An Evaluation of Agroforestry as a Viable Base for Rural Development in Paanchkhaal VDC, Kabhre, Nepal

By

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LETTER OF RECOMMENDATION

We hereby recommend that this thesis entitled **An Evaluation of Agroforestry as a Viable Base for Rural Development in Paanchkhaal VDC, Kabhre, Nepal** prepared by Mrs. **Amita Rajbhnadari** under our supervision be accepted by the Research Committee for the final examination in the fulfillment of the requirements for the degree of Master of Art in **Sociology**.

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ABSTRACT

Agriculture and forestry are closely related with the livelihood of rural households of Nepal. It has been estimated that for sustaining 1 ha of agricultural land, 2.8 to 18 ha of forestland is required. Nepal is one of the few countries in the world where people to a large extent are dependent on agriculture and forest resources for their subsistence. Therefore, agroforestry is greatly needed because of its potentiality of generating farm household income, drudgery removal of women in household chores, increase active decision making role of women and leadership development in women, and reducing the pressure on community forests, thereby assisting rural development in Nepal.

This study on **An Evaluation of Agroforestry as a Viable Base for Rural Development in Paanchkhaal VDC of Kabhre, Nepal** focuses on the objectives: (i) to document the role of agroforestry systems in community forestry management of the study area, (ii) to identify the agroforestry system's major components that contribute to farm household income, (iii) to assess the impacts of agroforestry on drudgery removal of women in household chores, and (iv) to identify the role of agroforestry in active decision making of women, (v) to find the role of agroforestry in leadership development of women .

Whatever the definitions, agroforestry connotes using trees on farms. Rural development is a strategy to improve the economic and social life of specific group of people, the rural poor. The group includes small-scale farmer, tenants, and the landless. There are no legal aspects dealt with specifically in the context of agroforestry. Therefore, they are often directed from general forestry sector policy, act and regulation.

The research is conducted in three wards (3, 4, and 7) of the Paanchkhaal VDC of Kabhre, a central mid-hills district of Nepal. A total of 49 households are surveyed systematically. Household questionnaire survey, key informant interviews, direct observation and informal interviews are carried out for obtaining the data and related information. The secondary data and information are gathered from DDC, VDC, ISRSC and other organizations. Descriptive statistical tools like frequencies, percentages, means and standard derivations are used to present

the general findings of the study. Mostly tables, but graphical figures too, are used for describing the information.

The average household size is found slightly higher compared to the district and national average household sizes. The highest percentage of male and female population is found in 15-60 years age group. In all the tree categories (upper/lower/other) of caste, the average percent of distribution of households in the wards seems to be higher compared to the national average. The average total percent of literacy is slightly lower, compared to the national average percent. The average number of cattle and buffalos (together) per household is slightly greater compared to the national average.

The major source of income is of regular type, followed by business and labor. Agricultural crops, followed by milk, contributed the highest percentage of household income. A substantial household income is allocated directly or indirectly for NRM and CFM. A tremendous distance to be covered by the household to reach community forests seems to be reduced by the introduction of agroforestry development and community forestry management. The majority of the households reported that agroforestry reduced the passive decision making role of women to active decision making. Likewise, there is agroforestry directly proportional to the leadership development of the women in the study area.

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ACRONYMS AND ABBREVIATIONS

CEAPRED	Center for Environment and Agriculture Policy, Research, Extension and Development
CFM	Community Forestry Management
DAB	District Agriculture Bank
DADO	District Agriculture Development Office
DDC	District Development Committee
DFO	District Forest Office
DLO	District Livestock Office
DOF	Department of Forest
ECDO	Election Commission District Office
GDP	Gross Domestic Product
GDP	Gross Domestic Product
GOs	Governmental Organizations
ha	Hectare
ICIMOD	International Center for Integrated Mountain Development
ICRAF	International Council for Research in Agroforestry
ICS	Improved Cooking Stoves
INGOs	International Non Governmental Organizations
IOF	Institute of Forestry
IPM	Integrated Post Management
IRR	Internal Rate of Return
ISRSC	Informal Sector Research and Study Center
LGN	Love Green Nepal
masl	Meters Above Sea Level
MOFSC	Ministry of Forest and Soil Conservation
MOPE	Ministry of Population and Environment
MPFS	Master Plan for the Forestry Sector
NACRMP	Nepal-Australia community Resources Management and Livelihood Project

NAF	Nepal Agroforestry Foundation
NARC	Nepal Agricultural Research Council
NGOs	Non Governmental Organizations
NRM	Natural Resource Management
NRs	Nepali Rupees
NTFP	Non-timber Forest Product
SLC	School Leaving Certificate
SN	Serial Number
TU	Tribhuvan University Committees
WB	World Bank
WN	Ward Number

GLOSSARY

Allelopathic effects	Endogenous substances (kaolines) showing inhibitory effects on germination and growth of neighboring plants.
Alley cropping	synonymously used for hedgerow intercropping.
Bari	Upper slope, out sloping and rainfed terrace land.
Bole	The tree part, which is devoid of branches.
Boundary planting	Conventional agroforestry practices, where trees are planted on farm boundaries to demarcate the boundary.
Crown	The upper branchy part of the tree.
Khet	Lower slope, leveled and irrigated, terrace land.
Lalpurza	Official document (certificate) of land ownership
Non-farm income	Income from sources other than the agricultural activities.
Pakhobari	Synonymously used for bari.
Hedgerow intercropping	Agroforestry practices where arable crops are grown in the alleys between the rows of woody perennials.
Shelter belt	Several rows of trees for protecting soil.
Slash-and-burn	Cutting and burning of forests to clear the land and to provide ash 'fertilizer' or 'lime' for soil.

Strip hedgerow intercropping	Agroforestry practice, where tree rows are alternated with agro crops.
Wind break	Single or double rows of trees maintained for protecting soil, plants and livestock.
Woodlots	Strands of trees planted on farms, community lands or degraded land to provide wood for fuel, construction or pulp.