IMPACT OF AANDHIKHOLA HYDROPOWER PLANT ON HEALTH AND EDUCATION

(A Case Study of Arjun Chaupari VDC, Syangja District)

A Thesis
Submitted to the Central Department of Economics
Faculty of Humanities and Social Sciences,
Tribhuvan University
In Partial Fulfillment of the Requirements
for the Degree of
MASTER OF ARTS (M.A.)
in
ECONOMICS

By Keshab Bhusal Roll No.: 321/065 TU Reg. No.: 5-1-48-204-2000

Central Department of Economics Tribhuvan University Kirtipur, Kathmandu Nepal March, 2015

Date: March 13, 2015

LETTER OF RECOMMENDATION

This thesis entitled "IMPACT OF AANDHIKHOLA HYDROPOWER PLANT

ON HEALTH AND EDUCATION (A Case Study of Arjunchaupari VDC,

Syangja District" has been prepared by Mr. Keshab Bhusal under my supervision. I

hereby recommend this thesis for examination by the Thesis Committee as a partial

fulfillment of the requirement for the Degree of MASTER OF ARTS in

ECONOMICS.

Khagendra Katuwal

Thesis supervisor

Date: March 13, 2015

ii

Date: March 13, 2015

Signature

APPROVAL LETTER

We certify that this thesis entitled "IMPACT OF AANDHIKHOLA

HYDROPOWER PLANT ON HEALTH AND EDUCATION (A Case Study of

Arjunchaupari VDC, Syangja District", submitted by Mr. Keshab Bhusal to the

Central Department of Economics Faculty of Humanities and Social Science,

Tribhuvan University, in partial fulfillment of the requirements for the degree of

MASTER OF ARTS IN ECONOMICS has been found satisfactory in scope and

quality. Therefore, we accept this thesis as a part of the said degree.

	\mathcal{E}
Dr. Ram Prasad Gaynwali, Ph.D.	
Head	
Sanjay Bahadur Singh	
External Examiner	

Date: March 13, 2015

Khagendra Katuwal

Thesis Supervisor

Thesis committee

ACKNOWLEDGEMENTS

This thesis is the end of my long journey in obtaining my degree in economics. I have

not travelled in a vacuum in this journey. There are some people who made this

journey easier by fuelling encouragement and intellectual motivation by offering me

with different ideas and suggestions to expand my ideas.

First, a very special thanks to my supervisor Mr. Khgendra Katuwal, who instructed

me with ideas and road map to carry out my thesis project. My sincere thanks go to

Dr. Ram Prasad Gnawali, Ph.D, Head of Central Department of Economics, who

helped me in every possible way to make this thesis a success.

I am also grateful to my parents, who continually inspired me in this project with all

warmth and affection. I acknowledge the support of my brother and friends who

immensely helped in every step of my work .Special and deserved accolade to Mr.

Devhari Gyawali for his support. They all mirrored back my ideas, so, I heard them

aloud, an important process for me to shape my thesis paper.

Last but not the least, I thank all those involved directly or indirectly in bringing this

thesis without whom the success of this project would have been a dream.

Keshab Bhusal

Date: March 13, 2015

iv

TABLE OF CONTENTS

		Page No.
CHA	APTER - I: INTRODUCTION	1-5
1.1	Background of the Study	1
1.2	Statement of Problem	3
1.3	Objective of the study	4
1.4	Significance of the Study	4
1.5	Limitation of Study	5
1.6	Organization of the study	5
CHA	APTER - II: REVIEW OF LITERATURE	6-19
2.1	Introduction	6
2.2	History of Micro Hydropower in Nepal	6
2.3	Review of Empirical Studies	12
CHA	APTER - III: RESEARCH METHODOLOGY	20-22
3.1	Introduction of the study site and project	20
3.2	Research Design	20
3.3	Nature and Sources of Data Collection	21
3.4	Sample size and sampling procedure	21
3.5	Data Processing	21
3.6	Data collection tools and techniques	21
	3.6.1 Questionnaire survey	22
	3.6.2 Field Visit and Observation	22
	3.6.3 Key Informant Interview	22
3.7	Presentation and Data Analysis	22
CHA	APTER - IV: FINDINGS AND ANALYSIS OF THE STUDY	23-34
4.1	Sex Ratio	23
4.2	SHP and Health	23
	4.2.1 People suffering from disease by age sex	24

	4.2.2	Number of people suffering from different disease	24
	4.2.3.	Days spent in hospital to cure disease	25
	4.2.4	Expenditure pattern to cure disease	26
	4.2.5	Number of visit to hospital	26
4.3	SHPs	and Education	27
	4.3.1	Literacy rate of study area by sex	27
	4.3.2	Drop out ratio and study hours	28
	4.3.3	Change in study hours	29
	4.3.4	Impact of Electrification on performance of school	29
	4.3.5	Impact on the use of modern appliances in teaching	30
4.4	SHP a	and sustainability	30
	4.4.1	Allocation of Benefits	31
	4.4.2	Local Participation	31
	4.4.3	Capacity Building	32
	4.4.4	Spare parts and Maintenance	33
	4.4.5	Use of electricity	33
	4.4.6	Effect of sedimentation and flow water	33
СНА	PTER -	- V: SUMMARY, CONCLUSION AND	
		RECOMMENDATIONS	35-38
5.1	Sumn	nary	35
5.2	Conclusion		36
5.3	Recor	mmendations	37
REF	ERENC	CES	

APPENDICES

LIST OF TABLES

Table No.	Title P	Page No.
4.1	Sex Ratio of the study Area	23
4.2.1	Numbers of members affected by different disease by sex and ag	ge 24
4.2.2	Disease and numbers of people suffering from it	25
4.2.3	Time spent in hospital and absent days for the household work	26
4.2.4	Expenditure pattern of surveyed household before and	
	after electrification	26
4.2.5	Number of visit to hospital	27
4.3.1(a)	Literacy rate of the study area by sex	27
4.3.1(b) L	iteracy rate of the study area before and after electrification	28
4.3.2	Impact on Dropout Ratio	28
4.3.3	Change in study hours in Average	29
4.3.4	Impact of on performance of school	29
4.3.5	Change in the use of modern appliances teaching	30
4.4.1	Allocation of benefits in sampled household	31
4.4.2	Participation of sampled HHs	32
4.4.3	Training provided to sampled Household	32
4.4.5	Use of Electricity	33

ABBREVIATIONS/ACRONYMS

CBS Central Bureau of Statistics

CDR Central Development Region

CEDECON Central Department of Economics

EDR Eastern Development Region

EIA Environment Impact

FY Fiscal Year

GDP Gross Domestic Products

GON Government of Nepal

HHs Households

ICIMOD International Center for Integrate Mountain Development

KM Kilometer

KW Kilowatt

MHPs Micro Hydropower Plants

MOF Ministry of Finance

MW Mega Watt

MWDR Mid-Western Development Region

NEA Nepal Electricity Authority

SHP Small Hydro Power Project

VDC Village Development Committee

WECS Water and Energy Commission Secretariat