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**LIVESTOCK AND LIVELIHOODS: DYNAMICS OF GENDER, CLASS, CASTE  
AND ETHNICITY IN RURAL AGRARIAN COMMUNITIES OF NEPAL**

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The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the *National Statement on Ethics Conduct in Research Involving Human* (1999), the *Joint NHMRC/APCC Statement and Guidelines on Research Practice* (1997), the *James Cook University Policy on Experimentation Ethics. Standard Practices and Guidelines* (2001), and the *James Cook University Statement and Guidelines on Research Practice* (2001). The proposed research methodology received clearance from the James Cook University Experimentation Ethics Review Committee (Approval number H2688)

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Nature of Assistance	Contribution	Names, Title, Affiliations
Intellectual support	<p>Proposal writing</p> <p>Data analysis</p> <p>Cartography</p> <p>Editorial assistance</p>	<p>Dr. Alison Cottrell A/P David King</p> <p>Dr. Alison Cottrell A/P David King</p> <p>Mrs Adella Edwards</p> <p>Dr. Alison Cottrell A/P David King Ms. Christine Pam</p>
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## **Dedication**

To my late mother Sarsati Gurung whose words to me some days before she passed away in 2009 were:

“Finish your PhD study soon and make proud to us”

## ABSTRACT

This thesis analyses the role of smallholder livestock production within mixed farming practices in the agrarian society of Nepal based on a detailed analysis by gender, class, caste, and ethnicity from six communities representative of the three agro-ecological regions-Mountain, Hill and Terai. Over the past decade, farmers have gradually integrated market based small scale livestock enterprises into subsistence farming systems for livelihood enhancement which has generated alternative livelihood opportunities for the reduction of poverty among poor and disadvantaged people. Specific attention is given to both the assumptions that surround the promotion of livestock development as a poverty alleviation programme, and the investigation of complex society-livestock development-environment relations through the incorporation of 'everyday' interactions at different scales. Moreover, in such a mixed farming system there is a dynamic relationship between livestock, crop and common property resources (e.g. forest, pastureland) whereby, depending on the agro-ecological region, livestock production depends to a certain extent on fodder and grass from common property resources (CPRs).

The thesis uses a theoretical framework derived from political ecology to critically analyse how society, development and environment orthodoxies influence livestock production and management practices. The research used multiple methods (qualitative and quantitative methods) including participatory research techniques which were conducted in six communities from Mustang, Lalitpur and Chitwan representative of the three agro-ecological regions respectively. Socio-economic and gender analysis, and cross comparative analytical tools were used to discover the main factors influencing current livestock production and inequitable benefit sharing of livestock development across gender, class, caste, and ethnic groups.

The discussion of the results of the research begins with a consideration of rural livelihood diversity from an historical context and from empirical investigations that were conducted in order to explore the vulnerability of diverse caste and ethnic groups across agro-ecological regions of Nepal. This thesis then examines the specific roles of livestock production and changes over the time. The effects and consequences of both pre-existing socio-cultural values of livestock, and agro-ecological circumstances on the current market based livestock production and consumption preferences are examined in South Asia generally, and more specifically in Nepal. Following this, the thesis addresses gender roles and relations and also the gendered effects of market based livestock production and management systems across the three agro-ecological regions, and class, caste and ethnic groups are described and analysed. Finally, there is examination of the relevance of environmental problems and challenges that are

associated with the current market based livestock production systems, based on the farmers views and perceptions.

The findings reveal that over the past decade, farmers from various socio-economic groups have integrated small scale market based livestock production into their subsistence agricultural systems to generate cash income. There is also evidence that the preference for particular livestock enterprises is influenced by socio-cultural values, characteristics of the agro-ecological region, and availability of livestock feed resources. In the process of developing market based livestock production and management systems, gender roles and relations have changed and a greater income inequality has been created among the rural poor, differentiated by class, caste, and ethnicity. The findings also reveal that, in contrast to the general assumption that livestock has degraded natural resources, farmers views/perceptions indicate that current livestock enterprise practices in the hill and Terai regions have not impacted negatively on common property resources (mainly forests). This is due to the introduction of community forestry programmes, along with stall feeding practices and the use of alternative feed resources (e.g., private cultivated land and other feed resources). However, according to the farmers, these regions have been facing new environmental challenges from livestock processing and wastes; a finding that requires further investigation. In contrast to hill and Terai regions, the pastureland areas of the mountain region, are being degraded due to the lack of alternative feed resources/options.

