 2001). Based on these, two justices, distributive and procedural interact. While the fairness of the procedural justice leads to reach intended decisions, faire procedural justice ameliorates negative reactions that would normally result from an unfair outcomes (Smith, 2001).

Smith (2001) underlines three principles of distributive justice: equity, equality and need. Equity suggests everyone should get rewards in proportion to their efforts or costs. Equality requires that everyone benefit equally regardless of costs or efforts. Finally, need requires that people receive benefits according to their needs, either they are deficient relative to other or because they have a need for greater resources than others do (Smith, 2001). Equality in term of people's rights (HRW, 2001) is missing in this concept.

Fairness in decision-making is an appropriate goal for people participation efforts. Natural resource issues also often involve limited resources, but multiple constituencies, creating a situation in which it is impossible for everyone to get what they desire, that is why focusing on fairness may help to alleviate resource-based conflicts (Smith, 2001).

Regarding equity in participation at practice, several questions should be considered. Such as "given that fairness in decisions should be a key goal; what does this

suggest for how people participation should be conducted? To what extent do theories of people participation embody justice principles such as voice, neutrality, and status recognition? Participation has been thought of both in term of power and in term of democratic philosophy (Smith, 2001). Arnstein's (1977) cited in Smith (2001) "ladder of citizen participation" outlined those eight rungs of citizen power, ranging from manipulation to consultation to citizen control. Laird (1993) indicates participants need to learn and become informed, participation should be as broad as possible, and decision-making power should be shared.

The issues of justice in term of access, and benefits may found to be central in many giant programs and projects of rural development. Studies conducted by the International Labour Organisation (ILO) of "poverty-oriented" projects worldwide, supported by World Bank showed that the poorest were excluded from activities and benefits. Conventional projects usually target medium to large-scale "progressive" producers, supporting them with technology, credit and extension advice in the hope that improvements will gradually extend to more "backward" strata of rural society. In many cases, including case from Nigeria, the channelling of development assistance to the better-off has led to concentration of land and capital, marginalization of small farmers and alarming growth in the number of landless labourers.

The basic fault in the conventional approach is that the rural poor are rarely consulted in development planning and usually have no active role in development activities. This is because the vast majority of the poor have no organizational structure to represent their interests. Isolated, under-educated and often dependent on rural elites, they lack the means to win greater access to resources and markets, and to prevent the imposition of unworkable programmes or technologies (Karl, 2001). How do some conventional projects discriminate against the poor? An example comes from Nepal, a study by ILO:

"In Nepal, prosperous farmers exerted pressure to participate in a project intended to benefit the poor. Until important changes are introduced in the way poverty-oriented projects are conceived and set up, the claim that they will necessarily alleviate poverty - or, at least, improve equity-remains questionable." (Karl, 2001).

"Water taps distributed at public level are not made available in Dalit's (untouchable) settlements. The route of drinking water pipe for the use of higher caste people was changed because through the untouchable settlement water would be defiled. As a result, about one forth Dalit families of the same village were deprived of using drinking water from the tap" (INSEC, 1993).

"When a farmer belonging to Dalit caste applied to a financial institution for loans to raise buffalo, he was refused to do so on the plea that their milk would not sell in the market." (INSEC, 1993).

The lesson is clear: unless the rural poor are given the means to participate fully in development, they will continue to be excluded from its benefits. This realization is provoking new interest in an alternative rural development strategy, that of people's participation through organizations controlled and financed by the poor (Karl, 2001).

2.6 Understanding of Social Diversity in People's Participation

The value ascribed by a society to gender, class, caste, age, ethnicity, culture, or disability affect people's lives and opportunities. The capacities and vulnerabilities that derive from people's social identities often provide a potent catalyst for change (Eade, 1997). A strong correlation between low social class, economic insecurity, and ethnic minority status exists. So, there is a need of understanding about social diversity in the development. In trying to understand people's social and cultural institutions, it is important to be aware of the dangers of using interpreters from a different race, class or sex from the respondent while gathering the information for social research. In the construction of socio-cultural profile, such elements like a socio-cultural map, the political relationships, the economic relationships should be distinguished (Eade, 1997).

Any community is heterogeneous and dynamic, with different social actors having different sets of environmental entitlements and endowments and diverse and sometimes divergent interests in natural resource management projects and that expecting consensus is unfounded. However, an analysis of social differences existing behind any image of community may allow projects to take seriously the claims of the socially excluded and actively negotiate outcomes and alternative livelihood sources for certain social groups' (Ahluwalia, 1997).

The issues of diversity from practical fields are seemed to be complicated even in the project specially designed focusing to equity. An evidence regarding equity in participation in term of benefit sharing comes from Joint Forest Management (JFM) program in India. The lack of equity exists in representation into Multi-village and Hamlet Protection Committees, the JMF institutions, due to uncommitted government resolution that ensures representation of all geographical areas as well as different caste groups including gender (Roy, 2001). Likewise, another case from community managed watershed management project in Rajasthan, India shows increase in inequality between scheduled tribes, and other caste groups of people, although all of them depend on diverse sources of livelihood and the project is running (Ahluwalia, 1997).

In such case Gastil (1997) adds among the different thoughts that forming a group consisting of individuals with roughly equal wealth and social status is necessary for addressing disadvantaged people's needs positively and focally. However, be careful that extreme power difference can also emerge after the group has already formed.

Socio-economic and cultural obstacle for equitable people's participation in Nepal has also been substantiated by Schrader (1998) quoted from Stone's study (1989) on perceptions hold by villagers of western mid hills. Since the culture of most Nepalese ethnic groups is hierarchical, based upon the local caste and kinship system and the interdependence of persons and groups contrary to an emphasis of the values of self-reliance, individualism and equality, there is within the Nepalese context-an emphasis of mutual dependencies, human linkages and regulated exchanges between people and groups. This affects the perception of participation and planning. All project staff of a watershed project emphasized that development is closely related to behavioral change: adoption of new production techniques, modern health services etc., or even an attitude when people realize that they can take initiative. The villagers by contrast, understood development (*bikas*) in different ways as concrete, visible objects such as the school,,

health post, or water system. Although the government, in cooperation with development projects, provides educational message (poster, radio announcement), these were not considered as *bikas*. For the villagers development is some things coming from the outside, not something that has been mobilized within the community. This is no mere reflection of traditional development aid functions, but a cultural expression, the own social organization and ideology which is based upon principles such as hierarchy and human interdependence.

2.7 The advantages of People's Participation in Resource Management

Based on above mentioned general concept and practice of people's participation there may a need to point out some people's participation issues regarding resource management. Ponguan (1992) illustrates in her study the distinct advantage from people participation drawn from many programs and projects implemented by many agencies, like FAO (1992), UNDP (1993). The advantage was an output of programs that enable poor people to pool their own efforts to resources in pursuit of objectives they set for themselves. That is why, apparently, for governments and development agencies, people's participation through even small community groups offers distinct advantages (FAO, 1992; Sthapit and Bendsen, 2000):

- *Economies of scale*: Participatory groups constitute a grassroots "receiving system" that allow agencies to reduce the unit delivery or transaction costs of their services.
- *Higher productivity*: Benefit sharing in the efforts of small groups ensures poor to become more receptive to new technologies and services, and achieve higher levels of production and income.
- *Reduced costs and increased efficiency*: The poor contribute to project for searching and operating the activities for solutions in their own.
- *Building of democratic organizations*: The limited size and informality of small groups is suited for the diffusion of collective decision-making and leadership skills.
- *Sustainability*: Participation leads to increased self-reliance among the poor and the establishment of a network of self-sustaining rural organizations, even after aid stop.

Barraclough, and Pimbert (2000) dealt with the issues of advantages of participatory approaches to natural resource management. In the new context scholars' concern was concentrated into the secured and equitable rights and duties of disadvantaged settlers of a watershed. Disadvantaged settler's control over and access to land, water, genetic and other natural resources as well as the present and anticipated benefits should be derived from them. These rights and duties define the relations among members of the communities and also those with outsiders such as the state, private individuals and corporate entities in the use of natural resources This means that common pool property rights constitute a central issue for participatory natural resource management. For examples, the social dynamics of deforestation and of forest protection are the ongoing interactions among social actors and processes that determine the use and management of forests. The central issue, therefore, is not how to halt deforestation, but rather how to manage forest areas and natural resources in order to meet social goals on a more equitable and sustainable basis (Barraclough and Ghimire, 1995). In addition, in a imposed project of JMF (joint forest management) in India Dalits had not shred benefits from many activities (Roy, 2001).

2.8 Disadvantaged Groups (Dalits) in Mainstream of Nepal's Development

There is limitation in access to reliable information regarding the development of Dalits in Nepal. The recent study led by Dahal (2002) is a comprehensive and based on the reliable information. In his study he has comprehensively reviewed the efforts that have been taken so far for holistic development of Dalits in Nepal. He found that there are two schools of thoughts emerging for Dalits development. First, development of Dalits community should be attempted through enhancement of their traditional skills as well as other so-called lower level occupations. Second, the improvement in the quality of life of Dalits is to be sought by the educational and income generating facilities as for other segments of population. In general, it is often expressed that the former is suggested by non-Dalits, and later is the chosen approach of Dalits. The second approach of improvement in education, employment and other social reforms is equally applicable for all downtrodden groups of people irrespective of their Dalits-non Dalits status. Therefore different options have led to formulate several programs and project and implemented by the government non-government organization. Dalit Development Committee under Ministry of Local Development of the government is the main implementing agency of such special programs and projects. While, CARE/Nepal, Action Aid/Nepal, Save The Children US, and HELVETAS are leading INGOs working with Dalits by formulating special package for Dalits through mobilizing numbers of NGOs, including Dalit NGO Federation (Vishwakarma, 2002).

Followings are the major activities of such special programs (Dahal et al, 2002):

- Social Enhancement: Education, health and sanitation,
- Cultural Change: orientation to non-Dalits on the equal rights of Dalits, campaigns against untouchability, public programmes of sharing water and food, fighting for the rights to enter into the temples
- Women Empowerment: Activities related to empower women with education, advocacy of their rights, reproductive and sexual health, organising them through grassroots level Dalit-women pressure groups
- Income Generation: Income generating different activities such as leather and shoe production, manufacture of agricultural tools, vegetable and livestock farming, small scale business, grocery shop, formation of credit group and co-operative
- Political, Legal and Administrative: Legal awareness, demonstrations, orientation on human rights issues including child and women rights, voting rights campaign, building of pressure group and bargaining capacity to ensure enhancement in quality of life, campaign for political participation
- Campaign and Advocacy: Programmes of awareness, especially related to untouchability and not accepting water and food, mobilisation of local level representatives with partnership of non-Dalits

Despite the government's policies and programs for the Dalit upliftment over the years and proliferation of many NGOs and INGOs in enhancing the quality of life of Dalits, the fate of Dalits has not improved much over the years. Up to today, the Governments policies and programs fall short and NGOs and INGOs are not very effective in improving the quality of life Dalits in Nepal. Compared to the *Indigenous Nationalities* and the so-called high caste Hindu groups, the social, economic, health and nutrition level and political participation of Dalits in Nepal is very low even today. This clearly suggests

that there is serious lack of political commitment on the part of government for the Dalit upliftment even today on one hand. On the other hand lacking on the part of Dalit themselves that they did not feel as equal partners of development process (NPC, 1997, cited in Dahal et al, 2002).

Nevertheless, there are some positive aspects as well for changing the life of Dalits over the last 50 years. In Nepal as a whole, it can be fairly said that there have been changes in the life of Dalits, particularly after the restoration of democracy, in 1990. Today, high caste members increasingly find themselves confronted with so-called low caste members attempting to assert their right to control and own resources (Caplan, 1972; Forteir, 1989 cited in Dahal et al. 2002).

2.9 Approaches to Measure People's Participation

In order to assess and analyse people's participation in development projects and programmes, it is necessary to identify the prime stakeholders, or targeted group of people who are affected by the outcome, negatively or positively, or those who can affect the outcomes of a proposed intervention (Karl, 2000). There are various methods for identifying them. The World Bank (1996) suggests some guiding questions:

- Who might be affected (positively or negatively) by the development concern to be addressed?
- Who are the "voiceless" for whom special efforts may have to be made?
- Who are the representatives of those likely to be affected?
- Who is responsible for and likely to mobilise for or against what is intended?
- Whose behaviour has to change for the effort to succeed?

2.9.1 Methodological Adjustments

The evaluation of people participation requires methodological adjustments. Participation is a qualitative process that cannot be measured using only quantifiable indicators. There is widespread agreement that it is necessary to develop qualitative indicators in order to evaluate participation (Clayton et. al., 1998; Uphoff, 1989, Dale, 2000). However, both qualitative and quantitative aspects of participation are important (Clayton et al., 1994; Marsden and Oakley, 1994). This requires two forms of measurement: (i) Measurement based on numerical values leading to judgment, (ii) Description leading to interpretation. Because participation is a dynamic process that must be assessed over time. It should be participatory involving the rural people participated in the project (Oakley 1988).

Quantifiable indicators can be used to measure the economic aspects of participation, the extent of participation in organizations and project activities, and the development momentum. Qualitative indicators measure processes such as organizational growth, group behaviour and self-reliance. These indicators may evolve over the life of a project as participation changes. Understanding social complex is also essential. While different methods can be used, participatory methods primary stakeholders wherever possible is generally recommended. Experiences of World Bank show that assessments of the impact of stakeholder participation have been carried out mainly through reviews of ex post evaluations, case studies, surveys and statistical analysis (Karl, 2000; Eade, 1997).

The measurement of participation requires (Marsden and Oakley 1984):

- Valid criteria for understanding the nature of participation in a development project;
- A set of indicators to give form to these criteria;
- Appropriate methods at project level for monitoring the indicators and maintaining a continuous record of the process of participation; and
- Interpretation of the information recorded in terms of making a judgment concerning participation.

The social differences that matter with regard to natural resources vary from setting to setting, and thus researchers must develop methods to deal with particular types of social difference such as caste/ethnicity (Adolph, and Oppen, 1997). Although these categories of social difference are useful, there may be a danger of making inaccurate intra-group generalisations, a danger, which may be guarded against by using oral testimony to focus researchers on the specific lives of individuals. So the methods must cope not only with social difference and the interaction between different types of social difference, but also with the dynamic changes in people's livelihoods over time. For example, people may change their livelihood strategies to cope in times of stress. Crisis situations aside, researchers must find methods to understand how livelihoods gradually change over time (Ahluwalia, 1997)

If empowerment is one of the goals of participation, then some ways should be developed to evaluate whether or not this has occurred. For this, empowerment must be defined and indicators of empowerment developed. McAllister (1999) suggests that indicators of empowerment encompass personal as well as socio-economic and political change and can be established at the levels of individuals, groups or communities. Criteria for determining whether participation encourages social change and contributes to local empowerment can be categorised in the following clusters:

- Strengthening local awareness of issues and options.
- Participation in decision-making, planning and action to address problems.
- Perceptions of ownership of the process.
- Strengthening existing individual and organizational capacities.
- Creating linkages between stakeholder groups.
- Empowerment and social transformation.

2.9.2 Indicators of People's Participation

There are no generic indicators of participation. The indicators selected will vary according to the project and its objectives. Bhatnagar and Williams (1992) propose three very broad categories of indicators:

- Empowerment indicators, e.g., how many new initiatives were launched? How proactive is the group, as measured against a specially devised index?
- Indicators of continuity and participation.
- Autonomy indicators.

Other development authors and agencies have drawn up categories or questions that can be used in developing indicators of the extent and quality of participation. The following two examples are provided in this regards (Karl, 2000):

a) Quantifiable Indicators

Oakley (1991) preferred quantifiable indicators: *Economic indicators of participation*. These measure: i) economic benefits of the project, and ii) who is participating in the project's benefits, an analysis of the sectors of the rural population who have directly benefited and a quantitative assessment of the benefits on their lives and their future ability to sustain the level of activities. He further more identified:

- *Organizational indicators of participation*. In projects in which organizations play an important role as a vehicle for participation, it is important to develop indicators to measure the extent of rural people's participation in organizations. These could include such things as:
 - i) *Percentage* of rural adults in the project areas who are members of the organization,
 - ii) *Frequency* of attendance and changing size of membership over time. These indicators could be disaggregated as regards gender and socio-economic groups.
 - iii) *Participation in project activities*: These measure the numbers and kinds of groups of people involved in the project in different ways.
- *Development momentum*: These include such things as:
 - i) *Numbers of project members* aware of and in contact with development agencies' services,
 - ii) *Numbers receiving training*, links with similar projects.

Despite above, DFID (1995) used indicators for evaluating the stakeholder participation. Such as: Who is participating? How many people are participating and through what institutional arrangements? Are local project institutions developing satisfactorily? Project input take-up rates - are people actively engaged in the project? What is the level of participation in key activities? Are participants mobilising their own resources and contributing to the project materially? Are installations kept in good running order by the participants?

b) Qualitative Indicators

Similar to the quantitative a set of qualitative indicators was also developed by Oakley et al. (1991) as follows.

- *Organizational growth*: e.g. internal structuring of project group, leadership, formalisation of group structure.
- *Group behaviour*: e.g. changing nature of involvement of project group members, emerging sense of collective will and solidarity, involvement in discussions and decisions, ability to analyse and explain issues and problems.
- *Group self-reliance*: e.g. increasing ability to propose and consider courses of action, knowledge and understanding of policies and programmes, changing relationship with project staff, formalisation of independent identity, independent action

DFID (1995) used following qualitative indicators:

- How are groups expected to achieve stability?
- What capabilities are participating groups being encouraged to develop?
- What are the expected qualities of participants' contributions?
- What behavioural characteristics are groups and participants expected to display?
- Are groups achieving increased self-reliance and control?

In addition to quantitative and qualitative indicators DFID (1995) stresses the importance of the *time dimension* of participation. This refers to the timing of activities, such as the formation of groups, the local production of micro-plans, the farmers' on-site trial results, etc. The time dimension can be measured by the sequence of activities rather than by time limits; e.g. by looking at the sequence of the formation of farmers' groups, rather than setting a time limit within which so many groups should be formed (DFID, 1995).

Chapter 3

Research Design

This chapter includes methodological approach employed for the study, including study area selection, research design, and data processing methods. Moreover it assesses caste/ethnic group wise characteristic.

3.1 Methodological Approach of the Study

Normally people's participation related studies analyze general community participation in project planning and implementation. This type analysis does not reflect the reality in communities with diverse social groups belonging to different caste/ethnicity and occupation. So, the proposed study has compared and analyzed different caste/ethnic group's participation, with focus on Dalits, in Bagmati Integrated Watershed Management Program (BIWMP).

There are very limited studies done in line with the objectives of this study. Thus, no well-developed methodologies to analyze people's participation according to their social affiliation are available. So, this study had adopted a multi pronged approach to achieve the study objectives. It assesses socio-economic situation, problems and aspirations of people in the study area. This is followed by analysis of participation different caste groups in project planning, implementation and in community organizations and decision-making. Besides, it explores reasons explaining variations in people's participation. Finally, it examines different caste groups' perception of project activities. This chapter gives a brief description on the process of selection of the study area, process and methods used in data collection and methodology of analyses (Figure 3.1).

3.2 Research Type and Level

This study attempts to assess the situation of community participation in watershed management decision-making and benefit sharing according to their social and economic backgrounds. The type of research is exploratory, as well as explanatory as the research attempts to answer "*what are special factors associated with the participation, particularly of disadvantaged people?*" as well attempts to explain *how these factors influence?* The level of research is *individual* as well as *relational*.

3.3 Selection of the Study Area

To perform this research one of 10 sub watersheds located in the northern Makawaknpur district under the working area of the BIWMP was selected (Figure 3.2). There are 37 districts under the joint management of the government of Nepal and donor agencies (Sthapit and Bendsen, 2000). There is growing concern about participatory watershed management programs/projects in order to acquire high level of people's participation. Many watershed projects/programs in Nepal have adopted participatory approach. However, as claimed, this project has adopted an unique participatory approach, which may become an important lesson for other watershed projects (BIWMP, 2001).

3.4 Sources and Methods of Data Collection

After conceptualizing the issues of people's participation relevant to the research objectives, a coordination schema was prepared (Appendix A). Based on the parameters of the schema, both primary and secondary data were gathered and used for the research. Primary data was largely employed for this study.

3.4.1 Secondary Data

Secondary data on the existing land use, general socio-economic condition, and institutional arrangements was collected to complement the primary information obtained from household survey and participatory appraisal methods. Project reports, maps, official records, and project policies/guidelines were also utilized.

3.4.2 Primary Data

This research is based mainly on primary data collected through household survey, focus group discussion, field observation, key informants interview and informal discussion. The methods used were as follows.

a) Reconnaissance Survey

In order to select a sub-watershed for the study under BIWMP area, basic information, including demographic, geographic and years of project's involvement were collected at BIWMP's head office. Based on the information, two sub-watersheds of each Lalitpur and Makawanpur districts were visited to conduct the reconnaissance survey. The survey information included socio economic and demographic information, watershed boundary and its nested catchment area, drainage pattern, existing biophysical conditions, infrastructure development, land use pattern and major agricultural activities. Based on the reconnaissance, the Palung sub-watershed was found most suitable for the study from two perspectives: (i) caste/ethnic composition, (ii) accessibility. (Figure 3.3)

b) Household Survey

The household survey was conducted using a structured questionnaire (Appendix B). The questionnaire was pre-tested. A total of 11 households, representing four caste/ethnic groups participated in the pre-test. Besides, two key informant interviews were conducted in order to avoid overlapping of information collected through the household survey and key informants interview. The questionnaire included both closed and open-ended questions. It collected information on socio-economic situation, community institutions, and people's interaction with natural resources and people's participation in BIWMP activities. The questionnaire focused on people's participation in project planning, implementation, benefit sharing and decision-making. Besides information on people's perceptions of the implemented activities and their opinion regarding the project's management and organization was also collected.

The household survey was conducted with assistance of four enumerators. They were two women and two men belonging to Newar, Brahmin and Chhetri castes. A five-day training was conducted for the enumerators. Regular monitoring of administered questionnaire was done every day and feedback was provided to the enumerators.

c) Key Informant Survey

Village leaders, extension workers, project staffs, government officials, and social workers were interviewed separately to complement the information obtained through the household survey. The obtained information also served as explanatory tools to the research questions. Detailed list of key informants is given in Appendix C.

d) Field Observation

Field observation was carried out to collect complimentary information about general land use pattern, status of existing infrastructure, people's life style, and social segregation between so-called untouchables and other caste groups.

e) Structured and Unstructured Interviews

Interviews were carried out to obtain first hand information on perception/opinion about the functional system of community groups, including decision-making process, leadership, harmony and conflicts in interest, and benefits sharing among the group members. Meaningful participatory manner of facilitation was provided to the interviewees during the course of interview to ensure that voice of disadvantaged people must be listened. Structured checklist was used for the discussions.

3.5 Sample Design

3.5.1 Grouping of Caste and Ethnicity

Examining disadvantaged people's participation in every aspect, under the scope of the study, is a comparative term, where the comparison is required with various social groups. Social groups, in the case of the study area, like elsewhere of Nepal, are characterized by caste or ethnic structures. In such context, it was needed to categorize settlers in to different caste/ethnic groups following the structure. But, due to existence of many castes or ethnic groups and the complicated caste or ethnic structure (Appendix D) a solid base of socio-anthropological as well as developmental studies were followed (Bista, 1991; Team Consult, 1999; Gurung H., 2002; Dahal et al., 2002). Finally, the research design of this study has grouped all caste/ethnic groups of the study area into four broader groups: (1) Brahmin/Chhetri, which includes Brahmin and Chhetri castes; (2) Newar, which includes only touchable Newar groups, (3) Tamang, which includes Tamang, Rai, Gurung, and Magar; (hereafter in this thesis "Tamang" group will refers to all these groups). (4) Dalit, which includes all socially untouchable groups Sunar, Kami, Damai, Sarki and Pode (untouchable caste from Newar caste group). Detailed list of caste/ethnic groups is given in Appendix E1.

3.5.2 Sampling

On the basis of above explanation purposive sampling was employed for the study. In order to make sensible representation of disadvantaged people living in heterogeneous communities their proportionate was relatively increased in the sampling. Besides, rationalizing the sample size, following factors were taken into consideration while choosing households as the sample population for the study: (i) representation from beneficiaries of different activities under the BIWMP, (ii) representation from all defined

groups of castes/ethnicity, (iii) representation from different communities, and (iv) representation from political boundaries (VDC). A total of 217 households were surveyed as sample, where Dalit's proportionate representation was largest (Table 3.1).

Table 3.1: Sample size by caste/ethnicity

Caste/ethnicity	Daman VDC		Palung VDC		Total		
	Total (N)	Sample (f)	Total (N)	Sample (f)	Total (N)	Sample (f)	(%)
Brahmin/Chhetri	551	28	594	36	1145	64	5.6
Newar	66	20	105	11	171	31	18.1
Tamang	133	11	246	43	379	54	14.2
Dalit	57	39	92	29	149	68	45.6
Total	807	98	1037	119	1844	217	11.8

NB: N= Number of total households under a particular caste/ethnic group in the study area
f= Number of household taken as sample under a particular caste/ethnic group

3.6 Data Analysis

Data collected from primary and secondary sources were analyzed both qualitatively and quantitatively according to objectives. The primary data were coded according to the requirement of computer software package- SPSS 10.0 version and spread sheet- Excel. Then, the data were processed, summarized, tabulated and analyzed with the help of software.

Quantitative data was analyzed using descriptive and analytical tools such as cross tabulation, mean and standard deviation. Chi-square test, and F –test were employed to test the significance of variation between ethnic/caste groups. Weighted indexes were constructed to compare the degree of dependency on natural resources, satisfaction with the project between the caste/ethnic groups. The formula used for the construction of indexes is as follows:

$$\text{Weighted average index (WI)} = \sum_{i=1}^n \frac{f_i * v_i}{f_{..}}$$

Where, f_i = frequency of respondents with a particular level of satisfaction or dependency
 V_i = Score assigned to a particular level of satisfaction or dependency

For qualitative data analysis several methods were used, which included case study, and cause and effect relations and phrasing of respondents' verbal statements.

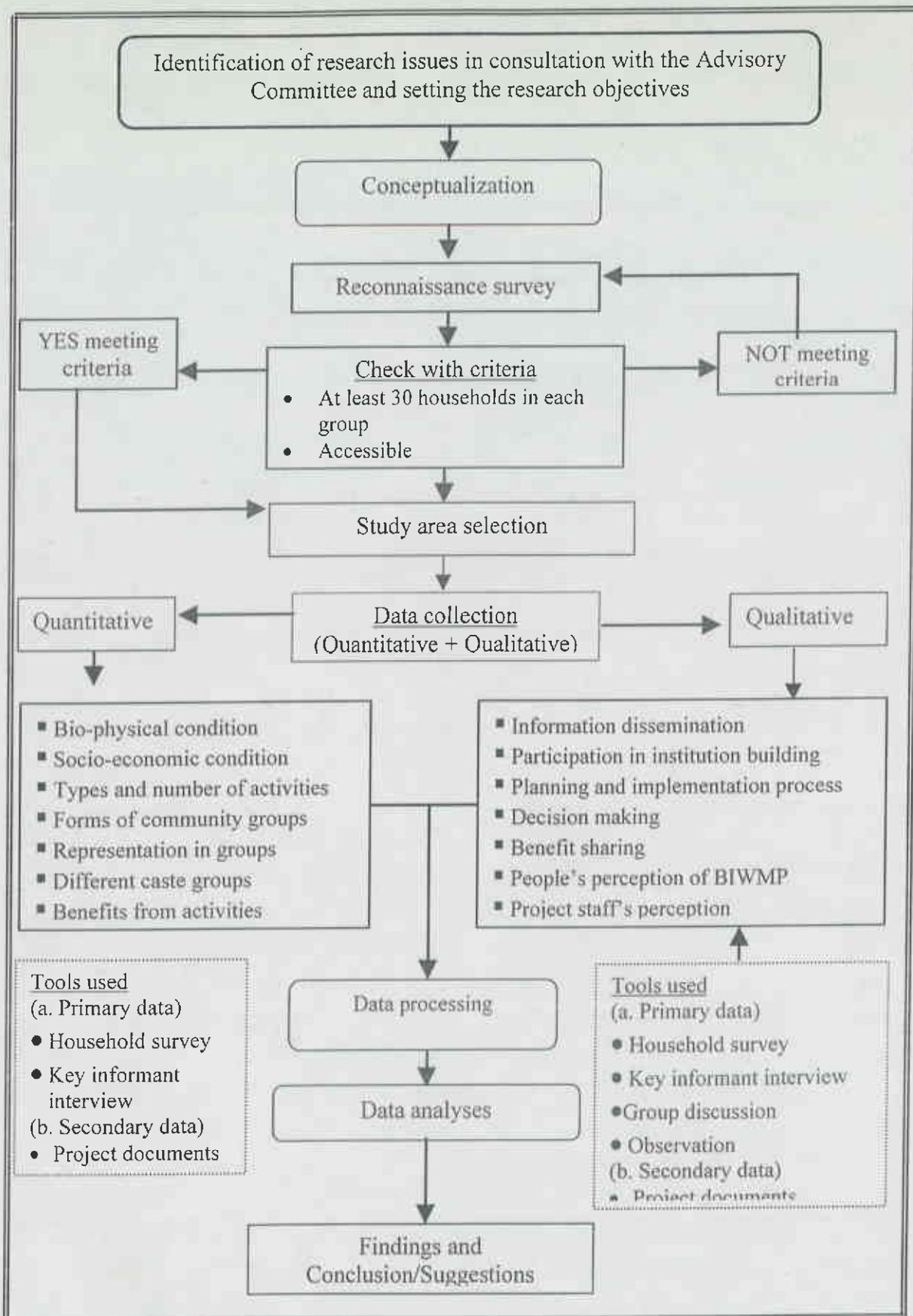


Figure 3.1: Research design employed for the study.

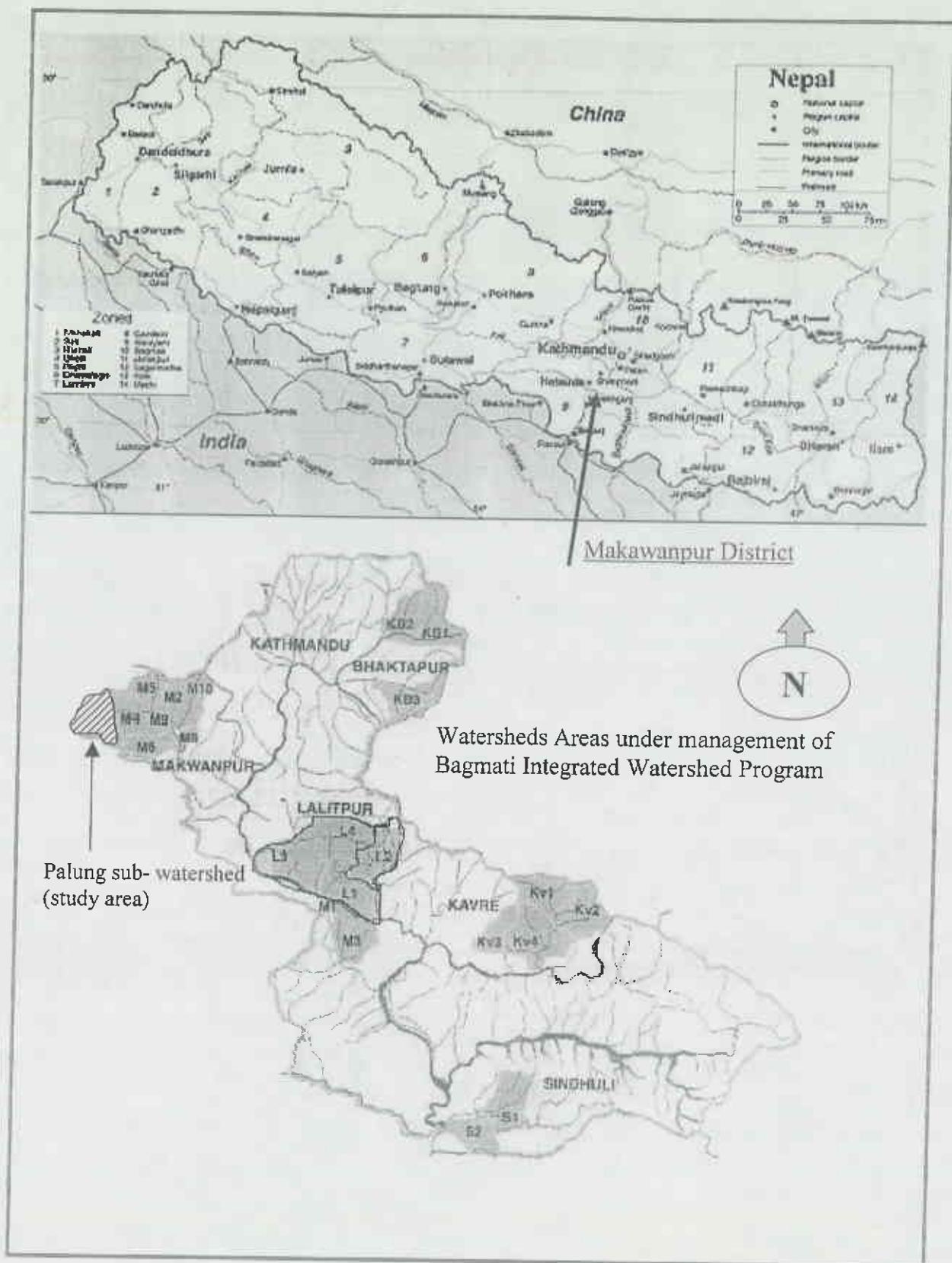


Figure 3.2: Location map of the study area

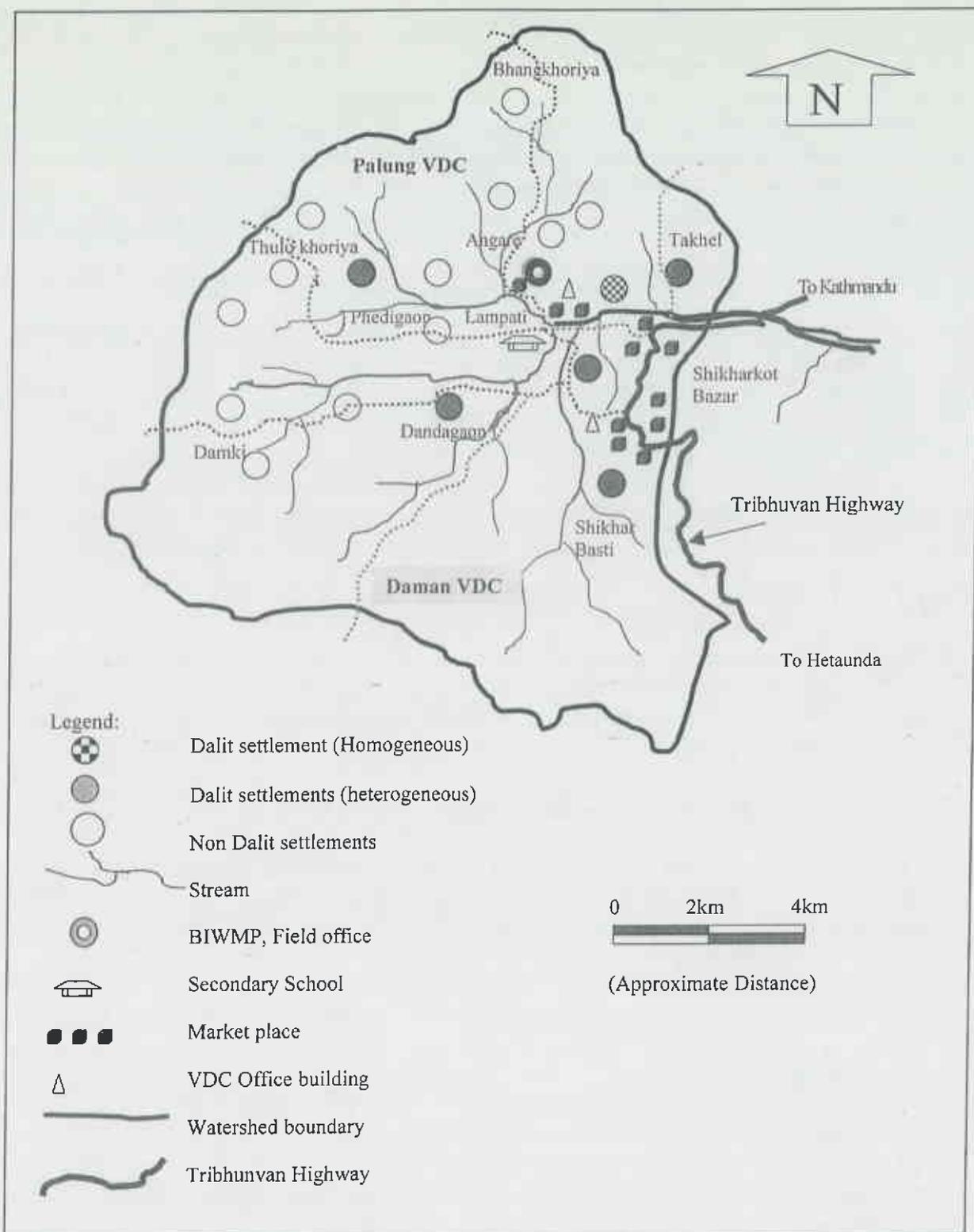


Figure 3.3: Sketch map of Palung sub-watershed, the study area

Chapter 4

Characteristic of Study Area and Project Profile

This chapter has been mainly organized in three sections: bio-physical, socio-economic and project profile of Bagmati Integrated Watershed and Management Program (BIWMP). The bio-physical includes topography, climate and land use. The socio-economic includes household structure, household economy and social profile of caste structure. The project profile includes its objectives, strategies, and approach of program management. Secondary data provided by the BIWMP and data obtained from household survey were used for descriptive analyses.

4.1 Biophysical Condition

The study area, Palung sub-watershed is located in the northeastern part of Makawanpur district of the central development region of Nepal (Figure 4.1). Covering a total of about 29 km² the watershed extends within 85°1'30" E to 85°5'33"E longitude and 27°36'42" N to 27°39'28"N latitude. The watershed area, by the political boundary, extends to some wards of two village development committees (VDC), namely Palung and Daman. Ward no. 2-9 of Palung VDC and ward no. 1-5 of Daman VDC are fallen within delineated boundary of called Palung sub-watershed, given name by the (Singh, 2002).

4.1.1 Topography

Palung sub-watershed is predominantly mountainous with elevation ranges from 1660m to 2551m. Granite, quartzite and phyllitic schists are the major rocks found in the watershed. Because of the weak geological structure, combined with steep hills and heavy rainfall, lands seem to be vulnerable to landslide and soil erosion (Singh, 2002).

The slope has been a governing factor affecting geomorphic process land use. Lands in the small narrow river valleys and at foothills are with well bench-terraced lands, are gentle sloping, with gradient of less than 15 degree. Hill slopes gradient ranges from 15 degree to 60 degree. Intensive cultivation is found even on steep slopes, with outward facing terraces. Besides cultivation, quarrying is another land use activity being practiced, which has further threatened slope destabilization.

4.1.2 Climate

Palung sub-watershed is characterized by cool temperature and warm humid temperature climates. The mean annual ranges from 10°C to 15°C, with the highest mean monthly temperature 22°C in April and May. The lowest mean monthly temperature ranges from 6°C to 8°C in the month of January. The temperature varies according to slope, the south facing slopes being much warmer than the north facing slopes (Singh, 2002).

Monsoon is the main source of rainfall, which lasts for four months from June to September. About 76% of the rainfall occurs during June and July. A maximum rainfall 2317 mm and minimum 1078.5 mm were recorded during the past 30 years. The highest

amount of rainfall (470mm) occurs in July and the lowest (7.2 mm) in November months due to atmospheric disturbances originating in the Mediterranean areas (Singh, 2002).

