

**Socio-Economic Impact of Micro Hydro Project in
Solukhumbu**

**(A Case Study of Dudu Khola Micro Hydro Power System Lokhim
VDC, Solukhunbu District)**

**A Thesis submitted to
The Central Department of Rural Development,
Faculty of Humanities and Social Science
Tribhuvan University, in partial fulfillment of the requirements
for the Degree of the Master of Arts (M.A) in Rural Development**

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RECOMMENDATION LETTER

The thesis entitled **Socio-Economic Impact of Micro Project in Solukhumbu: A Case Study of Dudu Khola Micro Hydro Power System, Lokhim VDC** has been prepared by **Asha Rai** under my guidance and supervision. I hereby forward this thesis to the evaluation committee for final evaluation and approval.

Professor Dr. Mangala Shrestha

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Designation

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APPROVAL LETTER

The thesis entitled **Socio-Economic Impact of Micro Hydro Project in Solukhumbu: A Case Study of Dudu Khola Micro Hydro Power System, Lokhim VDC** submitted by **Asha Rai** in partial fulfillment of the requirements for the Master's Degree (M.A) in Rural Development has been approved by the evaluation committee.

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27-12-2071

DECLARATION

I hereby declare that the work reported in this thesis entitled **Socio-Economic Impact of Micro Hydro Project in Solukhumbu: A Case study of Dudu Khola Micro Hydro Power System, Lokhim VDC**. submitted to the Central Department of the of the Rural Development, Tribhuvan University, entirely is my original work prepared under the guidance and supervision of my supervisor. I have made due acknowledgement to the ideas and information borrowed from different sources in the course of preparing this thesis. The result of this thesis have not been presented or submitted anywhere else for the award of any degree or for any other purposes. I assure that no part of the content of thesis has been published in any form before.

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ABSTRACT

Micro hydro- power, which is abundant in the numerous streams and rivers of the remote areas of Nepal. Nepal has been put to use for agro- processing activities through the use of modern turbine technology.

Several studies have been conducted to check the viability of the technology, Solar, mill services, operational and maintenance issues as well as performance evaluation of rural lighting programs, income generation promoting the community ownership of MHP and the mills, prospects in the past.

A review of some of the past studies has been made in this study to up-date the past information available. Although many areas were covered by this studies, there still remain enough areas for investigations especially when questions like who are the real beneficiaries and why have to be answered.

Here, Micro-Hydro Project is in Lokhim VDC of Solukhumbu District. Solukhumbudistrict lies in the Sagarmatha Zone. Eastern Development Region of Nepal. It is one of the mountainous regions with full of slope terrain and cultivated land. The MHP Project is situated at about 1043m about AMSL. The nearest road head are at Jiri and Okhaldhunga. It takes about 3 days walk for normal and about 5 days for loaded porter to reach the MHP Project location.

Geologically, MHP Project is predominated by Sedimentary and Metamorphic rock consisting of shade, mudstone and limestone. MHP project lies on the left bank of DuduKhola. The bank of the Khola is also strong and stable. The total length of the headrace canal is about 575 meters.

There are about 737 households in Lokhim VDC. The number of households are beneficiary area is 520. There are different ethnic groups located in that area like Rai, Tamang, Sherpa, Dalits, Kami etc.

The study has helped answer some of the main questions raised during the inception of the study. The answer are presented in the different chapters.

I believe that the study will make an useful contribution towards taking up necessary actions by concerned and involved agencies and project partners in future with an aim to maximize benefits to the rural communities in general and rural poor in particular residing in the remote areas of Nepal.

Asha Rai

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ACRONYMS AND ABBREVIATIONS

ACSR	-	Aluminum Conductor Steel Reinforced
AEPC	-	Alternative Energy Promotion Centre
BYS	-	Balaju Yantra Shala
DCS	-	Development and Consulting Services
DDC	-	District Development Committee
DEES	-	District Energy and Environment Section
ESAP	-	Energy Sector Assistance Programme
GTZ	-	German Development Co-operation
H/HS	-	Households
HMG/N	-	His Majesty's Government of Nepal
INGOs	-	International Non Governmental Organization
ICIMOD	-	International Centre for Integrated Mountain Development
ITDG	-	Intermediate Technology Development Group
Kg	-	Kilogram
Km	-	Kilometer
KMI	-	Kathmandu Metal Industries
KW	-	Kilowatt
Lit/sec	-	Liter per Second
M	-	Meter
MH	-	Micro- Hydro
MHP	-	Micro- Hydro Power
MHS	-	Micro- Hydro System
MW	-	Mega Watt
NEA	-	Nepal Electricity Authority
NHE	-	Nepal Hydro and Electric
NPC	-	National Planning Commission
RADC	-	Remote Area Development Committee
REDP	-	Rural Energy Development Programme
UNDP	-	United Nations Development Committee
VDC	-	Village Development Committee
WECS	-	Water Energy Commission Secretariat