The study concludes that there is a critical need to prioritise and combine three key elements/factors in order to formulate an inclusive livestock development framework to address the issues of vulnerability and social exclusion in rural livestock development. They are: i) address pre-existing livestock based socio-cultural values in order to include the poorest of the poor, such as the Dalit group and other disadvantaged ethnic groups, ii) introduce livestock which are suitable to the agro-ecological conditions, and iii) consider the availability of and access to livestock feed resources. The positive implications that potentially emanate from social inclusion include the maintenance of rural income equality across household, community and regional levels, and livestock management and production systems that are environmentally sustainable across the three agro-ecological regions of Nepal.

## TABLE OF CONTENTS

STATEMENT OF ACCESS.....	I
STATEMENT ON SOURCES DECLARATION.....	II
STATEMENT OF THE CONTRIBUTION OF OTHERS.....	III
DECLARATION ON ETHICS.....	IV
ACKNOWLEDGEMENTS.....	V
ABSTRACT.....	VIII
TABLE OF CONTENTS.....	X
LIST OF TABLES.....	XIV
LIST OF FIGURES.....	XVI
LIST OF BOXES.....	XVII
LIST OF MAPS.....	XVIII
LIST OF PLATES.....	XIX
<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 The rationale for research and research question.....	1
1.2 Research approach and analytical framework.....	6
1.3 Overview of the thesis.....	8
<b>CHAPTER 2 VIEWS FROM THE LITERATURE: THEORETICAL PERSPECTIVES.....</b>	<b>11</b>
<b><i>PART 2.1: WOMEN, GENDER, AND SOCIAL EXCLUSION: THE EMERGENCE OF ALTERNATIVE EXPLANATIONS.....</i></b>	<b>11</b>
2.1.1 Women in development: A historical perspective.....	11
2.1.2 Women and development: Third world feminist perspective.....	14
2.1.3 The shift from “women in development to “gender and development”.....	15
2.1.4 The empowerment approach: Micro-credit schemes as examples of economic empowerment.....	17
2.1.5 Social exclusion: A new frontier.....	19
2.1.6 Gender, caste and ethnicity based exclusion: Social structure and poverty in Nepal.....	20
<b><i>PART 2.2: SUSTAINABLE RURAL LIVELIHOODS AND DIVERSIFICATION.....</i></b>	<b>22</b>
2.2.1 Poverty and livelihoods: Entitlement and capabilities.....	22
2.2.2 Sustainable rural livelihoods.....	24
2.2.3 Livelihood resources: Assets.....	28
2.2.3.1 Natural capital.....	28
2.2.3.2 Social capital.....	29

2.2.3.3	Financial capital and substitutes.....	30
2.2.3.4	Physical capital.....	30
2.2.3.5	Human capital.....	30
2.2.4	Diversification and rural livelihoods.....	31
<b>PART 2.3: THEORETICAL FRAMEWORK: BRINGING SOCIETY,</b>		
<b>DEVELOPMENT AND ENVIRONMENT INTO THE FOLD.....</b>		
2.3.1	Livestock intervention for rural livelihood development.....	32
2.3.1.1	Political ecology theory: Political context.....	32
2.3.1.2	Historical political ecology.....	35
2.3.1.3	A political ecology of scale.....	37
2.3.1.4	A feminist political ecology: Gender, development and environment.....	38
2.4	Conclusion.....	39
<b>CHAPTER 3 SITE SELECTION AND RESEARCH METHODOLOGY.....</b>		
3.1	Rationale for the representation of three agro-ecological regions and the selection of multi-research sites.....	41
3.2	Research support and organisation of field visits.....	46
3.3	Methods of data collection and analysis.....	48
3.3.1	Secondary data and information.....	48
3.3.2	Primary data and information collection.....	49
3.3.2.1	Household sampling and survey: Quantitative data.....	49
3.3.2.2	Focus group discussion: Qualitative information.....	51
3.4	Data analysis and interpretation.....	56
3.4.1	Socioeconomic and gender analysis (SEAGA).....	56
3.4.2	Cross-comparative analysis.....	57
3.5	Conclusion.....	58
<b>CHAPTER 4 GEOGRAPHICAL AND LIVELIHOOD DIVERSITY.....</b>		
4.1	Introduction.....	59
4.1.1	The geographical setting of Nepal.....	60
4.1.2	Agriculture in the Nepalese economy.....	61
4.2	Research sites: People, land and livestock.....	62
4.2.1	Syang and Kagbeni villages in Mustang District: The Mountain regions.....	62
4.2.2	Ghusel and Champi villages in Lalitpur District: The Hill region.....	65
4.2.3	Parashnagar and Shaktikhor in Chitwan District: The Terai region.....	66
4.3	The diversity of rural livelihoods: Past and present.....	70
4.3.1	Land and livestock distribution and ownership: Class, caste, and ethnicity.....	70
4.3.1.1	Historical land arrangement system.....	70
4.3.1.2	Land ownership: Contemporary context.....	73
4.3.1.3	Livestock distribution and ownership.....	75
4.4	Livelihood diversification.....	79
4.4.1	Agro-ecological regional diversity: Livelihood diversification.....	82
4.5	Conclusion.....	84