4.1.3 Drainage

The sub-watershed area is characterized by dendritic type of drainage system. It is drained by Palung river, which is perennial type, flowing from west to east across Plaung and Daman VDCs on left and right banks respectively. The river is formed of three main tributaries, namely, Gharti *khola*, Khaiti *khola* and Phedigaon *khola*. These *kholas* are originated from many gullies and streams of the sub-watershed.

4.1.4 Natural Vegetation

Natural vegetation of the sub-watershed, covering 1505 hectares (52.44%) area is dominated by two types of species. They are blue pine (*Pinus wallichiana*), and *Kharsu* (*Quesrcus*). Patches of *Uttis* (*Alnus nepalensis*) are found in areas with landslides. Other forest species are *Gurans* (*Rhodendron arboretrum*), *Nigalo* (*Arundonariya* species), and *Painyu* (*Prunus cerasoides*). Forests close to settlements are in degraded condition.

4.1.5 Soils

The soil type in Palung sub-watershed depends on slope, aspect and gradient. Generally, *Lithik* sub-groups of soil with loamy skeletal textures were found in steeply to very steeply mountainous terrain. This type of soil is not suitable for cultivation and is very sensitive to erosion. *Typic rhodic*, and *dystro chrepts* soil with loamy skeletal textures were found in larger areas of moderately to steeply sloping mountainous terrain. In the valleys and foothills, alluvial soils with loamy and bouldery texture were found.

4.1.6 Land Use

More than half of the sub-watershed area was covered with forest, which were mainly confined to steep slopes (Table 4.1, and figure A2.1). The cultivated land accounts for nearly half of the total area. More than half of the agricultural land is in steeply sloping areas with more than 15° gradient. A total of 13,285 *Ropani* agricultural land was available in the watershed area, of which 3,347 (25.2%) *Khet*, where as 9,890 (74.44%) and 48 (0.36%) used as *Pakhobari* and *Ailanipakho* (barren land) respectively.

Table 4.1: Area under different land use type and slopes of Palung sub-watershed (hectare)

Slope	0-3°	3°-15°	15°-30°	30°-60°	> 60°	Total	Percent
Land use							
Shrub	0.1	1.5	19.0	26.1	-	46.7	1.63
Plantation	12.5	17.5	1.3	-	-	31.3	1.09
Landslide	-	0.7	4.5	2.2	-	7.4	0.26
Grass	-	2.9	6.3	1.8	-	11.0	0.38
Forest	3.1	180.4	836.1	485.7	-	1505.0	52.4
Cultivation	153.9	543.9	466.6	82.4	-	1247.0	43.44
Barren	0.7	2.1	11.4	7.7	-	21.9	0.76
Total	170.3	749.0	1345.2	605.9	-	2870.0	100.0
Percent	5.9	26.1	46.9	21.1	-	100.0	

Source: Singh (2002)

4.1.7 Population and Settlement

Population and settlement of the Palung sub-watershed found unique. It is densely populated not only among the sub-watershed treated under BIWMP, but also among VDCs within the Makawanpur district. The population density of the Plaung sub-watershed¹ is 570 people per km², which is much higher than national average², which is 125.6 people per km². There were a total of 1844 households comprising 10,685-population (5,318 male 5,367 female) from different castes/ethnicity living in the area (Appendix E1). Brahmin/Chhetri caste group is in majority followed by Tamang. But, Newar and Dalit constituted each less than one-tenths population of the Palung sub-watershed.

There were 19 villages in study area settled in a pattern of rural and urban. Market centers like Shikharkot and Chaukibazaar were densely populated, accounting for five percent of the population of the study area. Located in lowlands, these centers were functioning as regional market centers as well as *Ilaka* administrative unit of the northern Makawanpur district. Trading activities, security posts, communication facilities and educational institutions were found there. Chhetri and Newar (Gopali) were the main caste/ethnic groups living in the markets.

More than three-fourths of Dalits are living in heterogeneous villages (Table 4.2), mostly located in river valley and foothills. Their concentration is higher in villages with Newar and Brahmin/Chhetri. Such composition of community is almost common in hill areas of Nepal. Likewise, about two-third population of Tamang lives in upland, notably upstream of the study area.

Table 4.2: Settlements in Palung sub-watershed by composition of community and steepness of land

Location and nature of settlements		Proportion of caste wise population (in percent)				Total
		Brahmin/Chhetri	Newar	Tamang	Dalit	
Location	Upland	45.3	6.5	66.7	4.4	32.3
	Lowland	54.7	93.5	33.3	95.6	67.7
Type	Homogeneous	31.3	49.1	53.7	22.1	30.4
	Heterogeneous	68.8	50.9	46.3	77.9	69.6

Source: BIWMP, field office population database, 2002

4.2 Socio-economic Structure

4.2.1 Family Size and Sex Ratio

A family, in general, was structured in a form of joint family. Patriarchic structure, as in other parts of the country, exists in the study area. Most of the households were headed by male (VDC profile, 2001). The structure and size of a household varies according to caste or ethnic affiliation. The average household size was about seven (Table

¹ According to VDC profiles of Damn and Palung VDCs, 2001

² According to Central Bureau of Statistic (CBS) of government of Nepal, 2000

4.3) of which four were female and three males. The average family size of the Palung sub-watershed study is higher than national average, which is 5.4. By caste and ethnicity, Tamang had largest household size of seven, where as Dalits had about six. But, there was no statistically different across the caste/ethnic groups. Household size for Dalit had been found less than national average³, which is about 6.4.

Table 4.3: Sex composition and family size

Attributes	Brahmin/ Chhetri	Newar	Tamang	Dalit	Total
	(n=64)	(n=31)	(n=54)	(n=68)	(n=217)
Family size	6.6	6.2	7.0	5.9	6.4
Sex ration	1.0	1.0	0.9	1.0	1.0
Female	3.4	3.2	3.4	3.0	3.2
Male	3.3	3.0	3.6	2.9	3.2

Source: Household survey, 2002

NB: n = number of respondents under the household survey

4.2.2 Age structure

In the context of Nepal's family structure the more infant and child ratio the more involvement of women in household chores, the reproductive role, that lessens the chance of involvement of women in community work (Dahal et al., 2002). For the case of study area children below 14 years had proportionate less than one-third of sampled population (Table 4.4). Adult age group of people (15-59 years) nearly two-thirds. By caste and ethnic, the ratio of age-old people accounted for highest for Dalits. Population of adult people found to be highest proportion within Brahmin/Chhetri caste group. Similarly, proportionate of children, including infant (below 3 years), had less than one-tenth, in which Dalit accounted for the highest.

Table 4.4: Population by age and caste/ethnicity of sampled household

Age group	Brahmin/Chhetri		Newar		Tamang		Dalit	
	f	%	f	%	f	%	f	%
Children (< 3 yrs.)	24	5.7	13	6.8	27	7.1	31	7.7
Children (3-14 yrs.)	104	24.5	53	27.6	129	34.0	119	29.6
Adult (15-59yrs)	283	66.7	121	63.0	213	56.2	239	59.5
Age old (60 yrs and above)	13	3.1	5	2.6	10	2.6	13	3.2

Source: Household survey, 2002

NB: f = number of people under different age group

4.2.3 Education

About 30% of the population in the study area is illiterate (Figure 4.1)⁴. The illiteracy rate is highest for Dalit. About 37 percent of Dalit were illiterate against 20 percent of Brahmin/Chhetri and 25 percent Tamang. Slightly more than one-fourth population of Dalit can read and write (Figure 4.1).

³ According to Team consult, 1999.

⁴ Differs from VDC profile 2000, which shows 48% illiteracy.

The proportion of population with primary level education was found highest for Dalit (Figure 4.1). Despite the existence of public and private primary and secondary schools in the area school dropping rate was rampant among Dalits as their proportionate was significantly decreased in secondary and primary level education, while others' proportionate almost stagnant. Although a campus was being run from the support of joint VDC⁵ fund, the considerable numbers of students were studying outside of the watershed. There were only four people from Dalit who just pursuit above higher secondary level education.

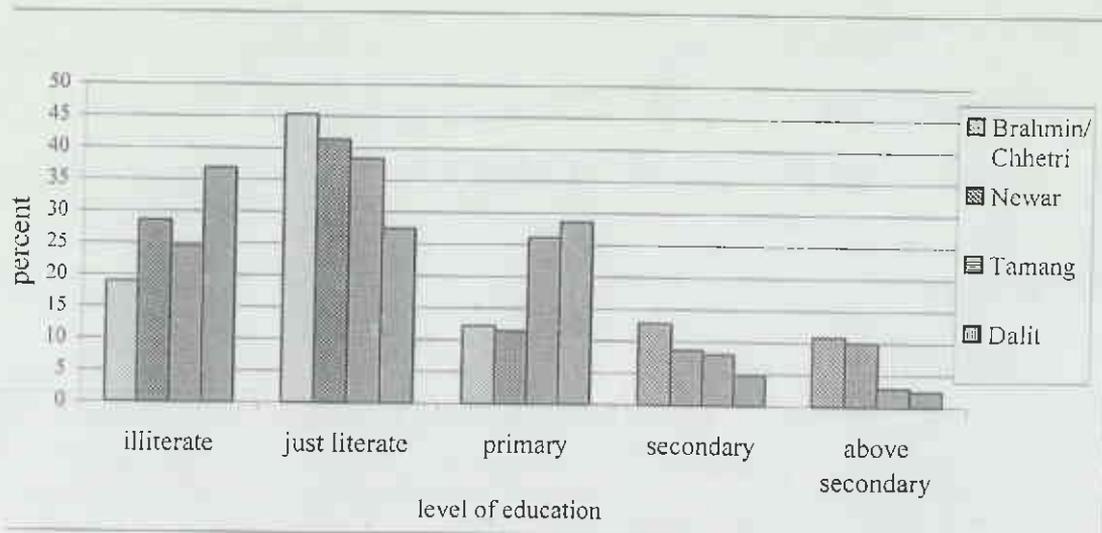


Figure 4.1: Educational status by caste/ethnicity

4.2.4 Employment

People aged 15-59 years are officially considered as economically active (Dahal et

al., 2002). Age groups other than this are considered as dependents, though their involvement in the household work is quite considerable. They contribute to the household and farm works as per needed in the study area. Often children above 10 years in rural areas help for parents for fetching water, buying daily necessities from nearby market and serving foods to their parents working on farmlands. Likewise, age-old male and female (above 59 years) irrespective to their caste/ethnicity do play active role for maintaining their household economy and participate in community development works in rural areas. For instance, old-age Dalits are more engaged than adult in the study area, particularly in caste based occupation, i.e. tailoring, making agricultural tools, copper utensil and collect grain from other caste household in lieu of remuneration of works served during a whole year; other caste people from this age often work in farm lands, rare livestock. Therefore, they have been considered as "partial economic active" population.

The dependent ratio of population of the study area proportionates nearly two-third. As the higher ratio the higher responsibility to the economically active population for fulfillment of all members' need, thereby reduced leisure time for active population for participating in the community development work. It meant the Tamang and Dalit have to earn more for fulfilling household needs than Brahmin/Chhetri and Newar have. Because, the dependent ratio is highest in Tamang followed by Dalit, and Newar, whereas Brahmin/Chhetri accounts for the lowest (Table 4.5).

Table 4.5: Economically active and dependent population by caste/ethnicity

⁵ Joint VDC is a form of coalition management for the betterment of Palung and Daman since 16 years ago. Though it is informal institution, it has own regulation and status differing from the regular VDC administrative unit and funds. In recent years both VDCs are in process to form municipality.

Population	Brahmin/Chhetri		Newar		Tamang		Dalits	
	f	%	f	%	f	%	f	%
Economically dependent (below 14 and above 60)	141	33	71	37	166	44	163	41
Economically active (15-59 years)	283	67	121	63	213	56	239	59
Dependent Ratio	0.50		0.59		0.78		0.68	

Source: Household survey, 2002

NB: n = number of respondents under the household survey

4.2.5 Occupation

Farming was the major occupation of the settlers, followed by caste-based occupation dominated by iron-smithing and tailoring (Table 4.6). Civil service, trading, and wage labour were the minor occupations. Only a small percentage Brahmin/Chhetri, and Tamang people had been employed in services, including civil service, teaching and wage labour. Some people belonging to Tamang and Brahmin/Chhetri were also working abroad. Notably, nearly 60 percent of economically active Dalits were employed in traditional caste based occupation, i.e., by the tradition iron-smithing and gold smithing were hold by *Kami* and *Sunar* respectively and tailoring hold by *Damai* (Table 4.6) Rest of them are engaged in farming, wage labour and civil service.

Table 4.6: Main occupational structure of economically active people

Main occupation	Brahmin/ Chhetri (n=107)	Newar (n=49)	Tamang (n=92)	Dalits (n=117)
Farming	91.6	81.6	90.2	27.4
Iron-smithing				36.8
Gold-smithing				2.5
Tailoring				18.8
Agricultural labour			1.1	5.1
Construction labour		2.0		3.4
Trade	2.8	8.2	3.3	
Vehicle driving	5.6	8.2	5.4	6.0
Total percent	100	100	100	100

Source: Household survey, 2002

NB: n= frequency of people holding main occupation

Traditional occupations of Dalits of the study area were inherently coming generation to generation. Their income from their traditional profession, majority of them earned it based on “*Balighare pratha*”, a relationship between a client and craftsman or a system also known as patron-client relationship. In this system Dalits collect annually a lump sum amount of service in grain for the services provided to clients. The services of Dalits were paid mostly in kind (grains) and sometimes cash as well depending upon the amount of landholding (for blacksmith group) and the number of members (for tailors) in the family (Table 4.7). In addition, each craftsman also gets his traditional share (food, vegetables, cloth, etc) when there is a festive occasion, marriage and some rituals in the house of the client. The client-craftsman relationship can be temporary or permanent.

Normally this kind of client–craftsman relationship was not observed renewed every year like in some other parts of the country (Table 4.7).

On general, only about one third of Dalits earned cash income from service provided to other clients extra than that of non-households under the above system. Less than one fourth Dalits got service both in cash and annual grain. Reportedly, this tradition had been gradually disappearing over the years primarily due to three reasons: (i) Dalits themselves think that their occupation has lower social prestige and demeaning socially; (ii) many young educated Dalit boys and girls did not like to follow their fathers' footsteps, and (iii) they are finding difficulty in competing with the open market which is supplying various types of similar goods depending upon the needs of the customer. The nature of the labour consumption in above traditional caste-based occupations number of household members were verily involved. Tailoring occupation consumed comparatively high quantity of labour. About three person, including about one woman, were involved in the tailoring while iron-smithing and gold-smithing had consumed labour that of half of the tailoring, where women's involvement was almost negligible (Table 4.7).

Table 4.7: Distribution of Dalit households according to type of traditional income

Attributes		<i>Damai</i> household (Tailoring) (f=14)	<i>Kami</i> household (Iron-smithing) (f=32)	<i>Sunar</i> household (Gold-smithing) (f=3)
Type of remuneration gained from service (% of HH)	Cash	21.4	36.4	100.0
	Grain	50.0	42.4	-
	Both cash and grain	28.6	21.2	-
	Total	100.0	100.0	100.0
Number of household member involved in occupation	Mean labour number/HH	2.57	1.31	1.33
	Female labour/HH	0.93	0.06	0.00

Source: Household survey, 2002

NB: f = number of Dalit households earning income in different form

HH = household

Dalit occupants had provided service to varied number of non-Dalits. On average, a Dalit household provided service to about 16 non-Dalit households. Due to the availability of garment goods in the market centers a *Damai* household was bonded to provide service only to 14 non-Dalit households, while on average a *Kami* households, nearly equal to *Sunar* household, were bonded to provide service to about 18 households. If distribute the labour power involved in the traditional works of Dalit, one can found that one average one labor from tailoring occupation is serving to only six non-Dalit households. Whereas one average one laour from iron-smithing and gold-smithing was providing services to about 14 and 13 non-Dalit households. It meant that tailoring occupants (*Damai*) had comparatively less earned the income from the traditional occupation than that of earned by others, *Kami* and *Sunar* (Table 4.8).

Table 4.8: Number of non-Dalit households under service provided by Dalits on the basis of annual lump sum remuneration

Households of non-Dalits	Tailoring (f=14)	Iron-smithing (f=32)	Gold-smithing (f=3)
Minimum (HH)	3	2	5
Maximum (HH)	60	100	30
Average HH served by one Dalit family	14	18	17
Average HH served by a Dalit labour under the annual lump sum system	5.5	13.7	12.8

Source: Household survey, 2002

NB: f = number of non-Dalit households under the service provided by Dalits
HH = household

4.3 Economic Condition

Both on-farm and off-farm activities were sources of watershed settlers' earnings. On-farm activities include farming and livestock raising, while off-farm activities include services and trade. Due to variation in productive assets like land, education, skill and access to resources, the economic level of a household subject to differ within and between caste/ethnic groups. In order to describe the economic condition of the settlers this study evaluates settlers' perception of their own economic status as compared to their neighbors rather to using quantitative figures of income they earned from different sources. Because, providing exactly figure of earning throughout the year was tough task for rural people. Besides, the purpose of the study was to just compare economic level of a household between the caste/ethnic groups.

4.3.1 Relative Economic Status

The relative economic status of settlers was analysed based on interviews conducted in communities with heterogeneous caste composition, so as to know as the how particularly Dalits consider themselves as compared to other caste groups. Notably, more than half of the Dalit and Tamang people considered economic status⁶ "low" (Table 4.9). However, not more than 16 percent of people, except Newar, considered their economic status "high" as compare to other neighbors. There is considerable gap in terms of economic status within Tamang, while it is relatively less within Dalit and Brhmin/Chhetri caste/ethnic groups. More than two-thirds of Brhmin/Chhetri and Newar considered themselves "moderate" in terms of their economic status. Clearly, Brahmin/Chhtetri and Newar have better economic status as compared to level than Tamang and Dalit (Table 4.9).

Table 4.9: Relative economic status of settlers as perceived by themselves

⁶ A common participatory understanding was made with respondents on categorization of economic status of people, which includes three levels: (i) "Low" economic level of a household – who has food deficit for more than six months; has suffering from no access to productive resources except wage labour; obtained some debts for food consumption in terms of bond for wage labourer to work in farm field during the faming season, (ii) "Moderate" economic level of a household– who has a small production unit-major income from sale of surplus labour, can be survived through out of the year; (iii) "High" economic level of a household defines-as relatively better placed in terms of access to land and technology and extension services, and owns variety of income sources other than land. (For more details- Appendix E2)

Economic status of respondents' household	Brahmin/Chhetri (f=64)	Newar (f=31)	Tamang (f=54)	Dalit (f=68)
High (%)	5	-	16	2
Moderate (%)	66	73	27	45
Low (%)	29	27	57	53

D45Source: Household survey, 2002;

NB: f= number of respondent corresponding to different caste/ethnic groups

The distribution of economic status from household survey was found little different from BIWMP's assessment incorporated in Sub-watershed Appraisal Report on Community Organizations and Disadvantaged Groups (DAG), Makawanpur District, (Bhandary, 2001). According to the report majority, about 79% of watershed population, had poor economic condition. Only three percent population of the watershed was "rich", and 18% as "moderate" economic classes (Appendix E3).

Regarding the economic condition of the Dalits the household survey also revealed that majority of Dalits were able to meet food requirement for only less than six months, and a very few, about 5% throughout the year. About 27% and 14% of Dalits meet the requirement for the period of six to nine months and above respectively. Their source of food was largely relied on non-Dalit households. Non-Dalits pay Dalits in kind (grain) for their bonded services. Besides many of the Dalits interviewed repeatedly expressed that they had burden of debt used to use for buying the additional grains. Usually the debt had been bonded to repay in terms of wage labor in farmland of private moneylenders.

4.3.2 Land Ownership

Ownership was considered as the most important resource and means of production in the study area. As Gurung (2002) revealed, like elsewhere in Nepal, the ownership of this resource not only the dominant means of livelihood but also an important determination of social prestige and class in the study area. Irrespective caste/ethnic affiliation, settlers had very small landholdings measuring about half a hectare per household varied significantly from one caste/ethnic group to another. On average per Brahmin/Chhetri had the largest capita landholdings, followed by Newar and Tamang. Dalit with only 0.47 *Ropani* had the smallest per capita landholdings (Table 4.10). With the exception of Newar, *pakho* accounts for the major proportion of landholdings for all caste/ethnic groups.

Table 4.10. Average landholding size by type and caste/ethnicity (*Ropani*/household)

Land area (<i>Ropani</i>)	Brahmin/Chhetri (n=64)	Newar (n=31)	Tamang (n=54)	Dalit (n=68)
-----------------------------	---------------------------	-----------------	------------------	-----------------

Average landholding size* per HH	9.95	6.49	7.06	2.81
Average landholding per capita	1.50	1.05	1.01	0.47
Irrigated land (khet)* per HH	3.33	3.70	1.63	0.94
Rainfed land (pakho)* per HH	6.62	2.79	5.43	1.87

Source: Household survey, 2002

NB: 1 Ropani = 1/20 hectare ; F test -- * Highly significant at 99% confidence level

4.3.3 Farm Production and Productivity

Highly fragmented land holdings have constrained their efficient utilization. Different from other rural areas of Nepal, the settlers in the study area cultivate vegetables like potato, cauliflower, cabbage, radish and peas at a commercial scale. The climate and soil are favorable for all-time vegetable farming. Due to high demand for vegetables in urban areas and high value vegetable farming has become a major agricultural activity. Settlers purchase rice, which is the staple food crop, from market using income earned from vegetables. Only steep up land area is intensively used for maize cropping, due to absence of irrigation facility.

Since landholdings are very small, the major proportion of them, irrespective of caste/ethnic affiliation is owned and operated by settlers. With a small-scale people in the study area are involved in land leasing, sharecropping and mortgaging. Aware of benefits from the vegetable farming, even small parcels of lands were being leased for vegetable farming. On about average less than 10% of arable lands were being rented-in and rented-out (Table 4.11). Renting-out was popular among Newar, while Dalits have trend of renting of small parcels of land adjoining to their homesteads for kitchen gardening.

Table 4.11: Land tenure systems (in Ropani)

Land tenure	Brahmin/ Chhetri (n=64)		Newar (n=31)		Tamang (n=54)		Dalit (n=68)	
	Land /hh	Area in %	Land /hh	Area in %	Land /hh	Area in %	Land /hh	Area in %
Owner operated	9.0	83.0	5.8	83.7	6.6	80.1	2.7	78.6
Rented-out	0.9	8.5	0.7	9.8	0.4	4.7	0.1	3.6
Rented-in	0.9	8.5	0.4	6.5	1.3	15.2	0.6	17.8
Total	10.8	100	6.9	100	8.3	100	3.4	100

Source: Household survey, 2002

NB: hh = household

The trend of vegetable production, both seasonal and off-seasonal, was becoming increasingly popular in the area. Significant expansion of the vegetable farmland had taken place after the flood disaster of 1993. The flood had deposited alluvium in paddy land (*khet*) along Palung and made lands highly suitable for vegetables. The fertility of soil is being maintained by using compost and chemical fertilizers. The quantity of vegetable production in the study area was found appreciable. About 10, 800 tons of potato, 7,200 tons of cauliflower and cabbage are being annually sold by farmers⁷. Due to lack of cold

⁷ Interview with Daman VDC Secretary during field survey 2002.

storage in the study area selling of vegetable is being done only within a short period of time of harvesting, which lowered the price of produces. In some cases farmers left matured potato in their farmland for more than few weeks as they intended to sell the produce in later time when the price increased.

4.4 Peoples' Dependency on Forest Resources

Peoples' dependency on forest resources, i.e. firewood, fodder, timber, and liter in overall found highly depended and varied across the caste/ethnicity (Appendix E4). Firewood collection from the forest had been largely limited in the upland area. Having the facilities of cooking gas stove, and biogas plant many households in the *bazaar*, and accessible lowland area the use of firewood was found comparatively less. Moreover, as an alternative to firewood farmers use dried stem of cabbage and cauliflower for cooking purpose. Notably, due to closer settlements to the forest Tamangs were found highly depended on the firewood followed by Brahmins/Chhetris, and Dalits, while Newar was the least depended on it. Although the forest density had been increased over past 10 years (Appendix E5) due to community forest management settlers claimed that they had to go far and far for collection of firewood, as they were not allowed chop the tree elsewhere, however, people were aware about the conservation of the forest to some extent.

On overall, settlers less depended on forests for the fodder (Appendix E4). Collection of fodder was largely practiced, since the open grazing was limited in the area. The requirement of fodder for livestock raised for dairy, meat purpose and ploughing power was managed both from natural forest and private agro forests, i.e., collection of grass/fodder from tree species along the private land terraces. Decreasing trend of fodder availability from the forest (Appendix E6) due controlling the forest was one of the reason of fodder management. As informed by VDC staff and VDC profiles, due to low livestock density fodder requirement had been managed from the private forest considerably. However, less landholding Newars, who mostly raising milking buffalo, were comparatively depended on the forest fodder. Due to distant location of the forest these Newars had to spent much more time for the fodder collection. Dalits, apparently, were the least depended to the forest for fodder as very few of them raise cattle.

In the overall, the respondents were less depended for non-timber forest product (Appendix E4). On contrary the BIWMP reports/bulletins claim that upland poor settlers' way of earning is NTFP. In fact, getting first hand information from the settlers regarding their collection of medicinal plants, and raw material for household consumptions was extremely difficult. Because, strong restriction of collection of selected species from any forest and low awareness regarding forest policy/regulation settlers afraid to claim the reality. Nevertheless, obtained household data had articulated that Dalits were comparatively least depended on the non-timber forest product, while Tamang depended comparatively higher (Appendix E4). From the observation it was revealed that raw materials like *nigalo* and bamboo were available from the forests. As the Tamangs were skillful for processing these raw materials they prepare several items like rope, basket and sold in the local market, and to the neighbors.

Settlers' dependency on timber, in overall, found low but closer to high degree of dependency. The use of timber was little replaced by cement concrete in roadside settlements, but was larger in the construction of houses in upland area. Thus, the requirement of timber remained comparatively higher in Tamang (Appendix E4). On the

other side dependency on timber was least in Newar groups, while Dalits's dependency was found comparatively less than the degree of dependency of Brahmin/Chhetri (Appendix E5).

4.5 Accessibility and Market Services

Tribhuvan highway runs through the lower part of the watershed connecting it exit the capital city of Kathmandu and the regional city of Hetaunda (Figure 3.3). The Palung watershed is connected with all weather earthen roads from the highway to Palung bazaar, Phedigaon, lowland of Palung VDC and Ghartigaoun and Damki, middle upland of Daman VDC. These places are well connected with regular public bus and goods transportation facilities for whole the year, however, fear during monsoon season within the study area.

Farmers of the area get agriculture inputs from the locals market where number of private venders are providing services. The local market is characterized with one-way service only in term of agriculture. Due to lack of facilities of cold storage and appropriate farmers institutions the market is solely handled by strange-individual traders resulted small-farmers have not been benefited adequately. Moreover, the trading activities have to be concentrated in the vegetable seasons only, caused negative implication in the farming management as well.

4.6 Institutional Setup

Different agencies were involved in development activities in the study area. They were broadly categorised in to two types of organizations: (i) Local government organizations, and (ii) Membership community organizations. The former one included the village development committees (VDCs) and ward committees. The latter one included youth clubs, organizations induced by line agencies and BIWMP's like hamlet committee, sub-watershed committee, user groups including groups for irrigation, drinking water supply, community forest user group (CFUG) and income generation group (IGG).

4.6.1 Involvement of District Line Agencies and NGOs

Numbers of district level line agencies and regional and national level non-governmental organizations (NGOs) were involved in the development activities in the study area as the part of their program area. The governmental organizations included District Agriculture Office, District Forest Office, District Women Development Office, and Nepal Electricity Authority and Daman Horticulture Center. The NGOs included MIRA, SOLVE, OMNI Nepal, and CEPRED. Their programs were not particularly planned for this area nor targeted to Dalit communities. Their programs were intended to benefit general people from general activities like drinking water supply, community forestry, agriculture, and women development.

Makawanpur district development committee (DDC) was one among numbers of districts facilitated and equipped with resources provided under Local Government Programme (LGP). The LGP aims at strengthening the local governance so that the districts can initiate their own development activities with intensive public participation. However, due to relatively higher development indicator of both Daman and Palung VDCs the LGP programmes did not provide support them. In this regards VDCs members expressed that they were looking LGP's supports, as the VDCs do not have sufficient

capacity to plan and implement the development activities. In fact, the VDCs were seemed to be weakening from the perspective of representation of disadvantaged people's in its body.

4.6.2 Involvement of Village Development Committees

Nepal's local government practice was started from 1998 only after establishment of laws and bylaws based on the Local Government Act, 1992. District is a spatial unit considered in local government practice by the act. District development committee (DDC), thus, is a political and developmental body for the district. In this context, village development committee (VDC) is the lowest unit of the DDC. A VDC contains nine wards, standing as for the political units. But, the ward unit do not have functional mandate as administrative unit. Rather ward is limited in representation in VDC assembly. According to the Act, the VDC is responsible for the community development within the VDC territory. However, devolution of power in generation and allocation of revenue and human resources is still lacking (Nepal Human Development Report, 2001).

Distribution of benefits from the community development works at local level is determined by the degree of people's involvement in the project planning and implementation, in which the VDC body plays a leadership role. The structure of the VDC and its functionality is subject to be largely influenced by representative status of different social groups in the body. The VDC assembly body, from the mandatory of Act, composed of 53 members in total, including nine women members elected from each ward. Of 53 members there is reservation of six members to be nominated from disadvantaged groups. But, the pursuit of the Act in both VDCs of the area was found questionable as happening in other parts of the country (Nepal Human Development Report, 2001).

Despite policy frameworks and legislative provision for addressing access, equity and empowerment issues Dalits had inadequate access to the local government body and it's functioning system. Dalit's representation in both VDC Assemblies was low in terms of proportion. Even though their total population is about 10% only about 6% of Dalits represented in the body, while there is higher representation of Brahmin/Chhetri, Newar, and Tamang 47%, 15% and 32% respectively (VDC profile, 2001). Besides, the capability of those Dalit representatives was evaluated by themselves and the local people as very low compared to others members. Owing to low educational status, low access to information and low economic status of the Dalits members as well as the barrier of caste hierarchy their political performance was repeatedly threatened. Besides, due to poor political awareness and political attainment of Dalits the Dalit members could not lobby for the development activities needed for the Dalits. As the result, VDC's planed and implemented and recommended activities, even within planning framework of the BIWMP had tended to be not in favor of Dalits. This system will seriously implicate to the BIWPM's programming approach, if the BIWMP will flatly follow the VDC's plans for the action as mandatory framework granted by the Local Government Guidelines-1999. Ultimately, the distribution of benefits from VDC's program cannot evenly distributed to the Dalit people. For example, virtually there were no specific programs in VDCs plans targeting to Dalits of both VDCs (Table 4.12).

Table 4.12: Activities planned and implemented under the VDC/Wards during fiscal years of 2000/01-2001/02

VDC	Activities performed last year and planned for current fiscal year by VDCs	Remarks/comments
-----	--	------------------

Daman	Construction of 10.5 km rural earthen motorable road, VDC area entrance gates, Training on agriculture, Health camp, Salary for women health workers, Construction of VDC guest house, School management,	No program and no specific target for development of socio-economic condition of Dalits; No any joint program with BIWMP;
Palung	Maintenance of two school buildings, Construction of four community houses, Construction of 3 km earthen motorable road	No program and no specific target for development of socio-economic condition of Dalits; No any joint program with BIWMP;

Source: Daman and Palung VDC plans, 2000/2001 and 2001/2002

4.6.3 Community Organizations Initiated by Others than BIWMP

Community organizations originated from self-motivation due to communities' needs, culture and tradition were also found in the study area. These organizations included *Guthi* among Newar communities. Youth clubs used to organize sports games for youths and sometime participated in village sanitation campaigns.

Samudyik Sanchar Kendra (Community Information Center) was formed by local intellectual people after the flood disaster of 1993. This center aims to provide information on possible natural disasters. The Center is gradually expanding its' activities. It is also implementing social awareness creation and agricultural information dissemination programs through a public audio tower in ward no. 3, 4, 5, and 7 of Palung VDC. Recently the center is preparing to launch a community radio station in frequency modulus (FM).

There were three farmers' cooperatives formed and managed by local people, particularly Brahmin/Chhetri. Of them, Palung Multi-purpose Cooperative Limited (PMCL) is popular not only within the study area, but also in the district. Disadvantaged and poor farmers cannot, reportedly, be the members of the cooperatives, though they were keenly interested. High cost of share caused and very limited number of shares prevent disadvantaged groups from joining the cooperatives.

Governmental, non-governmental organizations in the watershed have also promoted several membership community organizations. Their induced COs were found in significant numbers. Of them, women groups, cooperatives, farmers' committees were the typical membership organizations. Besides, there were water user groups formed by national NGOs for water supply projects. But, according to key informants, there was no representation of Dalits in those community organizations formed by these agencies. Depending on project policies the structure and function of the community organizations varied from one community to another or from one project to another project. Notably, there is only one community organization called "Dalit Mukti Samaj- chapter " initiated by and targeted to Dalits. This organization, being a branch of a national level Dalit concerned NGO, is gradually expanding its awareness campaign in the watershed area.

4.6.4 BIWMP Project Initiated Community Organizations

Bagmati Integrated Watershed Management Program was working with new community groups induced by it. There were three tiers of community organizations under

the program. They are: (i) Sub-watershed Conservation Committee, called *Mul Samati*, on the top rank of the tires, (ii) Hamlet Committee, called *Gaon tole Samitee* within the second tire, and (iii) Membership Groups like drinking water and irrigation construction committee, income generating group and community forestry group on the lowest tire. Although the BIWMP was launched in 1998, the organizations were formed about two and half years ago, as the project lately started its intensive works.

a) Sub-Watershed Conservation Committee

Principally, the Palung Sub-watershed Conservation Committee was formed for: firstly, planning of BIWMP to be implemented within the sub-watershed, and secondly, coordinating the BIWMP's activities with two VDCs, Daman and Palung. From this point, the committee was formed from the representation, largely from both VDC executives. A VDC vice-chairperson had also rendered as chairperson person of the Plaung sub-watershed conservation committee. This committee constitutes 11 member including one Dalit and one-woman members.

b) Hamlet Committee

There were 19 hamlet committees formed by the BIWMP. Basically each village had one hamlet committee (Appendix E7). As per the rule of the BIWMP, each household of a particular village should be a general member of that hamlet committee. For this a representative from a household takes a part in the hamlet committee general committee, irrespective to caste or ethnic affiliation. Each hamlet committee has an executive committee, comprising 7 to 11 members. The committee is responsible for planning of BIWMP related conservation activities to be implemented within their respective village. This function had been assumed due to concept of that the respective committee will play the role of mother committee of other small community groups. So that the coordination of local community groups will be strengthen and the groups will remain sustainable.

c) Membership groups

Of the multi tire community organizations induced by BIWMP, the membership groups were in the third tire and accounted for the majority. Their number was increasing gradually as new activities were being implemented over the years. As of the date of the study research there were 42 membership groups or called small groups formed by the BIWMP⁸. Most of them were related with construction management committees during the implementation stage and women's income generating (IGG). In general, a group's executive committee consisted about 7 to 11 members representing concerned beneficiaries. The basic objective of formation of such groups was to implement already planned activities and operate the activities in post construction of implementation stage. For instance, IGGs were created for providing financial services to the people such as involving in saving and its mobilization, taking loan from financial institutions and invest in its members for income generating activities. While, drinking water user groups were formed for construct the water supply system and distribute water to the users and provide maintenance services of the water supply system through mobilizing the local resources. Similarly, community forest user groups were created for managing the forest resources

⁸ According to the Palung field office provided data.

through mobilizing the users. So that beneficiaries of the activities will have benefits for a long period.

4.7 Bagmati Integrated Watershed Management Program Profile

In order to brief a glance about the Bagmati integrated watershed management project (BIWMP), especially relating to its focus on improvement of livelihood of disadvantaged people, the project documents had largely been employed in following sections. The section includes background, objective, strategy, and project organization and management. For describing and documenting of profile mostly secondary data provided by the BIWMP were used.

4.7.1 Background

BIWMP follows on from the Bagmati Watershed Project (BWP), which started in 1975 under joint management by the Commission of European Committee (CEC) and Department of Soil Conservation and Watershed Management (DSCWM) of the Government of Nepal. At that time its activities were mainly confined to re-afforestation and gully control within the Kathmandu valley. In 1985 the project gained support from the European Commission (EC). It was launched in 1986 and continued for 10 years. This period was known as Phase I of the Bagmati Watershed Project. During the phase I of the project, field activities were largely concentrated on small-scale engineering packages and soil conservation measures including terrace improvement, conservation ponds, gully and landslide measures, afforestation, trail improvement and the construction of a ropeway. No direct poverty alleviation or soil conservation work was undertaken. The project evaluation of phase I was conducted in 1992. The evaluation team was generally agreed that good progress was made in Phase I. However, it was suggested that, in the future, the project adopt a more holistic approach for the management of watersheds. To achieve this, a second phase was designed based on an integrated community based approach. An agreement to implementation was signed by the EC and HMG/N in July 1997. The follow on project began on 25 April 1998. This came to be known as the Bagmati Integrated Watershed Management Programme, Phase II. The phase II bonded to total program duration of six and half years with an overall budget of about 15 million EURO (BIWMP, 2001b).

4.7.2 Bagmati Watershed Area

The Bagmati watershed covers an area of 3500 sq. km. and drains out of Nepal across the Indian State Bihar to reach the Ganges. It, partially or wholly, spreads over 8 districts of the kingdom, Kathmandu, Lalitpur, Bhaktapur, Makwanpur, Kavre, Sindhuli, Rautahat and Sarlahi. For technical purposes it has been classified into three main areas: the Upper, Middle and the Lower Bagmati Watershed Areas.

The Upper Bagmati Watershed Area covers the whole of the Kathmandu valley including its source at Shivapuri. From the Chovar gorge, the river flows into the Middle Bagmati Watershed Area across the Mahabharat and Siwalik ranges, including Kulekhani watershed. This area is characterised as having very steep topography, a comparatively dense population and large numbers of livestock. People in the rural areas practice subsistence farming. Soil erosion is a serious problem, adversely affecting productivity.

This Watershed covers the Kulekhani watershed, including Palung sub-watershed, which is of national importance being the source for one of the country's major

hydroelectricity plants. The Lower Bagmati Watershed Area starts once the Bagmati River passes onto the flat lands of the Terai.

4.7.3 Programme Area

Phase II of the project focused on 23 sub-watersheds in the Upper and the Middle Bagmati basin. These 23 priority sub-watersheds lie in five districts: Kathmandu, Lalitpur, Makwanpur, Kavre and Sindhuli. Barring 3 sub-watersheds in the Kathmandu valley, the rest come within the Middle Bagmati Watershed. The total area covered in Phase II is approximately 60,000 ha. with approximately 150,000 populace (BIWMP, 2001b)

4.7.4 Mission and Objectives of BIWMP

The primary aim of BIWMP II is “to reduce erosion in the Bagmati catchment, and to introduce sustainable improvements in the management of 23 priority sub-watersheds in the Bagmati River catchment, thus improve land productivity and livelihoods of local people” (BIWMP, 2001).

