

**SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT OF MICRO
HYDROPOWER PROJECT IN BAITADI**

(A Case Study of Baggad Micro Hydro Power System Hat VDC, Baitadi District, Nepal)

**A Thesis Submitted to
The Central Department of Rural Development,
Faculty of Humanities and Social Science
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DECLARATION

I hereby declare that the thesis entitled **SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT OF MICRO- HYDROPOWER PROJECT IN BAITADI (A Case Study of Baggad Micro Hydro Power System Hat VDC, Baitadi District, Nepal)** submitted to the Central Department of Rural Development, Tribhuvan University. This thesis is original which is written under the supervision of my supervisor; no part of it was earlier submitted for the candidate of research degree to any university.

.....

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RECOMMENDATION LETTER

The thesis entitled SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT OF MICRO- HYDROPOWER PROJECT IN BAITADI (A Case Study of Baggad Micro Hydro Power System Hat VDC, Baitadi District, Nepal) has been prepared by Binod Prasad Bhatt under my guidance and supervision. I hereby forward this thesis to the evaluation committee for final evaluation and approval.

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Mr. SumanKharel
(Thesis Supervisor)

Date: 2073/11/10 B.S. (21/02/2017 A.D.)

APPROVAL SHEET

This Thesis entitled **SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT OF MICRO- HYDROPOWER PROJECT IN BAITADI(A Case Study ofBaggad Micro Hydro Power SystemHat VDC, Baitadi District, Nepal)**Submitted by Binod Prasad Bhatt in partial fulfillment of Master's Degree in Rural Development has been accepted and approved.

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ABSTRACT

The present study entitled “Socio-economic and Environmental Impact of Micro-Hydropower Project “is an attempt to find out the socio-economic and environmental impact of Micro-hydropower project in Rural Area of Hat V.D.C of Baitadi district .This study specially reports to the evaluation of socio-economic and environmental impact of socially acceptance and economic viability of Baggad Micro-hydropower project in Hat VDC of Baitadi district. It encompasses many study areas.

But it specially focuses on the investigation of such questions like who are the beneficiaries and to what extent do they get benefit .This study is focused on studying the constraints prevailed in rural energy of Nepal .It also keeps the interest to find out the answer of the questions who gets the access to the rural lighting and why ?

As Baitadi district lays in Hilly region, the environmental condition is moderate and suitable for human beings. As electricity is regarding as a major infrastructure of development, every place should be facilitate with it. But majority parts of our country have to spend their life in

darkness because of which they are facing so many problems related to their daily life situations. Such problems like not access to modern science and technology, education and other occupation in which they are involved.

The main objective of the study is to evaluate the impact of micro hydropower projects (MHPs) in rural development on environmental and socioeconomic aspects through income and employment generation, health and sanitation, education and information technology and suggest solution for sustainable development of MHPs.

The study has employed both primary and secondary sources for data collection. Under the primary source, the study has been based on questionnaire, interview and direct observation of the project site and affected areas .To meet the objectives of this research, 40 respondents of the study area i.e. Hat VDC of Baitadi district were selected as the primary sources of data. Likewise,different reports and official publications regarding hydropower plants have been taken in to consideration for the statistical data. In order to conduct this research, procedure was used to select 40 respondents of Hat VDC of Baitadi district as a research methodology. A questionnaire was used as the tool for data collection and finding out the socioeconomic and environmental impact of micro hydropower project in Rural Area. In addition to it, direct observation and KII are also adopted to collect information regarding knowing about socio economic impact of MHP.

The study found mixed socio-economic impact of the project on the project affected areas. About 80% of the respondents are seems to be satisfied with this MHP and about 20% of the respondents are seems to be not satisfied with this MHP. The study further finds out that the population has not completely substituting electricity for firewood. In the study area 90 % student's performance at school is improved after MHP installation because children have been studying at the night time using electricity.

People are suffering from asthma bronchitis eye infection and heart disease due to indoor pollution hydroelectricity has a prominent role in reduce indoor air pollution by decreasing the use of firewood and kerosene. Electricity from a micro hydro plant makes it possible to use overhead projectors, computers TV, radio refrigerator washing machine, chargeable battery, mobile and internet. This has increase the living standard of the people in the study area.

To sum up installation of hydropower projects like BaggadMicrohydro power project is significant from several angles like to fulfill national demand for electricity, project environment, uplift standard of rural people.

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ABBREVIATIONS

AEPC	-	Alternative Energy Promotion Centre
ADB	-	Asian Development Bank
BMHP	-	Bagagad Micro Hydro Power

CDRD	-	Central Department of Rural Development
CBS	-	Central Bureau of Statics
CEA	-	Consumer Electronic Association
DC	-	Development Consultancy
DANIDA	-	Danish International Development Assistance
ESAP	-	Energy Sector Assistance Program
EIA	-	Environmental Impact Assessment
ICS	-	Improved Cooking Stove
KW	-	Kilo Watt
MHPS	-	Micro Hydropower Plants
MW	-	Megawatt
NAST	-	Nepal Academy of Science and Technology
PV	-	Photo Voltaic
PAF	-	Project Affected Family
REC	-	Rural Electrification Cooperation
RETS	-	Renewable Energy Technology Station

REDP	-	Rural Energy Development Program
UNDP	-	United National Development Program
VDC	-	Village Development Commttee