

**Impact of Climate Change in Agriculture:  
A Case Study of Chhtedhunga VDC in Terhathum, District**

**A Thesis Submitted to  
The Faculty of Humanities and Social Sciences,  
Mahendra Ratna Multiple Campus Ilam,  
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in partial fulfillment of the requirements for the  
Degree of Master of Arts (M.A)  
in  
Rural Development**

**By  
DEVI PARSAD KANDANGWA  
Exam Roll no: 10151  
T.U. Regd. no: 6-1-1-116-2001  
Department of Rural Development  
Tribhuvan University  
Mahendra Ratna Multiple Campus, Ilam  
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त्रिभुवन विश्वविद्यालय  
TRIBHUVAN UNIVERSITY

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०२७-५२१६९३  
Fax 520070

**महेन्द्ररत्न बहुमुखी क्याम्पस, इलाम**  
**Mahendra Ratna Multiple Campus, Ilam**  
**ग्रामीण विकास विभाग**  
**DEPARTMENT OF RURAL DEVELOPMENT**

संख्या -  
पत्राङ्क -

Ref No.....

### Letter of Recommendation

The thesis work entitled **Impact of Climate Change in Agriculture: A Case Study of Chhatedhunga VDC in Terhathum, District**, Prepared by **Devi Parsad Kandangwa** Under my Supervision as a partial fulfillment of the requirement for the degree of Master of Arts in Rural Development. So i recommend it for evaluation to the Thesis evaluation committee.

.....  
Yadab Bharadwaj  
Thesis Supervisor

Date: 2073/05/31  
Sept.16-2016

## Approval Letter

The thesis entitled **Impact of Climate Change in Agriculture: A Case Study of Chhatedhunga VDC-7 in Terhathum District** Submitted by **Devi Parsad Kandangwa** in partial fulfillment of the requirements for the of Master's Degree (M.A) in Rural Development has been approved by the evaluation committee.

### Evaluation Committee

.....  
Jas Bahadur Lungeli  
Head of Department

.....  
External Examiner

.....  
Yadab Bharadwaj  
Supervisor

Date: 2073/06/14  
2016/09/30

## Declaration

I hereby declare that the thesis **Impact of Climate Change in Agriculture: A Case Study of Chhatedhunga VDC in Terhathum, District**, submitted to the Department of Rural Development, Tribhuvan University, Mahendra Ratna Multiple Campus, Ilam, is entirely my original work prepared under the guidance and supervision of my supervisor. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of preparing this thesis. The results of this thesis have not been presented or submitted anywhere else for the award of any degree or for any other purpose. I assure that no part of the content of this thesis has been published in any form before.

.....

Devi Parsad Kandangwa

T U Reg.No.6-1-116-2001

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Devi Parsad Kandangwa

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Sept.16-2016

## ABSTRACT

This Study Mainly Concentrated about Impact of Climate change in agriculture of chhatedhunga VDC of Terhathum. The life style of the inhabitants of Terhathum is agrarian way. Paddy wheat, maize, rice are the major food crops and cardamom, ginger, broom, Potato and are the major cash crops of Terhathum.

Agriculture is the dominant sector of chhatedhunga VDC of Terhathum. It plays an important role in providing opportunity for people and to solve the unemployment problems to some extent. However, there are also expected to be positive climate change induced effects on the health status of certain populations in this VDC.

In the chhatedhunga VDC, the most of the respondents the impact of climate change is positive They said. According to respondents of VDC, Farmers are growing new vegetables such as Cauliflower, Cabbage, Chili, Tomato and Cucumber which used to need greenhouse to survive. Local fruits have better sizes and tastes. New plants that only used to grow at lower altitudes can now be found. Many note that the fact that their district is greener than it was a few decades ago. Local residents say this is because of the changing climate rather than technological inputs or improved seed varieties.

Now various studies have been conducted covering almost all the aspect of impact of climate change on agriculture but till now there has not been any study regarding the climate change and its effect on agriculture. This study mainly has consent rated on agricultural in chhatedhunga VDC of Terhathum district.

The present study is based on filed survey in order to fulfill the specific objectives of the study and exploratory research design is applied. A combination of purposive sampling method has been adopted. In this study, only 40 percent respondents were selected for interview both primary and secondary data are used for this study. The method of primary data collected for the questionnaire, unstructured interview, observation and check list. Secondary data has been collected from the available literature such as, records, reports, publication of different related offices and possible resources. Data have been analyzed descriptively. This study both qualitative and quantitative data have been collected. Qualitative information has been tried to interpreted and demonstrated by the means of percentage and graphs. There are castes/ethnics; age groups participated in the study area.

There are no organization working on climate change and how to adopt to its impacts, are there adopt to its impacts, neither are there organizations working on public education on the issue.

Awareness raising, education, capacity building and advocacy programmes on climate change and its impact on indigenous livelihoods are needed in chhatedhunga communities.

While the effects of climate change on agriculture and its associated hazards have been well assessed, there is paucity of information on its effects on vegetation, as well as plant succession on recently deglaciaded soils.

Communities are highly dependent on natural resources for the ecosystem services that the perform provisioning services as genetic resources, food, fiber fresh water etc. Regulating services as regulation of climate water and human diseases, supporting services as productivity, soil, fertility and nutrient cycling.

Therefore understanding the effects of climate change on soil and vegetation dynamics is important for assessing impacts on chhatedhunga Livelihoods, as well as for implementing effective conservation strategies.

Attractive greenery environmental development, tourism industry employment creation and ender development reflect that positive sign of climate change in local development.

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## **Acronyms/Abbreviations**

AAN	Action Aid Nepal
AD	Anna Domini
AMSL	Above Mean Sea Level
CBS	Central Beaurou of Statistics
CDM	Clean Development Mechanism
CO <sub>2</sub>	Carbon Dioxide
Fig.	Figure
GCM	General Circulation Model
GHGS	Effect of Green House Gases
KHK	Hidu Khush-Himalayas
NARC	Nepal Agricultural Research Council
PPM	Parts Per Million
UNFCC	The United Nations Framework Convention on Climate Change
VDC	Village Development Committee
WMO	World Metrological Organization