The specific objectives of the project are:

- To build up the community level institutional capacity to manage watershed resources,
- To create awareness and stimulates interest in conservation practices,
- To focus on sustainable participatory integrated watershed management,
- To promote income generation opportunities favoring women, lower caste and poorest,
- To carry out, at the request of user groups, remedial measures to control erosion hazards that threaten assets,
- To facilitate field level conservation and infrastructure works,
- To share information and experience

4.7.5 Activities Under BIWMP

The following activities were implemented by BIWMP in its programme areas to achieve the above objectives (BIWMP, 2001b):

- Training and Extension: This includes community training on institutional, managerial and technical capacity building targeted to member of community group.
- Planning and Monitoring of Interventions
- Soil Conservation and Related Activities in Agriculture and Forestry: This component includes technology transfer of improved farming system, terrace improvement through promotion of vegetation, handover of community forests to the local users, livestock promotion, and plantation. Upland farmers are the main targeted beneficiaries for terrace improvement activity.
- Erosion Hazard Treatment: This component includes gully treatment, landslide control, torrent control, stream bank protection, degradation land rehabilitation, and conservation pond.
- Infrastructure Improvement: This includes building or protection of water supply systems, installation or improvement of irrigation system, foot-trail improvement,

bridge construction, ropeway installation, construction of cold storage, and improvement of school buildings.

- Income Generating Activities: This includes activities at household basis, i.e. buffalo raising, poultry, vegetable farming and tailoring. This component is especially targeted for women and disadvantaged people, including Dalit people.
- Group Credit: This component includes lending the money through cooperatives and groups and targets to women.
- Studies: This includes adult basic and advance literacy class, whose targeted illiterate people above 12 years.
- Reproductive Health: This includes mobile health camp, particularly for child and maternity health.

4.7.6 Expected Results of the Programme

The following results were expected from the project (BIWMP, 2001b).

- Programme staff will have a broader understanding of pertinent issues related to integrated watershed management; institutional capacity to manage watershed resources will be enhanced.
- Communities in the project area will understand conservation and their roles in it. They will be better able to manage and utilize their natural resources.
- People will be empowered, social and gender discrimination reduced and equity increased. The economic conditions of the poorest, minorities, disadvantaged groups and women will be uplifted.
- Reproductive health training and access to basic health services will be improved in the programme area.
- Appropriate and realistic soil conservation works will be implemented through people's participation as identified by the community in their integrated watershed management plans.
- The productive infrastructure will be improved to enable greater access to markets and public services.
- The existing natural systems monitoring in Bagmati watershed will be improved and upgraded.

4.7.7 Project Operation

The project had a slow start caused by conflict between the two Co-directors and the Technical Director and late release of funds by EU. After a complete change of the project authorities, the first installment of funds was received eight months later in December 1998. The financial agreement sets a short period of five-years for project implementation to be achieved, with total program duration of six and half years and with an overall budget of 15 million EURO. Owing to the delay in the release of fund, the project activities began only in 1999 (BIWMP, 2001). This has resulted in unwanted implications for program components focused on poor, disadvantaged and upland settlers. The rush in project implementation in the field staff focusing on the more accessible and richer communities living in the valley floors and enough attention had not being paid to the quality of the work undertaken.

4.7.8 Project Organization

A joint directorship, composed of a National Co-director from HMG/Nepal and European Co-director with the help of a Technical Director from CEC part and administrative and financial management staff, had provided overall leadership to the BIWMP. All top-level officials were based at project management unit in Kathmandu. Under their leadership, seven units (Figure 4.4) were functioning in order to provide appropriate support to six District Soil Conservation Offices (DSCO). DSCOs were the responsible unit at district for planning, implementation and monitoring/evaluation of all activities under BIWMP, besides their own regular activities planned and funded by DSCWM.

To ensure the effectiveness of BIWMP activities, each DCSO has been organized into five sectors, namely, social development and capacity building, agriculture and livestock development, enterprise development, infrastructure development, communication and information (Figure 4.4). A specialist, either seconded by the HMG or temporarily hired by the BIWMP, headed each sector. Mid-level technicians had provided assistance to them. A total of 370 staffs were working in the BIWMP. Of them 60 staffs were from Terain Region of the country. In terms of caste/ethnic affiliation of the staff, the vast majority (73%) was represented from Brahmin/Chhetri, while about 13% were Newars and Tamangs. The representation from Dalit group was negligible (1%). Notably, only Brahmin/Chhetri and Newar were serving almost all senior administration positions. Considerable number of field level staff was from Terai regions and Tamang ethnic groups. Notably, there was difficult in understanding of local language and culture to the Terai field staffs.

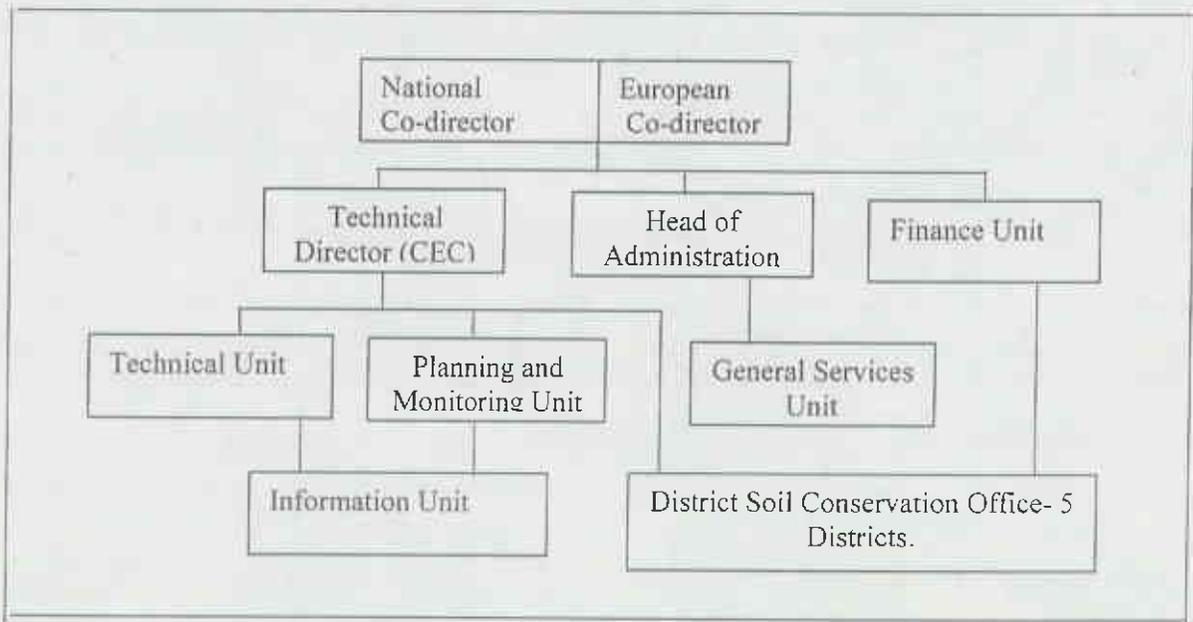


Figure 4.2: Organizational structure of BIWMP

DSCO-Makawanpur had managing ten sub-watersheds under the BIWMP, including Palung sub-watershed. DSCO Officer led to an interdisciplinary team, who looked after all soils conservation activities in the district including the BIWMP activities. The team constituted a total of 38 staffs, both from government and the project side. In order to directly interact with sub-watershed settlers during entire the project cycle Field Center Offices were established and organized in each sub-watershed (Figure 4.5).

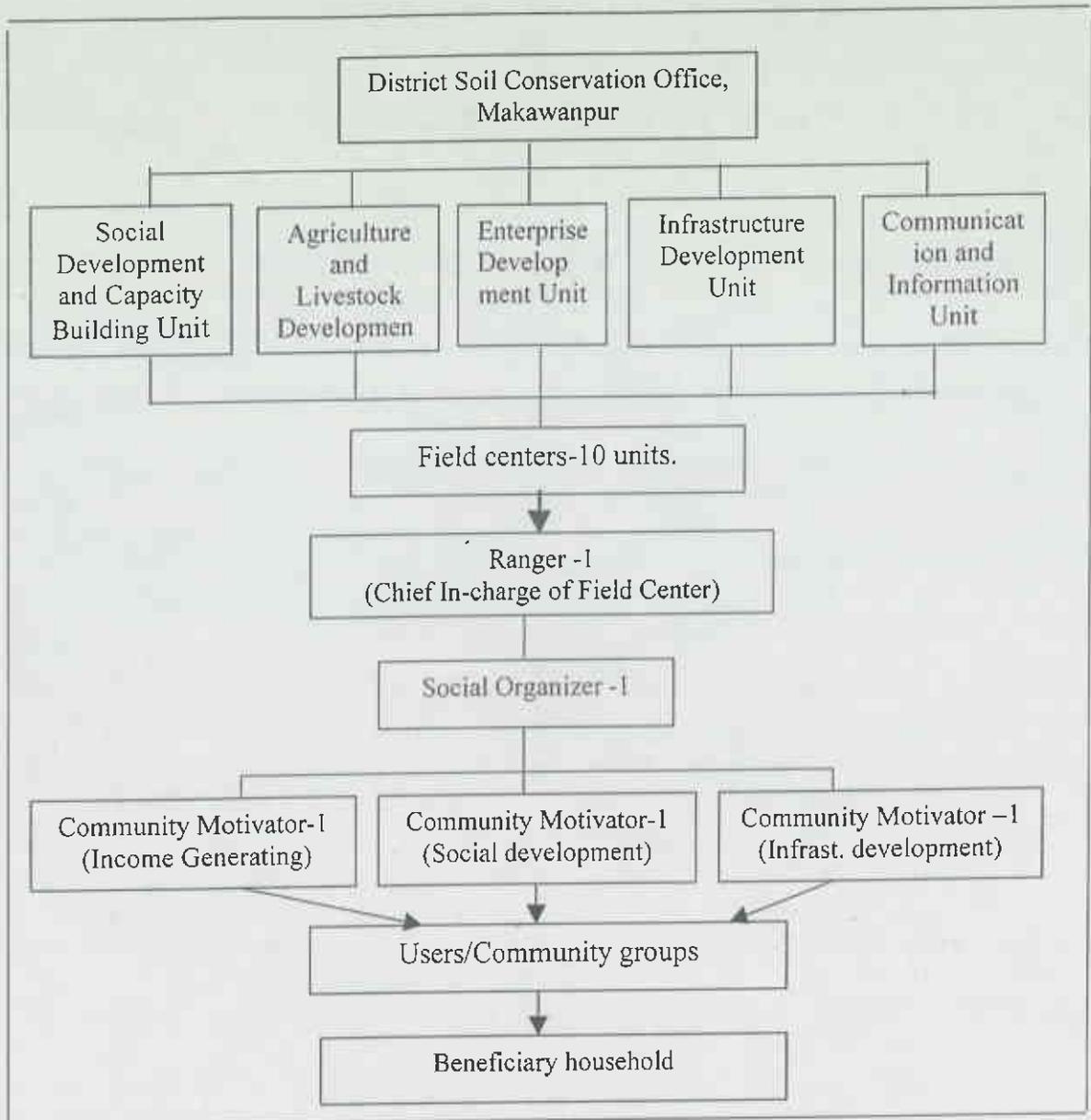


Figure 4.3: Organizational chart of District Soil conservation Office

team composed of five staff including a social motivator and three women motivators, who were from the same sub-watershed. All in all were from Brahmin/Chhetri caste group. This team was full-time field base and was the real frontline cadre of the project for this sub-watershed. Thus, ability of each staff of the team, no doubt, had determined the successes of people participation in the projects in the area.

4.7.9 BIWMP's Strategy

BIWMP promotes an integrated approach to watershed management. Past efforts were mainly concentrated on soil conservation neglecting the welfare of the people or land users in the area. This approach was unsustainable. The need to integrate social and economic development was deemed indispensable for sustainable watershed management. Moreover, it was realized that the sustainability of the programme was not possible if the people of the area were bypassed in planning and decision making processes. When stakeholders plan and implement their own activities they not only complete the work; they also have a sense of ownership and, in most cases, actual ownership. This is the backdrop

for sustainability. BIWMP, thus, makes every effort to ensure that people have control over the entire process of planning and implementation, including financial and technical monitoring and evaluation (BIWMP's 2001b).

Social issues are also addressed through the representative involvement of women and disadvantaged groups. An emphasis on income generation supported by a savings and credit programme as well as market development will provide participants with the opportunity to improve their livelihoods and their environment together. Community based Watershed Management Groups will lead the developmental efforts. These groups play a major role in ensuring the success of the programme in each sub-watershed (BIWMP's 2001b).

4.7.10 Disadvantaged People in BIWMP as Targeted Beneficiaries

The BIWMP had adopted a special understanding about the rural poor and disadvantaged people under the project for targeting to the activities to them. Under the rural poor categories following groups of people were considered. They were small farmer, marginal farmer, share-croppers and tenants farmers, landless laborers, rural women, disadvantaged groups (DAG) and the poorest of the poor (Appendix E2). Of them DAG by the general definition may include Dalits, rural women, widows, destitute children, disabled persons, tribal people and the poorest of the poor. But, some of the BIWMP papers, reports (BIWMP, 2001a; BIWMP, 2001b; Bhandary, 2001) referred to a segment of community who have traditional occupation and their existence is constrained by social, economical, political and organizational barriers. The latter definition refers solely to the people belonging to Dalit group.

Giving prime reason for existence of BIWMP in this sub-watershed there is a need of further explanation based on present socio-economic condition explained briefly in this chapter. Hence, analyses employed by secondary as well as primary data obtained from household survey, group discussion and key informant interviews have been done in consecutive chapters. In which the pertaining issues will be focused to the Dalits of the study area.

Chapter 5

People's Involvement in Community Organizations

Many scholars of community institutions are agreed on that some form of local organization is needed to provide the structure within which local participation can be organized (Ostrom, 1996). Community organizations provide a platform for the people where they can share problems, opportunities and strengths that help to make their lives better regardless of their caste/ethnicity. That is why the community group approach has been adopted by BIWMP. Such emphasis on people's participation was to secure people's contribution to project activities, to better manage resources and to empower the participants for self-reliance. People's empowerment objective of the project, as claimed, aims at strengthening the overall socio-economic condition of women and disadvantaged people, including Dalits.

5.1 Group Formation Process

Mobilization of various community groups for the implementation of BIWMP to secure people's participation in the various kinds of activities was the necessary strategy of the BIWMP. No clear-cut strategy was found in such a way that guides whether the project should form new community groups or collaborate with existing traditional groups. But, little interest was given to collaborate with existing community groups in the study area. Because, as stated by the senior project staff, the BIWMP believes that traditional associations are stronger. Because of the low capability of indigenous groups, all in all, community groups working with the project in the study area were newly formed by the project. The community group formation was the entry step for intensifying the BIWMP's activities in the study area.

A blanket process of community group formation was followed by the project regardless of the types and objectives of the community organizations. In this course, settlers used to gather at a place, normally a *Chautaro* (resting place beneath a tree), or in the house of any community leader. Usually, local communities preferred meetings during agriculturally slack seasons or in the morning or late evening when they are at home. Despite knowing the matter of leisure time of settlers, the BIWMP did not consider the villager's convenience. Groups were formed during April-June months when villagers were busy. As a result, people's presence in mass meetings used to be low. Project staff used to call mass meetings on his/her convenience and requirement. On the other hand, since the people were not adequately aware about the groups to be formed, their presence in the mass meeting seemed to be very less active.

From the acquired information, it was clear that the role of the project alone was dominant in the process of group formation. Their tasks, in general, needed sequential attempts, i.e. started from consultation, motivation to the local people until the formation. Due to the low level of familiarity of project staff with the local socio-economic situation, the staff could not perform their facilitation role appropriately that had to ensure good participation of disadvantaged people in the group formation process. Besides, in the process of group formation, delay in budget releasing and rushing at the end of the fiscal year for meeting plans of group formation had lessened the importance of group formation. A distinct example can be drawn from the rushing attempt of formation of hamlet

committees. Of 19 hamlet committees 17 were formed within less than three months period of time. The main reason behind it was the use of project allocated budget before the end of financial year, otherwise it would be freezing. On average it took less than four days to form a hamlet committee, but for the case of about six hamlet committees were formed within a single day (A1.10). Apparently, this availed a little time to motivate people about the importance, roles and responsibilities of each member of the groups. Ultimately it could not facilitate newly selected group members to internalize the roles and responsibility clearly.

Inclusion of disadvantaged people in community groups was also not seriously considered by VDC officials while they were providing assistance to the project. For example: Palung Sub-watershed Conservation Committee (SWCC) was formed with the help of VDCs officials. A few senior staffs from DSCO and PMU combined with field center staff were involved in the one-day-orientation meeting. The participants of the workshop were VDC leaders, ward chairpersons and village elites. Of them only one Dalit (*Pode*) had participated the meeting in his capacity as the chairperson of a ward committee. Other people were not invited by the project. In another case, a few hamlet committees were not represented by all ethnic/caste groups. About more than 24 households located at distant from clustered communities and between two hamlet committees were found excluded.

5.2 Representation

Diverse people's representation in community groups shapes the exercise of power and the allocation of benefits in terms of material and non-materials (Sengupta, 1996). Particularly this variable has also been related to the project's objective, which intended to increase the participation of disadvantaged people in BIWMP's activities so that they became self-reliant and respected in a society. Generally, there is no absolute figure or ratio of community group members to be in a group, which ought to be accounted for a group, but it is a matter to compare with group's purpose and the proportionate of population of different caste/ethnic groups living in respective village.

In order to analyze proportionate representation of caste/ethnic groups in all 19 hamlet committees and 18 membership groups, both qualitative and quantitative data were collected. The relative representation was compared across the caste/ethnic groups and the type of community groups formed in both heterogeneous and homogeneous communities. Results of the analysis showed no significant different in representation in hamlet committees across the caste/ethnicity (Table 5.1). Only the representation of Brahmin in hamlet committees was slightly less than their total population in villages with heterogeneous communities. Likewise, the representation of Newar and Dalit was found slightly higher than their respective population in homogenous communities (Appendix E8a and E8b). On average, there was one Dalit member in each hamlet committee while there were five members belonging Brahmin/Chhetri. No Dalit representation was found in three hamlet committees while few households of Dalit were living there. Similarly, in three particular community forest user groups no one from Newar and Dalit was included, although there were considerable numbers of households belonging to these caste/ethnic groups (Table 5.1). Though, proportionally represented in local community based organization, the problem was that just one Dalit member could not influence any decision made by the organizations. Being majority, always other caste/ethnic groups were influencing the overall decision-making.

Table 5.1: Representation of people in executive committees of community groups

Type of groups	Proportion	Brahmin/ Chhetri	Newar	Tamang	Dalit
Hamlet committee (n=19)	No. of members	97	22	34	18
	Percentage	56.7	12.9	19.9	10.5
Income generation (n=17)	No. of members	25	14	30	12
	Percentage	30.9	17.3	37.0	14.8
Community forestry (n=3)	No. of members	20	-	11	-
	Percentage	60.6	-	39.4	-
Other membership groups (f=4)	No. of members	16	6	7	-
	Percentage	55.2	20.7	24.1	-
Total	No. of members	158	42	82	30
	Percentage	50.6	13.5	26.3	9.6

Source: BIWMP, Palung field office database, 2002

NB: n= Total number of groups formed by BIWMP

f= Number of groups formed by BIWMP, but not the total number (Taken for analysis due to only reliable database was available only for 4 nos.)

Generally, local people were supposed to nominate to the group members, where the elites and project staff facilitated them. Villagers were the key actor for the selection of group members. Overwhelming majority of group members were selected by them. No significant variation was found in actors involved in the selection of group members across the caste/ethnicity. The rest of the members selected by the project staff were interfered in the selection (Table 5.2).

As the project had an aim to increase the women's involvement in any key position of any community groups formed by it, there was appreciable achievement on this. About one-third women members were selected for all in all general groups, like hamlet committee, community forest user committee (Appendix E7). It was the effort of project staff in which they influenced to all villagers to have women members in their groups. Although there were some rooms for improvement in selecting active women, instead just fulfilling the numerical target of proportionate in the groups, staff's role had rendered an appreciable attempt. Because, some time without positive discrimination the disadvantaged people cannot be involve in community organizations to make the power balance in community organizations (Schrader, 1998). Although such opportunities could be employed for shaping the community groups to a pro-disadvantaged group, absence of objectively targets to Dalit people could not resulted in the favor of Dalit to ensure their adequate representation in community groups.

Table 5.2: Actors who selected/nominated group members for all type of community groups by caste/ethnicity

Actors	Brahmi/Chhetri (f=50)	Newar (f=25)	Tamang (f=47)	Dalit (f=38)
Villagers (%)	82	80	79	74
Project staff (%)	18	20	21	26

Source: Household survey, 2002

NB: f= frequency of respondents

Inadequate knowledge acquired about the local socio-economical and political interdependency between the caste/ethnicity project staffs found closer to the local elites. As a result, advantaged people had better chance to get the information regarding the group formation, which eased them to be nominated or selected. Mostly they were political leaders, rich villagers, ex-ward chairmen, vice-chairmen, relatives of the incumbent VDC chairmen and schoolteachers. This indicates that disadvantaged villagers could not get opportunity to play an influential role in village organizations and remain just silent followers of the traditional ways of social system.

Several reasons were noticed from group discussions and interviews that why less or no representation of Dalits in user groups. Dalits pointed out that they were not aware of what was happening in their villages. They added that they did not have any idea about the objectives of group formation. This came in to true that since these people were historically suppressed from the caste based discrimination they felt humiliation and could not actively participate in the forum, where non-Dalit present. If Dalits were nominated by some one from non-Dalit leaders, Dalits used to node the head, meant to objection, though they may have some arguments (Gurung, J., 2002). This has also led to exclusion of Dalits from the process of empowerment. For example, a case recorded from hamlet committee represents a meaningless representation of Dalits in community groups.

A project field staff called villager's meeting through some local leaders of Dandagaon village, ward no.3 of Daman VDC for formation of a Hamlet Committee (HC). There were 20 households of Dalit and 117 households of Chhetri in that village. It was in third week of June 2002, just one week before of foot-trail improvement. Upon the call, around 50 persons, including some political leaders and teachers from all caste groups had assembled in the meeting. The project staff explained the purpose of meeting and requested for formation of a HC. They also advised to include women and Dalit in the HC. Then, the villagers nominated nine persons for the HC, including two Dalits and three female, one from Dalit. Two Dalit members were Rita Pariyar (40yrs) and Kedar Pariyar (34 yrs). Their occupation was tailoring. Then now the HC met for only one time during the improvement of foot-trail. Interestingly majority of non-Dalit members of HC did not even know who Dalit members were in HC. Neither Dalit members considered themselves as HC members. According to Dalit members their names for the HC were suggested by a village leader, and they did not know anything about HC. " We do not know any things about the committee, nor we have attended any meeting after the formation of HC" said both of Dalit members of HC, who were interviewed by the researcher.

5.3 Group Meeting

The project has emphasized people's participation in all group activities to ensure sustainable watershed management. In this regard group member's participation in meeting is essential to secure their continued support to project activities. The gap of one meeting to another was found varied. Income generating groups met regularly once in a month. Members of these groups said that they attended the meetings regularly, as they were keenly interested in their saving and credit activities. While hamlet committees and forest user groups met mostly irregularly. Other groups met as per requirement (Table 5.3).

Most of the community groups examined had set agenda prior to the group meeting. It was the chairperson who mostly fixed agenda, while group secretary and the

group members had also set the agendas. Besides, the project staff also facilitated to hold meetings of one-third hamlet committees (Table 5.4). Even they tried several times to catch few group members of hamlet committees to hold meetings, when a meeting is essential for the project staff to get formal decision regarding the project activity implementation. It was occurred because different social and economical status and level of awareness of group members as well as perceived benefits from the groups had determine the willingness of the group members to participate in group meetings in regular basis.

Table 5.3: Frequency of meeting of community groups

Type of community groups	Frequency of meeting		Comments/Remarks
	Monthly	When Irregularly required	
Income generating group (n=17)	94%	6%	Fixed date and venue for meeting once a month was established. Giving prior notice can be changed the date and venue, in rear case. Only one income-generating group held meeting irregularly. No variation found in meeting attendance by caste/ethnicity. Satisfactory rules and regulation established for meeting conduction.
Hamlet committee (n=11)	72%	28%	Meetings were organized for activity planning and implementation, but sometimes upon the request of the project staff. Less participation from disadvantaged group. Group's agenda were decided by Chairperson/Secretary and some time by the project staff. Ineffective dissemination of calls for meeting.
Community forest user group (n=3)	67%	33%	Meetings were timely organized mostly inline with approved community forest operational plan. Relatively regular facilitation in meting was provided by project staffs. Meeting agenda were fixed in advance.
Other group* (n= 4)	100%		Formal meetings were organized during implementation. Few joint meetings were organized with project staff. No any rules and regulation regarding meeting established.

Source: Household survey, 2002

NB: n= number of community groups examined;

* other groups included drinking water/irrigation groups

Table 5.4: Selection of meeting agenda

Type of Group represented	Setting of agenda prior to meeting		Actors setting the meeting agenda			
	Yes	No	Chairperson	Secretary	Group	Project staff
	%	%	%	%	%	%
Income generating group (n=17)	94	6	41	24	29	6
Hamlet committee (n=11)	95	5	45	18	9	27
Community forest user group (n=3)	67	33	33	33	33	-
Other groups (n=4)	67	33	67	-	-	33

Source: Household survey, 2002

NB: n= number of community groups assessed

In order to reveal the extent of willingness of the members to participate in the group, members were asked to express their opinion. It is obvious that three main reasons had influenced community group members to participate in groups meeting (Table 5.5). In general, there was no significant variation in reasons that influencing to the group members affiliated to different caste/ethnic groups. Expected benefits from the project delivering through the community groups found most influential reason among the reasons listed (Table 5.5). About half of the Dalit members next to Brahmin/Chhetri had considered this reason as the most. The forceful participation due to group's rules/regulation and request made by project staff and village or group leaders was also considered by considerable proportion of group members belonging to Dalit and Tamang groups. It was because the level of esteem and awareness among them was relatively low and the other hand they were informed about the meeting, though less, not in good enough time in advance, as usually key post holders decided the schedule of meetings. There was also good reason of participation in the group meeting regardless their caste/ethnicity. With considerable frequency it was found that members regardless their caste/ethnicity have desires to serve the local people as social workers for the people's betterment (Table 5.5). This reason stands for a good potential to maximize the benefits drawing from the project for the sustainable way.

Table 5.5: Reasons for participation in group meetings

Attributes	Brahmin/ Chhetri (f=50)	Newar (f=25)	Tamang (f=47)	Dalit (f=37)
To provide social service to villagers (%)	32.0	48.0	36.2	24.3
Forced by group's rules and request from project staff and group/village leaders (%)	18.0	16.0	29.8	27.0
Due to expected benefits from the project (%)	50.0	36.0	34.0	48.7

Source: Household survey, 2002

NB: f= number of community group members;

5.4 Peoples' Perception of BIWMP Induced Community Groups

Though the BIWMP has made some efforts to organize the people it is important to see on that how these people perceive their organization in terms of representation, group meeting, their sentiments and work division. Institutional survey (included in household survey questionnaire, as a part of the household survey), focus groups discussions, and interviews were employed to acquire the information regarding this. All about these have been discussed under this section.

5.4.1 Representation in Groups

The representation of different social group, and economic class into any community groups may serve as an indicator of the people's participation. Thus, the representation from disadvantaged people in the BIWMP induced community groups was found as an important indicator. The project had induced several community groups. The groups were formed not separately for aiming to serve to any specific caste/ethnic groups, instead formed according to nature of activity and spatial coverage. In this regard, the project had facilitated, even somewhere the project had forced to achieve the representation of diversity. But, it is important to see that how the people had perceived of achieved representation; whether they ready for continuing the support to the groups or not? Therefore, respondents, including both community members and non-members, were

asked in household survey to express their level of satisfaction regarding the representation of different caste/ethnic groups in BIWMP induced community groups. Two category scaling, satisfy and dissatisfy, was used for the analysis. Besides, information of key informant interviews and focus group discussion were used for analyzing the reasons for the extent of satisfaction.

In overall, Tamang people were most satisfied, followed by Newars and Dalits. The Brahmins/Chhetris accounted for the lowest satisfaction (Table 5.6). In particular, majority of community group members among the respondents had claimed for satisfaction with the representation in the community groups. For the case of non-member respondents, the claims were found different from the member's opinion. The majority of satisfied non-members were found in Newar and Tamang caste/ethnic groups, while there were equal proportions for both categories in the Brahmin/Chhetri caste group existed. The dissatisfaction of non-group member in Brahmin/Chhetri caste group was found closely related to political ideology rather than the caste/ethnic composition, which is out of scope of the study. For the case of Dalit respondents there was significant difference in responses that majority of non-members respondents had claimed for not satisfied with current representation status of respective community groups.

The significant difference in Dalit caste group had deserved the crucial reasons. The Dalit respondent during interviews opened the reasons for dissatisfaction. Which were mostly related with social issues. The people's satisfaction of the representation in BIWMP induced community group was very much relied on the age-old social tradition. Non-Dalits in general, and Brahmin/Chhetri in particular were the elites of the area, who hold the major political and social power. With the gradual changing of awareness on rights in the country the disadvantaged people, including Dalits of the study area were expecting to develop self-esteem and gain social respect for the social and economical change of their lives. Owing to these facts the combination of the awareness within own and facilitated roles from the BIWMP the Dalit people had developed overwhelmingly expectation to represent in groups, which were formed for serving to the settlers of that cluster where they live. Though there was effort from the BIWMP in order to increase the representation of Dalits, the induced groups did not composed of that much number of Dalits as the Dalit people expected. Contrary, many groups, particularly HCs and CFUGs were remaining within the hand of the elites, as continuing tradition of the unfair social relations.

Table 5.6: People's satisfaction with representation of different caste/ethnic members in BIWMP induced community groups

Status of respondent	Brahmin/Chhetri (f=64)		Newar (f=31)		Tamang (f=53)		Dalit* (f=56)	
	%		%		%		%	
	Satisfied	Dissatisfied	Satisfied	Dissatisfied	Satisfied	Dissatisfied	Satisfied	Dissatisfied
Member	70.0	30.0	68.0	32.0	80.4	19.6	78.4	21.6
Nonmember	50.0	50.0	66.7	33.3	71.4	28.6	47.4	52.6
Total	65.6	34.4	64.5	35.5	79.2	20.8	67.9	32.1

Source: Household survey, 2002;

NB: f= frequency of respondents;

* Denotes significantly difference, Pearson chi-square value 0.019

In the assessment of member's satisfaction by type of group revealed that more than three quarter of members were satisfied with the representation (Table 5.7). No respondents for the claim of dissatisfaction were found from other small groups (construction management committees). The second highest magnitude of frequency of satisfaction was found in community forest groups, while the lowest for income generating groups. Some of the members of income generating groups, during the group discussions, expressed that they were not satisfied maximally. Because, the groups were not able to include all poor people in their groups sine the groups in beginning phase it could not accommodate and render the services to all. Despite the dissatisfaction with the representation of caste/ethnic groups in executive committee of community groups some of the people regardless their caste/ethnicity had expressed that educated people who can read and write and communicate with the different organizations should not be left out from the committee while making the balance of caste/ethnicity in the composition of a committee. Otherwise the group would face many problems like not proper minuting and communication with outsiders.

Table 5.7: Members' satisfaction with representation of different caste/ethnic members in community groups

Caste group of respondent	Attributes	Income Generating Group		Hamlet committee		Community Forest Committee		Other small group's committee	
		N	%	N	%	N	%	N	%
Brahmin/Chhetri	Satisfied	27	67.5	4	80.0	1	50.0	3	100
	Dissatisfied	13	32.5	1	20.0	1	50.0		
Newar	Satisfied	13	68.4	4	80.0	1	100		
	Dissatisfied	6	31.6	1	20.0				
Tamang	Satisfied	28	77.8	4	80.0	5	100		
	Dissatisfied	8	22.0	1	20.0				
Dalit	Satisfied	26	78.8	3	75.0				
	Dissatisfied	7	21.2	1	25.0				

Source: Household survey, 2002

NB: N = number of members of particular group

5.4.2 People's Sentiments

The satisfaction of group members was also attributed with their sentiments. Measurement of the sentiments of the group members was considered as accelerating factor associated with the functioning system of community groups. As agreed by Eade (1997) the higher the positive sentiments the more active role of members, and the role facilitates to the greater participation of the people in respective development activities. Being a member of any community group meant accruing the social status, however subject to be differing according to the social and economical status of a member.

Being influenced from above the researcher had asked group members for expression their sentiments. In the response the majority of members had felt as a good social worker and the rest of the members expressed both that their prestige had been improved or they did not feel any change (Table 5.8). The degree of change in terms of quality sentiments had been observed highest in Dalit member across the caste/ethnicity and followed by Tamang and Brahmin/Chhetri. Being suppressed from a traditional culture

within society Dalit in the study area relatively felt a greater achievement once he/she found to be a member of a community group. Because he/she always looking a member as prestigious person. Such sentiment in Tamang members was also seen relatively higher than other members, after Dalit. However, some of the Newar and Brahmin/Chhetri members during the interview did not recognize that being a member of the groups was a prestigious as that was not a new position for them. Because, they in past had already served as ward chairperson, held several position in previous community groups formed by other agencies on one hand and the other hand their caste group is traditionally taken as superior caste (Table 5.8).

Table 5.8: Feelings of people as group member

Feelings	Brahmin/ Chhetri (f=50) %	Newar (f=25) %	Tamang (f=47) %	Dalit (f=38) %
Social status improved	4.0	-	10.6	31.6
Feel as a social worker	82.0	84.0	78.7	60.5
No change	14.0	16.0	10.6	7.9

Source: Household survey, 2002

NB: f= number of respondent members of community groups

5.4.3 Perceived Role of Community Groups

The role of community group, commonly, is understood as having the appropriate and adequate skill and knowledge serve for problem identification, prioritization, implementation, monitoring, and evaluation of any activities intended to provide benefits to the community people fairly (Eade, 1997). But, while the community is diverse with social and economical classes the concerned people around the community groups may not equally satisfied with the given services by the groups. The fulfillment of different interests may govern the satisfaction of people. Therefore, assessment of people's perceptions was meaningful which targeted to see prone and cones of present style of group approach including the capacity building and empowering process adopted by the BIWMP. In this course, thus, the social diversity of the study area the respondents were asked to weight the variety of task performed by the respective community groups induced by the BIWMP in the area.

In overall, respondents were satisfied with the performed role of respective community groups. The overall satisfaction was found with higher score in Brahmin/Chhetri followed by Tamang and Dalit, whereas the lowest level of satisfaction was accounted for Newar (Appendix E9). Maintaining the transparency of group fund was the most and maintaining the balance of social diversity in the groups was the least satisfied tasks as perceived by Dalits. Dalits' dissatisfaction, in general, was found entangled with caste-based discrimination. Detailed perception of group tasks by caste/ethnic groups are given in following sections.

a) Leadership and Work Division

Leadership and division of work in the BIWMP initiated community groups were perceived satisfactory by the majority of respondents (Table 5.10). However, a little variation was noted as compared across the caste/ethnicity due to diversity of members in

the groups. The leadership of community groups was mostly led by Brahmin/Chhetri as the key positions such as Chairperson, Vice chairperson, Secretary and Treasurer of hamlet committees were filled by them (Appendix E7). In response to why satisfaction with the leadership, the education level of key position holders as well their involvement in other areas, like teaching, ward committees and political parties were found to be determining factors. But, little dissatisfaction perceived among the majority of Newars and Tamangs as they were fall into moderately satisfaction category. Because, as the respondents claimed, there was lacking of the alternative leadership in their respective groups. Only few members holding key positions repeatedly play functioning role in the group. Once he/she falls seek or went outside of the village the members cannot hold meeting and take any decision. In the development of second row leadership project had never gave attention. Few hamlet committee members had claimed that they had not receive any training regarding institutional development of their group, though few of them have demanded.

The division of role among the group members was another factor for lessening the group's capacity as perceived by the respondents. Less than half of Dalit and Tamang respondents were not fully satisfied with existed work division (Table 5.9). No existence of group's constitutions, guidelines for roles and the responsibility were another cause for their dissatisfaction. Majority of interviewees reportedly expressed that project's role for group formation was largely limited within just for assembling few people in to a group. Who should do what was neither shared well among the members nor the project facilitated on this, even till now. On the other hand Dalit members had also added that although they were in very few groups they were always remaining in minorities and seldom get responsibility to be furnished from the groups due to that non-Dalit members do perceive them incapable and do not want to be under the leadership of Dalits.

Table 5.9: Perception of leadership and work division of community groups

Area of satisfaction	Attributes	Brahmin/ Chhetri (f=49) %	Newar (f=25) %	Tamang (f=46) %	Dalit (f=37) %
Satisfaction with leadership	Dissatisfied	4.1	20.0	2.1	2.7
	Moderately satisfied	32.7	44.0	51.1	40.5
	Satisfied	63.3	36.0	46.8	56.8
Satisfaction with implementation of group's decisions	Dissatisfied	6.1	28.0	4.3	2.7
	Moderately satisfied	36.7	36.0	34.0	32.4
	Satisfied	57.1	36.0	61.7	64.9

Source: Household survey, 2002

NB: f= Number of people responding to the question.

b) Maintaining Balance of Social Diversity

The social diversity, for the scope of the research, included only difference in caste, however little touched to aspect of gender. From the response of several interviews and household survey the understanding of issue of diversity of gender role and castes was found varied by the identity of a member by his/her sex and caste/ethnic affiliation, not by the type of a group. Thus, the household survey showed that majority of respondents were satisfied with the capacity of group to consider the above issues, however significantly differed by the caste of the respondents (Table 5.10). BIWMP's preference for women's involvement in the institutions as well as existence of large number of IGG in the area had

been perceived positively by the male respondents too. Since Dalit women were represented in the IGGs and held the responsibility for women development they did see that groups were capable to handling the gender issues.

Existence of caste based discriminatory practice in the community groups was another hindering factor serving to dissatisfaction with the groups' capacity as perceived by majority of Dalits and some of educated non-Dalit people too. Among the dissatisfied non-Dalit respondents Newar had accounted for the highest proportion while Brahmin/Chhetri for the lowest (Table 5.10). The key informant interviews with few members had revealed some social reasons for the dissatisfaction. The dissatisfaction was occurred when the groups used to hold meeting without properly informing the Dalit members on one hand and the other hand the splited seating arrangement during the meeting used to had discouraged Dalits by which the active and high moral of a Dalit member participated in a the meeting had lessened the feeling of group unity. Therefore, majority of Dalit members did not see that the respective groups were capable for accelerate in bringing the social change. Although they felt positive to the regards of Dalit's representation in the groups their minor representation and flavor of caste based discriminatory behavior in the group compelled them to see the group as incapable. In such matter the respondents made comments that the project was not looking to enhance the capacity of the groups, like preparing plans, collaborate with vDCs, national Dalit NGOs, and social awareness.

Table 5.10: People's perception of community group's role in maintaining caste and gender sensitiveness in group

Member's satisfaction Attributes different areas		Brahmin/ Chhetri (f=49) %	Newar (f=25) %	Tamang (f=46) %	Dalit (f=37) %
Satisfaction with awareness on gender sensitiveness	Dissatisfied	4.1	20.0	8.9	
	Moderately satisfied	22.4	24.0	28.9	16.2
	Satisfied	73.5	56.0	62.2	83.8
Satisfaction with no practice of caste discrimination against	Dissatisfied	6.1	20.0	11.1	37.8
	Moderately satisfied	24.5	32.0	20.0	35.1
	Satisfied	69.4	48.0	68.9	27.0

Source: Household survey, 2002

NB: f= Number of groups members

c) Transparency of Group Fund

How the settlers had perceiving their respective groups' role in maintaining group fund and financial transaction may one of the most crucial indicator for the group's reliability for the project. Instead grouping the respondents' perceptions by type of group, the responses were grouped by caste/ethnic groups. Because the psychology embodied into the age-old caste system of respondents to assess the group's behavior was meaningful rather to analyse by type of groups in which the respondents belong.

