

**AN ASSESSMENT OF LIVELIHOOD IMPACT OF  
IMPROVED COOKING STOVE PROGRAM IN RURAL  
COMMUNITIES**

**A Case Study of Chirtungdhara VDC, Palpa District, Nepal**

**A Thesis  
Submitted in Partial Fulfillment of the Requirements  
For the Award of the Degree of Master of  
Humanities and Social Science in  
Rural Development**

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## RECOMMENDATION

This thesis entitled “*An Assessment of Livelihood Impact of Improved Cooking Stove Program in Rural Communities*” has been prepared by **Mr. Manoj Kumar Thapa** under my supervision. I hereby recommend this dissertation for examination by the Thesis Committee as a partial fulfillment of the requirements for the Degree of *Master of Arts in Rural Development*.

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## APPROVAL LETTER

We certify that, this thesis entitled “*An Assessment of Livelihood Impact of Improved Cooking Stove Program in Rural Communities*” prepared by **Mr. Manoj Kumar Thapa**, to the Faculty of Humanities and Social Sciences. Central Department of Rural Development in Partial Fulfillment of the Requirement for the Degree of Master of Arts in Rural Development has found acceptable in scope and quality. Therefore, we accept this dissertation as a part of the said degree.

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## Abstract

*A Thesis Submitted in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Humanities and Social Science in Rural Development. The study had focused on entitled “An Assessment of Livelihood Impact of Improved Cooking Stove Program in Rural Communities”. The research had conducted in Chirtungdhara VDC and each ward of Telgha and Kusumkhola VDCs of Palpa District.*

*This study helps to know the present situation and condition of ICS and changing socio-economic status of user after ICS installed and environmental aspect of the study area. Moreover, specific objectives are, to explore the socio-economic impact of ICS program on local village people, to identify the prospects and challenges for the users of ICS and to identify the causes of drop out of ICS uses and ICS promoters.*

*Methodology is the backbone of the study. Therefore, it needs to be well defined to conduct the study. Therefore, in this study the following methodology were adopted to fulfill the objectives. Such as, Research Design (descriptive and analytical), Sampling Procedure (random household survey), Types of Sources of Data (Primary and secondary data), Data Collection Tools and Techniques, Structured and non-structured Questionnaire, Field Visit and Observation, Key Informant Interview, Case Study, Focus Group Discussion and data presentation analysis in table, graph and pie chart.*

*In Nepal, Improved Cooking Stove can be main device to reduce the fuel wood problem as well as energy problem for rural people. It can be more effective method than the traditional cooking stove. It can save 30% to 35% fuel wood than TCS and helps to reduce the fuel wood problem.*

*During the study, an interaction program was organized among the ICS users, non ICS users and dropout ICS users to discuss about the ICS program of and an attempt was made to understand their opinion regain the usefulness of ICS technology. The study had observed in Chirtungdhara VDC and each ward of Telgha and Kusumkhola VDCs. Ninety households were supervised during the study. Which as, fifty HHs were ICS users, twenty-five drop out ICS users and fifteen non ICS users. In the study area, Magars 53.24% were head in installing the system, Brahmins 27.5% were second, and Chetries 7.85% were installing the ICS. Major respondents' educational status (30.45%) was five to ten class. In addition, 19.25% people are above SLC, out of 19.25%, there are 10.41% female and 8.84% male. Out of total population 12.17%, people were illiterate and 15.71% were general education. Out of fifty households' of ICS users, 24% users were only regular using ICS and remaining 76% user were using others stove along with ICS. Hence,*

*among the fifty households (ICS users), 48% ICS user are facing technical problem like more consumption fuel wood, smoke back, late cooking etc. likewise 18% user are quit satisfy and 34% users are satisfying of this ICS. Most of respondents answered the about warm food in ICS a long time (20%) and saved from smoke if the stove works properly way (14%). In the study area, most of them (76%) respondents have not any health problem of smoke related disease. 12% people are unknown of this problem, and 10% people feel improvement of health after installed the ICS. The study had found major respondents of TCS users (60%) says that one bundle of fuel wood consume up to two to three days, similarly 46.66% of ICS users says that one bundle of fuel wood consume up to four to five days. This data shows four bundles (In percent 16.67% to 18%) of fuel wood saves per month in ICS than TCS.*

*Similarly, there are many reasons and challenges of drop out ICS but among them major problems were more consume of fuel wood (48%), second smoke not passing out (20%) and third non quality ICS installed by skill less promoter (12%). Out of 12 promoters, 41.66% promoters were supporting their home expenditures from this profession such as, maintenance of home, education for child, make ornaments etc. therefore, still some promoters were depending on this profession for their survive. Overall, Improved Cooking Stove plays the vital role for short run energy conservation in Nepal. It has directly address the urgent problems of deforestation and rescuing domestic firewood scarcity as well as other health related problems due to excess smoke inhalation. They do not require complex technology and high investment. A major difficulty is the adoption and dissemination, which meet local traditions. If ICS are develop considering user characteristics and regional differences, they help to reduce pressure on the forest & fuel crisis.*

*After the study, there was lack of more awareness of ICS program and technical monitoring mechanism especially in phase out VDC. Therefore, the stakeholder should be done re-participatory technical monitoring of ICS in phase out VDC. There is most necessary to make full responsible for Local Partner Organizations (LPOs). In the Palpa District, promoters drop out ratio is high so it is most necessary to engage them on their profession and give repair and maintenance training of ICS for ICS users. It may helps to reduce the drop out ICS problem.*

**Manoj Kumar Thapa**

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## **ABBREVIATIONS/ ACRONYMS**

AEPC	–	Alternative Energy Promotion Center
BNA	-	Beautiful Nepal Association
CFDP	–	Community Forest Development Project
CRT/N	–	Center for Rural Technology/ Nepal
DCRDC	-	Dhaulagiri Community of Rural Development Centre
DDC	-	District Development Committee
ESAP	–	Energy Sector Assistance Program
FAO	–	Food & Agriculture Organization
FY	–	Fiscal Year
GJ	–	Gaga Jules
GUPA	-	Gramin User Promoter Association
GON	–	Government of Nepal
HH	-	Households
ICIMOD	–	International Center for Integrated Mountain Development
ICS	–	Improved Cooking Stove
ISK	–	Indreni Samaj Kendra
JBTPK	-	Jana Bachat Tatha Parichalan Kendra
LP	–	Liquid Petroleum
LPO	–	Local Partner Organization
MOF	–	Ministry of Finance
NCDC	-	Namsaling Community Development Centre
PPDA	–	Palpa Pasture Development
RRDC	–	Rural Resource Development Center
REDA	-	Rural Economic Development
RRESC	-	Regional Renewable Energy Service Centre

RES	–	Rural Empowerment Society
RDSC	-	Rural Development Service Centre
REMREC	-	Resource Management and Rural Empowerment Center
RECAST	–	Research Center for Applied Science Technology
SASF	–	Social Awareness Stakeholder Forum
SSAN	–	Samajik Sasthakikaran Abhiyan Nepal
TCS	–	Traditional Cooking Stove
TOE	–	Ton of Oil Equivalent
TV	-	Television
UNDP	–	United National Development Program
VDC	–	Village Development Committee
WECS	–	Water Energy Commission Secretariat



