



**STUDY OF SUBSISTENT ACTIVITIES OF MOUNTAIN PEOPLE
IN CHANDAN BARI OF LANGTANG NATIONAL PARK**

Submitted to

CENTRAL DEPARTMENT OF ENVIRONMENTAL SCIENCE
FACULTY OF SCIENCE AND TECHNOLOGY OF SCIENCE AND
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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTER
DEGREE IN ENVIRONMENTAL SCIENCE

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LETTER OF RECOMMENDATION

This is to certify that *Miss Yamuna Tondon* has prepared this dissertation entitled, “*Study on subsistence activities of Mountain people in Chandanbari of Langtang National Park*” as partial fulfillment of the requirement for the degree of Masters of Science in Environmental Science under my supervision and guidance.

This dissertation bears the candidates own work and has not been submitted for other purposes.

I therefore recommend this dissertation for approval and acceptance.

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Dr. Krishna Chandra Paudel

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LETTER OF APPROVAL

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Declaration

I, *Yamuna Tondon.*, hereby declare that the work presented here in is genuine work done originally by me and has not been published or submitted elsewhere for the requirement of a degree program. Any literature data works done by others and cited within this dissertation has been given due acknowledgement and listed in the reference section.

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Abstract

The study area, Chandan Bari in Rasuwa District of Nepal is a Sub-alpine region (3550 m) of the Lantang National Park of Syafru Village Development Committee. The area was inhibited by four hotels of Bharku people and one cheese factory. Five livestock herds (ghot) inhibited the study area as they practice transhumance grazing system of which milk was collected by the cheese factory by moving around up to 20 km. The subsistent need of local people was fulfilled directly or indirectly by the tourism based activities.

*The forest type of study area was mixed conifer forest with *Abies spectabilis*, *Rhododendron barbatum* and *Acer caudatum*. The average annual demand of fuel wood for 9 HH's was found to be 13340 kg/year, 195811 kg/year for 4 hotels and 8347 kg/year for 5 herders respectively. The fuelwood demand and sustainable yield of Chandan Bari forest was estimated to be 45.31 ton/year and 214.83 ton/year, which showed sufficiency of fuelwood. The density of cut stems and burned stems was found to be 165 ind./ha and 124 ind./ha on northern and southern slope respectively. As well as the invasion of poisonous plant species and successional plant in the grazing area indicated heavy grazing which showed that the human disturbance was very high.*

Of the total surveyed household population (56) 55.36% of them were economically active group of which 44.44% of respondent were engaged on tourism sector and 55.56% were engaged in animal husbandry. As all the physical facilities were created for tourist (hotel and lodges situated in the area), they charge only for food to the foreigners whereas for both lodging and fooding were charged to National tourists. This was discrimination among the tourists.

Though the forest was found in degraded state, the soil of the forested area as well as of agricultural land of Chandan Bari was still in virgin condition. The physical and chemical parameters of drinking water of the study area was found to be below the WHO, USPH, ISI, DSWW guideline value and is sound for drinking as well as for domestic purposes.

Key word: Forest, Fuelwood, Tourism and drinking water condition.

Acronyms

%	=	percent
⁰ C	=	degree centigrade
⁰ F	=	degree farenheight
ACAP	=	Annapurna Conservation Area
AgNO ₃	=	Silver nitrate
Ca (OH) ₂	=	Calcium hydroxide
CaCO ₃	=	Calcium carbonate
CAMP	=	Conservation Assessment and Management Planning
CITIES	=	Convention in International Trade in Endangered Species of wild Flora and Fauna
CO ₂	=	Carbondioxide
CO ₃	=	Carbonate
Conc.	=	Concentrated
DFRV	=	Department of Forest Research and Survey
DPR	=	Department of Plant Resources
DW	=	Drinking Water
H ₂ SO ₄	=	Sulphuric acid
ha	=	hectare
HCl	=	Hydrochloric acid
HCO ₃	=	Bicarbonate
K ₂ Cr ₃ O ₇	=	Potassium dichromate
KI	=	Potassium iodide
km	=	kilometer
lit	=	liter
IUCN	=	World conservation Union
LNP	=	Langtang National Park
m	=	meter
MAP	=	Medicinal and Aromatic Plants
mg	=	milligram
MgCO ₃	=	Magnesium carbonate
ml	=	milliliter
mm	=	milimeter
Na ₂ S ₂ O ₃	=	Sodium thiosulphate
NaOH	=	Sodium hydroxide
NH ₃	=	Ammonia
nm	=	nanometer
NTFPs	=	Non-timber Forest Products
OH	=	Hydroxyl
VDCs	=	Village Development Committees