In the results of analyses of surveyed data almost all community groups except all IGGs did not have group funds. It meant that respondents were not much concern about the fund. That is why response on group transparency regarding group fund was found satisfied among majority of respondents. Dalits were highly satisfied than others (Table

5.11). Because, majority of the people had positively perceived monthly saving and credit programs of IGGs. On the other hand there was good monitoring system for record keeping of saving and credit program in the IGGs of the area. More than that regular meeting of IGGs and loan borrowers' door to door visit by the project women motivator as well as from cooperative, the finance intermediates, had made the fund transparent as perceived by the respondents.

Table 5.11: Members' satisfaction with transparency of group funds

Attributes	Brahmin/ Chhetri (f=49) %	Newar (f=25) %	Tamang (f=46) %	Dalit (f=37) %
Dissatisfied	4.1	16.0	2.1	
Moderately satisfied	22.4	32.0	27.7	18.9
Satisfied	73.5	52.0	70.2	81.1

Source: Household survey, 2002

NB: f= Number of members responding to the question.

In general, formation of community organization under BIWMP has been considered as foundation for the organizing the people for the betterment of settlers' lives so that the settlers can collectively contribute in the sustainable management of the Palung watershed. But a strong argument was noted regarding the disparity in the access to the community organizations, where Dalit people virtually denied. So, aiming at broadening the disadvantaged people's participation connecting with the implications of the community organizations in over, participation in planning and implementation will be separately dealt in the subsequent chapter.

Chapter 6

People's Participation in Planning and Implementation

People's participation had been the approach adopted by the BIWMP for planning and implementation of its activities. Such emphasis on people's participation was to secure people's contribution to the project activities, to better manage resources and to empower the participants for self-reliant. People's empowerment objective of the project aims at strengthening overall socio-economic condition of women and disadvantaged people, including Dalits. Guided by these objectives project efforts were supposed to concentrate on people's participation in the entire project cycle from the initial stage of identification and prioritization of community problems to subsequent stages of planning and implementation till to monitoring and evaluation.

This chapter examines the process and extent of peoples' participation in planning and implementation by caste/ethnic affiliation of project participants. Assessment on monitoring and evaluation, as stated in the limitation of the research, have not been conducted. Due consideration has been given to the understanding of complex composition of the people of the study area that characterizes with social stratification. Notably, the chapter attempts to seek answer to three questions: participation in what? who participated? and how the participants were involved?

6.1 People's Participation in Planning Process

Ensuring participation of disadvantaged people in planning is most challengeable task where the socio-economic and cultural stratification exists (Uphoff, 1980 cited in Schrader, 1998). Most such community participation approaches may get threats from local elites who might capture the benefits of the projects, even if the group is homogenous. Moreover, elites may defectively articulate the real interests of disadvantaged people to capture the benefits from the development projects (Asthana 1994, cited in Schrader, 1998.) So as suggested by them the study discusses on the planning process, which involves preplanning consultation with settlers, source of information employed for the planning, identification and prioritization of the needs and decision-making systems.

6.1.1 Pre-planning Consultation

Consultation with people at the beginning of project preparation stage is essential to assure people's participation in planning in subsequent stages of the project cycle. The preparation phase for BIWMP II had started in 1997, when the agreement between CEC and the HMG/Nepal was made. An interdisciplinary team composed of national and international experts visited selected areas of six districts. No doubt, the team visited mostly accessible areas and had rapid rural appraisal (RRA), field observation and very limited interaction with the local people, however mostly with elites. Several line agencies and NGOs were also consulted by the design team (BIWMP, 2001). Finally, project design was finalized for the BIWMP project II, with the provision of some target outputs, framed within the Global Work Plan (GWP). The GWP has been set as the milestone for the project impact, which was emphasized by the CEC counter part. There is an objective that directly focuses on Dalits, women and other disadvantaged people as stated in project

objectives as *"to promote income generation opportunities favoring women, lower caste (Dalit) and poorest."*

The informal interaction between project staff helps local people to understand about the project. Such interaction also creates many opportunities for benefits sharing from the project interventions. It is obvious that such interaction happens in a biased way in rural Nepal, particularly where Dalits are living (Team consult, 1999). Same as to that elsewhere in Nepal, the BIWMP project staff, as stressed by VDC members, used to visit people who could offer better logistics and food better, and who could provide information about the village. Even they were provided better logistics by Dalits, the project staff would have preferred to deal with non-Dalits due to the prevalent practice of untouchability in rural areas of Nepal. A number of reasons may attribute for this: (i) the absence of code of ethic for the project staff banning them for doing discriminatory practice connected to the project performance, (ii) lack of project staff, particularly extension staffs, belonging to Dalit in the project, (iii) the motive of getting better facilities among the staff, and, (iv) inability of Dalit people for treating the staff as do non-Dalits. All these factors led to the excluding the disadvantaged people from the opportunities of equal access to information about the project at the beginning stage of planning.

In order to assess the variation in efficiency of project information dissemination between caste/ethnicity respondents were asked in household survey. In response to question when they came to know about the BIWMP is working in there village, majority of respondents claimed that they became aware only when the project started to form community groups for implementation of activities. Most people only a year later after the project implementation were known about real existence of project. Besides, the duration needed for reaching information to the settlers varied across the caste/ethnicity groups, because above mentioned ways of informal interaction. For instance, people belonging to Brahmin/Chhetri group got project information relatively faster as compared to other caste/ethnic groups. Dalits on the average had got information only after five months later than the Brahmin/Chhetri (Appendix E10). It implies that the project extension in the beginning of the project was biased to elites and higher caste people. It was happening due to mostly the field staffs were from out side of the project area.

People received information about project activities from meeting project staff and village leaders. Irrespective of caste/ethnic affiliations overwhelming majority of settlers had received information from the project staff (Table 6.1). The project staff visited formally and informally to the villages under the project area through different ways. In the beginning stage of the project, they had to report site information to the project office, accompany to researchers in the study area, as well as they had to prepare tentative plans of action for the next year project. From the interview it was revealed that staff after a year of launching the BIWMP in the study area staff made village-to-village visit. For overwhelming proportion of the villagers this visit was the first source of information on the BIWMP (Table 6.1).

Table 6.1: Sources of information about BIWMP used by settlers

Source of information	Brahmin/ Chhetri (n=64)	Newar (n=31)	Tamang (n=54)	Dalit (n=68)
Village mass meeting	12.5	16.1	9.3	10.3
Project staff	84.4	67.7	88.9	89.7
Village leaders	3.2	16.1	1.9	

Source: Household survey, 2002

NB: n= number of respondents

Village meeting as a means for disseminating information was used very less frequently. Four village meetings were organized with the attendance of the majority of people just before the hamlet group formation. This happened as any guideline or specific procedure to call a village meeting for dissemination of information, which is done on ad-hoc basis. Normally the project staff called village meetings through the targeted village leader. But, there was neither provision to provide information on meeting to all villagers, irrespective to caste/ethnicity nor the community audio tower had been used for such purpose. That is why only about one-tenth of all groups had reportedly got information through village meeting (Table 6.1).

The village leaders did not play significant role in dissemination of information among fellow villagers. Respondents reported that for few years village leaders were not active due to unsafe situation created by Maoist insurgency.

6.1.2 Need Assessment

The needs of the community people were vary according to their socio-economic condition. Prioritizing local needs requires an effective process assessing needs aspiration of disadvantaged people. In order to assess the model of problem identification and prioritization of the needs besides the household survey and group discussions, project reports and field database were reviewed along with interviews with sector specialists of the project. Clearly it came to know that when a significant change was made in the senior management of the project after two year of project's implementation¹ only then the project had adopted several standard procedures of planning and implementation (Figure 6.1). Before that period, there was no standard participatory planning techniques were adopted. The project had selected activities on an ad-hoc basis. No properly gathered information regarding people's problems and analyzed. For example one can see in feasibility reports of engineering measures like landslides/gully controlling and stream channelization that there are no social studies and analyses carried out. Most of the technical activities were imposed to meet the GWP. The project head office had played the major role in regards to project decisions (BIWMP, 2001).

A significant change, as justifying by several studies (Sing, 2001, Bhandary, 2001, BIWMP, 2001), was noticed after the period of newly overhauled project management. The project adopted more flexible and participatory process of planning approach. According to the planning process set by the project, people share their views and opinion on problems in group meetings, usually organized by project staff. Then collecting the problem at field centers CEST makes analysis matching with PRA and planning workshop

¹ A brief history is given in project profile, chapter 4.

reports. Then the team forwards to District Soil Conservation Office for district wise planning to be sent to the project head office. PMU at central office workouts for whole project plans for all areas under the BIWMP inline with GWP. Only then the head office makes appraisal (Figure 6.1).

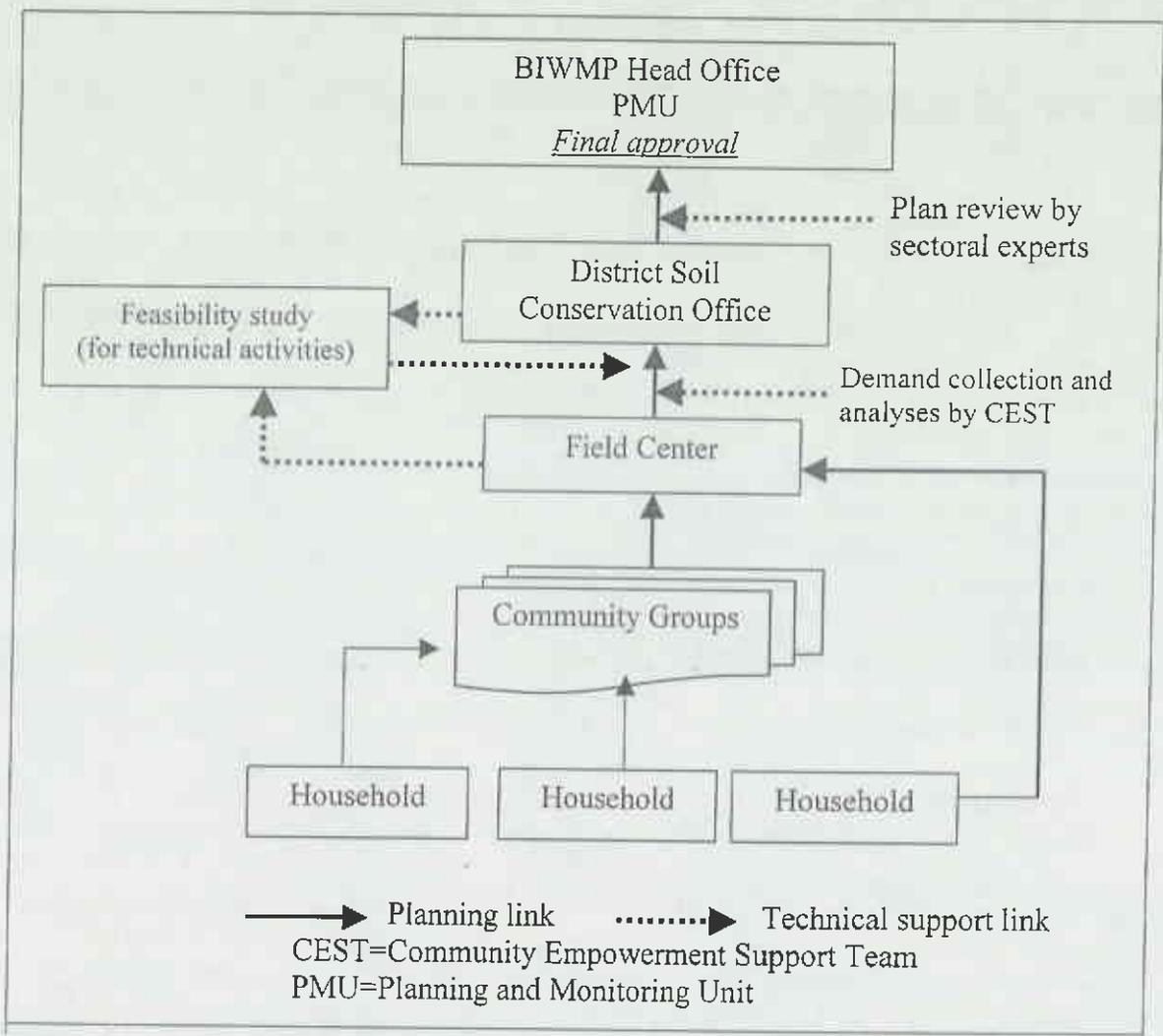


Figure 6.1 Project planning process as provisioned by BIWMP

Since lesson learnt from the two years' planning exercise, few efforts had been done by the project so far and are planned for future in order to increasing the facilitation skills of the project staff on making planning process more participatory. Several trainings were provided to planning staffs working at district as well as field levels. But, from the verification of the planning provision with the current practice it was found that the effectiveness of the planning model was in evolution stage. The practice undertaken presently found not fully in line with the principle of community based planning process. Staffs were unable to help the people in identification of needs that lie at the root causing for substandard quality of life. Because, suppressed mental stimuli of the poor people may not find the much better solution for their better life (Dale, 2000). Moreover, Dalit's mental stimulus is characterized by depressed ideology shaped by age-old caste hierarchical system, which often comes out as "fatalism²" (Team Consult, 1999). In such

² A specific word, state of thought, widely used these days in Nepal's caste structures is a contribution of Bista, Dor Bahadur (1991).

context, it was urgent to help disadvantaged people to deeply analyse the socio-economic factors that entangled them in vicious circle of deprivation and deteriorating their lives. As suggested by Schrader (1998), the project was staff had to play to identifying and formulating the actions that can address to disadvantaged peoples' problems and help them for breaking the vicious circle. Interviewing with project staff and settlers found that disadvantaged people were not especially provided with support in such way, contrary their demanded activities, whatever, were prioritized chaotically.

6.1.3 Prioritization of Needs

Prioritization of needs after requesting to the staff relied upon the hand of the project. Many evidences regarding to above were noticed during the field study. The CEST and field staffs usually get requests individually from people for the activity support or through community groups induced by the BIWMP. The informal ways, personal request had been occurred largely than the formal. Staff used to receive numbers of requests from the people while they met people wherever and whenever, during walking around the villages or at the moment of marketing or at his residence place. The requests were noted in staff's diary or compiled in folders for taking the action.

In other side staff had participated in few community groups to collect the demands. In this course they were found highly influential due to mainly three things: (i) low capacity of community group to formulate the project for their villages, (ii) BIWMP's targets were not clearly shared with the local people or groups, (iii) target oriented motive of staff as their performance was measured with his/her contribution in achievement of project targets. All these enabled staff to get a list of activities from the groups or individuals according to the project's physical targets. No application of PRA or any other participatory tools were applied, which issues have also been noted by project midterm evaluation and studies on institutional development of BIWMP. It implicitly shows that community groups were not mobilized in real sense for the planning process, instead they had followed the steps instructed by the staff to overcome with list of activities what a staff intended to.

Due to above circumstances field staff used to prepare a list of activities on his judgment. Interviewing to few staffs it was revealed that field office usually gets gross quota for selected activities to be implemented in that particular sub-watershed. The quota subjects to transfer to another sub-watershed if the planned activity is not accepted in the area or seems to be threat. Then, field staff matches with the list of compiled requests and decides whom to provide the activities. In such mode of selection of needs village elites do influence to the field staff. Such practice overlooked the wills of needy people and has lessened the chances of fulfilling their needs. The people repeatedly reported that community needs that relayed to the project authority were not approved, as it was demanded, or getting delayed in approval or postponed for next year, or the people received no any response. During the fieldwork researcher of this study repeatedly observed that people frequently asked field staffs to know what about the status of their demands. They were disadvantaged people who personally asked to field staff, however their demands found to be littler vary respective to their caste/ethnicity.

In order to review people's needs, as they preferred, they were asked for recalling the type of activities in prioritized order. In the response the respondents listed out some main activities demanded to the project staff personally or formally during the whole

period of the project in the study watershed (Appendix E12). The listed activities were grouped into several components consistent to the project. In general, the distribution of percentage of demand appeared comparatively heavier for the infrastructure activities, then followed by income generating, agriculture and forestry, erosion hazard treatment and the training and extension (Table 6.2)

Table 6.2: Activities demanded by settles individually or through community groups (multiple choice based on responses)

Activities	Brahmin/ Chhetri (f= 217) %	Newar (f=109) %	Tamang (f=186) %	Dalits (f=213) %
Infrastructure Improvement	31.0	45.9	29.5	40.3
Income Generating	24.0	29.4	28.0	27.7
Training and Extension	8.7	7.4	8.0	15.6
Agriculture and Forest related	25.3	9.1	22.6	13.6
Erosion Hazard Treatment	11.0	8.2	11.9	3.7
Total percentage of responses	100	100	100	100

Source: Household Survey, 2002

NB: f- total number of main activities requested

A thinking of collective action in rural areas, people regardless their caste/ethnicity preferred infrastructure activities like school building, road, temple, water supply, and resting place (Schrader, 1998). This comes true in the demanding trend of the people in the study area. The component of infrastructure, which included foot trail improvement and drinking water supply, was comparatively prioritized activity by the people regardless their caste/ethnicity. Despite the erosion hazard control activity, like land slide and gully control are construction oriented, was prioritized fourthly by the settlers. It was because no majority of downstream people demanded these. Notably, very few portion of the Dalit, as compared others, prioritized them.

Due to low level of income of people, high requirement of financial inputs for their occupations like for vegetable production, lack of community based finance institutions in the study area, and good performance of saving and credit programs in nearby watersheds people irrespective to their caste/ethnicity had demanded the monthly saving and credit activity after the infrastructure. But, the priority given to this activity found varies across the caste/ethnicity of the demanding people. Of them Newar accounted for majority while the Tamang for the least. But, it was noticed that the proportions claiming for saving and credit among Dalits, Brahmin/Chhetri and Tamang were not significantly varied.

Due to increasing demand of vegetable production and increasing awareness on forest conservation people demanded the agriculture and forest activity as thirdly important, on general. Within this activity training on agriculture was the most demanded by the Brahmins/Chhetris and Newars. Similarly the training and extension, which relatively lies on the bottom of the listed activity, had variation across the caste/ethnicity. It was Dalit group who demanded literacy classes with high preference compared to others.

6.2 People's Participation in Decision Making System

Decision making system was examined from the perspective of that how different member of community groups or community members belonging to different caste/ethnic group functions in the decisions making system. The household survey together with focus group discussion and key informant interview revealed that decision-making process was diverse according to the types of community and caste/ethnic hierarchy structure (Table 6.3). It was occurred because of extent of social and economic gap among the group members. The fewer gaps had permitted members to take an active part in-group discussion without hesitation in homogeneous groups, while higher gap contributed reverse.

Table 6.3: Decision-making criteria by composition of group

Types of community groups	Decision making categories			
	<u>Consensus</u>		<u>Majority</u>	
	%	Remarks	%	Remarks
Income generating group (n= 17)	27.1	Fewer consensuses due to holding task for prioritization of credit allocation to a member. No significant variation in Dalit member's presence. But, significant conflict exists in trainee selection through IGG's decision.	72.9	Not enough discussion while going for majority category of decision making. Less influential members could not articulated for any new idea. So, they were remained on setback.
Hamlet committee (n=11)	52.6	Due to low ability of articulation on the discussion issue, culture of silence of Dalits made easier to make decision with consensus in heterogeneous groups.	47.4	Relatively enough discussion in homogenous HCs as there was fewer gaps in social and economical levels of members. But, high potential to exclusion of minorities disadvantaged people in case of heterogeneous composition of HCs.
Community forest user group and others (n=7)	42.9	Although no Dalit members existing in community groups, decision making process incase of community forestry groups was little guided by their operation plans formalized by District Forest Office, as well as members had gained comparatively more knowledge on decision making.	57.1	Relatively open discussion happened. Different extent of dependency on forest led discussions a head. But, nil representation of Dalit in community forest committee resulted in banning to make charcoal.

Source: Household survey, 2002

NB: f= number of community group members

The difference in the decision making process, however, was a consequence of several practices and dealing behaviors and different peoples' ability, which about preceding sections have dealt clearly. So, these facts and figures, coupled with other qualitative information recorded, revealed that discussion in group meeting or village meeting of heterogeneous community were highly treated by the set of discriminatory ideas perpetually associated with caste hierarchy, economic status as well as numerical

strength (term of majority used in democratic process of meeting). Like in other parts of Nepal, Dalits of this area do hesitate to talking to and sitting together with non-Dalits. However, among women IG groups the feeling of untouchables was relatively not so strong compared to other groups. This was due mainly to regular meeting of IG groups, facilitation role of women motivators and a non-formal adult literacy class conducted by the project.

6.3 People's Participation in Implementation

Implementation, in broad sense, is a part of project cycle, and may be described most briefly as the stage between decision and operation. In narrow sense, it is the actual transformation of what has been put on paper during the planning process into physical structures, social welfare improvements (Rondinelli, 1981). So the participation in implementation through mobilization of people in project activities is essential for community-based projects. But mobilization the process of mobilization of people may be both coercive and voluntary. As in decision-making, participation in implementation requires some initial activities such as creating an infrastructure and building up of knowledge of implementation. These were the difficult tasks to mobilize the people equally in the study area due to vast gap in social and economic status of people.

6.3.1 Contribution Sharing

Assessing people's involvement in implementation it was revealed that no variation exists in the form of participation of people affiliated to different caste/ethnicity. In contrast, the form and extent of people's participation varied respective to the nature of activities implemented. A typical division of responsibility established for the project and participating people have determined the form and extent of people's participation (Table 6.4). Guided by the responsibility the form of people's participation was heavily dominated by contribution in the form of physical labor. Infrastructure improvement and erosion hazard treatment were the main activities which consuming that sort of contribution. While, voluntary contribution in the form of time investment was found in extension and trainings on different subjects. The project had provided incentives to training/extension participants besides to the allocation of cash and material support or subsidy for the construction related activities.

The stage of implementation for approved activities started after the sanctions of projects. But due to several reasons vast gap between planning and implementation existed. Approval from the head office on commencing the activities usually gets delayed. Generally, DSCO prepared plans in February month and approved planned reached to the field office in April month of next year. It means people had to wait for a long time, for nearly nine months to get the project activities started. Even the settlers were not sure about the implementation of the activities. Some communities even did not know whether their plan was approved. It resulted loss of patient of very needy people who fabricated the hopes from the project to over come with his/her problems. Besides, the delay in implementation had affected to several activities led by few partner organizations under the framework of BIWMP for the study area.

Financial intermediary, called Plaung Multi Purpose Cooperative Limited (PMPCL) and a NGO called Center for Environment and Policy Research Extension and Development (CEPREAD) were involved in group credit and income generating activities

as the partner organizations under the framework of BIWMP. They worked on the contract basis with the BIWMP. CEPREAD was providing training to cooperative members on saving and credit management, as well as helped in formation new cooperatives in the study area and facilitated them in institutional development process.

Table 6.4: Role of communities and the project in activity implementation

Role of community	Role of project
Training, extension and literacy class	
<ul style="list-style-type: none"> - Select participants for class - Provide class room - Communicate with project field office - Monitor the class 	<ul style="list-style-type: none"> - Organize training and workshop - Provide subsistence allowance to participants - Select literacy facilitator, train and provided salary - Provide stationary, books and lantern - Provide regular instruction and feed back for class
Infrastructure improvement	
<ul style="list-style-type: none"> - Participate in survey - Collection of construction materials and transport up to site (stone, sand, aggregates) - Provide labor (unskilled) - Communicate with project technicians - Keep record of people's labour contribution 	<ul style="list-style-type: none"> - Survey, design and estimation - Make agreement for the implementation - User group formation under hamlet committee - Provide construction materials not available locally (cement, steel bars, tools, pipe and gabion box) - Cash for skilled and semi-skilled labour and supervisor (through UG) - Technical supervision for quality controlling - Coordinate with VDCs for disputes resolving
Income generation	
<ul style="list-style-type: none"> - Organize in group and start monthly saving - Record keeping - Recommend member for getting loan - Request cooperative for loan 	<ul style="list-style-type: none"> - Provide cash support (revolving fund) through cooperative - Provide technical and managerial support to group - Help in preparation of a scheme for group loan - Provide training on skill development for IGG members - Regular monitoring of scheme of credit borrowers
Agriculture and forestry	
<ul style="list-style-type: none"> - Request for tree plantation and fruit sapling through CFUG - Select participants for training on forest management - Provide unskilled labour and construction materials for ICS and tree plantation 	<ul style="list-style-type: none"> -Organize training on forest -Provide - Subsistence allowance to participants - Provision of literacy facilitators
Erosion hazard treatment	
<ul style="list-style-type: none"> - Collection of construction materials and transport up to the site - Provide unskilled labour - Communicate with project technicians - Keep record of people's labour contribution - Plantation of grass and trees in site 	<ul style="list-style-type: none"> - Survey, design and estimation - User group formation under HCs - Construction material not available locally up to road head (cement, steel bars, tools, pipe and gabion box) - Cash for skilled and semiskilled labours and supervisors (through UG) - Technical supervision for quality controlling - Coordinate to VDC for resolving disputes

Source: BIWMP, 2001 and Key informant interview, 2002

NB: CFUG- community forest group: ICS- improved coking stove

No same organizations from the planning were involved in the implementation process. New community groups were formed for management and implementation of all types of construction activities once a construction-oriented activity is ready to implement in the field (Figure 6.2). These were drinking water supply, irrigation and bridge construction management committees, which were formed as mandatory process of implantation of activity. The motive behind the formation of new committees, though there were already groups, was to smoothly implement the activities. But it was not the case as expected. Because the composition of new committees was not made from those all people who at least initiated the plan for activity. In fact other community groups planned the activities. This led to over look the effort of those groups who prepared the plans. Thus, the coordination among groups implementing activities became complicated, leading to incompleteness of some activities. For instant, majority of users affiliated with foot-trail improvement reportedly complained that the construction was incomplete according to plans prepared. This had happened due to the implementation of activities by groups, which were not involved in project activities planning. On the other hand long gap between planning and implementation have made confusion people regarding the volume of works attached with planned activity.

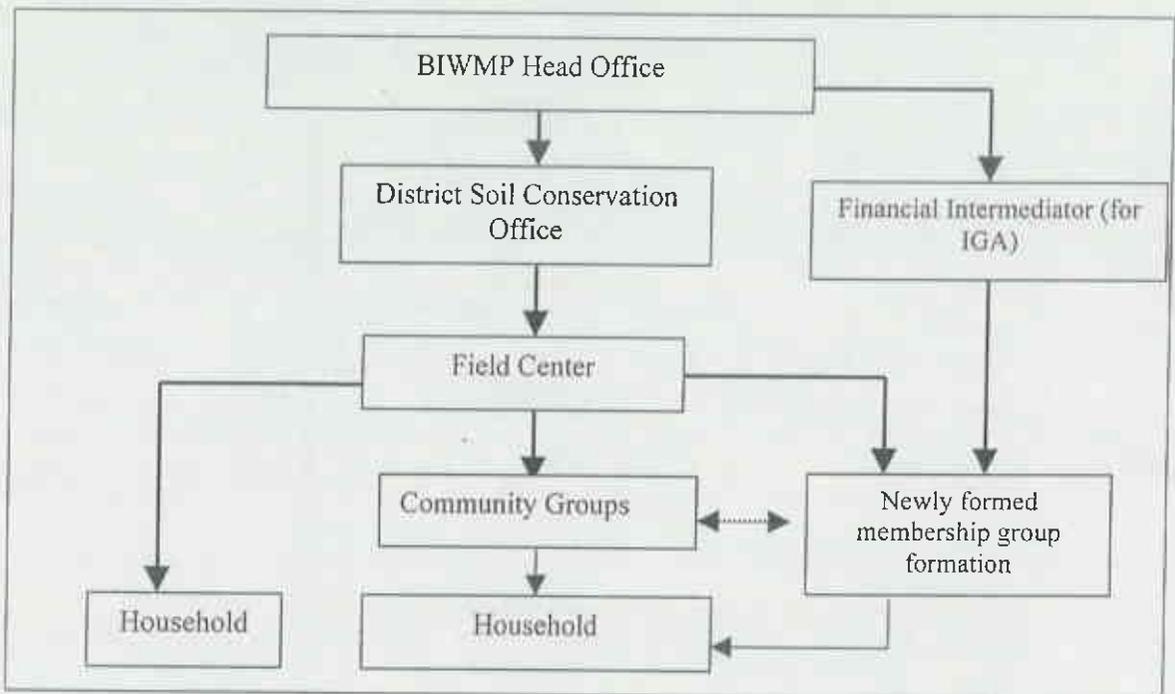


Figure 6.2: General implementation process of project activities

6.3.2 Forms of Contribution

People participating in project implementation had made contribution to different activities in different forms. They had contributed cash, labour, and knowledge. The extent and form of participation were based on the types of activities. Here, all the activities have been put in to only two types: i) training, extension and awareness related, which basically require time and mental efforts of the participants, and ii) construction related activities, requiring contribution of labour, cash and idea.

a) Training and Extension

Only a few of the demanded training and workshops and literacy classes were organized by the project. They were: a three-day sub-watershed planning workshop, a two-day women empowerment training, field visits for group members, and women literacy for both basic and advance levels. Since many training implemented were out of demanded, the selection of participants was done by the project. In the process of organizing the training and workshop the project sent invitation letter to concern groups one or two weeks in advance. The letter mentioned the venue of training/workshop, expected participants from the concerned group and allowance to participants. Also the groups were advised to whom they nominate. Only a few of community groups were asked to nominate participants. There was no instruction for selection of disadvantaged people like Dalit. In few cases, the project field office did the selection. According to the villagers, the selection was unfair. Key informants belonging to Dalit said that they were not informed timely about the trainings. The key position holders in the groups, those all in all were from non-Dalit caste/ethnic groups, did not want to select disadvantaged people, as they nominated from the trainings because of the attraction of the allowance provided by the project. That is why mostly key position holders had repeatedly attended the training activities.

In case of literacy activities, three types of classes: (i) general, (ii) Dalit, and (iii) community forestry were held and each class was categorized into basic and advance levels. All classes were running by the respective community groups. Management committees formed under HCs were responsible for running general and Dalit classes, whereas CFUGs were responsible for forestry classes. Emphasis was given to local people from the same caste groups for the selection of facilitator. However, due to the absence of educated people among Dalit, a Dalit class was being ran by a non-Dalit facilitator. Due to the deteriorating security situation in the area, attendants of a Dalit literacy class in Shikarbasti had dropped by more than 50 percent.

b) Infrastructure

Number of infrastructure activities, including foot trail improvement, drinking water supply, check dams, drainage, and stream bank protection were implemented in the study area. The number of activities implemented was always less than demanded (Appendix E13). These activities required several inputs from the people. Contribution, in terms of cash and labour were mandatory in most infrastructure development activities. The criteria for implementation differ among activities (Appendix E11). But, the relative contributions to be made by the people and the project were arbitrarily determined by the project. There were some evidences in favor of increasing the proportion of people's contribution. For example arbitrarily increasing in haulage distance for collecting and transporting local construction materials like stone, aggregate and sand had been made for infrastructure activities. The motive for this was to achieve the proportionate amount (converted value of contribution in-kind into cash) in cost-estimation accordingly if the activity must be implemented by the project despite less ration of community's contribution found.

The labour contribution to different infrastructure activities till the date of this field study (last of February, 2002) was found about 12 days per household (Table 6.5). There was no significance difference in construction by caste/ethnicity. The cash contribution made by people in Shikharkot water supply scheme, which serves water to 206 households

and nearly one dozen offices. Each household shared about Rs. 3,000 for installation of each water tap stand in each home yard. The most features of the scheme were good despite poor households, including Dalits, were forced to pay that much cash amount because of constructing a single own tap stand. It could be omit when a tap stand would be shared by couple of households, however not happened. As reported by the project staff, this scheme had not adequate ration of contribution that is why the people shared the money, as there was high pressure from the party politics.

Table 6.5: Local people's contribution to the project activities

Labour contribution	Brahmin/ Chhetri (n=64)	Newar (n=31)	Tamang (n=54)	Dalit (n=68)
Mean (manday/household)*	12.0	11.0	11.0	11.0
Sum (manday)	746	345	618	727
Minimum (manday/household)	2	2	2	2
Maximum (manday/household)	59	33	34	24

Source: Household survey, 2000

NB: n= sample size

F test – not significant at 95 % confident level.

Settlers, mostly from up land areas had implemented activities even without unknowing detailed terms and conditions and technical details of activity. They were more like foremen assigned to a job done. The DSCO junior engineer shared the plan of implementation with only few members of respective UGs, but did not mentioned technical details to them. One UG chairperson reported that he was informed about activities to get his signature on the agreement paper. No regular technical support from the DSCO technicians was provided which created problem during the project implementation. Moreover, mostly stream bank protection and landslide treatment activities were carried out by contractors for which respective UGs were not consulted properly.

In another case also the project had ignored the community groups formed by project itself, which lessened the role of hamlet committees. In the earlier stage hamlet committee was supposed to function as an umbrella organization at the community level to play leadership role in all activities to be planned and implemented. But in reality hamlet committees were playing a minor role. The project was bypassing the hamlet committees while implementing its project activities. For instance, selection of individual beneficiary household for pit latrine, seedling distribution, income-generating training was done by the project staff at their personal discretion.

6.3.3 Gap in Planned and Implemented Activities

Responding to the household survey questionnaire respondents reported that there was gap in activities demanded by them and activities implemented by the BIWMP (Appendix E13). The deviation had been recoded from the proportion of people who demanded activities formally or informally from the project and what they had got activities for the implementation. To see the difference in this regard difference has been calculated. Here, higher the difference in implemented from demanded activities the higher the population involved in activities selected by the project.

On overall, irrespective to the caste/ethnicity the difference found in implemented activities. It was occurred when the project had made approval of activities came through the line of the provision, as illustrated (Figure 6.2). Assessment revealed that three activities: income generation, agriculture/forestry and erosion hazard treatment were implemented in those communities, where the demand was less. For instances, income generating and erosion hazard treatment had covered more than double number of people belonging to Tamang and more than four times of people belonging to Newar. Similarly, only about two third of Tamangs of demanded population had been covered by implementation of the erosion hazard treatment. The difference was also found in income generating, which had been considered by the BIWMP as primarily targeted activity to poor and disadvantaged section of the study watershed. This activity had covered nearly three times more households from Brahmin/Chhetri and Dalit. Number of reasons had resulted in the gap mentioned above. Ineffective planning process including need identification and prioritizations had lead to create the gap. In addition, strong influence made by national/district political figures resulted these outcomes. As reported by few senior officials of the project, due to limited allocation of financial budget for a district/watershed formally channelized demands may get less priority than politically channelized at the level of project authority.

From the cumulative consequences of the gap, the settlers were affected both positively and negatively. Settlers those who could not demand activities, like saving and credit, have been positively benefited when these were implemented by the project. But, settlers those who have not received demanded activities were suffered from the problems. Due to low household economic status mostly disadvantaged people faced burdened of required contribution in implementation. Notably, despite the small gap in activities Dalits reportedly pointed out that activities requiring voluntary contribution, like infrastructure development, tree plantation, and participate in number of meeting and gathering had hampered them to be available for wage laborer for meeting to daily needs of foods.

6.4 People's Perception of Planning and Implementation

Planning, decision-making and implementation systems required to be assessed from the perspective of local people's perception. It is more meaningful to analyze people's perception across the caste/ethnicity groups to see the variation between their perceptions so that development program can perform development activities perfectly. In this endeavor, peoples were asked to express their perception on the form of extent of satisfaction. Indexing and ranking methods were employed for this purpose.

6.4.1 Perception of Approach

On overall, the settlers of the study watershed had perceived problem identification prioritization and decision-making process under the BIWMP dissimilarly. The dissatisfaction was increased when the expected project's supportive and catalytic role at the stage of identification and prioritization of needs and problems were absent in the project approach. Dissatisfaction was ever increased among the Dalits and Tamangs when the identified needs/problems were not adequately prioritized in the planning process (Table 6.6). During the group discussion of the research some of the community group members had realized that there was no practice of appropriate participatory methods in groups to identify local people's needs and prioritize them appropriately. Due to persisting conflicts in use of community forests as well as development activities, like training, under

the project supports and leadership of HC and CFUGs were perceived unfair by Newars and Dalits. In this matter respondents were looking the support from the BIWMP urgently.

Table 6.6: Perception of performed role of community groups in planning, implementation and group decision

Tasks of group	Attributes	Brahmin/ Chhetri (f=49) %	Newar (f=25) %	Tamang (f=46) %	Dalit (f=37) %
Problem identification	Dissatisfied	12.2	32.0	8.7	10.8
	Moderately satisfied	28.6	28.0	19.6	51.4
	Satisfied	59.2	40.0	71.7	37.8
Problem prioritization	Dissatisfied	14.3	36.0	10.9	16.2
	Moderately satisfied	34.7	36.0	41.3	48.6
	Satisfied	51.0	28.0	47.8	35.1

Source: Household survey, 2002

NB: f= frequency of respondents

Notably, virtually non of Dalits and Tamangs were dissatisfied with the decisions and their implementation, however no majority of Dalit stand for the satisfaction instead they were standing for the neutral, or moderately satisfied categories (Table 6.6). Their claims for this category of satisfaction were based on that whatever they got from the decision under the project was little more significant gain than that while they were completely ignored by many agencies/organization before the BIWMP period. In another aspect of implementation of planned activities decided by the groups some of educated respondents were found dissatisfied with own group's role performed. As expressed during the group discussion, the groups did not able to protest and make comment to the BIWMP field office when the project had implemented several activities without consulting to the BIWMP induced groups in their area. For instance, Danda gaon HCs did not protest while number of toilets were constructed directly under the selection of beneficiaries by bypassing the HCs or IGG of that area (Figure 6.2- for flow diagram). Nevertheless, the bypassing to the HCs was positively seen by some of disadvantaged people in the area, especially Dalits who were in minority. This was attributed due to that there were no existence of comprehensive and conducive rules and regulation within the group on one hand and the other hand commonly used decision criterion "majority" had to undermine the voice of disadvantaged minority people, direct intervention some time perceived as positive. It was the same notion what Schrader (1998) revealed and urged for positive discrimination to the disadvantaged people.

Notably, some of the interviewees were looking project's intensive supports for improving the capacity of their group. Interestingly, Newars were curious for stability of institutions in the village in order to take care of all intervened activities. They were gaining comparatively more advantage from the infrastructure activities. Inadequacy of transformation of technological and managerial skills to the community groups by the BIWMP was highlighted matter in the interviews with the group members. Such as technical and system management training on drinking water supply as well as placing and binding of gabion boxes used for landslide controlling and stream bank protection work was never given to the concerned groups. As the result the settlers occurred several problems for maintenance of the water systems as well as the gabion boxes placed for controlling the stream. Interviewees realized that there is essential to have a caretaker for

maintaining the water system by the group itself. Similarly less or virtually no involvement of the BIWMP induced community groups in enhancing the awareness campaign regarding the social transformation was another identified area to be improved by the community group members. On another side respondents belonging to other caste/ethnic groups, except Newar, were satisfied with the groups' capacity in implementation of decisions. Implementation of foot-trail, water supply and gully controlling activities led by the groups was most recognized tasks by these respondents. Mostly, Dalits had positively perceived the construction management of the foot-trail under the leadership of HCs as they earned some cash during the construction (Appendix E14)

6.4.2 Effectiveness of Activities

In order to know the effectiveness of BIWMP implemented activities from the beneficiaries' perceptions people were asked for naming effective activities in order. Giving the rank score to multiple responses a table was generated (Appendix E15). Comparing the given scores it had been found that the different caste/ethnic people perceived first three effective activities commonly, however, differed from scored values. In general, foot trail improvement, saving and credit, drinking water supply system were most named by the respondents for main successful activities. Considering the project focus area and people's overall perception two components, saving and credit and infrastructure have been discussed below.

a) Saving and Credit

Despite poverty among the disadvantaged people the saving and credit program was scored for the second rank by Dalits and Tamangs, but Brahmin/Chhetri and Newar people ranked it as third and fourth respectively (Appendix E15). Of them the saving and credit activity was perceived as first ranked by majority of Dalit, Newar, and Tamang who had low economic level but there total numbers was quite low as compared to the total number of respondent (Table 6.7). Rest of the respondents had claimed that saving and credit program was risky and required a long time to draw the benefits on one hand and the other hand they felt that they do not have sufficient entrepreneur skill and new ideas to pursue the profit making business. Besides all above reasons, the respondents had perceived to the saving and credit program itself as inadequately conducive for all categories of people. Because, as claimed by respondents, the expansion of membership was limited, loan-processing period was lengthy and no facility of livestock insurance was integrated with the livestock raising credit under the BWMP. Therefore, about one-fourth respondents were looking for improvement in the present saving and credit program (Table 6.8).

Table 6.7: Distribution of respondents claiming the saving and credit as first effective activity among the BIWMP implemented activities

Economic level of households	Brahmin/Chhetri (f=9) %	Newar (f=8) %	Tamang (f=11) %	Dalit (f=16) %
High	11.1		9.1	
Moderate	55.6	50.0	36.4	31.2
Low	33.3	50.0	54.5	68.8

Source: Household survey, 2002

NB: f = number of respondents perceiving the foot trail improvement activity as a first successful activity

Table 6.8: Income generating group members' opinion about credit rule and regulation

Attributes	Brahmin/ Chhetri (f=52) %	Newar (f=28) %	Tamang (f=44) %	Dalit (f=52) %
Appropriate (%)	71.2	71.4	72.7	79.9
Need to be improved (%)	28.8	28.6	27.3	20.1

Source: Household survey, 2002

NB: f = number of IGG members responding the question

b) Infrastructure

Among the infrastructure activities foot trail improvement, drinking water supply, stream bank protection and foot truss-bridge were effective activities under the BIWMP as perceived by the settlers (Appendix E15). Of the scored activities foot-trail deserved about the highest score. Tamangs had highly scored for this activity, Dalits scored it as first but was less than that of Tamangs. Whereas, Newars had scored this activity for the third successful activity. Newar had given second highest score for foot truss-bridge construction.

As discussed in earlier chapter the foot-trail activity, which had safely drained the surface runoff as well as improved the physical condition of the foot trail accessing to the market for the people of upland areas. Besides, in the process of its' implementation participating people had got good opportunity for earning cash, though for very short-term duration. In this course, a question would raise from this that instead of Dalits' and poor people's high involvement in income generating activities they were highly involved in and positively evaluated the foot-trail despite their state of the poverty. Majority of poor Dalit and Tamang respondents of both household survey (Table 6.9) and interviewed had expressed that due to their state of the poverty the immediate benefit providing activities were most likely for them as well as they were free from risk of failure of their investment.

There were other factors playing the major role. As the people perceive that, the awareness, knowledge and mental stimuli were guiding factor for choosing the most necessary activities. For instance, three quarter of Newar and Brahmin respondents who perceived that foot trail was a most popular for them were from moderate economic level (Table 6.9). Besides, as continuing of the tradition of collective action in rural hills of Nepal poor and disadvantaged people prefer to construct road/trail, *Chautari*, water supply and such infrastructure, which provide equitable benefits (Schrader, 1998).

Respondents had scored drinking water supply activity within the top five effective activities. Availability of clean water at the near house yard was the reason for this. Of the respondent Newar had perceived the water supply as the first effective activity. Being less affected from soil erosion problems the landslides, gully and stream bank erosion control activities were scored for lower rank by the Dalits and Tamangs. While, the Brahmin/Chhetri had given the fourth score for the stream bank protection activities which activity some how able to protect their farmland.

Table 6.9: Distribution of respondents claiming the foot-trail improvement as most effective activity among the BIWMP implemented activities

Economic level of households	Brahmin/Chhetri (f=23) %	Newar (f=10) %	Tamang (f=32) %	Dalit (f=39) %
High	8.7		15.6	2.6
Moderate	73.9	80.0	40.6	46.2
Low	17.4	20.0	43.8	51.3

Source: Household survey, 2002

NB: f = number of respondents perceiving the foot trail improvement activity as a first successful activity

6.4.3 People's Perception of Roles of Project Staff

Project's staff were found key actor for ensuring the effective participation of the settlers in line with the project objectives. As discussed in previous chapters their role was fallen within the questionable. But it was necessary to see them from the perspective of people's perception. In this course settlers were asked through household survey and key informant interviews. Assessing the project staff's performance was not easy task for the respondents. Particularly, the poor and disadvantaged people were found relatively uneasy to make comments about the staffs.

In over all, only about two percent of the respondents had expressed no satisfaction with performed role by staff and about the same percent of respondents denied for answering (Table 6.10). The rest of the percentage was stand for both "fuller" and "some extent" cooperative role that staffs performed. But, by caste/ethnicity, the majority of Dalit and Tamang had perceived staff as cooperative with full extent, while majority of the respondents from Brahmin/Chhetri and Newar perceived to some extent. Since there was no such external support in the area previously, who had extended their helping hand to the poor and disadvantaged people, only poor Dalits viewed the staff as cooperative with fuller extent.

Table 6.10: Extent of cooperation of project staff as perceived by the people

	Brahmin/Chhetri (n=64)	Newar (n=31)	Tamang (n=54)	Dalit (n=68)
Fully cooperative	45.3	35.5	51.9	54.4
To some extent cooperative	53.1	58.1	42.6	39.7
No cooperative	-	3.2	3.7	2.9
Can not say	1.6	3.2	1.9	2.9
Total	100.0	100.0	100.0	100.0

Source: Household survey, 2002;

NB: n= Number of respondents

Encouragement to people by the project staff is another good work. Not only providing the benefits to the poor, but also time-to-time visits to the poor households and chatting with them, and encourage with them for household betterment were also another rapport building factors for the extension workers in the study area. Moreover, particularly the Dalits interviewed, had reported that if a staff belonging to the non-Dalit caste takes a

glass of water or a cup of tea in their house would give them a great positive impulse to realize them that they were respected. Because, accepting foods and water from a Dalit's hand has been rendered as a social indicator in rural areas of Nepal.

In overall, variation in people's participation across the caste/ethnic groups in planning, decision-making and implementation exist. The reason behind the variation is not only the social custom but also low level of people's awareness, low level of understanding of caste/ethnic hierarchical structure among the project staff and inadequacy of special measures of BIWMP for ensuring disadvantaged people's participation in planning and implementation. There is still important to assess BIWMP's effort made in benefits sharing from the perspective of equity by caste/ethnic groups. The next chapter, thus, will assess distribution of benefits emerged due to the BIWMP.

Chapter 7

Distribution of Project Benefits

People's decision whether to participate or not in the developmental activities is largely determined by perceived benefits (Miller, 1988, cited in Pongquan, 1992, Dale 2000). As Poudyal (1990) pointed the higher is the expectation of benefit from the activity the higher is the rate of participation. But, the expectation of a participant depends on his/her needs as well as his/her ability, which largely correlates to their social and economical conditions. That is why aiming at ensuring equitable distribution of benefits the BIWMP's, as claimed, has made several efforts. But, on the ground of variation in socio economic conditions of the settlers study intends to assess the project benefits from the perspective of the equity.

This chapter includes tangible and intangible benefits that settlers have got on the form of economic and non-economic benefits generated from the project supports. Since the project has been implementing different components the chapter involves discussion on benefits respective to main components.

7.1 Distribution of Benefits From Income Generating and Saving-Credit Programs

In order to analyse benefits from the income generating and saving-credit program, information were gathered from household survey, key informant interview and monitoring reports prepared by the BIWMP. The perceptions of the IGG members has been drawn from household survey while proportionate of benefit sharing has been analysed using secondary data. The household survey, which interviewed 217 households, included only 92 members of income generating groups. Similarly, data used from the project's monitoring reports have included all in all IGG information regarding representation and loan.

7.1.1 Purpose of Benefits

The objective of the income generating and group credit activities was to enhance livelihood of watershed settlers and to increase employment opportunities by establishing a credit support program. The activity aimed at empowerment of women and disadvantaged groups, including Dalits. The major activities carried out were formation of saving and credit groups, provision of training and demonstration programs on improved agriculture and livestock raising, and formation of co-operatives. The project had provided credit through the Palung Multiple Cooperatives Limited according to the agreement.

Although, the activity had started about two years ago, now it became a central activity among the poor people in the study area. Because of the absence of formal financial institutions, settlers had to largely relied upon the rich villagers and traders for even small amount of credit. These lenders used to charge high interest. Since the off-season vegetables were cultivated in the project area small farmers had no alternatives other than borrowing from local moneylenders. In such a situation, the project supported income generating and group credit activity had provided a lot of benefits to them. The settlers were provided credit at low interest without collateral. Besides the project had helped to form community organizations and provided opportunities for training and

exposure. All these opportunities were created by linking with other project activities like adult literacy class, training on vegetable farming with focus on soil conservation, and forest management and infrastructure development. Thus, high level of participation of people individually or through groups was expected.

Benefits from the income generating and credit program include tangible benefits in the form of cash. Nevertheless, the group process and integrated approach adopted aim at providing intangible benefits in term of emotional and ideological rewards. In the following sections the distribution of tangible benefits are discussed.

7.1.2 Approach to Reach to Disadvantaged People

Approach to provide benefits to participating people through the saving-credit program had based on group approach. In this endeavor the project had selected numbers of potential villages based on boundary of sub-watershed, needs and the willingness of the people. Then, the project staff had identified poor and disadvantaged people through participatory rural appraisal (PRA) tools, including the market assessment. The consequent steps included the group formation. The project had formed 17 income-generating groups (IGG), comprising a total of 461 members including 25 male members. Male members were serving as advisor. One group constitutes 25 to 39 general members from the same village (Table A1.17). Each IGG has an executive committee (EC) comprises of five members from the general members. Notably, the approach had intended to focus on awareness building of women, so in many cases membership of the IGG was given based on attendance of women literacy class conducted by the BIWMP itself.

On the next step the approach involved in setting of rules and norms, enhancing the skill of IGG members, and linking IGG with Plaung Multi Purpose Cooperative Limited, as umbrella organization for each IGG. Besides, training related on women empowerment and skill development were also organized to the IGG members. Saving deposit was precondition of the credit program. Accordingly, a borrower had to deposit Rs. 20 to 50 per month. The EC collects the saving deposit from each member at every month meeting. Principally, any member of an IGG had equal chance to obtain credit as well as non economic benefits like receiving training on skill development and empowerment.

Although the approach principally intended to create equal benefits ability of the members determined by the socio-economic condition of a particular household had not permit members to get share in benefits equally. For instances: since the area was highly dominated by small landholders, agro-based training and credit support for vegetable production, buffalo and goat raising activities along with off-farming activities like retailers shops were found potential and were highly preferred by the settlers. The villagers had showed their interest in income generating activities differently. Particularly, Dalits had interested to get project supports for their traditional skill-based activities like blacksmithing and tailoring, but preferred to change specialization of produces. Since it requires diversification in skills male Dalits were looking support for training on skill development. Despite the caste affiliation of tailoring, women at large from non-Dalits had also demanded training on sewing and knitting.

While implementing the income generating and saving and credit activities several concerns were regarded. Mid-term evaluation of BIWMP had also realized that the program activities were highly depended on the staff attitude at the initial period. Not

much consultation with local people was done at the initial stage. Which had lead to less focus on poor people in the upper catchment areas and disadvantaged communities like Dalit. The staff preferred to provide assistance in extension services to lowland middle-class farmers. The problems were arises from the beginning at distribution membership for IGG until the loan disbursements.

7.1.3 Membership of Income Generating Groups

The project has formulated 17 IGGs in different villages. No special IGG formed from the perspective of caste/ethnicity. Being a member of any IGG under the BIWMP was an entry point to be eligible for receiving the project support under the component of income generating and saving/credit, including loan through groups approach and training on numbers of themes. There were increasing willingness of people to form more IGG, thus the project is in process to increase its numbers. In recent days, one of the prerequisite condition to form the IGG was literacy class. Literacy participants may form a IGG. Nevertheless where women are relatively aware and literate they can form a IGG. For the case of illiterate village, notably, about 50% of Dalit women due to no literacy class in their village could not form IGG (Table A1.18). In addition they could not be member of IGG formed by other village, which limited the coverage of the saving and credit component as it assumed in the project strategy.

The income generation and saving and credit component had covered 461 members from all caste/ethnic groups as of February 2002 (Table A1.17). Measuring the representation of IGG members by different caste/ethnic groups field office data its has showed that Dalit and Newar groups have relatively higher representation in IGGs, while representation of Brahmin/Chhetri caste group accounted for low. But the highest number of IGG members were from this caste group (Table 7.1). As the income generating and saving and credit activity was envisaged to provide benefits to the poor representation was assessed by the settlers' economic level, as they perceived. No large numbers of representation from poor had been noted out irrespective to caste/ethnicity poor households either living in low land or in uplands. For instance, although poor Dalit and poor Tamang constitute 53% (79 households) and 57% (216 households) of the total population respectively only 63 and 145 member from them respectively represented in IGGs. There were only about one-third members having poor economic status in the groups. But, likely, the majority of IGG members belonging Dalit and Tamang were from poor households (Table 7.2 and A1.18).

Table 7.1: Membership by caste/ethnic groups

Distribution of membership	Brahmin/ Chhetri	Newar	Tamang	Dalit
Total number of households	1145	171	379	149
Number of IGG member households	193	60	145	63
Representation in IGG (%)	16.8	35.1	38.3	42.3

Sources: Palung sub-watershed field office database, BIWMP, 2002

Table 7.2: Population of IGG members by household economy status

Economic level member households	Brahmin/Chhetri (f=41) %	Newar (f=22) %	Tamang (f=36) %	Dalit (f=34) %
Higher economic level	4.9	-	13.1	2.9
Moderate economic level	68.3	63.6	47.4	38.2
Lower economic level	26.8	36.4	39.5	58.9

Source: Household survey, 2002

NB: f= Number of sampled members of income generating groups under the household survey

7.1.4 Distribution of Credit Facility

As discussed in previous chapter the majority of people who considered themselves poor were Dalits and Tamangs (Table 4.9). Though they were poor and in need of project support the income-generating program could not address them adequately. For instance, only four Dalit members out of 63, represented from three IGGs had got loan. This figure is quite low compared to others (Table 7.3).

Table 7.3: Households who had received loan

Attributes	Brahmin/Chhetri	Newar	Tamang	Dalit
Number of IGG member households	193	60	145	63
Number of household who received loan	31	18	33	4
Percentage of loan takers	16.1	30.0	22.8	6.3

Sources: Palung sub-watershed field office database, BIWMP, 2002

There may arise several questions that if the credit program is targeted for the disadvantaged and poor people then why only 6% of Dalit had got loan. Asking to the IGG members as well as analyzing socio economic conditions of the study area it was noticed that there were some reasons which had lowered the number of borrowers from Dalit.

1. Income generating groups were formed by and for women. Only women are eligible to get loan. For the case of Dalit women there are limited activities to be chosen for their entrepreneurship. They almost do not have land for agriculture-based activities. Neither they have sufficient space in home or home yards for cattle raising and poultry farming nor they can raise milking cattle and sell the milk to the market because of the they are so-called untouchables. Only the way remains is to take loan for husband or son to increase their traditional occupation. But a women is little involved in these occupation, except in tailoring. So it may difficult to a women member to take a decision whether take loan to support to husband or son.
2. Low risk bearing capacity among Dalit individual entrepreneur exists. It had been attributed that Dalits have comparatively less confident that they can pay back the loan timely and can earn the benefits sufficiently. There were numbers of reason for this: (i) bad habit of spending money for alcohol as many of male Dalits have addiction with alcohol, thus a women member may feel risky to invest on them (ii) high vulnerability

due to very few fixed assets, and their occupational based schemes required high amount of loan, (iii) they do not have modern skills to modify produces and compete to the factory products sold in the local market, (iv) inspired from some cases of failure of buffalo and goat raising and retailers shop schemes supported under the same loan program, and (v) limited opportunity for diversifying the entrepreneurs except own traditional occupation.

3. There was strong provision that the intermediate cooperative who sanctions loan scheme requires high level of enterprise scheme to ensure that the loan is best utilized and paidback timely. That is why there is a standard procedure adopted to prepare a detailed enterprise scheme, for which women motivator provides support. But, motivators are not strongly capable to prepare sound scheme for traditional skill based enterprise. Such enterprise requires high amount of running capital and tools and equally risky for assuming the benefits. Similarly, Dalits do not have strong base of knowledge for identification of sound activity to be supported under the loan. As a result no enterprise schemes were prepared to be forwarded to financial intermedaitor.
4. Dalit IGG had low capability in trapping the opportunity that was created by the project. It was obvious that among four persons who received loan were from three IGGs out of four IGGs constituted Dalit members. Notably, only one Dalit women have got loan from a IGG which was homogenous group, constituted of 100% Dalits. In contrast, one and two out of 11 and 9 Dalit members respectively had got loan from two IGGs which were composed heterogeneously. It shows that Dalits who had got loan were accounted larger number from the heterogeneous groups than that of groups entirely composed of Dalits themselves (Table 7.4 and Appendix E21). Dalit IGG was found incapable, as there were many illiterate members as well as no existence of alternative leadership. Only one male advisor (Dalit), who is ward chairperson too, was mobilizing the group.

Table 7.4: Pattern of loan distribution in income generating groups (IGG) where Dalits represent

Name of IGG	Brahmin/Chhetri		Newar		Tamang		Dalit	
	Numbers of group Member	Loan borrower						
Syapatri	22	6		1	1		9	2
Setiganaesh-B			2		12	2	11	1
Indrayani							39	1
Panchakanya		1	3		18	3	4	
Total	22	7	5	1	31	5	63	4
Percentage	18.2	31.8	4.1	20.0	25.6	16.2	52.1	6.3

Source: Database, Field office, BIWMP, 2002

NB: Percent of each column "member" is the percent of row total

Percent of column "Loanee" is the percent respective to the member column of each caste/ethnic group

Palung sub-watershed has been claimed for highly intensified project area for income generating and saving/credit program by the BIWMP. As of the date of this field study, 1.056 million Nepali rupees (NRs.) have been invested from the project as the revolving fund. That entire amount was channelized to the beneficiaries through PMCL.

Despite the loaned amount was looked sizable (NRs. 2,290/ member), distribution of loan had been found not satisfactory to the local condition. The distribution pattern significantly varied across the caste/ethnicity (Table 7.5). Of the total loaned amount Dalit had got the least Rs. 55,000 (5.2%) while larger amount of loan had gone to the Brahmin/Chhetri members, worthy Rs. 441,000 (41.8%) followed by Tamang (29.8%). The distribution of loan was found significantly different across the caste/ethnicity (Table 7.5). If calculated the credit amount per capita (among the total general members of IGGs) by caste/ethnicity the Dalit lies at the bottom, which is nearly two-fifth that of top rank occupied by Brahmin/Chhetri. The mean loaned amount, till the date of study, was lowest for Tamang, while the Dalits accounted for the second highest. In general, member had got loan for one scheme ranging from Rs. 3,000, the lowest in Newar, to Rs. 35,000, the highest in Brahmin/Chhetri (Table 7.5).

Table 7.5: Average amount of loan distribution by caste/ethnic group

	Brahmin/ Chhetri (f=31)	Newar (f=18)	Tamang (f=33)	Dalit (f=4)
Amount of loan in NRs.				
Mean loaned amount ** (per borrower)	14,226	13,611	9,545	13,750
Amount of loan per capita IGG member	2,285	4,083	2,172	873
Maximum	35,000	28,000	20,000	25,000
Minimum	5,000	3,000	5,000	5,000
Percent of total poor household	27.1%	32.1%	46.9%	57.6%
Percent of total loaned amount	41.8%	23.2%	29.8%	5.2%

Source: Adopted from BIWMP Field office database, Feb.2002

NB: f= frequency of IGG members who had received loan

** F test - significantly different at 95% confident level (F=3.761; p value =0.014)

The same data set was also used for analyses from the perspective of project's focus on upland area. The average size of loan had revealed little another feature than expected. The Tamang, the dominant settlers had shared the less amount of loan provided than the same ethnic group members living in lowland area. Notably, the upland Brahmin members, whose economic status lies at little upward than that of Tamang had shared bigger amount than those same caste colleagues living in lowland (Appendix E22). Distribution of loan by type of community was not seen difference across the caste/ethnicity. Nevertheless, if compared intra features the gap has been found more in Newar members (Appendix E22). Which, perhaps, are the consequences of level of economy of Newar members. The level governs the loan size required for an entrepreneur. Owing this fact further analysis has been done in consequent section.

On the course of analyses of the pattern of distribution of credit the potential of variation between the caste/ethnic groups have also been assessed. Inability of harnessing the local resources and market opportunities as well skill is the common problem of the settlers of study area irrespective to the caste/ethnicity. Provided the financial input the poor may improve their livelihood. But, the complex economical and societal structures were found constraints in the attempt of the income generating and credit program. From the sampled population one can see that majority of members having not comparative poor economic condition becomes targeted population by this program (Table 7.6). This scenario was found with extreme cases with Newar members, where less than proportion of poor was invested with the project loan, followed by case with Brahmin/Chhetri. But, it

has been obvious that the positive progress had been tied with members from Dalit and Tamang, despite very less number of loanee from Dalit.

Table 7.6: Economic level of loan takers

Economic level of loanee	Brahmin/ Chhetri (f=31) %	Newar (f=18) %	Tamang (f=33) %	Dalit (f=4) %
High economic level	4.9	11.1	3.0	
Moderate economic level	54.8	61.1	48.5	25.0
Low economic level	38.7	27.8	48.5	75.0

Source: Adopted from database, Field office, BIWMP, 2002

NB: f= frequency of IGG members who had received loan;

7.1.5 Multifold Benefits of Income Generation Program

Number of activities were integrated with the component of “income generation and saving and credit”, as the project had multifold objectives connected with this. They were, mainly, increasing the participation of women and disadvantaged people, including Dalits, there by empower them to bring the social change in the society. In this course the project had conducted several training events (elaborated in section 7.3). From all these efforts participating members have got economic as well as non-economic benefits.

a) Economic Benefits

Economic benefits were generated through running numbers of productive schemes under the loan supports. Since the program was running in second year there was difficult to measure direct economic outputs. Thus, schemes that were running by the participants under the credit were analyzed.

IGG members had got loan for three types of activities: vegetable cultivation, livestock raising and retail business. Overall, nearly half of borrowers had taken loan for vegetable production, as there was opportunity for supplying vegetable to capital city of Kathmandu and regional city of Hetaunda. Notably none of the Dalit had taken loan for vegetable production due to lack of land suitable (Table 7.7). While only four Dalit households had received loan, they had made investment in piggery, buffalo raising and retail business. The majority of Brahmin/Chhetri used loan for dairy buffalo raising and vegetable production. However, the majority of Newar and Tamang used the loan for vegetable production. Although piggery has good market, only Dalit were raising as pig is an untouchable animal for Brahmin/Chhetri. Likewise, despite a good demand for milk Dalits were not raising dairy buffalo/cattle, because as per the Hindu tradition no body buys milk touched by them. Despite their traditional skill of tailoring, blacksmithing and goldsmithing, Dalits did not have much access to the credit to operate an income generating activity that they wanted. Only one Dalit among the borrowers had used the loan for operating his small-scale copper utensils making industry. It was very good example (text box next to Table 7.7) for the profitable production useful for the traditional workers in the area.

Table 7.7: Purpose of loan

Loan item	Brahmin/ Chhetri (f=31) %	Newar (f=18) %	Tamang (f=33) %	Dalit (f=4) %
Poultry	6.5	11.1	-	-
Piggery	-	-	-	50.0
Goat raising	16.1	5.6	21.2	-
Buffalo raising	35.5	-	15.2	25.0
Vegetable production	32.3	61.1	63.6	-
Retail business/workshop	9.7	22.2	-	25.0

Source: Adopted from database, Field office, BIWMP, 2002

NB: f= population of IGG members who had received loan

The risk bearing capacity of the loanee was another factor found in the decision making for choosing the entrepreneur scheme under the loan support. Because, the nature of scheme was highly differentiated in capital requirement. For instance, obviously, the poultry farming needed highest money (NRs. 21,250) while piggery consumed the loan amounted only NRs. 5,000 (Appendix E19). Majority of loanee of lower economic status got loan for vegetable production due to first they have skill for farming as well as the potential demand, and secondly the vegetable farming required that much loan which is within their risk. Nevertheless, existing norms and very low landholding size in Dalit resulted less active in adopting varieties of income generating schemes. Moreover, they were found in less active in getting the loan for their skill based activities since those required high amount of capital (Appendix E19).

b) Non-Economic Benefits

Non-economic benefits had been generated through the participation in several activities organized through the IGGs, i.e. literacy classes, training on tailoring, vegetable farming, trafficking, and women empowerment. IGGs made selection some participants for these training. In general, noticeable change found through group discussion that women members could speak without hesitation in mass. Interviewed women expressed that they are equally capable as men to share the task of betterment of household economy. As they have augmented their knowledge from vegetable training they have confidently taking a part in decision making in vegetable farming. Regardless the caste/ethnic identity woman member had recognized the change brought by the means of saving credit groups. The change was more significant in some Dalit women compared to others.

Notably, after getting training on women empowerment and participating in literacy classes IGG members of Seti Ganesh IGG-B of Shrijan basti, Daman VDC have abandoned use of alcohol in their own home aiming to control their husband's addiction with alcohol, avoid unnecessary expenditure on alcohol and to be saver from beating habit of husband. This became possible due to the leadership under Dalit women, namely Subhadra Bishwarkarma. Every member says, "*she is strong leader and very active and works on collectively*". Due to Subhadra's encouragement a Dalit women member had got loan for improving her husband's occupation (indented text below).

An Ironsmith Bonded to Barter Service Earned Cash

Gopini Bishwakarma, a Dalit woman from Sundarbasti, ward no. 4 of Daman VDC, is a member of Setiganesh income generating group as well as a participant of Dalit literacy class. The group was created by BIWMP. It constitutes 11 Dalit, 12 Tamang and 2 Newar women. Each member deposits NRs. 20 per month in the group fund on 6th day of the month. During the meeting the group discusses on members' demand for credit and at prioritizes them. Then the demands are forwarded to the project field office for further action. First time, Gopini took loan of NRs.25, 000 for the period of 12 months payable in four installments at the annual interest rate of 12% enable her husband to start a new copper utensils making activity. Her husband used to make agriculture tools like spades, and knives (khukuri) for local villagers and receives as lumpsum amount of grain annually. He was providing his service to 25 non-Dalit households for which he used to receive annually about 110 kg husked-rice, 460 kg maize/wheat and some vegetables. But the grain was not sufficient to meet their household food demand. Thus Gopini and her husband had to work on others' farms as wage laborers as well as go to the market to sell a few khukuri to earn small amount of cash. The situation aggravated when because of the security concerns arisen from Maoist insurgency, the administration imposed a ban on khukuri to making and selling. Likewise, their traditional clients were reluctant to give grain regularly in same quantity. To cope with these difficulties, Gopini's husband started making copper utensils from the raw materials given by the local retailers. He received his service fee of the rate of NRs. 45/kg for final products. From this he was hardly able to earn NRs. 105 per day, which was not enough to fulfill even the food requirement. They did not have any access to better alternatives. When the project's IGG program reached, this provided a good earning opportunity to the couple.

Using the loan, Gopini had borrowed, her husband bought new equipments for his workshop and bought copper sheets to make utensils. He used his home yard as the showroom for selling utensils. He sold them at cheaper prices than other retailers. His business flourished and the utensils had high demand. He had employed three artisans in his industry to satisfy to increasing demand for his products. Gopini spent time in business. She was in process of expanding the business by adding other merchandise in the business. She had already paid back paid back 30% of the credit. Her husband now stopped making agricultural tools. Her son had joined in an English boarding school. Gopini's husband had become a member of a Dalit NGO. Gopini's family was very happy.

Source: Key informant interview, 2002

7.1.6 Adequacy of Credit

Majority of respondents regardless their affiliation to caste/ethnic groups had considered the amount of credit that they were provided inadequate for their income generating schemes (Table 7.8). In some instances the borrowers did not get as much credit they had requested, because intermediatory finance organization and the project head office had slashed the amount demanded. That is why some borrowers had to get complementary loan from other sources to run their activities, while others had to reduce the scale of activities (Table 7.9).

Table 7.8: Adequacy of loan provided by the project

Adequacy of loan	Brahmin/ Chhetri (f=19)	Newar (f=6)	Tamang (f=14)	Dalit (f=4)
Not adequate (%)	57.9	50.0	57.1	75.0
Adequate (%)	42.1	50.0	42.9	25.0

Source: Household survey, 2002

NB: f= frequency of IGG members who had received credit

All ethnic/caste groups were heavily depended on relatives for complementary credit. Besides, some of the entrepreneurs had got outsiders likes merchants, cooperatives and financial companies. People normally do not prefer to get credit from merchants, as they charge very high interest ranging from 24% to 42% annually. This rate is more than double the interest that is being charged by cooperatives/user groups. However, the loan provided by the project through cooperative was not released quickly.

Table 7.9: Strategies adopted to cope with inadequate loan provided by the project

Strategies	Brahmin/ Chhetri (f=11)	Newar (f=4)	Tamang (f=8)	Dalit (f=3)
Received credit from outsiders (%)	18.2		25.0	
Received credit from relatives (%)	63.6	50.0	62.5	100
Reduced the scale of activity (%)	18.2	50.0	12.5	

Source: Household survey, 2002

NB: f= frequency of IGG members who could not receive the required amount of loan

The delay in loan delivery through the intermediatory finance organization was problematic to the IGG members. As a result, IGG members were forced to get loan from the outsiders. In some instances, farmers could not cultivate vegetable, as loan was not provided to them on time. On average, the applicants had wait up to 50 days to receive the loan once the demand is forwarded to the intermediatory finance organization. By caste/ethnicity Tamang had to wait for longer period (65 days), while Brahmin/Chhetri had to wait shorter time period, 38 days (Appendix E20).

Although there was very few numbers of loan borrowers their pay back time found meaningful for the study. The payback period had been fixed by the project not privileging to any particular caste/ethnicity of borrowers and the activities under the loan. The length of time for repay back was depended with the type of activity under the loan scheme and the ability of loanee. But, upon the ability of the borrowers the some of borrowers had paid back the loan. The time period was fixed from the number of installments for repay back. Where loan for buffalo raising and retailers were given for longer period with eight installments. But, few vegetable production schemes were bonded with only one installment. Difference in installments exited across the caste/ethnicity (Appendix E20). Newar members had to repay the loan in fewer installments while Brahmin/Chhetri in highest numbers of installments. Dalits got, in average, six month's installment, which is longer duration than other members got. The variation shows that Dalits had less pressure of repayment period than others.

7.1.7 Utilization of Loan

In order to assess the utilization of loan project monitoring report was reviewed. Few failure and successful schemes were observed during the field study. It was revealed that relaxing terms of loan, such as period, amount and collator, all the schemes were found with different level of the progress. No doubt, larger majority used the loan appropriately and properly in the envisaged schemes. Tamang accounted for highest in best utilization of loan (Table 7.10). Of the four Dalits one had misused the loan. It was because loan taker did not pay the loan at committed time frame, as she used the benefited amount in another payment to a private money lender from which her husband had took loan. Since, the loan had been provided in cash, few members indented to use some part of taken amount out of approved scheme, mostly in unproductive areas, i.e. changing the roof of house, payback to previous debt to others. Most of them were found in mood of delay in repayment. Because these people were comparatively influential to respective IGGs.

Loss of capital was found hindering factor in the study area, even these evident had served as threat to the disadvantaged people. Due to loss of capital three members heavily lost their scope. Of them two were raising buffalo and one raising goat. Death of cattle due to ineffective livestock health facility and lack of livestock insurance facility in the area loan takers had further gone in to trouble. However, respective IGGs were found in mood to further cope them by providing limited additional loan for another scheme, but no relaxation of the previous loan.

Table 7.10: Utilization of loan by caste/ethnicity of loan takers

Status of loan/progress	Brahmin/ Chhetri (f=31) %	Newar (f=18) %	Tamang (f=33) %	Dalit (f=4) %
Properly used as per the committed objectives	87.1	88.9	90.9	75.0
Loan used for other purpose	9.7	5.6	9.1	25.0

Source: Adopted from IG database, Field office, BIWMP, 2002

NB: f= total number of IGG members who had received loan

7.2 Benefits from Infrastructure and Soil Erosion Control Activities

Protection of drinking water sources, construction footbridges, improving foot-trail, improving irrigation channel contribute to improve socio-economic condition of watershed settlers. Despite overwhelming demand for infrastructure, the project was found not in position for support accordingly. Not only the economic resources, but also technical limitations had constrained to development of infrastructures as per settler's preference. But, one can consider that what have been implemented under the activities till the date of field study, the foot-trail improvement and stream/torrent bank protection were the main activities persuade by the project (Appendix E15). If linking the effect of such activities after the constriction one may face with counting of exact benefiting households, because such kind of activities are subjective to count their effect.

Identification of beneficiaries of respective activities seemed to be critical in the area. Activities, which provided immediate benefits and had high budget were attractive for the settlers regardless their affiliation with caste/ethnicity. Thus, the project had

identified direct users, in most cases, based on the territorial location of user's house. Similarly community group was selected from the same location for implementation. For instance, beneficiaries of foot trail improvement users might be from another village. Likewise, beneficiaries of landslide and gully controlling activities might be from both downstream and upstream settlements.

The variation in distribution of benefits from the implemented activities under the scope of the infrastructure and the soil erosion control were considered for analyses and evaluation rather to base on the specific location of the activity.

7.2.1 Distribution of Benefits from Infrastructure

Community participation in the form of labor was mandatory for infrastructure activities. By the nature and volume of work the project provided cash and material supports for implementation of these activities. Material support constituted cement, high-density polythene pipe, GI pipes, construction tools, and GI wire and gabion boxes. The cash support alone amounted to Nepali Rupee (NRs) 1.67 million for the fiscal year of 2000/2001 (Field Office, 2001). The community had contributed labour, ranging from one day to 73 days, till the February 2002, for construction of infrastructure and mechanical structures for soil erosion treatments. The contribution was made on the basis of cost sharing scheme agreed by villagers and the project.

The information provided by the project indicated that drinking water supply and stream bank under the infrastructure, and mechanical structures for soil erosion had provided benefits to larger population in the watershed area. From the point of view of distribution of benefits, Dalits had highly benefited from foot trail improvement followed by drinking water systems. Similarly landslide activities were covered by larger population of Tamang. While, drinking water covered nearly two third population of Brahmin/Chhetri. Second large population of Brahmin/Chhetri was covered by stream bank protection, by this means no Dalit population was covered. From the irrigation improvement Newar farmers benefited highly compared to others (Table 7.11).

More than the benefits generated after completion of the activities, people had also gained short-term tangible benefits during the construction period. This had been created from that since the construction oriented activities largely implemented in cost sharing basis, where community shared the cost by contributing labour in-kind. In spite creating the ownership among the beneficiaries the labor was contributed as there was incentive provided to the certain restricted form of labour.

Table 7.11: Proportion households who had benefited from construction activities as of fiscal year 2000/2001

Main activities	Achievement (1998/99-00/01)	Brahmin/ Chhetri	Newar	Tamang	Dalit
Foot trail improvement	7.03 km	5.1	24.0	10.8	23.5
Drinking water system	7 systems	17.1	31.0	6.9	19.4
Landslide/gully control	11 sites.	5.7	7.0	20.4	3.4
Stream bank protection	4 km	13.7	-	33.2	-
Irrigation improvement	2 systems.	4.1	33.9	0.5	-

Source: Field office database, 2002

7.2.2 Immediate Benefit during the Project Implementation

A blanket cost sharing mechanism was adopted for project activities. Construction related activities observed highest labour contribution. Highest labour contribution was made for drinking water systems, followed by stream bank protection. Foot-trail had absorbed the lowest contribution (Table 7.12). The project had contributed cash and materials. Highest proportion of cash contribution was provided to stream channelization work, which was implemented by the contractor. In the second highest budget was provided to landslide, followed by foot-trail improvement. Small bridge construction was also supported by the project. The project fund was used for hiring skilled and semiskilled labourers. In all construction activities carried out by the user groups, local people worked as semiskilled and unskilled labourers. Those who worked were provided some remunerations by user groups on the basis of mand-days of contribution. Those who did not contributed labour, but had enjoyed from the scheme, were panelized. For example:

Cash Earning Opportunity

A 450 meters long 1.5 meters wide foot trail improvement activity located in Daman VDC ward no. 5 was constructed within 23 days in FY 2000/2001. The foot-trail, after completion provided better access to the market of Shikharkot to 50 households (HH), including 30 Chhetri and 20 Dalits. This project was implemented through Dandagaon hamlet committee. The community had voluntarily contributed labour worth of Rs. 29, 244, (at the rate of one man-day labour equals Rs. 80). This voluntary contribution accounted for about 40% of the total cost of the trail improvement. Rest 60% of contribution funded by the project was in the form of both cash (Rs. 40,325) and material (Rs. 3,540). The materials included construction tools like chisels, shovels and hammers. The cash support was for payment to masonry works. The people had to used local skilled persons as masons a part of their voluntary contributions helped to make some savings from the fund provided by the project. Besides fines were collected from non-participants. The project completed earlier than the estimated time. The savings was distributed at the rate of Rs. 800 per household.

Source: Key informant interview, 2002

Table 7.12: Contributions made by community and project for FY 2000/2001

Activity	Project contribution			Community labour contribution		Cash available for labor work* (NRs./HH)
	Cash	Material	Total	Total labour	Average labour man-day/HH	
	%	%	%	%		
Foot trail improvement	55.5	4.5	60.0	40.0	5.7	627
Drinking water system	2.9	46.5	49.3	50.7	60.4	274
Landslide control	67.5	22.9	90.4	9.6	9.3	3,011
Stream bank protection	47.3	29.1	76.4	23.6	13.8	2,222
Stream channelization	100.0	-	100.0	-	-	-
Bridge construction	3.9	76.1	80.0	20.0	-	-
Irrigation improvement	7.6	42.4	50.0	50.0	17.2	209
Total	33.2	35.5	68.7	31.3	26	1,491

Source: Adopted from database, Field office, BIWMP, 2002 HH= household

NB: * denotes that if project's cash contribution was provided to all beneficiaries of respective schemes for their labour used as skilled/semiskilled type contribution.

7.3 Benefits from Training and Extension

Benefits from training and extension programs of the BIWMP were assessed through the secondary information provided by the project and collected through the household survey. Besides training attendants were also interviewed. Since the training/workshop and visits were means of empowerment of women and disadvantaged people the study required in-depth analysis to see the variation across the caste/ethnicity.

The objective of the training and extension program of BIWMP was to improve the institutional, managerial and technical capacities of project beneficiaries, which determine the degree of success of the project. The strategy for the training and extension program had to stress informal and practical hands to promote open discussions and sharing of experiences. The training, excursion and workshops had concentrated on improving relevant skills and knowledge related to agriculture, forestry, group management and health. Women and disadvantaged community group members were most targeted beneficiaries as stated in the BIWMP documents. In this endeavor, women's illiteracy was found as a constraint. To build women's capacity for managing natural resources, to reducing the gender gap, and to develop awareness of the importance of non-formal education (NFE), literacy classes were different groups.

Trainings and workshops/visits recorded in database were organized according to physical targets of the project. Whatever titled given by the project for these training/workshop they were found out of matching with the fullest desires of the settlers. That is why the settlers were found, in true sense, reluctant to participate in above training enthusiastically. In the response of why the people participated in the training the key informant interviewee largely responded that they participated in the training as invited by the project staff formally and informally. The formal process of invitation characterized an official letter from the field center addressing to respective group and had quoted about the training events, how and who should participate and how to select the participants. The informal invitation characterized direct nomination by the projects staff upon his knowledge. The former process had been commonly used for forest related training as well as for income generation related training, while the latter process had happened comparatively frequently with the hamlet community groups (Table 7.13). It was found easy to communicate with CFUG and IGGs than hamlet committee. Because, hamlet committees were less functioning. They do not have regular meeting practice, no existence of group fund, and a proper contact place. Three-fourth majority of participants was selected by the groups however differed across the type of groups. If looking from the eye of democratic norms of group functioning the decision-making in selection of a participant with "majority" category may rates good. But, it is not happening in the rural Nepal (HRW, 2001). Due to higher possibility of diluting of voice of minorities in-group decision process the Dalits from heterogeneous community could not be selected for many programs, training/workshop. In such cases the role of project as "positive discriminator" may facilitates in favor of the disadvantaged people, if the project provides clear instruction to the extensionists.

Table 7.13: Selection of training/workshop participants by type of group

Groups represented by attendants	Selection for training/workshop	
	Selected by groups (%)	Project staff (%)
Income Generating Group (f=49)	75.5	24.5
Hamlet Community Group (f=7)	57.1	42.9
Community Forest Group (f=9)	88.9	11.1
Other membership group (f=3)	66.7	33.3
Total (f=68)	75.0	25.0

Source: Household survey, 2002

NB: f = number of group members

Assessing the economic level of participants selected by the group or the project staff the majority had been found from the moderate economic class. But, if looking within the group except members belonging to Brahmin/Chhetri rest of the caste/ethnic group members were from the low economic class. Although, they were selected by both group it self and by the project staff only about less than half participants were from poor households, as stated in the household survey (Appendix E23). This figure is less than that of targeted by the programs' objectives. It was obvious as already discussed that the decision making process in many groups were highly influenced by the position and the economic level of members. That leads to lessening the chances for poor and disadvantaged people or group members to be nominated for the training/workshop from the group. In this situation the selection of participants from those groups who have weak institutional capacity seems to be rational if that is done with justifiably.

In such case the project staff can play a very good role, the role of positive biased, for the selection of disadvantaged people. But the staff's selection was found little influenced rather to focus to the poor. Absence of clear instructions, except for income generation training designed for Dalits, gave much flexibility to the staff to be influenced by others. From the response it was clear that the project staff selected training participants belonging to lowland areas, which located near by the field office accounted majority from the lowland area (Appendix E23). The rationale for this was found not merely that those people were needy for the trainings instead they were closer with the project staff in many terms. Project staffs do frequent informal interaction mostly within the periphery of the field office, which is located in lowland, therefore increases the nearby people's access to the projects. That is why people from far located, up land in the case of the study sub-watershed had been less involved in the training program. Besides, understanding and familiarity of local people project staff's role and performance found to be biased towards the local elites. Thereby, the people from lowland and from better economy had got higher probability than far located upland people and poor.

Aiming at distinguishing the benefits generated under the extensions and different trainings and extensions three components have further more been dealt in this section: (i) literacy program (ii) skill development oriented training, and (iii) awareness building oriented training.

7.3.1 Non-Formal Education

Distribution of benefits from non-formal education program was assessed based on information obtained through group discussion and active observation. The project was conducting two types of literacy courses for adult women to empower women for both (i) reduce gender and caste discrimination and to aware about forest management. The functioning systems were found similar in all classes. Only difference notice was that only Dalits participants were in Dalit classes. Of the two Dalit classes facilitators were one each from Dalit and Tamang ethnic groups.

In general, the literacy program had not provided benefits according to expectation. The numbers of classes conducted by the project were less than demanded by the local people, and the contents of the courses were not appropriate. Overall, the program was ineffective. The impact of the literacy program was limited to developing writing and reading skills of participants. Books reading were found the only source of information for the participants. Books published by the Ministry of Education, contains general lessons regarding the gender role and resource management, but they lack on issues in caste and gender discrimination against, and inspiring course participants to a respect and treat all people equally. Moreover, there was not much informal discussion on pertinent issues.

Three classes, called social classes, were observed in field works. Participants of dropped-out were discussed separately during the fieldwork. It was revealed that there were less than half of the participants were attended in two classes while a class constituted two-third of Dalits was closed since a month (Table 7.14). As respondents answered it was happened due to security problems at late evening in the area. In addition few respondents of interviewed claimed that there is no interesting in the class on one hand and the other hand they were not always free at home and husbands did not allow to come to class at late evening time. Evening time is only the slack time for them to join to class.

Table 7.14: Literacy class participants by caste/ethnicity

Literacy type	Brahmin/ Chhetri		Newar		Tamang		Dalit	
	TE	TP	TE	TP	TE	TP	TE	TP
CFUG literacy ¹	10	NO	-	-	33	NO	-	-
Social literacy ²	-	-	-	-	8	3	69	29

Source: 1: Database, Palung Field office, BIWMP, 2002;

Source 2: Field Observation

NB: TE = Total participants at the time of enrolment

NO = Data not available

TP= Total participants attending literacy class at the time of field observation, March, 2002

7.3.2 Skill Development

Skill development oriented training included training on goat farming, pig raising, vegetable farming, improved cooking stove (*chulo*) construction, health worker and tailoring. In order to improve the skill and knowledge regarding the occupation of participants the pig farming, vegetable farming, goat raising and tailoring trainings were organized by the project. And one excursion was also organized to get observe vegetable farming in other areas. Majority of participants was women in these training. If consider the objectives for these training the proportions of the trainees as compared to total population the attendants' proportions of the Dalits and Tamang were not considerably sufficient. Dalits accounted for least proportions in awareness/conservation related

training/workshop, while the number of participants from Brahmin/Chhetri accounted for the highest 41% (Table 7.15). The most focused trainings for Dalits were on pig farming and tailoring, which were organized in the study area and in Kathmandu respectively. The majority of Brahmin/Chhetri and Newar had got training on vegetable farming and the majority of Tamang had attended training on goat raising.

Absence of understanding of needs of disadvantaged people among the project staff seemed to be concerned. Many disadvantaged households, irrespective to their caste/ethnicity affiliation, were looking financial support and skill development training on activities like candle making, soap making, masonry and potato chips making. Particularly Dalit artisans wanted to have training on tailoring, goldsmithing, and blacksmithing to upgrade their traditionally acquired skills. However, the project did not consider such felt needs of local people. Instead, the project had provided training based on concerned staff's perceived needs (for details chapter V).

Table 7.15: Income generation related training attendants by caste/ethnicity

Types and events of training	Beneficiaries						
	No. of events (no)	Duration of events (days)	Brahmin/Chhetri (no)	Newar (no)	Tamang (no)	Dalit (no)	Total (no)
Piggery training for IGG female members *	1	2	1	-	4	5	10
Vegetable farming * excursion visit	1	2	7	4	1	2	14
Vegetable training for * IGG female members	1	5	22	9	7	2	40
Goat raising training *	5	1	10	5	12	1	28
Tailoring training for * Dalit women	1	60	-	-	-	5	5
Total number	9	70	40	18	24	15	97
Percentage respective to total attendants			41	19	25	15	100

Source: Training database, Field office, BIWMP, 2002

NB: * indicated events were organized for women members of income generating groups

7.3.3 Conservation Awareness Creation

Aiming at people's awareness building on soil conservation as well improving people's ability to plan and implement the action against the problems numbers of trainings were organized. Such as training on women empowerment, nursery management, community forestry, integrated pest management and pesticides handling, watershed planning, and school children's awareness creation. According to the project documents, these trainings were for both males and females regardless their identity of caste/ethnicity. Disadvantaged people were the targeted group. Contrarily, the project's training database revealed that number of recipient of the training from Dalit and Tamang was substantially lower than the representation of other ethnic/caste groups (Table 7.16). Although the community forest management training covered nearly half of the total trainings/workshops, none of Dalit had got chance to attend. This kind of training is a forum for the forest users to actively interact in order to getting information from the project extensionists and forest authorities. The researcher had an opportunity to attend the three days long two trainings on community forest management. One Brahmin member

had participated in both events, while the training was organized for different CFUGs. None of Dalits had attended the trainings.

Although, women comprised nearly half of the total participants in the trainings, they were found less active. The indigenous knowledge, and social issues were lacking in the curriculum/lesson of the training. Trainees represented from elites groups used to come late in the training, because the ongoing training was not really wanted by them. Instead their attraction with the training was to get daily allowance at the rate of Rs. 130 per day. The exclusion of disadvantaged people from the training events exacerbated when the project staff did not monitor the training effectiveness after the training conduction as well as lacking of the training knowledge sharing mechanism to reach to the disadvantaged people. Less priority was given to Dalits, in particular, by the project staff for ensuring their attendance in trainings on community forestry. The reason behind it was that they do not see disadvantaged people's role in the community forestry as a community forest officer responded: "*community forest's objective is to only control the use of forest.*"

Table 7.16: Distribution of attendants of the awareness creation trainings/workshop

Types and events of training/workshop			Beneficiaries				
	No. of events (no)	Duration of events (days)	Brahmin/Chhetri (no)	Newar (no)	Tamang (no)	Dalits (no)	Total (no)
Local women health workers	2	5	10	5	6	1	22
Women empowerment	1	2	1	1	1	1	4
Nursery resource management	1	5	2	-	1	-	3
Community forest management	2	3	38	2	9	-	49
Sub-watershed planning workshop	1	2	15	6	3	2	26
Total attendants	7	17	66	14	20	4	104
Percentage respective to total attendants			63.5	13.5	19.2	3.8	100

Source: Training database, Field office, BIWMP, 2002

7.4 Distribution of Benefits from Agricultural and Forestry Related Activities

Since natural resources, livestock, agriculture and forest were considered as interwoven components by the project, distribution of benefits from agriculture development and forestry activities were assessed separately.

7.4.1 Agriculture

The objective of the agricultural development program as quoted by BIWMP document, is to help the farming community to reduce soil erosion and by so doing increase their incomes and standards of living will improve. Initially, the project activities were concentrated on establishment of terrace construction and improved agricultural practices suitable particularly for irrigated lands. All these activities provided benefits to people with relatively large irrigated landholdings. Landless and small farmers especially in uplands could not enjoy any benefits. Cognizant to this the project had started paying attention to upland areas. In this regard on-farm terrace improvement by using sloping

land agriculture land technology (SALT), fodder and fruit trees plantation and improved farming systems were being implemented on poor and disadvantaged people.

But, due to project staffs' tendency to meet only physical target, and lack of technical staffs in the field office had resulted in little achievements. The project records show that 12 Brahmin/Chhetri and eight Tamang farmers were given seedling of peer walnut for improvement about four hectares of terraced land. However, from the field observation the researchers found only 16 peer seedlings surviving in less than 0.1 hectare of land. The land belonged to local politicians. The landlord had planted fruit seedling, as that plot land was kept fallow for a long time. But, on the project document it was reported as terrace improvement, covering 0.75 hectare.

No attention was paid to repair terrace, mostly belonging to disadvantaged people damaged by the 1993's flood disaster. Since they were poor, the disadvantaged groups could not afford the cost of terrace repairing.

7.4.2 Forestry

Access to forest resources of Nepal was always remaining within the big hand of elites, politicians and non-Dalits. The disparity in the access was also found existing within the BIWMP induced and supported community forest. The forestry component of the project aims at promotion of sustainable forest management through the establishment of forest user groups, development of forest management plans, supporting and promoting forest nursery and development of forest plantations. The expected outcomes were strengthened institutional capacity, increased conservation awareness and increased income the income. In this regard, three community forests were handed over to community forest user groups (CFUG). Other eight CFUGs formed by other agencies were also under the scope of the project. The forest technician (ranger) at the field office was conducting training and providing support to the CFUGs members.

Notably, Dalits and Newar were not included in any CFUG, including CFUGs formed by others agencies (Table 7.17). Disappointed with this, some of those excluded communities had protested with the District Forest Office (DFO). Since they were not CFUG members, Dalits were not allowed to extract any kind of product from community forestry, not to mention the opportunity for training. As a result, particularly 35 households of blacksmiths, who use charcoal as fuel for metal tools and utensils making, could not collect wood from forest for charcoal making. They were in compulsion to buy charcoal, (used firewood in cooking stove), at the rate of Rs. 15/standard box (about four KGs), from few big family sized non-Dalits households. As the consequences these non-Dalit families were in attraction to make higher quantity of charcoal at home and sell to Dalits and earn money. Periodic blames to the Dalits had also been recorded from the different group discussions and key informant interviews that Dalits did not know any things about the management of forest and are not seriously concerned. But, Dalits denied all the blames, instead claimed that they have equal sense towards the conservation of resources, instead they were blamed from the perpetuated perceptions of social discrimination on hand and the other hand the project did not facilitate to minimize the disparity of access to the forest.

Table 7.17: Community forest management

Role	Number	Area (Ha)	Status
Community forests handed to the CFUGs by the BIWMP	3	31.3	<ul style="list-style-type: none"> • Members: 133 households, including 100 Tamang and 33 Brahmin/Chhetri. • Conflict persists in one CFUG due to exclusion of few Dalit and Newar from the user rights. • Management plan exist and in practice. • People are collecting wood and fodder as allowed. • No practice of NTFP cultivation inside the forest • One CFUG was selected as model CFUG. • Inventory of forest resources began. • Good cooperation available from District Forest Office, and VDC.
Community forest handed over by other agency before the project implementation	8	1,409	<ul style="list-style-type: none"> • Members: 864 households. • Conflict persists in three CFUGs over forest boundaries. • Process of conflict resolution undergoing under the BIWMP support. • People are collecting wood and fodder as allowed • No practice of NTFP cultivation inside the forest. • All CGUGs were covered under the BIWMP further support, including renew of management plan. • Good cooperation available from District Forest Office, and VDC.

Source: Household survey, 2002 and BIWMP field office report, 2002

7.5 Allocation of Benefits from Health Program

The aim of this program is to contribute to a more sustainable use of natural resource in the area by promoting awareness of the link between population growth and environmental degradation. Through local partners, such as NGOs working in health sector, the project had planed to provide training support for health service providers, particularly in the area of reproductive health.

Ever since implementation a number of activities were organized. The activities carried out were health awareness creation sessions at school, one mobile health clinic, mebendazole distribution, iron tablet and folic acid distribution, three stretchers distribution, and installation of 51 pit latrine. A small number of people had attended the health camp (Table 7.18). The main reason was that people were not provided information about this activity.

Table 7.18: Attendance of health camp

Activity	Brahmin/ Chhetri (n=64)	Newar (n=31)	Tamang/ Magar (n=54)	Dalit (n=68)
Participated in health camp* (%)	22.2	12.5	9.2	5.9
Installation of pit latrine** (no)	11	6	16	18
Percent of beneficiaries from total HH	1.0	3.5	4.2	12.1

Source: * Household survey, 2002

** Database, Field office, BIWMP, 2002

NB: n = sample size

Lacking of knowledge on sanitation among the Dalits was observed comparatively poor than other caste/ethnic groups. The work place and home yards of Dalits was found poor from the point of view of the sanitation. That is why it was noted that the extension workers, including the non-Dalit members of HCs hesitate to meet the home of Dalits. In this regard the project support for installation of sanitary toilets, which were earthen pit type, was the popular device for household sanitation in the area. This was because that the existence of a toilet at a home was considered to be a symbol of economic well-being and social status. Therefore, there was increasing demand for pit latrine, as the project provides subsidy for cement and few man-day of labour cost. Dalits had received highest benefits from such support (Table 7.18).

In the course of the support to disadvantaged people Dalits, poor, and upland households had been considered as targeted. Therefore, there were highest 18 numbers out of 51 latrines had been installed by Dalits, followed by Tamangs (Table 7.18). These people had made high appreciation of project support during the key informant interviews. The use of newly installed latrine resulting surprising improvement in sanitation conditions in the villages of Dalits. Nevertheless, the sanitation awareness likes bathing, usage of soap after toilet, and tooth brushing had still been found less habitual among Dalits.

Key informants' response regarding the reproductive health gave the indications that youth were quite aware of the reproductive health of women and children in the study area, but varied relatively high with educated people than others. Moreover the variation was found across the caste/ethnic groups. Project's support in extensions in the dissemination reproductive health is lacking in the whole district, including the Palung sub-watershed. There is no one unit or staff within the DSCO, though few are working in project head office. The whole program within the mission is relied upon the partner NGO or the health posts/health centers. And, since there is only one health post in the area, the extension of such health education evidences neither from the project nor the hospital had been found in the watershed. Obviously, as earlier assessed, the number of child population and child birth rate is higher in Dalit and Tamang caste/ethnic groups, it meant that these people are in less focused by the project although the objective is stated in the project document.

7.6 Perception of Benefits

The satisfaction of a people from any development agency may vary according to the problem what he/she had been facing. Besides, the satisfaction with gained benefit from development interventions may exactly not always be determined by the extent of the benefit. It is rather a subject that how a beneficiary do perceive and react on the gained benefits. Therefore, in spite earlier discussions it was felt to assess the people's satisfaction with benefits that were provided or generated under the BIWMP. In this course people were asked through household survey and key informant interviews.

Only 10 percent of respondents had claimed that they were fully satisfied from the interventions launched by the BIWMP (Figure 7.1). Within the rest of the proportion of the respondents about little more than half of them had moderately satisfied while nearly one third had claimed for least dissatisfaction with the BIWMP' support. If looking at the scenario from the caste/ethnic wise disaggregated data the higher proportion of Tamang and Dalit people had claimed very low satisfactions (Figure 7.2). The reason behind that

was relied on the extent of expectations from the project. The higher expectation was embodied with project's different working style, which had been positively taken, than other line agencies and VDCs in the area. Besides, the expectation was heightened in recent years from the staff led village meetings and frequent visits of project's guest visitors and researcher's to the villages. Because, it is common in rural areas of Nepal that poor and deprived people do high expect once foreigners met their village.

Further verifying the extent of satisfaction with benefits intra caste/ethnic group respondents were further categorized by their economic status. No statistically significant relation was found between the extents of satisfaction with the economic class of the respondents. As well, about four percent of respondents did not answer the question regarding this perception. Because answering the questions intended to evaluate the project was not easy for them as they felt that once the project staffs know their negative comments staff may not continue the support. In the tabulated frequencies (Appendix E24) one can see that majority of respondents, whatever economic class they represent, had claimed for moderate extent of satisfaction. High economic level holding respondents, except Newar, had claimed for moderate extent of satisfaction, while Newar from this economic category did not responded the question. Similarly, the majority of the respondents having moderate household economy had claimed for the same perception. But considerable proportion of Dalit of this economic level had claimed for being satisfied and unsatisfied too. This scenario was differing from other caste/ethnic groups. Because some of the satisfied respondents had got good benefits from the BIWMP. Having comparative good benefits than the other case/ethnic the majority Newars, who hold low economy, had expressed his perception claiming for the satisfaction. Whereas, gaining comparatively less benefits from the project about one-third of Dalit and Tamang respondents had expressed that they were satisfied. Indeed this response was crucial, thus, from the interviews it was found that many people, wherever they belong on, had a consensus understanding on that the project should continue its work in the study area. They said that project would continue to work if they make only positive comments about the project.

Nevertheless, on another part, there were unsatisfied respondents too representing from all the caste/ethnic but only few. Of them were from moderate and low economic classes as well as from high economy holders from Tamang (Appendix E23). As above discussed the frequency for unsatisfied respondents may increase if the people claiming "can not say" and few from moderately satisfied respondents are added. Of the unsatisfied respondents Brahmin/Chhetri accounted for the highest followed by the Dalit. Within the Dalits the moderate economy holders were in the higher proportion. But it is important to take in account that the project had not equally covered the areas of sub-watershed, thus obviously its benefits were not been spatially distributed equally.

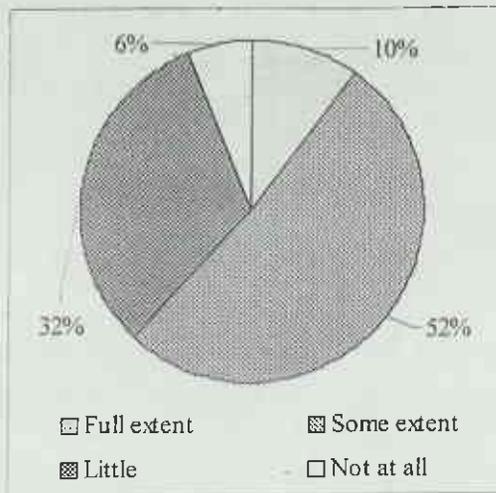


Figure 7.1: People's overall satisfaction with BIWMP's support

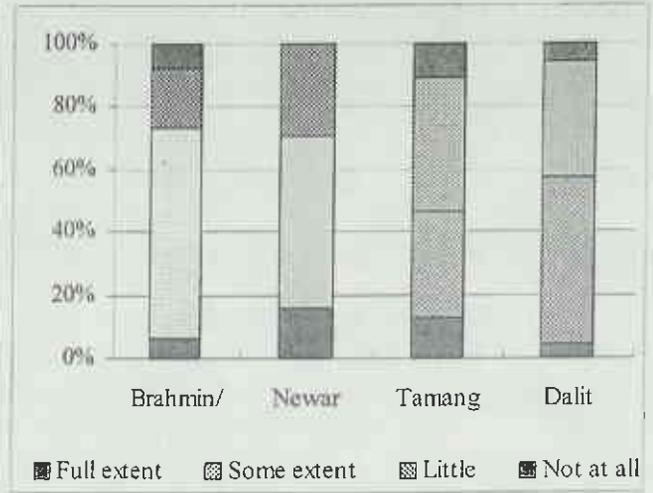


Figure 7.2: Extent of satisfaction with BIWMP's support by caste/ethnicity

Though the unsatisfied respondents accounted about 10 percent, they were further asked for giving reason. From the response it was found that: (i) gained benefits were less than expected, (ii) unequal benefit distribution, and (iii) participation hampered to wage earning. Further explaining the reason being unsatisfied or moderately satisfied few literate Dalits had made few comments and suggested that they were expecting benefits not only to change economic status but also change in social dignity. They perceived that the present activities like NFE, income generation and infrastructures, toilets were incomplete packaged of program, because the social awareness package has been missing in the program. In their view the project's activities should able to change the unfair social customs, if that activities were pronounced, "*targeted to the Dalits*".

From the discussions about the participation, particularly of Dalits, in all above chapters have revealed some genuine issues that provided some guidelines for improving the watershed management programs and projects. Therefore the next chapter will be a conclusion of discussions and will provide some suggestions based on the findings.

Chapter 8

Summary, Conclusion and Suggestions for Improvements

This chapter firstly summarizes the major findings of this study, followed by conclusions based on the findings. Finally, a comprehensive framework conducive to secure participation of particularly the disadvantage groups of people is suggested.

8.1 Summary of Findings

Rapid degradation of Nepal's mountainous watersheds has caused very deleterious impacts on the environment and the socio-economic well being of the settlers. To mitigate such negative impacts, several integrated watershed development and management projects were implemented in various parts of the country. Bagmati Integrated Watershed Management Program (BIWMP), which covers five districts, was one of the major projects.

This study analyzed participation of caste/ethnic groups in several activities implemented in particularly the Palung sub-watershed under the BIWMP. This sub-watershed is predominantly mountainous. More than half of the sub-watershed area was covered with forests, whereas cultivated land accounts for nearly half of the total area. Forests close to settlements are in degraded condition as the upland people's dependency on forest is comparatively high. People have relatively well access to national highway joining to the capital city of Kathmandu and regional market centers.

There are a total of 1844 households in Palung sub-watershed and are predominantly characterized by Hindu caste/ethnic groups. Brahmin and Chhetri, combinedly accounting for (62%) of the population are the majority caste/ethnic groups. Tamang, Newar and Dalit are the minority caste/ethnic groups. Their socio-economic status varies considerably. Illiteracy is highest among Dalits, against lowest among Brahmin/Chhetri. Farming was the major occupation of all settlers, except Dalits, who had traditional caste-based occupations, like ironsmithing, tailoring and goldsmithing. The majority of Dalits are poor. Their per capita landholding is less than one third of average of the study area. Non-Dalits were engaged in off-season vegetable farming to earn income, but due to lack of cold storage facility the price of vegetable produces was low. About 5% of Dalits had sufficient food supply from agriculture throughout the year. Rest of them had to work, besides their traditional occupation, as agricultural wage laborer.

Several governmental and non-governmental organizations were implementing development and conservation activities in the study area. BIWMP was one of the major organizations. There were also some indigenous institutions. A numbers of community groups formed by the BIWMP were also working.

BIWMP was launched in 1986 under the joint management of Commission of European Committee and the Department of Soil Conservation and Watershed Management of Nepal. After the completion of its 10 years, the project was now emphasizing participatory approach to watershed managements. Among various immediate objectives, *promoting income generation opportunities favoring women, Dalits and poorest* was the clearly stated one that favored women, Dalits and other poor people. Six

major activities training and extension, agriculture and forestry, erosion hazard treatment, infrastructure improvement, saving and credit with income generating, and reproductive health were being implemented under the BIWMP.

8.1.1 People's participation in Community Organization

As the entry step in project implementation several community groups were formed through without following proper process. Low level of ownership and awareness regarding the groups were found among the members. The project's attempt to group formation was concentrated on achieving the target of number of groups rather than making them balanced and disadvantaged people oriented. The representation in groups significantly varied across the caste/ethnicity. Dalits' representation in groups was commensurate to their respective population. Although majority of group members were selected by most of the villagers members were political leaders, rich villagers and ex-ward chairmen. Notably, women were selected as per project staff's advice to meet the requirement of 30%-50% women's representation in groups. However, only a few Dalit women were in income-generating groups' executive committees. In general, lack of provision of mandatory representation of disadvantaged people resulted in their lowest representation in groups. Dalits remained to be silent followers of the rules and regulations and decisions made by the majority caste/ethnic groups.

Irrespective of caste/ethnicity, community groups were functioning as per their objectives. Income generating groups were functioning well compared to others. They had fixed date for monthly meeting while other held meeting as per requirement. Mostly the groups fixed agendas in advance and lacked good minuting and reporting systems. Low attendance was common in all group meetings other than meetings of the income generating groups. The willingness of the group members to participate in group meetings on regular basis was determined by social and economical status, level of awareness of group member and perceived benefits from the group. Notably, Dalits participated in group meeting to secure benefits from project activities.

Based on the assessment of people's perception of their organizations, a significant difference was found between perceptions of member and non-member. For Dalits, who were group members, being a group member was a symbol of enhanced social status. Thus, they were keenly interested in securing group membership. However, most of them could not fulfill this desire. Therefore, they were not satisfied with the groups. Dalits involved in a group were satisfied though their overall representation in the group was low. Group members, regardless of their caste/ethnicity, perceived that educated and experienced person should serve executive committee members. The majority of Dalit members felt that they were being discriminated while pursuing group activities like meeting. Besides, they could not play an influential role in the decision-making. Group members regardless of their caste/ethnicity, there was lack of appropriate leaders and project had not paid attention to this issue.

8.1.3 People's Participation in Planning and Implementation

Ensuring participation of disadvantaged people, including Dalits, in project planning and implementation has been the most challengeable task for the BIWMP, which did not care much about disadvantaged people initially. Though the project staffs village-to-village visit was the first source of information on the BIWM, it took more than 13

months to reach the information to settlers. Dalits on the average could get information about five months later than other caste/ethnic groups, which indicates the negligence of the disadvantaged people by BIWMP. The absence of code of conduct for the project staff banning them from discriminatory practices in connection of project activities and lack of project staff belonging to disadvantaged groups were the major constraints of pro-disadvantaged group programs.

The action plans could not fully incorporate the real needs of Dalits, as they were prepared without any consultation with the concerned stakeholders. Majority of activities were planned and implemented based on informal personal contacts. Due to existing discrimination hierarchy Dalits were not actively involved in decision-making. Though consensus or majority was the form of the decision-making, Dalits were virtually silent followers of the decision made by other people belonging to non-Dalits. On the other hand, since their performance was evaluated based on their contribution to Global Work Plan, the staff became target oriented and overlooked the needs of Dalits. This led to preparation of plans according to the judgment of project staffs.

As a consequence of the mentioned blue print planning, there was a gap in preferred and implemented activities. For instance income generation, agriculture/forestry and erosion hazard treatment activities were implemented in those communities, where the peoples preference was less for these activities. People accorded top priority to infrastructure and income generating activities. One of the reasons why people preferred foot trail construction was it could provide them short-term income opportunity. People's contribution was labour for implementation of watershed conservation and development activities.

8.1.4 Distribution of Project Benefits

Activities which provided immediate benefits and had high budget were attractive for the settlers regardless of their caste/ethnicity affiliation. Among the activities implemented, infrastructure development and saving and credit had provided economic benefits. However the amount of benefit varied across the caste/ethnic groups.

Saving and credit schemes were targeted for the poor households and women. Group membership was the only criteria to get benefit from this activity. Group members were depositing savings at the rate Rs. 20 to 50 per month. The Palung Multipurpose Cooperative was managing the financial transaction. The comparative assessment showed that the distribution of membership was not so effective as expected. Newars had got comparatively more benefits, while Dalits could get very little. Among Dalits who had received credit only one had used it very successfully. Most Dalits did not get loan, as they did not have idea how to use it. While capable non-Dalit people had enjoyed with the loan facility, most of them had used loan for vegetable cultivation and buffalo raising. The amount of the loan was inadequate for majority of them.

Foot-trail improvement, drinking water supply system, stream bank protection, and soil erosion measures had provided benefits to the major proportion of population regardless of caste/ethnicity in the watershed. All weather access to local market, availability of clear drinking water and channelization the river were the most significant visual changes in the study area. Besides, people had also gained short-term economic

benefits by working as wage labourers in construction works. Mostly poor people including Dalits had benefited from such opportunity.

In contrast, variation was found between different caste/ethnic groups in benefits received from training and extension. Although these activities were supposed to provide more benefit to disadvantaged people, only about 10% of Dalits had got chance to attend in trainings. Due to the absence of clear guidelines that ensure their selection and prevents discrimination against them, Dalits could not get much benefits from training and extensions. Group members who had holed key positions had repeatedly participated in trainings. Similarly, the literacy classes, which were running to facilitate social change, were only providing basic literacy education to women. Many Dalits were looking for skill improvement training but the project could not provide them opportunity according to their needs.

The project was providing technical support for vegetable farming. Being virtually landless most Dalits could not take advantages of this opportunity. Like wise, Dalits could not get any benefits from community forestry supported by the project, as they were barred from membership of the forest user groups by non-Dalit people. Dalits could not collect wood required for charcoal making.

The project had not properly disseminated information about its health and sanitation activities. Only about 12 % surveyed households could get service from the health camp, and there was no significant variation between caste/ethnic groups. Since the sanitation was the major problem in the Dalit communities, 12 % of Dalits had installed pit latrines, which was more than other caste/ethnic groups.

The majority of the people were "to some extent" satisfied with the project activities. Notably, only 10% of people were "fully satisfied" with the activities. The Tamang and Dalit accounted for the major proportion of people who were little satisfied with the project activities.

8.2 Conclusion

People centered management approach has emphasize in several integrated watershed development and management projects in Nepal, including the Bagmati Integrated Watershed Management Program. Due to differences in abilities, attitudes and perceptions of watershed settlers, securing active and equitable participation from all caste/ethnic groups has been challenge to watershed management programs and projects.

Similar to findings of other scholars interested in Nepal's socio-cultural structures and rural development and watershed management the caste/ethnic group based socio-economic structure is found in the Plaung sub-watershed. Considerable disparity has been noticed in many aspects of the lives between different caste/ethnic groups. Dalits, who lay at the bottom of the social structure, are the minority populace. They are most disadvantaged from economical and social points of view. They feature with high illiteracy, lowest economic status, nearly landless and struggling with food scarcity for about half of the year. Moreover, they predominately rely on traditional occupations, which are being threatened by manufactured goods and their traditional skills.

BIWMP offers a good opportunity for the improvement of settlers' socio-economic condition and for natural resources conservation. But, Dalits, knowingly or unknowingly, are not given priority by the project. Though the projects have been initiated through community group, Dalit's representation in groups is negligible, on hand and those groups are less active on the other. Since Dalits are minority, their voices have been hardly considered. This combined with the project's inability to address disadvantages groups' problems have led to deprivation of Dalits from most benefits of the watershed management project. Dalits are contributing to implementation of mainly infrastructure related projects. This has provided some short-term economic benefits, but has not contributed to enhance Dalit's broader quality of life.

8.3 Suggestions for Improvements

Based on the above conclusions drawn from the research, the following suggestions have been proposed for reshaping the project strategies of ongoing project or new projects to make the project environment conducive to all caste/ethnic groups participating in overall project interventions.

8.3.1 Promotion of Pro-Dalit Community Organizations

Organizing the community under an umbrella, which serves as key actor for community based watershed management project, is essential. It is not always necessary to form community organizations. However, some existing community organizations or institutions cannot serve fairly to all people belonging to different caste/ethnicity. Therefore, formation of new community groups with appropriate representation of all caste/ethnic groups is essential. The question is what proportionate will be the composition of different groups and proportionate and for what sort of activities they should be involved in. If the groups are formed commensurate with group populations, the representation of minorities will be always negligible. This means, they will never have opportunity to influence the decision-making, although the groups may function democratically. Therefore, the watershed management project may consider the following options to distribute its benefits equitably among all caste/ethnic groups, including Dalits.

1. In heterogeneous settlements where Dalits are minority, the project requires to form main community groups comprising all caste/ethnic groups. About one-third of the group members should be Dalits with a provision of at least one key position for them. It will help to transmit the voice of the Dalits to the executive committees. Because, the key position holds authentic power to resolve disputes and can influence to other members to pursue democratic decision making process. In such case, other two Dalit members can support to the key position holder. Their selection to community groups will encourage them to mobilize community members. The project should develop guidelines, similar to developed for women's representation.
2. Membership groups, like income generating groups, should be separately formed for Dalits particularly in heterogamous settlements. Because Dalits require financial and technical inputs to pursue their preferred economic activities. Such organizational arrangement will enable Dalits to receive loan by identifying the potential activities on their skill. It will also help to identify their training needs without difficulty.

3. As this study showed that educated non-Dalits are positive towards the Dalits, they can play a very important role model for facilitating social changes. They can be influential to minimize the discrimination against Dalits. Therefore, the educated non-Dalits should be encouraged to be members of main community groups. They can also serve as advisors of income generating groups belonging to Dalits, so as social cohesion would be strengthened.
4. There should be sufficient time for formation of groups so as people belonging to different caste/ethnic groups will have discussion on objectives of groups and benefits from the membership. An immediate training about the role and responsibility of the each groups members should be organized and project has to help groups to establishing necessary rules and regulations.

8.3.2 Strengthening Capacity of Community Groups

In view of the inability of community groups to pursue watershed management and development activities effectively, it is essential to enhance their capacity in project planning, implementation and management effectively. Project needs to visualize that how long the groups will sustain and how they will perform after the termination of the project.

1. A participatory assessment is essential to evaluate the activeness of the existing community groups. The practice of caste discrimination and group members' perception of caste equity should be one of the criteria for assessment.
2. Reshuffling of community groups may help revitalize the groups. For this, the concept of different tiers of community organizations of the area is essential to be understood by all members and people. It is good to have provision of a higher-level umbrella committee or group with vertical networks of smaller groups or sub-groups at village level and a horizontal network with ward or VDC level groups, NGOs and project to secure active participation of all caste/ethnic groups. This will allow the disadvantaged people to secure a fair share of benefits from project activities.
3. As this study revealed, there are several instances of bypassing the hamlet committees while implementing project activities. The project should abandon such practice to develop the capacity of these committees. Moreover, the committees have to be provided full responsibility for implementing the selected activities. It will help them to acquire skill and confidence about planning and implementation of development activities.
4. All executive members and general members, including Dalits are also in need of appropriate skills on required to pursue conservation and economic activities. This entails trainings on formulation of community projects, fund management, record keeping, and social mobilization. Special attention need to paid to upgrading the skills of Dalits, who are in the most disadvantaged position.

8.3.3 Participatory Project Planning and Implementation

There is an urgent need for materializing the proposed participatory watershed management planning and implementation. This planning model based on need based approach that enables people to identify and demand for assistance. So far Dalits have not actively participated in the way envisaged by the project. Because of their low level of awareness and social suppression, Dalits may not be able to identify their needs properly.

Therefore, project's guidance is essential for them. One should be careful that their preference are best chosen and approved by the project authorities.

Despite their willingness poor people cannot make voluntary contributions to projects due to their poverty, which may prevent them from project benefits. Therefore, the project should provide subsistence incentives to the poorest people while securing their contribution to watershed management activities.

8.3.4 Participatory Monitoring and Evaluation Systems

It is essential to monitor and evaluate the step-by-step work progress on disadvantaged groups oriented programs. Corrective action should be taken immediately, if some anomalies and difficulties are encountered. Participation of Dalits should be provisioned in monitoring and evaluation system.

8.3.5 Provision of Special Package Program for Dalits

Problems of Dalits are more sever than other groups. They cannot be addressed by a blueprint program designed for all caste/ethnic groups. Achieving economic benefits cannot fully satisfy them, as such benefits alone cannot help to achieve the social dignity. Therefore, there is a need of holistic approach to project planning comprising social transformation as an integral component. Following specific components need to be incorporated in the special package program for Dalits.

1. Enhancement and diversification of traditional skills, and enterprises management capability of Dalits, which will help them to embark successfully on market oriented economic activities.
2. Creation of employment by allowing and helping poor people to grow herbal medicine in national and community forests on leasehold basis. It will help to other members of community forest groups to get increased benefits from the forest resources.
3. Advocacy of anti-caste based attitude and behaviors through the literacy program pro-Dalit people and organizations can be mobilized to pursue such activity. Non-formal education classes should have reading materials containing lessons that encourage all course participants to treat all caste/ethnic groups with respective honor.

8.3.6 Promotion of Pro-disadvantaged Attitude among the Project Staffs

Attitude and behavior of the project staffs are also important factors influencing programs reaching to the Dalits. Higher the positive attitude towards the Dalits, the higher the chance of Dalits getting befits. Therefore, it is necessary to heighten the caste sensitiveness among the staff. This can be achieved through:

1. Providing caste sensitiveness training to all concerned staff,
2. Making code of conduct for all concerned staffs to prevent caste based discriminatory practices at their works. Encourage staff those who serve as role model working with Dalits.
3. Increase the number of staff belonging to Dalit group at field to senior management levels.

4. Provision of performance evaluation based benefits provided to the disadvantaged group of people.

8.3.7 Further Research Suggestions

Findings of the study revealed that ability and perception of people determine the extent of participation in watershed management projects. Ability of Dalits is comparatively low to be involved in community groups, participating in planning and implementation and getting benefits from the project. So, the basic understanding is essential to improve the awareness of the Dalits through community organizations and economical activities. In such awareness creation framework and appropriateness of community organizations, which involve numerical and qualitative representation of people, need to be further developed based on in-depth research findings, such types of research is recommended.

Reference

- Abeyrama, T. and Weber K.E. (1993). *Local Participation in Rural Development Planning: A Case Study of Settlements Established by FELDA In Wetland Malaysia*, Research report, HSD, AIT, Thailand.
- Adhikari, R. (1996). *Participatory Rural Development in Nepal: Comparative Study of GO, NGO and Locally Initiated Projects in Syangja District*, Unpublished Master Study Thesis, Asian Institute of Technology, Thailand.
- Adolph, B. and Oppen, M. (1997), *Farmer's workshops as a tool to evaluate watershed management projects: an account of experiences and problems in South India*, Presented at the International Conference on Creativity and Innovation at Grassroots', Ahmedabad, India.
- Ahluwalia, M. (1997), *Representing Communities: The Case of A Community-based Watershed Management Project in Rajasthan, India*, IDS Bulletin 28(4):23-34. and studies (1999 – 2001), Kathmandu.
- Alexander, E.R. (1993), *Dimensions and Indicators of Development rural Development Journal*, Vol. XII (3).
- Barraclough, S. and Pimbertm, M.P. (2000), *Participatory Natural Resource Management and Property Rights Issues, London and Geneva: IIED and UNRISD Discussion Paper, Draft*.
- Barraclough, S.L. and Ghimire, K.B. (1995), *Forests and Livelihoods: The Social Dynamics of Deforestation in Developing Countries*. Basingstoke, Macmillan/St. Martin's.
- Bhatnagar, B. and Aubrey C. W. (eds.) (1992), *Participatory Development and the World Bank: Potential Directions for Change*, World Bank Discussion Paper 183, Washington D.C., The World Bank.
- Bhattachan, K.B. (2002). Social and Economic Condition of Dalit Women in Devkota, P. (ed.), *Dalits of Nepal: Issues and Challenges*, Feminist Dalit Organization, Kathmandu
- Bista, D.B. (1991), *Fatalism and Development-Nepal's Struggle for Modernization*, Orient Longman, Patna, India.
- BIWMP (2001a), *Annual Report 16 July 2000 to 15 July 2001*, DSCWM/CEC, Kathmandu.
- BIWMP (2001b), *Mid Term Review Report of BIWMP*, Kathmandu
- Buffum, B. (et al.), (2000), *Post Project Impact Evaluation-BTRT Watershed Management Project*, HMG Department of Soil Conservation and watershed management and CARE Nepal, Kathmandu.
- Cameron, M. M. (1995), *Transformations of Gender and Caste Divisions of Labor in Rural Nepal: Land, Hierarchy, And the Case of Untouchable Women*, Anthropological Research Volume 51, Number 3.
- CARE Nepal (2001), *Recent Lessons Learned: A Compilation of Findings from Evaluations (1998-2001)*, Kathmandu, Nepal.

- Cernea, M. M. (ed.), (1991), *Putting People First: Sociological Variables in Rural Development*, New York, Oxford University Press.
- Clayton, A., Oakley, P. and Pratt, B. (1998), *Empowering People: A Guide to Participation*, New York, UNDP.
- Committee on the Elimination of Racial Discrimination (CERD), (1999), *Fourteenth Report of States Parties Due in 1998: Nepal*, CERD/C/337/Add.4, Annex, May 12, 1999.
- Dahal, D. et al. (2002). *National Dalit Strategy Report*, Prepared for National Planning Commission for Supporting the Dalits-related Plans and Policies for Preparation of 10th National Five Year Plan of Nepal, Kathmandu, Nepal
- Dale, R. (2000), *Organizations and Development- Strategies, Structures and Processes*, Sage publications, New Delhi.
- Dale, R. People's Development with People's Money: The Mobilization – Organization - Finance Nexus, *Development in Practice* Volume: 11 Number: 5 Page: 606 -- 621
- Department for International Development (DFID), (1995b), *Guidance Note on Indicators for Measuring and Assessing Primary Stakeholder Participation*, London, DFID.
- Dixon, A. and Easter, W. (1988), Integrated Watershed management: An Approach to Resource Management, pp 3-14, *Studies in Watershed Policy and Management* No. 10.
- Eade, D. (1997), *Capacity Building-An Approach to people-Centered development*, Oxfam, GB, UK.
- Food and Agriculture Organization (FAO), (1990) *Participation in Practice: Lessons from the FAO People's Participation Programme*, Rome, FAO.
- Food and Agriculture Organization (FAO), (1992), *Lessons from the FAO People's Participation Program*, (FAO, 1992), Rome, FAO.
- Gastil, J. (1997), *Common Problems In Small Group Decision Making: The Group Promoter's Resource Book*, FAO.
- Grimble, R. and Wellard, K. (1997), *Stakeholder Methodologies in Natural Resource Management: A Review of Principles, Contexts, Experiences and Opportunities*, in *Agricultural Systems*, Vol. 55, No. 2.
- Gurung C.P. (1981), *People Participation in Local Level Planning*, AIT, Unpublished Thesis, AIT, Bangkok, Thailand.
- Gurung, H.B. (2002), Role of Indigenous People in Sustainable Development, *Sectoral Reports on Sustainable Development Agenda for Nepal (SDAN)*, National Planning Commission, HMG/Nepal, Kathmandu.
- Gurung, J. B. (2002). Empirical Glimpses of the Situation of Dalits in Nepal, in Devkota, P. (ed.), *Dalits of Nepal: Issues and Challenges*, Feminist Dalit Organization, Kathmandu
- Hinchcliffe, F., Guijt, I., Jules N. Pretty and Shah, P. (1995), *New Horizons: The Economic, Social and Environmental Impacts of Participatory Watershed Development*, Gatekeeper Series No. 50, London, International Institute for Environment and Development (IIED), London.

- Hoking A. (2001), *Development Anthropology for BIWMP*, Department of Soil and Watershed Management and Commission of European Communities, Kathmandu Nepal.
- Human Rights Watch (HRW), (2001), *Caste discrimination: A global Concern*; A Report for the United Nations World Conference Against Racism, Racial Discrimination, Xenophobia and Related Intolerance, Durban, South Africa, September 2001, Vol.13, No. 3(G).
- Informal Sector Service Center, (INSEC), (1993), *Human Right Yearbook-1993, Annex-1*, Kathmandu, Nepal
- Jensen, J.R. (1996), Watershed Development: Concept and Issues. In J.R. Jensen, Seth, S.L., Sawhney, T. and Kumar, P. (eds.), *Watershed Development: Emerging Issues and Framework for Action Plan for Strengthening a Learning Process at all Levels*, Danida Watershed Development Programme, New Delhi.
- Jensen, J.R. (2001), Integrated Watershed Development and Management: Exercises and educational and Research Challenges, in Thapa, G.B. et al., (ed). *Integrated Watershed Development and Management in Asia, Training and Research Needs and Priorities*, PP. 23-40, AIT, Bangkok, Thailand.
- Karl, M. (2000), *Monitoring and Evaluating Stakeholder Participation in Agriculture and Rural Development Projects: A Literature Review*, Sustainable Development Department (SD), FAO.
- King, W. et al. (2001), *Phase II -Mid Term Evaluation of Upper Andhikhola Watershed Management Project*, Syangja, DSC/CARE Nepal.
- Korsching, P.F., (et al), (2001), Soil Erosion as a Community Issue: Public Perceptions of Off-Sites Impacts, *Journal of Society and Natural Resources*, 14:67-76, 2001.
- Kottak, Phillip, C. (1991), When People Don't Come First: Some Sociological Lesson From Completed Projects, in Cernea, Michael M. (ed.), 1991, *Putting People First: Sociological Variables in Rural Development*, New York, Oxford University Press.
- Lal, R. (ed). (2000), Integrated Watershed Management in the Global Ecosystem, *Soil and Water Conservation Society*, CRC press, USA.
- Marsden, D. and Oakley, P. (eds.) (1990), *Evaluating Social Development Projects*, Oxford, Oxfam, UK.
- Marsden, D., Oakley, P. and Pratt, B. (1994) *Measuring the Process: Guidelines for Evaluating Social Development*, Oxford, INTRAC.
- Martin, A. and Sherington, J. (1997), Participatory Research Methods - Implementation, Effectiveness and Institutional Context, *Journal of Agricultural Systems*, Vol. 55, No. 2.
- McAllister, K. (1999), *Understanding Participation: Monitoring and Evaluating Process, Outputs and Outcomes*, Ottawa, IDRC.
- McGee, R. and Norton, A. (2000), *Participation in Poverty Reduction Strategies: A Synthesis of Experience with Participatory Approaches to Policy Design, Implementation and Monitoring*, IDS Working Paper 109, Brighton, IDS.
- Ministry of Local Development (MLD), (2001), *15th Country Report submitted to UN Committee on the Elimination of Racial Discrimination (CERD)*, WCAR, Durban South Africa.

- Mishra, S.N. (1992), *Participative Management and rural Development*, New Delhi.
- National Planning Commission (NPC), (1998), *The Ninth National Plan*, His Majesty's Government of Nepal, Kathmandu.
- Nelson, D. et al. (1980), *The Major Ecological Land Units and Their Watershed condition in Nepal*, Kathmandu, Integrated Watershed Management Project, Department of Soil and Watershed Management/UNDP/FAO.
- Oakley, P. and et al. (1991), *Project with People*, ILO, Geneva.
- Oakley, P. and Marsden, D. (1984), *Approaches to Participation in Development*, Geneva, International Labour Organization (ILO).
- Ostrom, E. (1996), Diverse form of participation, in Shivakoti G. et al., (ed.) *People and Participation In Sustainable Development: Understanding of Dynamic Of Natural Resource System*, IOAAS, TU, Nepal.
- Pongquan, S. (1992), *Participatory Development Activities at Local Level: Case Studies in Villages of Central Thailand*, Bangkok, Thailand
- Poudyal, L.P. (1990), *People's Involvement in Planned District Development Through Decentralization in Nepal*, Doctoral Dissertation, HS-90-2, Asian Institute of Technology, Bangkok.
- Rangan, H. (2001), Indigenous Peoples and Forest Management: Comparative Analysis of Institutional approaches in Australia and India, *Journal of Society and Natural Resources*, 14:145-160, 2001.
- Roy U.N and Iyer G. (2001), Status of Dalits in Shivalik Region of Punjab: Case study of watershed development villages, *Journal of Rural Development*, Vol. 20 (I), pp.99-112, NIRD, India.
- Rudqvist, A. (1992), The Swedish International Development Authority: Experience with Popular Participation, in Bhatnagar, Bhuvan and Aubrey C. Williams (eds.), 1992, *Participatory Development and the World Bank: Potential Directions for Change*, World Bank Discussion Paper 183, Washington D.C., The World Bank.
- Rudqvist, A. and Woodford-Berger (1996), *Evaluation and Participation -Some Lessons*, SIDA Studies in Evaluation 96/1, Stockholm, SIDA.
- Schrader, H. (1998), *Working paper No. 270*, University of Bielefeld, Faculty of Sociology, sociology of Development Research Center, Germany.
- Sengupa (1996), Diversity in participation, in Shivakoti G. et al., (ed.) *People and Participation in Sustainable Development: Understanding of Dynamic of Natural Resource System*, IOAAS, TU, Nepal.
- Sharma, P.N. and Wagley, M.P. (eds.), (1996), *Case studies of people's participation in watershed management in Asia*. Part I, Nepal and China and India, PWMTA-WMTUH-FARM, Kathmandu.
- Smith P.D. and McDonough M. (2001), Beyond Public Participation: Fairness in Natural Resources decision Making, *Journal of Society and Natural Resources*, 14:239-249, 2001.
- Sob, D. (2001), *Voice of Voiceless Women of Nepal*, Seminar paper presented in World Conference Against Racism (WCAR), August 2001, Durban South Africa.

- Sob, D., (2001). *Dalit Women: The Triple Oppression of Dalit Women in Nepal*, Asian Human Rights Commission - Human Rights Solidarity, Vol. 11 No. 08 Aug. 2001
- Team Consult (1999), *The Condition of The Dalits (Untouchables) in Nepal: Assessment of The Impact of Various Development Interventions*, Submitted to UNDP/Nepal, Kathmandu, Nepal
- Thapa G. B. (1993), *Managing Mountain Watershed in upper Pokhara Valley, Nepal*, Monograph, Asian Institute of Technology, Bangkok.
- Thapa G. B. (1995), Status and Management of Watershed of Watersheds in the upper Pokhara Valley, Nepal, *Journal of Environmental Management* Vol. 19, No. 4, pp.497-513.
- Thapa G. B. (2001), Changing Approach to Mountain Watersheds management in Mainland South and Southeast Asia, *Journal of Environmental Management*, Vol 27, No.5, pp. 667-679.
- Uphoff et al. (1979), *Feasibility and Application of Rural Development Participation: A state of the Art Paper*. Rural development Committee, Cornell University, Ithaca, N.Y. 1979
- Uphoff, N. (1989), *Participatory Self-Evaluation of P.P.P. Group and Inter-Group Association Performance: a Field Methodology*, Rome, FAO.
- Uphoff, N. (1991), *Fitting Projects to People*, in Cernea, Michael M. (ed.), 1991, *Putting People First: Sociological Variables in Rural Development*, New York, Oxford University Press.
- Uphoff, N. (1992), Monitoring and Evaluating Popular Participation in World Bank-Assisted Projects, in Bhatnagar, Bhuvan and Aubrey C. Williams (eds.), *Participatory Development and the World Bank: Potential Directions for Change*, World Bank Discussion Paper 183, Washington D.C., The World Bank.
- Vishwakarma, H. (2002). Dalits of Nepal: Their Movement Now and Then, in Devkota, P. (ed.), *Dalits of Nepal: Issues and Challenges*, Feminist Dalit Organization, Kathmandu
- Vorachak, I. (2000). *People's Participation in Rural Development Work: A Case study of Thapangthong District, Savanakheth Province Lao PDR*, M.Sc. Thesis, Asian Institute of Technology, Thailand.
- Wagley, M. (1997), Status of Watershed Management in Nepal. In P.N. Sharma and M.P. Wagley (eds.), 1997, *The status of watershed management in Asia*. PWMTA-FARM, Kathmandu.
- Wagley, M. and Bogaty (2000), State of the Art and Status of Watershed Management in Nepal, in Bendtsen, K. S. Et al: *Watershed Development Proceeding of Danida's III international workshop on watershed development*, Kathmandu, Nepal.
- World Bank (1996), *The World Bank Participation Sourcebook*, Washington D.C., The World Bank.
- World Bank (1998), *Assessing Aid: What Works. What Doesn't, and Why*, New York, Oxford University Press.

Appendix A: Coordination Schema

Objectives	Parameters	Information to be Collected	Source	Data Analyses
	Bio physical Socio economic	<ul style="list-style-type: none"> - Topography, landuse, drainage - Population: Household size, Age, Sex, Caste - Occupation - Institutional setup - Project profile 	<ul style="list-style-type: none"> - Secondary information - Household Survey - Project documents 	Descriptive statistic
1) To analyze different caste groups' participation in watershed management planning and implementation	People's participation in project planning	Pre-planning phase: <ul style="list-style-type: none"> - Information dissemination - Stakeholder consultation Planning phase: <ul style="list-style-type: none"> - Project policies/objectives - Terms and conditions for project implementation - Project selection criteria - Demand collection - Prioritization of needs - Dissemination of information on projects after selection - Community's rules and regulations fixed for participation - Satisfaction with the planning system 	<ul style="list-style-type: none"> - Secondary data, - Key informants interview - Focus group discussion with functional groups - Case study 	Descriptive and analytical statistic; (Ranking, Scoring, chi-sq. test.)
	People's participation in project implementation	<ul style="list-style-type: none"> - Types, number and coverage and objectives of project activities - Methods and modes of implementation - Contribution to selected project activity - Leadership in implementation - Satisfaction with the implementation system 	<ul style="list-style-type: none"> - Key informant interview - Household survey - Focus group discussion - Case study 	Descriptive and analytical statistic; (Ranking, Scoring, chi-sq. test.)
2) To analyze different caste groups' participation in watershed management community organization	Representation -Formalness of groups - Meetings - People's perceptions of community organization	<ul style="list-style-type: none"> - Types, number and coverage and objectives of community organizations induced by BIWMP - Group formation process - Representation - Formalness of groups - Frequency of meeting - People's perception of group representation - People's sentiments - People's perception of role performed by the group - Leadership 	<ul style="list-style-type: none"> - Key informant interview - Household survey - Focus group discussion - Case study 	Descriptive and analytical statistic; (Ranking, Scoring, chi-sq. test.)

	Parameters	Information to be Collected	Source	Data Analyses
3) To find out-- benefits that different caste groups got from the watershed management project	Benefits	<ul style="list-style-type: none"> - Terms and conditions of benefit sharing - Decision making in benefits sharing - Types and extent of benefits from selected project activities in the form of: material, social, personal gains - People's satisfactions with benefit sharing system 	<ul style="list-style-type: none"> - Household survey - Focus group discussion - Case study - Project reports - Observation 	Descriptive statistic; (Ranking, Scoring, chi-sq. test; cross tabulation)
4) To suggest participatory management framework conducive for active participation of all caste people in watershed management activities	<ul style="list-style-type: none"> -Planning model of BIWMP -Problems and prospectus identified in the study 	<ul style="list-style-type: none"> - Existing planning and implementation model - Review of focus program to disadvantaged people - Review of project operation and management system - Prospectus from the perceptions of the disadvantaged people - Suggestions for enhancing all caste groups' participation in watershed management 	Analyze chapter of the thesis	

Appendix B: Household Questionnaire

**Participation of Disadvantaged People in Integrated Watershed Management:
A case study of Bagmati Integrated Watershed Management Project, Makawanpur
District Nepal**

A. General

1. Identity of respondent:

Name: Mr./Ms. _____ Age: _____

VDC name _____ Ward no. _____ Tole _____

Caste/ethnic group: Brahmin/Chhetri Newar Tamang Dalit

2. Information on household family

Age group	No.		Education	Occupation	
	F	M		Major	Secondary
Respondents (key person)					
Below 5 years					
5 to 14 years					
15 to 59 years					
Above 59 years					
Total					

Marital status:

- 1 = Single
- 2 = Married
- 3 = Widowed
- 4 = Separated
- 5 = Divorcee

Education:

- 1 = Illiterate
- 2 = Simple literate
- 3 = Primary education
- 4 = Secondary education
- 5 = Higher than SLC

Occupation:

- 1 = Agriculture
- 2 = Tailoring,
- 3 = Shoe making
- 4 = Blacksmithing
- 5 = Goldsmith
- 6 = Wage laborer
- 7 = Service/job
- 8 = Student
- 9 = Mason/carpentry
- 9 = Cottage industry /Trading/business
- 11 = Others (specify)

3. Land ownership

Land tenure system	Total land area	Type of land			
		Irrigated		Rainfed	
		Ropani	Aana	Ropani	Aana
Self owned					
Rented-out					
Rented-in					
Total					

4. How do you evaluate your household economic status comparing to other households in your village?

Low Moderate High Can not say

5. How long do you survive from your farm production? _____ months

6. Ask Only to Dalit Household (otherwise go to Q. Section No. B)

6.1 What is your caste based occupation?

- Cobbler Tailoring Ironsmith
 Goldsmith Others _____

6.2 How many family members are engaged in this occupation

Total _____ Male _____ female _____

6.3 How many families are receiving your services as bonded service No. _____

6.4 What term of payment is adopted for your services?

- Cash Grain Both

6.5 Please specify the quantity in annual basis

Type of payment	Rate per Household	Total quantity	Comments on gained
Cash			
Grain			
1.			
2.			
3.			

6.6 Make your comments on how to improve your remuneration from your occupation?

6.7 Are the tools of your occupational workshop sufficient? Yes No

7. To what extent you are depended to forest resources? And your demands have been fulfilled?

Purpose	Highly	Moderately	Low	Demand Fulfillment	
				Yes	No
1. Fodder collection					
2. Live stock grazing					
3. Fuel wood collection					
4. NTFP					
5. Timber					
6. Others					

8. Please give your opinion on the changed status of following resources and practices within the past 10 years

Variables	Increasing	Same	Decreasing
1. Availability of fire wood			
2. Fodder from forest			
3. Availability of Litter			
4. Practice of open grazing			
5. Soil fertility			
6. Change in crop damaging			
7. People's awareness on conservation			

8. Practice of use of soil conservation measures

9.1 Do you know Bagmati Watershed Management Project is working in your village?
 Yes No

9.2 If yes, then when did you come to know ? _____

9.3 How did you know at first?

From mass meeting in your village From project staff visited you
 From elites of your village From others (specify) _____

9.4 Have you ever participated in pre feasibility of project activities ?

Yes No

9.5 Please give reason for not participating.

9.6 Are you member of any community organization?

Yes No

B. Questions related to Community Organizations (Ask Only to Group Members.)

1. Please provide information.

SN	Name of group	Initiated by	Date of Nominated	Your Position in	Who Nominated you?
1					
2					
3					
4					

2. What are the criteria to be a member in your group?

Only male Only female Mixed
 Same caste Inclusive to all caste Other (specify) _____

3. What is your feeling being a members of above community groups?

Social status increased Feel as a social worker No change.
 Others _____

4. What is your feeling about the the processes being adopted for group discussion?

Types of Activity	Strongly agree	Agree	Disagree
1. No consideration given to your idea			
2. Importance is given to rich member			
3. Importance is given to caste structure			
4. Importance is given to Position of member			
5. Others			

5. Frequency of meeting of you represented groups:

1. Name of group: _____ Frequency: _____

2. Name of group: _____ Frequency: _____
6. How often do you participate in those groups?
1. Name of group: _____ Regularly ___ Irregularly ___ Never _____
2. Name of group: _____ Regularly ___ Irregularly ___ Never _____
7. What are the reasons of your different extent of participation in groups?
- _____
- _____
8. What kinds of issues are discussed in the meetings?
- Of individual interest In line with the objective/ motive of forming group
- Not in line with the objective/ motive of forming group
- Political Of common interest Other (specify) _____
9. Are the issues to be discussed in meeting decided prior to the meeting?
- Yes No
10. Who decides the issues to be discussed? _____
- _____
11. How is the decision made in the meetings?
- Consensus Majority By influential ones. Who? _____
- Others (specify) _____
12. Did you or any of your household members participate in any group works?
- Yes, in all works Yes, in some No
13. If yes, why?
- Because it was a collective action It gave individual benefit
- It gave benefit to several/all participants Persuaded
- Obligated Other (specify) _____
14. If no, why?
- No spare time Not interested No benefit from such work
- Only certain people benefits from this activity It was useless
- No one asked to participate Other (specify) _____
15. In which of the following way did you or any of your household members contribute?
- Cash Labour Materials Other (specify) _____
16. How do you rate the capability of your group in devising/ formulating proper rules and regulations to benefit all the members on their own?
- Highly capable Moderately capable Not capable
17. Do your group also take any initiative to resolve conflict between/among group members?
- Yes No
18. Do you think your group has been able to resolving the conflict among group members?
- Yes No Can't say
19. Do you participate in the decision what the funds are used for?
- Most often Sometimes Never

20. Are you aware of the way the raised funds are being utilized by your organization?
 Yes No

21. What is your opinion on the participation of all group members in following activities?

Activities	Degree of participation			
	High	Moderate	Low	No
Planning				
Decision making				
Implementation				
Benefit sharing				

22. Please express your opinion on the role of local group/institutions in your village.
 Required for local development Does not make any difference
 Not required Others (specify) _____

23. Do you know is there any kinds of rules and regulation set for people's participation in the village development? Yes No

24. Do you satisfy with the criteria set for the participation?
 Strongly satisfy Satisfy Dissatisfy

25. Please mention the reason for not satisfying (precisely)
 Low benefit for you Norms is biased to caste system
 Others (please specify briefly) _____

C. Participation in Planning and Implementation and Benefits Sharing

1. Had you ever demanded activities for you from any development agencies working in your village?
 Yes No

2. Please provide specific information:

Type of activities you demanded	Whom you demanded? List the name of agency	Mediator used for demand process	Year of demand	Response of the request*

(* Please fill the column demand included in operational plan "fully", "partially", "never")

3. Who often consult you for your demands during the planning process of BIWMP? (Please list organizations/institutions in order of frequency)

S.N.	Name of Institutions/organization	Priority (3 to 1 for High to low)

4. Did you aware about the terms and conditions of supports from the BIWMP regarding your demanded activities before the activity demand?

Yes

No

5. Who provided you information about the terms and conditions? _____

6. Were you agreed with given terms and conditions?

S.N.	Activities under supports from BIWMP	Opinion about term and conditions for plans.		
		Strongly Agreed	Agreed	Disagreed

7. Please specify the reason for being agreed or disagreed.

8. Were you informed about BIWMP projects selected for implementation?

Yes

No

9. Do selected activities by the BIWMP address your needs?

Cover all needs

Cover few needs

Do not cover

10. What do you think about the reasons for selection of only few or no activities for your needs? (Tick off in cell)

Reason	Strongly agree	Agree	Disagree
Activities were selected by elites without consideration of your opinion			
Your ideology is different from majority of group members			
Caste culture constrained			
You were not informed/asked for the selection process of project activity			
Limited resources with the project authorities			
You were not able to meet the criteria proposed by the project or group			
Others: (specify)			

11. Please express your opinion regarding the planning process of activities for BIWMP.

Actions/process adopted for project planning	Score (3 = Very good, 2 = good, 1 = faire and 0 = bad)
Demand collection through PRA conducted by the project	
Demand collection through wards directly	
Demand collection through existing community groups	
Demand collection through project staff directly	

11. Please give specific reason for "very good" and "bad"

12. How many activities that you demanded were implemented by the BIWMP? (please specify in the table)

Name of activity and Demanded (year)	Implemented (year)	Year of completed	Activity targeted to:	
			HH	groups

13. Have you ever participated in implementation of any project activities supported by BIWM Project? Yes No

14. Please give reason for not participating

15. Please specify in what activities did you participate and how?

Type of activities	Form of contribution			
	Year of participation	Shared money for activity cost (NRs.)	Contributed as laborer (man days)	If other form, specify
Training and extension				
Agriculture				
Forest management				
Erosion hazard treatment				
Income generation				
Group Credit				
Reproductive health				
Infrastructure improvement				
Others (specify) _____				

16. What factor encouraged you for participation in implementation of BIWMP project activities in overall ?

Factors	Score (3 to 0)
Incentive provided by the groups/projects in kind	
Expected benefits in term of material	
Expected benefits in term of non material	
Forced by the existing caste structure system	
Forced by local leaders	
Others (specify)..	

* Please give score for reasons: 3 for main, 2 for moderate, 1 for minor, 0 for not applicable.

17. How do you feel about your participation in overall implementation of the BIWMP project activity?

Strongly satisfied Satisfied Dissatisfied

18. Could you give reasons for being dissatisfied?

Reasons	Score (0-3)*
Not fulfilled the expected benefits from the activity	
No equal benefit sharing	
You were forced for participation by other members	
Your family got difficulties in fooding during the participation	
No equal participation occurred during the implementation	
No or less recognition that you got for the participation by others	
You were not able to meet the criteria proposed by the project or group	
Others: (specify)	

(* Give score for reasons: 3 for main, 2 for moderate, 1 for minor, 0 for not applicable)

D. Factors and Extent of Participation in Different Activities

a) Training and Extension

1. Please fill the table if you participated in any training and extension activities of the BIWMP?

S.N.	Name of training/workshop or extension events	Year of events	Number or days of the event	Venue (tick off)		Level of usefulness for you (3 to 0)*	Factor of participation**
				Inside project areas	Outside of project areas		

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** use code 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material 3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

6= Others (specify) _____

2. Give the reason for giving scores 0 and 1.

3. Who nominated or selected you for the training and extension activities?

Your group leader Village elites Project staff Non

4. What do you suggest for improvement of the training and extension components of BIWMP?

b) Soil Conservation Related Activity in Agriculture and Forestry

1. Please list the activities in which you participated.

S.N.	Name of activities	Year of implementation	Form of participation	Factor of participation**	Satisfaction level with benefits*

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** use code: 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material

3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

6= Others (specify). _____

2. Give the reason for giving scores 0 and 1.

3. What do you suggest for improvement of these activities in future?

c) Erosion Hazard Treatment

1. Please list the activities in which you participated.

S.N.	Name of activities	Year of implementation	Form of participation	Factor of participation**	Satisfaction level with benefits*

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** Use code 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material

3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

6= Others (specify). _____

2. Give the reason for giving scores 0 and 1.

3. What do you suggest for improvement of these activities in future?

D) Income Generation Activities

1. Please list the activities under this the component of income generation in which you participated.

S.N.	Name of activities	Year of implementation	Form of participation	Factor of participation**	Satisfaction level with benefits*

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** Use code 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material 3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

6= Others (specify). _____

2. Give the reason for giving scores 0 and 1.

3. Are the acquired skill and knowledge useful for the promotion of your income generating activity?

Sufficiently Moderately Less

4. Are the acquired skill and knowledge new for you?

Completely new To some extent new No

5. What kinds of income generating activities do you running? Please specify _____

6. What do you suggest for improvement of these activities in future?

e) Group Credit

1. Please list the activities under this the component of income generation in which you participated.

S.N.	Name of activities	Year of implementation	Form of participation	Factor of participation	Satisfaction level with benefits

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** Use code 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material 3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

6= Others (specify). _____

2. Give the reason for giving scores 0 and 1.

3. What amount of loan did you get for the activity? NRs. _____

4. Duration of time in taking loan from the groups/organization after your request to the concerned. _____ months and reason if you think it is so longer for you comparing to others

5. Does that loan suffice your need for the generation of activities?

Less Sufficient Moderately

6. What is the rate of repayment of loan? Specify _____

7. Have you repaid the loan timely? Yes No

8. Have you repaid the loan in full amount? Yes No

9. What is your opinion about the rules and regulations in regard with the borrowing and repaying of the loan?

Reasonable Cumbersome Easy Adequate Inadequate

10. What do you suggest for improvement of these activities in future?

f) Reproductive Health

1. Please list the activities under this the component of income generation in which you participated.

S.N.	Name of activities	Year of implementation	Form of participation	Factor of participation	Satisfaction level with benefits

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** Use code 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material 3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

3.38 6= Others (specify). _____

2. Give the reason for giving scores 0 and 1.

g) Infrastructure Improvement

1. Please list the activities under this the component of income generation in which you participated.

S.N.	Name of activities	Year of implementation	Form of participation	Factor of participation **	Satisfaction level with benefits*

* Give score for satisfaction: 3 for high, 2 for moderate, 1 for less, 0 for not applicable

** Use code 1= Incentive provided by the groups/projects in kind

2= Expected benefits in term of material 3= Expected benefits in term of non material

4= Forced by the existing caste structure system 5= Forced by local leaders

6= Others (specify). _____

2. Give the reason for giving scores 0 and 1.

3. Do you see any constrains due to caste structure in the level of satisfaction from the support for you in these activity?

Yes No

3.43 Please specify how ?

4. Did you see any conflict in participation during project activity implementation?

Yes No

5. What types of conflict raised and why? (please mention)

6. Who resolved the conflict and how? (please specify).

7. What is your opinion about rights to get equal befits from the project activities conducted in your area?

Required Not required Do not know

8. How do you feel about the rights to access to your village forest as common pool resources?

Equal Unequal Not seen any critical conflicts

9. How do you perceive to project staff in term of their help for your involvement in the project activities?

Highly encouraging Moderately encouraging Discouraging

10. How do you perceive to this project overall? is it really exists for your help?

Strongly agree Moderately agree Disagree

11. Do you perceive this project is biased towards? (please fill the table)

	Strongly biased	Moderately biased	No biased
Dalits			
Tamang			
Newar			
Bramin/Chetri			
Others (specify)			

The interviewer may write below his/her opinion and feeling on what he/she could observed

Signature of the interviewer

Date _____

Name of Interviewer _____

Appendix C: List of People Interviewed and Groups Discussed

A) Beneficiaries

SN	Name of Interviewee	Designation and Organization
1	Mr. Ram Narayan Shah	Agriculturist, DSCO Lalitpur
2	Mr. Sita Ram Bayalkoti*	Residents, Plaung VDC ward no. 9
3	Ms. Subhadra Bishwakarma*	Chair person Setiganesh IGG, Shirjan basti, Daman -4
4	Ms. Bimal Lama	Literacy class facilitator, Srijanbasti center, Daman, VDC-4
6	Ms. Sabitri Pariyar*	Trainee of tailoring, Dandagaon, Daman-3
7	Mr. Dev Raj Upreti	Chairperson of Bayakhola DWS committee
8	Mr. Kedar Pariyar*	Executive Member of Danadagon Hamlet Committee, Daman
9	Ms. Rita Pariyar*	Executive Member of Danadagon Hamlet Committee, Daman
10	Mr. Kanchha Deula*	Executive Member of Sundarbasti Hamlet Committee, Palung
11	Mr. Balaram Bista	Executive Member, and Local School Teacher, Daman
14	Mr. Hari Krishna Karki	Secretary, Kalibanzar community forest executive committee
15	Ms. Gopini Bishwakarma*	Loan taker, Setiganesh IGG, Daman
16	Ms. Santa Bahadur Sunar*	Resident, iron smith, Daman-4
17	Ms. Chun Maya Deula*	Loan taker, Indrayani IGG, Palung

B) Project Staff

SN	Name of Interviewee	Designation and Organization
1	Ms. Anita Koirala	Gender Specialist, BIWMP, Head office, Kathmandu
2	Mr. Amar Lama	Entrepreneur Manager, BIWMP, Head office, Kathmandu
3	Mr. Dhruva Gautam	Senior Sociologist, BIWMP, Head office, Kathmandu
4	Mr. Thakur Bhattarai	Community Forest Office, DSCO, Makawampur
5	Mr. Ajaya Patel	Social Mobilization Officer, DSCO, Makawampur
6	Mr. Nava Raj Pudasini	Ranger and Chief of Palung field center
7	Mr. Udaya Narayan Mishra	Social Mobilizer, BIWMP, Palung Field Center

C) Officials of line agency

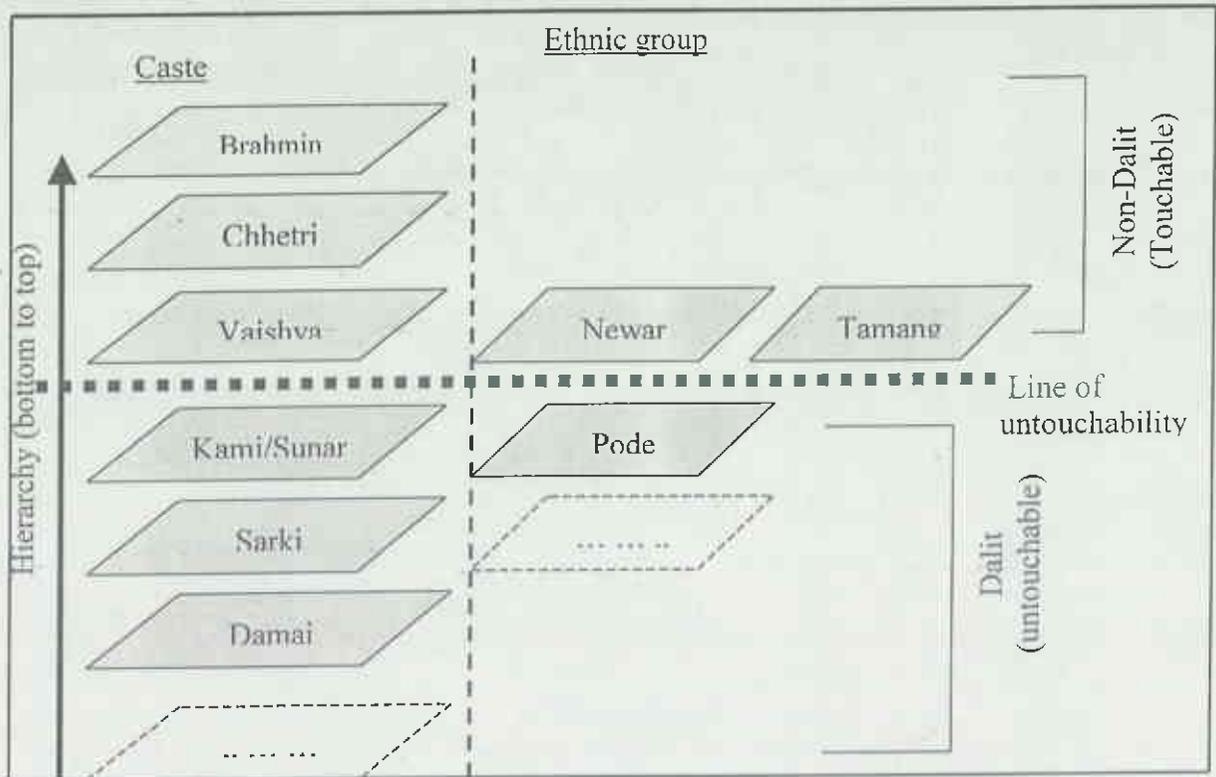
SN	Name of Interviewee	Designation and Organization
1	Mr. Raghavendra Mishra	Livestock Service Center, Daman
2	Mr. Netra Prasad Dhungana	Plung VDC Secretary
3	Mr. Jyoti Rayamajhi	Damana VDC Secretary

D) List of groups discussed

SN	Name of Group	Address
1	Kapurbasti Hamlet Committee	Palung VDC, ward no. 3
2	Karki gaon Hamlet Committee	Palung VDC, ward no. 5
3	Dandagaon Hamlet Committee	Daman VDC, ward no. 3
4	Literacy Class Management Committee	Shrijanbasti, Daman VDC ward no. 5
5	Literacy Class Management Committee	Shikharkot, Daman VDC, ward no. 5
6	Daman Drinking Water Supply Management Committee	Shikharkot, Daman VDC, ward no. 5
7	Kalibanzar Community Forest User Committee	Damki, Daman VDC, ward no. 1
8	Nayapokhari Community Forest User Committee	Palung VDC, ward no. 9
9	Lali Gurans Income Generating Group	Damki, Daman VDC, ward no. 1
10	Sayapatri Income Generating Group	Dandagaon, Daman VDC, ward no. 3
11	Gramin Women Income Generating Group	Shikharkot, Daman VDC, ward no. 4
12	Palung Sub-watershed Conservatorium Committee	Lampati, Palung VDC, ward no. 3

Appendix D: Supplementary Text and Figures

Appendix D1: Nepal's castes and ethnic structure



- The caste and ethnicity are different but are considered as interchangeable in latter stage of evolution of social groups. For example, Tamang, Rai, Magar, Gurung are considered as indigenous groups and all are lie above the line of untouchability (below figure). But, Newar, who's part of people believes on Hindu or Buddhist, has caste hierarchy same as Hindu Varna. Several groups within the Newar lie below the line of untouchably. Although untouchability does not exist in ethnic groups they follow the caste hierarchical structure and do equally the practice of untouchability as others do.
- "Tamang" has been categorized as broader group to represent all ethnic groups, except Newar, of the study area, though they are called "Matawali" in few literatures. Since the word "Matawali" literally denotes as drunken, human rights activists do not prefer to use Matawali word nowadays, while calling to the ethnic people.

Appendix E: Supplementary Tables

Appendix E1: Caste/ethnicity wise population

ward no.	Brahmin/Chhetri		Newar	Tamang					Dalits				Ethnic group	DAG	Total HHs	Population					
	Brahmin	Chhetri		Total	Tamang	Magar	Gurung	Rai	Total	Kami	Damai	Sarki				Podé	Total	Total	Male	Female	Average HHs
1. Plung VDC																					
2	30		30	37	236				236	54				54	236	54	62	374	185	189	6.0
3	6		6									27	751	778	778	108	784	386	398	7.3	
4	16	473	489		269				269	18	11		29	269	29	129	787	379	408	6.1	
5	577	71	648													107	648	323	325	6.1	
6				456												84	456	218	238	5.4	
7	2	919	921													194	921	443	478	4.7	
8		350	350	34	8	34			42	15			15	42	15	101	441	215	226	4.4	
9		414	414	2	1094	117	76		1287	45			45	1287	45	300	1753	862	891	5.8	
Total	631	2227	2858	529	1607	151	76		1834	99	33	38	751	921	1834	921	1085	6164	3011	3153	5.7
2. Daman VDC																					
1	34	537	571	49												145	868	431	437	6.0	
2	54	580	634		87				87					87		114	721	395	326	6.3	
3		581	581	26	56				56	118			118	56	118	131	781	397	384	6.0	
4		488	488	404	107			123	230					230		186	1122	568	554	6.0	
5		738	738		202			89	291					291		171	1029	516	513	6.0	
Total	88	2924	3012	479	452			212	664		118		118	664	118	747	4521	2307	2214	6.1	
Total	719	5151	5870	1008	2059	151	76	212	2498	99	151	38	751	2498	1039	1832	10685	5318	5367	5.8	

Source: Singh (2002)

Appendix E2: Categories of the poor defined by the BIWMP, Sub-watershed appraisal on community organization and DAG

Category	Special features	Potential and difficulties
Small farmer	Relatively better placed in terms of access to land technology and extension services.	Relatively viable and relatively easy to deal with this categories of rural poor.
Marginal farmer	Very small production unit-major income from sale of surplus labour	Presumably non-viable but can be made viable with improvements in productive efficiency-investment credit requires and project delivery systems.
Share croppers and tenant farmers	No sizeable resources except labour	Extending micro credit to start with micro enterprise activities
Landless labourers	No access to productive resources except labour. But can be made viable by creating off-farm employment opportunities	Difficult to individuals by can be supported if organized into purposive groups.
Rural women	No new skills other than traditional farming. Surplus of unskilled labour, defective production structure, partly depend on wage employment	Easier to support with improvement in supporting services structure and complementary institutional framework.
Disadvantaged groups (DAGs)	Despite being traditional professional (artisan) knowledge and skill, they are constrained by social, economical, political and organizational barriers.	They are unviable as such but can be made viable by inducing social and economical incentives in the form of building their organizations, access to credit, extension services and market mechanism for micro enterprise.
The poorest of the poor (mixed ethnic groups of people mainly depended on forest resources)	They usually reside on forest border, do not have productive agricultural lands. They derived non-timber forest products of their livelihood.	They are unviable. In order to make them viable special skill development programmes are need for them regarding NTFPs and micro enterprise.

Source: Bhandary (2001)

Appendix E3: Distribution of households by their economic status as defined by the BIWMP,

SN	Name of Village	Location		Total HH by caste/ethnicity				Population	Income Level (HH)			
		VDC	Ward No.	Brahmin/Chhetri	Newar	Tamang	Dalits		Total HH	High	Mid	Low
11	Chaukibhanjyang	Daman	1	95	6	45		146	879	5	21	120
2	Baghekhola	Daman	2	112	5	20		137	803	6	46	85
3	Dandagaon	Daman	3	117			20	137	801	2	50	85
4	Shikharkot-lower	Daman	4	81		10	4	95	598	2	10	83
5	Shikharkot-upper	Daman	5	71	2	4	14	91	547	11	94	36
6	Gopali gaon	Daman	4	3	48	6	15	72	500	2	10	60
7	Sundar basti	Daman	5	72	5	48	4	129	774	7	4	118
8	Takhel	Palung	2	5	9	39	9	62	374	3	25	34
9	Kapur basti	Palung	3	38			70	108	748	8	20	80
10	Karki gaon	Palung	4	89			2	91	635	2	10	79
11	Majhaangare	Palung	5	107				107	648		37	70
12	Bhangkhoriya	Palung	4			38		38	152		2	36
13	Lampati	Palung	6		84			84	456	2	22	60
14	Gairigaon	Palung	8	63	12	21	5	101	441	1	20	80
15	Soltu basti	Palung	7	194				194	921	2	22	170
16	Deurali basti	Palung	9	40		35		75	500		10	65
17	Pakhatole	Palung	9	30		25		55	438	2	13	40
18	Thulikhoriya	Palung	9	2		70		72	439		5	67
19	Chautara basti	Palung	9	26		18	6	50	337			50
	Total			1145	171	379	149	1844	10991	55	421	1418
	Percentage			62.1	9.3	20.6	8.1	100		3.0	22.8	76.9

Source: Participatory Rural Appraisal of Palung sub-watershed, 2001, conducted by project
NB: HH = household

Appendix E4: Index of dependency on forest resources by caste/ethnicity

Supply of forest resources	Brahmin/Chhetri (n=64)	Newar (n=31)	Tamang (n=54)	Dalit (n=68)
Fuel wood**	0.69	0.56	0.74	0.68
Fodder*	0.52	0.59	0.56	0.45
Dependency on NTFP	0.34	0.37	0.38	0.33
Timber	0.62	0.56	0.65	0.61
Litter	0.52	0.44	0.54	0.40

Source: Household survey, 2002

NB: Higher the index value higher the dependency on the forest
n= number of respondents; ** Significant at 99% confidence level;
* Significant at 95% confidence level

Index value denotes as follows: High dependency (0.68-1.0); Low dependency (0.34-0.67);
Negligible dependency (0.1-0.33)

Weighted Average Index (WAI) had been calculated as following:

$$\text{WAI of dependency} = \frac{\sum (FHD * 1.0 + FLD * 0.67 + FND * 0.33)}{\sum (FHD + FLD + FND)}$$

Where, FHD = Frequency of respondents highly depending on forest resources (0.68-1.0)
FLD = Frequency of respondents less depending on forest resources (0.34-0.67)
FND = Frequency of respondents negligibly depending on forest resources (0.1-0.33)

Appendix E5: Index of respondents' attributes towards change in forest resources over 10 years of time

Attributes	Brahmin/ Chhetri (n=64)	Newar (n=31)	Tamang (n=54)	Dalit (n=68)	Total Mean WAI
Change in forest resources	0.234	0.667	0.585	0.779	0.554
Change in livestock grazing area	-0.594	-0.467	-0.359	-0.353	-0.442
Change in fodder's availability	-0.781	-0.833	-0.547	-0.868	-0.758
Change in availability of fire wood	-0.797	-0.733	-0.660	-0.927	-0.795

Source: Household survey, 2002

NB: n= number of respondents;

Positive the index value the increase in resources, negative the index value the decrease in the resources.

Index value calculated from three scaling as follows: Increased (+1.0); Same (0.0); Decreased (-1.0)

Weighted Average Index (WAI) had been calculated as following:

$$\text{WAI of change} = \frac{\sum (FI * (+1.0) + FS * 0.0 + FD * (-1.0))}{\sum (FI + FS + FD)}$$

Where, FI = Frequency of respondents claiming increased in resources

FS = Frequency of respondents claiming no change (same) in resources

FD = Frequency of respondents claiming decreased in resources

Appendix E6: Change in watershed resources and awareness on management over 10 years.

Opinion	Brahmin/ Chhetri (n=64)	Newar (n=30)	Tamang (n=53)	Dalit (n=68)	Total (n=215)
1. Change in forest resources					
Decreasing.	34.4	13.3	15.1	10.3	19.1
Same	7.8	6.7	11.3%	1.5	6.5
Increasing	57.8	80.0	73.6	88.2	74.4
2. Change in live stock grazing land					
Decreasing.	59.4	50.0	37.7	35.3	45.1
Same	40.6	46.7	60.4	64.7	54.0
Increasing	0	3.3	1.9	0	0.9
3. Change in fodder's availability					
Decreasing.	82.8	90.0	69.8	91.2	83.3
Same	12.5	3.3	15.1	4.4	9.3
Increasing	4.7	6.7	15.1	4.4	7.4
4. Change in availability of fuel wood					
Decreasing.	84.4	83.3	79.2	95.6	86.5
Same	10.9	6.7	7.5	1.5	6.5
Increasing	4.7	10.0	13.2	2.9	7.0
5. Change in soil fertility					
Decreasing.	43.8	50	54.7	48.5	48.8
Same	25	10	18.9	11.8	17.2
Increasing	31.3	40	26.4	39.7	34
6. Change in people's awareness on environment					
Decreasing.	1.6	0	1.9	0	0.9
Same	6.3	3.3	3.8	1.5	3.7
Increasing	92.2	96.7	94.3	98.5	95.3
7. Change in use of soil conservation measures					
Decreasing.	1.6	3.3	1.9	0	1.4
Same	6.3	6.7	5.7	7.4	6.5
Increasing	92.2	90	92.5	92.6	92.1

Source: Household survey, 2002

NB: n= number of respondents;

Appendix E7: Caste wise representation in Hamlet Committees

SN	Name of Hamlet	Location			Type of Community	Total HH by caste					Executive						Representation by Caste (%)				
		VDC	Ward No.	Date of Formation*		Brahmin	Newar	Tamang	Dalits	Total HH	Total	Brahmin	Newar	Tamang	Dalits	Male	Female	Brahmin	Newar	Tamang	Dalits
1	Shikharkot basti-A	Daman	4	2057/01/26	Hetero.	81		10	4	95	11	10		1		8	3	12.3		10.0	
2	Shikharkot basti-B	Daman	5	2057/01/27	Hetero	71	2	4	14	91	11	9			2	6	5	12.7			14.3
3	Gopali gaon	Daman	4	2057/03/31	Hetero	3	48	6	15	72	9		6	1	2	6	3		12.5	16.7	13.3
4	Sundar basti	Daman	5	2057/11/26	Hetero	72	5	48	4	129	11	5	4		2	6	5	6.9	80.0		50.0
5	Takhel basti	Palung	2	2057/01/28	Hetero	5	9	39	9	62	9	2	2	2	3	5	4	40.0	22.2	5.1	33.3
6	Kapur basti	Palung	3	2057/03/12	Hetero	38			70	108	7				7	4	3				10.0
7	Karki gaon basti	Palung	4	2057/02/09	Homoge.	89			2	91	9	9				7	2	10.1			
8	Majhaangare basti	Palung	5	2057/2/20	Homoge	107				107	9	9				5	4	8.4			
9	Bhangkhoriya basti	Palung	4	2057/01/30	Homoge			38		38	7			7	4	3				18.4	
10	Lampati basti	Palung	6	2057/2/19	Homoge		84			84	9		9		5	4		10.7			
11	Gairigaon basti	Palung	8	2057/2/25	Hetero	63	12	21	5	101	7	6		1	5	2		9.5		4.8	
12	Soltu basti	Palung	7	2057/03/4	Homoge	194				194	11	11			7	4		5.7			
13	Deurali basti	Palung	9	2057/03/10	Hetero	40		35		75	9	3		6	5	4		7.5		17.1	
14	Pakhatole basti	Palung	9	2057/03/6	Hetero	30		25		55	7	3		4	4	3		10.0		16.0	
15	Thulikhoriya basti	Palung	9	2057/03/10	Homoge	2		70		72	7	1		6	4	3		50.0		8.6	
16	Chautara basti	Palung	9	2057/03/5	Hetero	26		18	6	50	7	3		4	4	3		11.5		22.2	
17	Chaukibhanjyang basti	Daman	1	2057/03/15	Hetero	95	6	45		146	11	9	1	1	7	4		9.5	16.7	2.2	
18	Baghekhola basti	Daman	2	2057/12/30	Hetero	112	5	20		137	11	10		1	8	3		8.9		5.0	
19	Dandagaon basti	Daman	3	2057/02/31	Hetero	117			20	137	9	7			2	6	3	6.0			10.0
	Total					1145	171	379	149	1844	171	97	22	34	18	106	65				
	Percentage					62.1	9.3	20.6	8.1	100.0	100.0	56.7	12.9	19.9	10.5	62.0	38.0				

Source: BIWMP, Palung field office database, 2002

NB: Hetero. = Heterogeneous community

Homoge. = Homogeneous community

* Nepali calendar

Appendix E8 (a): Representation in hamlet committees by caste/ethnicity

Type of community	Proportion	Brahmin/ Chhetri	Newar	Tamang	Dalit
Homogenous composition	No. of members	30	9	13	7
	Percentage	57.7	17.3	25.0	13.5
Heterogeneous composition	No. of members	67	13	21	11
	Percentage	56.3	10.9	17.6	9.2
Total	No. of members	97	22	34	18
	Percentage	56.7	12.9	19.9	10.5

Source: BIWMP, Palung field office database, 2002

Appendix E8 (b): Representation in membership groups by caste and ethnicity

Type of community	Proportion	Brahmin/ Chhetri	Newar	Tamang	Dalit
Homogenous composition	No. of members	15	-	11	-
	Percentage	57.7	-	42.3	-
Heterogeneous composition	No. of members	5	-	-	-
	Percentage	100	-	-	-
Total	No. of members	20	-	-	-
	Percentage		14	31	14

Source: BIWMP, Palung field office database, 2002

Appendix E9: Index of respondents' opinions towards performed role of community groups

Tasks of group	Brahmin/ Chhetri (n=49)	Newar (n=25)	Tamang (n=47)	Dalit (n=37)	Aggregate WAI mean
Role performed in planning and implementation	0.82	0.68	0.84	0.79	0.78
Leadership role and work division in groups	0.87	0.74	0.78	0.82	0.80
Role performed in maintaining social diversity	0.89	0.77	0.85	0.79	0.83
Role performed in maintaining transparency of group fund	0.90	0.79	0.89	0.94	0.88

Source: Household survey, 2002 NB: n= Number of people responding to the question. The higher the index value the more positive satisfaction with task;

$$\text{Weighted average index of satisfaction (IS)} = \frac{\sum [(FS * (+1.0) + FN * (0.0) + FD * (-1.0))]}{\sum (FS + FN + FD)}$$

Where, FS = Frequency of satisfied respondents (+1.0)
 FN = Frequency of moderate (neutral) respondents (0.0)
 FD = Frequency of dissatisfied respondents (-1.0)

Appendix E10: Months taken for reaching information to the settlers about the BIWMP

Period taken for reaching information	Brahmin/ Chhetri (n=64)	Newar (n=31)	Matawali (n=54)	Dalit (n=68)
Mean (month)	13	17	16	18
Minimum (month)	0.0	0.0	0.0	0.0
Maximums (month)	48	48	48	48

Source: Household survey, 2002

Appendix E11: Percentage of contribution sharing between office and community

S.N.	Activities	Cost sharing (in percent)	
		Project	Community
1	Training and excursion	100	0
2	Installation of sanitary latrine	N/A	N/A
3	Bio-engineering landslide treatment	80	20
4	Stabilization of rural road side slope	90	10
5	Torrent control	80	20
6	Stream bank control	60	40
7	Gully control	60	40
8	Conservation pond	50	50
9	Drinking water supply	50	50
10	Irrigation improvement	50	50
11	Foot trail improvement	60	40
12	Foot trail bridge	80	20

Source: DSCO, Makawanpur, 2002

Appendix E12: Activities demanded by settlers individually or through community groups
(multiple choice based on responses)

Component	Activities	Brahmin/ Chhetri	Newar	Tamang	Dalits
		(f= 217) %	(f=109) %	(f=186) %	(f=213) %
Training and Extension	Institution development	3.7	-	1.1	0.5
	Awareness raising	0.5	1.8	0.5	0.5
	NFE classes	1.8	2.8	3.2	4.3
	Toilet construction	2.7	2.8	3.2	10.3
	Sub total	8.7	7.4	8.0	15.6
Infrastructure Improvement	Foot trail improvement	19.2	14.7	22.0	23.9
	Drinking water supply	7.3	20.2	5.9	16.4
	Bridge construction	3.2	11.0	1.6	-
	Irrigation	2.3	-	-	-
	Sub total	31.0	45.9	29.5	40.3
Income Generating	Income generating training	5.0	6.4	5.9	11.7
	Monthly group saving/credit	19.2	22.9	22.0	16.0
	Total	24.2	29.4	28.0	27.7
Agriculture and Forest related	Training on Agriculture	8.9	8.3	4.3	1.4
	Fruit sapling	0.9	-	3.2	2.8
	Tree plantation	7.8	0.8	12.4	8.0
	Training on Forestry	6.8	-	2.7	1.4
	Improved cooking stove	0.9	-	-	-
	Sub total	25.3	9.1	22.6	13.6
Erosion Hazard Treatment	Landslide treatment	1.8	1.8	6.5	0.9
	River bank protection	5.5	6.4	5.4	2.8
	Conservation pond	3.7	-	-	-
	Sub total	11.0	8.2	11.9	3.7
Total percentage		100	100	100	100

Source: Household Survey, 2002

NB: f- total number of main activities requested

Appendix E13: Gap in activities demanded by the people and implemented by the BIWMP

Type of activity		Brahmin/ Chhetri (f= 217)	Newar (f=109)	Tamang (f=186)	Dalit (f=213)
Training and Extension	Demanded	12.0	17.6	25.0	31.4
	Implemented	8.7	7.3	8.1	22.1
	Difference	72	42	32	70
Infrastructure Development	Demanded	39.4	56.8	36.3	46.9
	Implemented	32.0	45.9	29.6	40.4
	Difference	81	81	82	86
Income generating	Demanded	12.6	14.9	6.5	6.8
	Implemented	24.2	29.4	28.0	20.2
	Difference	192	197	430	297
Agriculture and Forestry	Demanded	21.1	6.8	14.3	9.7
	Implemented	24.2	9.2	22.6	13.6
	Difference	115	135	158	140
Erosion hazard Treatment	Demanded	14.9	4.1	17.9	5.3
	Implemented	11.0	8.3	11.8	3.8
	Difference	74	201	66	71
Total demanded (percent)		100	100	100	100
Total implemented (percent)		100	100	100	100

Source: Household survey, 2000

NB: f = total number of activities requested by respondents respective caste/ethnic group.
All figures in cells of "demanded" or "implemented" are the percent of column total of each total "demanded" and total "implemented" activities.

Difference has been calculated as: $Difference = \frac{PI}{PD} * 100 (\%)$

Where, PI = Proportion of a particular "type of activity" implemented.
PD = Proportion of particular "type of activity" demanded.

Appendix E14: People's contribution in implementation of infrastructure activities

S.n.	Name of activity	Location		Caste/ethnicity				Total HH	Contribution				
		VDC	Ward no.	Brahmin/Chhetri	Newar	Tamang	Dalit		Cash by project	Material by project	Total by project	Community	Total
1 Foot trail improvement													
1	Gopaligaon	Daman	4	3	48	6	15	72					
2	Pakhatol	Palung	9	25		15		40	43,358	3,480	46,838	31,225	78,063
3	Chuniban	Palung	4			20		20	30,476	2,335	32,811	21,874	54,685
4	Dandagaon	Daman	3	30				50	40,325	3,540	43,865	29,244	73,109
Total of foot trail				58	48	41	35	182	114,159	9,355	123,514	82,343	205,857
2 Drinking water													
1	Baghekhola	Daman	2	47	5	10		62	19,917	159,480	179,397	136,265	315,662
2	Kafalchaur	Daman	2,3	22				22	14,620	206,375	220,995	220,994	441,989
3	Shikharkot	Daman	4	74	48	16	29	167	27,676	842,848	870,524	950,524	1,821,048
4	Upalloangare	Palung	5	39				39	16,198	80,069	96,267	96,268	192,535
5	Majhangare	Palung	5	14				14	5,000	58,783	63,783	65,749	129,532
Total of drinking water				196	53	26	29	304	83,411	1,347,555	1,430,966	1,469,800	2,900,766
3 Landslide treatment													
1	Gairigaon	Palung	8	63	12	21	5	101	7,590	19,019	26,609	17,739	44,348
2	Thulokhoriya-1	Palung	9					58					
3	Thulokhoriya-2	Palung	9	2	0	56		58	78,600	261,691	340,291	100,092	440,383
4	Thulokhoriya-3 (bio)	Palung	9					58	741,739		741,739		741,739
Total of Landslide				65	12	77	5	275	827,929	280,710	1,108,639	117,831	1,226,470

S.n.	Name of activity	Location		Caste/ethnicity					Contribution				
		VDC	Ward no.	Brahmin/ Chhetri	Newar	Tamang	Dalit	Total HH	Cash by project	Material by project	Total by project	Community	Total
1	Gully control in Gairigaon	Palung	8	22				22	20,618	75,896	96,514	64,343	160,857
4	Stream bank protection												
1	Dandagaon	Daman	3	11				11	8,153	40,532	48,685	34,456	83,141
2	Pandukeshwor	Palung	4	107		48		155	22,000	81,935	103,935	37,920	141,855
3	Kukhurephant	Daman	1	20		20		40	5,275	39,270	44,545	29,697	74,242
4	JK high school	Daman	3	17				17	81,110	172,772	253,882	169,255	423,137
5	Agriculture road protection	Palung	2						9,808	52,992	62,800	41,867	104,667
6	Thulokhoriya	Palung	9	2		58		60	502,446		502,446	-	502,446
	Total of stream bank			157		126		283	628,792	387,501	1,016,293	313,195	1,329,488
5	Stream channelization	Palung	9						625,830		625,830		625,830
6	Bridge construction	Daman	3						18,386	360,351	378,737	9,684	388,421
7	Irrigation (Gopali gaon)	Daman	4	2	72	2		76	15,896	88,629	104,525	104,525	209,050
8	Conservation pond	Palung	6	Not available									
	Grand total of FY 2000/2001			478	185	272	69	1,120	1,670,187	2,113,750	3,783,937	2,087,694	5,871,631
	Percentage			42.7	16.5	24.3	6.2	100.0	44.1	55.9	64.4	35.6	100

Source: Database of District Soil Conservation Office, Mawanpur, 2002

Appendix E15: Rank of BIWMP implemented effective activities

Activities	Brahmin/ Chhetri		Newar		Tamang		Dalit	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Foot trail	0.280	1	0.155	3	0.331	1	0.316	1
Saving and Credit	0.115	3	0.121	4	0.190	2	0.201	2
Drinking water	0.181	2	0.299	1	0.068	5	0.171	3
Toilet construction	0.029	10	0.014	9	0.067	6	0.104	4
NFE class	0.018	13	0.009	13	0.070	4	0.099	5
Training on IG	0.032	9	0.060	6	0.046	8	0.039	6
Tree plantation	0.079	5	0.035	7	0.082	3	0.025	7
Stream bank protection	0.089	4	0.101	5	0.049	7	0.020	8
Foot truss bridge	0.044	6	0.158	2	0.011	11	0.014	9
Fruit sapling	0.007	15			0.033	10	0.008	10
Training on agriculture	0.003	16	0.017	8	0.004	9	0.004	11
Landslide treatment	0.022	11	0.009	10	0.040	13	0.000	12
Irrigation	0.033	8						
Conservation pond	0.040	7	0.009	11				
Improved stove	0.008	14						
Training on forestry	0.021	12	0.006	14	0.008	12		
Institutional building			0.009	12	0.000			
Total of score	1.000		1.000		1.000		1.000	

Source: Household survey, 2002

NB: f = frequency of cases; Score was calculated as:

Rank I = 1/1=1 Rank II = 1/2=0.5 Rank III = 1/3=0.33

$$\text{Score} = \frac{(FR1 * 1.0 + FR2 * 0.5 + FR3 * 0.33)}{(FR1 + FR2 + FR3)}$$

Where, FR1 = frequency for activity ranking for First
 FR2 = frequency for activity ranking for Second
 FR3 = frequency for activity ranking for Third

Appendix E16: Caste-wise Representation in Income Generating Groups

SN	Name of Income Generating Groups	Location			Monthly saving per person	Total fund per month	Total	Women	Saving Members				Key Position			
		VDC	Ward No.	Village					B/C.	Newar	Tam.	Dal.	B/C.	Tam.	Mat.	Dal.
1	Chaukibhanjyang Women IG	1	1	Chauki	50	1500	30	30	27		3		5			
2	Laligurans Women IG	1	1	Damki	50	1250	25	25			25				5	
3	Kalabhairav Women IG	1	2	Baghekhola	20	560	28	28	26		2		4		1	
4	Syapatri Women IG	1	3	Dandagaon	20	640	32	32	22		1	9	3			2
5	Setiganesh Women IG-A	1	4	Gopaligaon	20	540	27	27		27				5		
6	Setiganaesh Women IG-B	1	4	Shrijana Basti	20	500	25	25		2	12	11		2		3
7	Gramin Women IG	1	4	Shikharkot	20	620	31	31	31				4		1	
8	Indrayani Women IG	2	3	Kapurbasti	20	780	39	38				39				6
9	Samudayik Bikas Women IG-A	2	5	Majh Angare	30	990	33	33	33				5			
10	Samudayik Bikas Women IG-B	2	5	UpalloAngare	30	840	28	28	28				3		2	
11	Mangaleshwor Aycarjan	2	4	Upalloangare	20	560	28	4			28				5	
12	Palown Samadayik Bikas IG	2	4	Lampati	20	560	28	28		28				5		
13	Chundevis Samudayik Bikas	2	8	Gairigaon	20	560	28	28	23		5				5	
14	Kot Thumki Women IG	2	9	Pakhatole	20	500	25	25	2		23		1		4	
15	Panchakanya Women IG	2	2	Takhel	20.8	520	25	25		3	18	4		2	2	1
16	Ghatdevi Women IG	2	9	Thulokhoriya	20	580	29	29	1		28				5	
	Total						461	436	193	60	145	63	25	14	30	12
	Percentage								41.9		31.5	13.7	30.9	17.3	37.0	14.8

Source: BIWMP, Palung field office database, 2002

NB: B/C = Brahmin/Chhetri;

Tam. = Tamang

Dal. = Dalit

VDC: 1= Daman

2= Palung

Appendix E17 : Status of loaned amount (As of February, 2002)

S.N.	Name of Income Generating Groups	Location			Total members (Dalit)	Loaned out amount (Rs.)	Loan back amount (Rs.)		Due amount		Amount in use (Rs.)	Loaned amount per member
		VDC	Ward	Tole			Principle	Interest	Principle	Interest		
1	Chaukibhanjyang Women IG	1	1	Chauki	30	90,800	42,950	3,496	11,354	504	48,354	3027
2	Laligurans Women IG	1	1	Damki	25	77,300	7,300	229			70,000	3092
3	Kalabhairav Women IG	1	2	Baghekhola	28	160,500	70,853	5,324		853	89,647	5732
4	Syapatri Women IG	1	3	Dandagaon	32 (9)	112,000	52,055	3,697	8,157		59,945	3500
5	Setiganesh Women A	1	4	Gopaligaon	27	193,985	62,385	5,822			131,000	7185
6	Setiganaesh Women B	1	4	Shrijana Basti	25 (11)	76,000	21,000	1,234		103	55,103	3040
7	Gramin Women IG	1	4	Shikharkot	31	126,000	48,000	2,055			78,000	4065
8	Indrayani Women IG	2	3	Kapurbasti	39 (39)	20,000	700	1,098			13,700	513
9	Samudayik Bikas A	2	5	Majh Angare	33	27,000	16,615	1,464			10,385	818
10	Samudayik Bikas B	2	5	Upallo Angare	28	50,000	17,491	2,870	25,000	475	32,984	1786
11	Mangaleshwor Ayearjan	2	4	Upallo Angare	28	111,500	78,595	4,932		227	33,132	3982
12	Palown Samadayik Bikas	2	4	Lampati	28	106,000	646	114		711	106,065	3786
13	Chundevi Samudayik Bikas	2	8	Gairigaon	28	121,000	69,000	3,202			52,000	4321
14	Kot Thumki Women IG	2	9	Pakhatole	25	82,000	7,070	1,168			74,930	3280
15	Panchakanya Women IG	2	2	Takhei	25 (4)	36,000	20,737	1,738	348	437	15,700	1440
	Total				461(63)	1,390,085	515,397	38,443	44,859	3,310	870,945	47934

Source: Field office, 2002

Appendix E18: Population of IGG members by caste/ethnic

Population category	Brahmin/ Chhetri	Newar	Tamang/ Magar	Dalit
Total HH in the area* (No.)	1145	171	379	149
Total poor HH in the area** (No.)	310	55	178	86
Percent of total poor HH in the area (%)	27.1	32.1	46.9	57.6
IGG member HH* (No.)	193	60	145	63
Percent of IGG member HH** (%)	16.8	35.1	38.3	42.3
IGG poor HH** (No.)	56	16	83	33
Percent of IGG poor HH*** (%)	29	27	57	53

* Denotes sources of data from Database, Field office, BIWMP, 2002

** Denote source of data from Household survey, 2002 and defined by the respondents themselves,

*** Percent = (Number of IGG poor household) / (Number of total poor households)

HH- denoted household

Appendix E19: Loaned out amount by purpose in NRs. and by economic level of borrowers

Loan item	Higher economic level (n=5)	Moderate economic level (n=45)	Lower economic level (n=36)	Loaned out amount	Mean loaned out amount	% of Total amount loaned out
Poultry	2	1	1	85,000	21,250	8.0%
Piggery		1	1	10,000	5,000	0.9%
Goat raising		6	7	103,000	7,923	9.8%
Buffalo raising	1	8	8	293,000	17,235	27.7%
Vegetable production	2	23	17	413,000	9,833	39.1%
Retailers/workshop		6	2	152,000	19,000	14.4%

Source: Adopted from database, Field office, BIWMP, 2002

NB: n= frequency of IGG members who had received credit

Appendix E20: Time factor in loan distribution by caste/ethnic groups

Time available for loan	Brahmin/ Chhetri (n=19)	Newar (n=6)	Tamang/ Magar (n=14)	Dalit (n=4)
Average days for waiting the loan (days)	38	60	65	40
Average duration of loan provided (month)	8.0	7.0	6.12	12
Number of payback loan installment	3.0	1.31	1.73	2.0

Source: Household survey, 2002

NB: n= frequency of IGG members;

Figures in parenthesis are percent of column total;

Appendix E21: Features of IGGs where Dalit represent

Name of Income Generating Group	Number of loanee		Loaned out		Remarks
	Total	Dalits	Mean	Sum	
Syapatri Women IG	9	2	10,111	91,000	Village is located at near by market place and Field Office; Non-Dalit local teacher, who is positive towards the Dalits provides advisory service;
Setiganesh Women IG-A	9	1	14,556	131,000	Headed by Dalit women and two-third of members are attending literacy class;
Indrayani Women IG	1	1	20,000	20,000	Constitute all Dalit members, mostly illiterate. Due to no strong leadership a ward chairperson (Dalit male) provides advisory service.
Panchakanya Women IG	4	0	9,000	36,000	No Dalit in key position; Dalits lie at very far below level than other in this village and illiterate

Appendix E22: Average loan distribution by location of cluster and type of community

Amount of loan	Features of community	Brahmin/Chhetri (n=31)	Newar (n=18)	Tamang (n=33)	Dalit (n=4)
Loan by location of cluster	Lowland	14,100	13,611	11,286	13,750
	Upland	14,454	-	9,077	-
Loan by type of community	Homogeneous	16,700	13,941	9,136	20,000
	Heterogeneous	13,048	8,000	10,363	11,667

Source: Adopted from, BIWMP Field office database, Feb.2002

Appendix E23: Selection of training participants by different actor by economic level and the location

		Selection made by		Total
		Group	Project staff	
Economic level of respondent household	High	5 (11.6)	1 (7.1)	6 (10.5)
	Moderate	20 (46.5)	8 (57.1)	28 (49.1)
	Low	18 (41.9)	5 (35.7)	23 (40.4)
	Total	43 (100)	14 (100)	57 (100)
Location of residence of attendance	Upland	14 (30.4)	7 (36.8)	21 (32.3)
	Lowland	32 (69.6)	12 (63.2)	44 (67.7)
	Total	46 (100)	19 (100)	65 (100)

Source: Household survey, 2002

NB: n = number of respondent members

Figures in parenthesis are percent of column total

Appendix E24: Level of satisfaction with BIWMP's by economic level of respondents

Caste/ethnic group of respondent	Economic status	Satisfied	Moderately satisfied	Unsatisfied	Can not say
Brahmin/ Chhetri (n=58)	High	-	100.0	-	-
	Moderate	21.1	57.9	18.4	2.6
	Low	6.3	56.3	18.8	18.8
	Total	15.5	60.3	17.2	6.9
Newar (n=28)	High	-	-	-	100
	Moderate	26.3	63.2	10.5	-
	Low	55.6	44.4	-	-
	Total	35.7	57.1	7.1	-
Tamang (n=49)	High	28.6	57.1	14.3	-
	Moderate	15.8	78.9	5.3	-
	Low	34.8	60.9	4.3	-
	Total	26.5	67.3	6.1	-
Dalit (n=66)	High	-	100.0	-	-
	Moderate	37.0	40.7	22.2	-
	Low	39.5	47.4	5.3	7.9
	Total	37.9	45.5	12.1	4.5

Source: Household survey, 2002

NB: n= number of respondents

Figures in cell are percent of column total

Appendix F: Photo Illustration

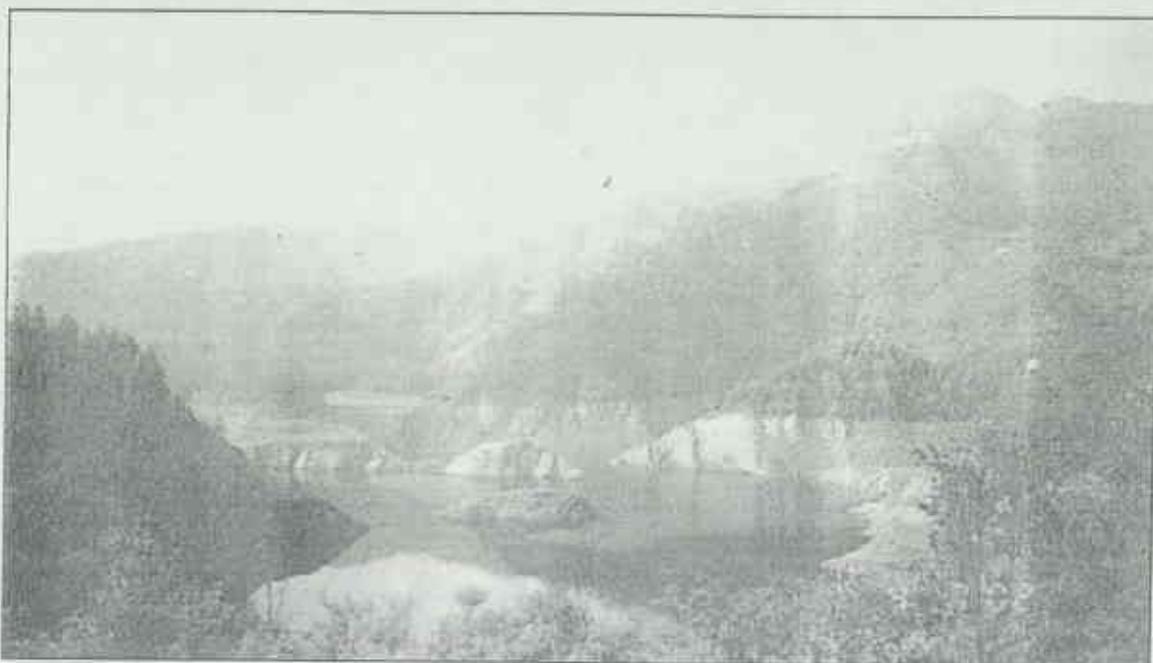


Photo 1: Reservoir of Kulekhani Hydro electric power plant (country's bigger hydro electric power station) is located at downstream of cathment of Palung sub-watershed



Photo 2: A settlement of Dalit at the foothills of Palung sub-watershed



Photo 3: Debris deposition, —an impact of 1993's disaster



Photo 4: Vegetable cultivation is common even in upland areas



Photo plate5: A Dalit house in Palung sub-watershed



Photo 6: Dalits and non-Dalits used to seat splitting each other even during group meetings



Photo 7: A metal manufacturing workshop -- A good example of income generation. A Dalit women, member of a IGG took loan Rs. 25,000 and supported to her husband for diversifying and modernizing his occupation.



Photo 8: A poor Dalit women, IGG member, is raising a pig in a unhygienic and unsuitable sty due to lack of knowledge and lack of investment and appropriate place.



Photo 9: A non-Dalit women holding a retail shop from credit support



Photo 10: Stream bank protection work has provided benefits to landholders along stream channels

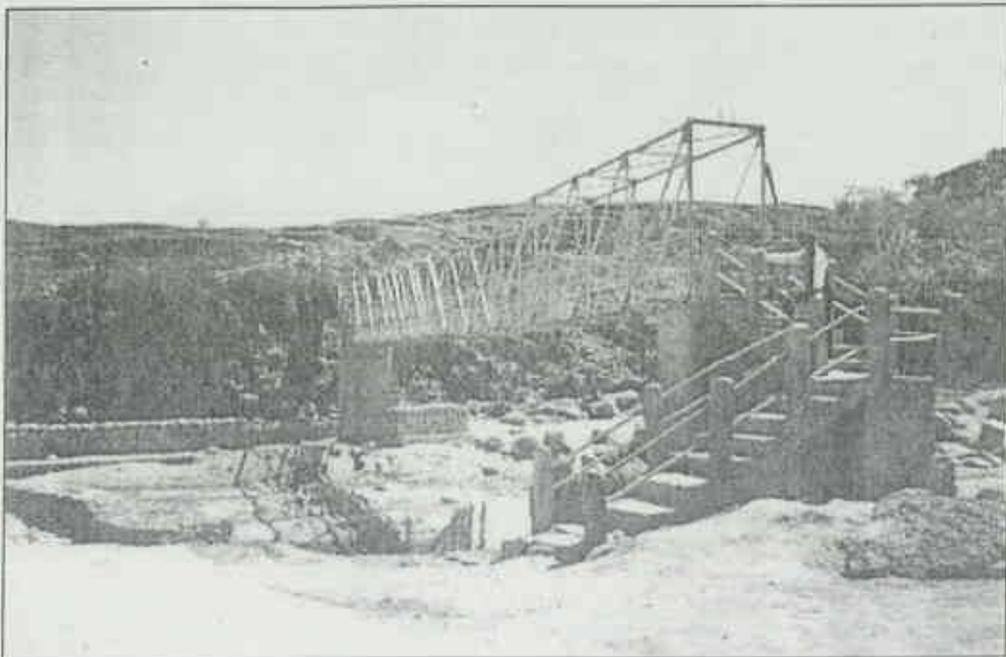


Photo 11: Foot-trail Bridge – highly valued activity by Newar, had provided immediate benefits to local people during construction period

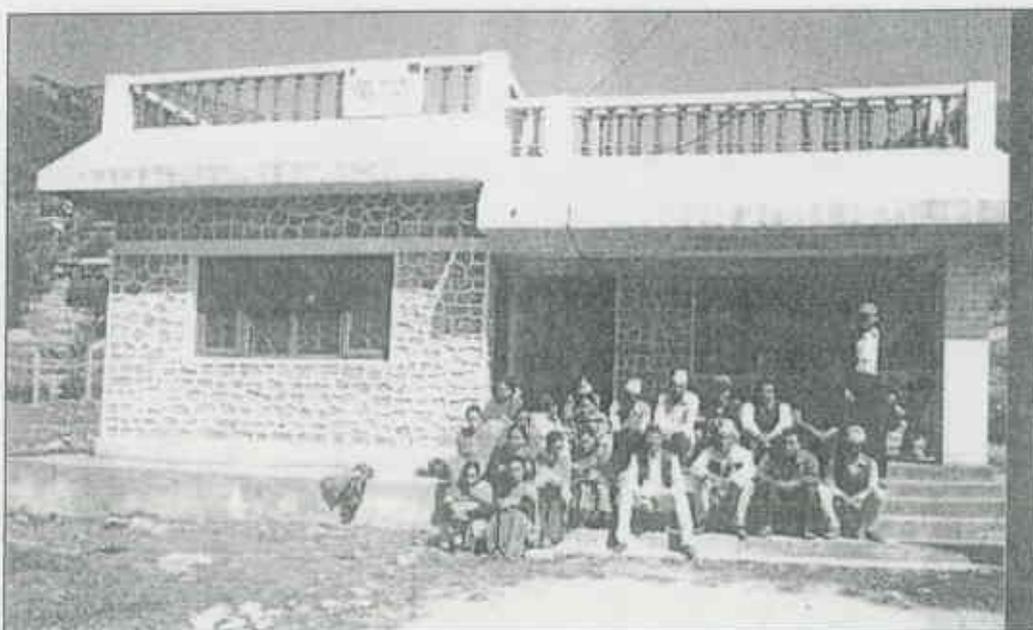


Photo 12: BIWMP Palung field center office

ICIMOD LIBRARY
Kathmandu
NEPAL