<b>CHAPTER 5</b>	<b>CHANGES IN SMALLHOLDER LIVESTOCK FARMING AND CONTINUITY IN SOCIO-CULTURAL VALUES.....</b>	<b>85</b>
5.1	Smallholder livestock production in mixed farming system: A case of Nepal.....	86
5.2	Livestock based socio-cultural values and relationship to identity: An historical reflection.....	89
5.2.1	The origin of the sacred cow concept: A case study of Hindu society.....	91
5.2.2	Nepalese constitutional laws: Domination and protection of the cow.....	92
5.2.3	Multi-disciplinary debates on the sacred cow concept.....	95
5.3	Livestock production and consumption: Do socio-cultural values and agro-ecological factors matters.....	96
5.3.1	Meat vs. milk production and consumption: South Asia context.....	97
5.3.2	Livestock preferences for production and consumption: The case of Nepal.....	99
5.3.2.1	Large ruminants: The roles of cattle and buffalo raising.....	103
5.3.2.2	Small ruminants: Small scale goat farming as income generation.....	109
5.3.2.3	Monogastric and small stock: Poultry and piggery farming.....	112
5.4	The effects of socio-cultural values issues in preferences of livestock Farming: Caste and ethnic groups.....	114
5.4.1	Dalit groups and Dairy farming.....	115
5.4.2	“ <i>Chepang</i> ” and Pig farming.....	116
5.5	Conclusion.....	117
<b>CHAPTER 6</b>	<b>GENDER ROLES AND RELATIONS IN LIVESTOCK PRODUCTION AND MANAGEMENT: INTRA HOUSEHOLD AND BEYOND.....</b>	<b>118</b>
6.1	Gender, labour and resource allocation in livestock production systems: Issues and Gaps.....	119
6.1.1	Transformations in measuring labour force in agriculture production: Counting labour as economic contribution.....	121
6.1.2	Agriculture work as economic activity and gender contribution in Nepal.....	124
6.2.	Gender labour allocation: Agro-ecological regions, and class, caste, and ethnic group.....	125
6.2.1	Gender and labour allocation patterns: Mountain, Hill and Terai agro-ecological regions.....	126
6.2.2	Gender and labour allocation: Rich, medium and poor households.....	129
6.2.3	Gender and labour allocation between caste and ethnicity: High caste, Dalit and Ethnic groups.....	132
6.2.4	Implications of market based livestock enterprise intervention and gender work load.....	133
6.3.	Gender involvement in livestock resource allocation: Caste and ethnic groups.....	135
6.3.1	Gender and decision making of major livestock activities: High caste, Dalit and Ethnic groups.....	136
6.3.1.1	Selection of livestock types.....	137
6.3.1.2	Credit and investment for livestock production.....	138
6.3.1.3	Marketing livestock and livestock products.....	138
6.3.1.4	Income and expenditure.....	139

6.3.2	Gender, and access to, and control over livestock activities:	
	High caste, Dalit and ethnic groups.....	140
6.3.2.1	Credit and investment in livestock enterprises.....	142
6.3.2.2	Marketing livestock and livestock products.....	142
6.3.2.3	Income and expenditure.....	143
6.4	Conclusion.....	144
<b>CHAPTER 7 MARKET BASED LIVESTOCK PRODUCTION AND ENVIRONMENTAL CHALLENGES.....</b>		<b>146</b>
7.1	Livestock based environmental issues.....	146
7.2	Sources of livestock feed resources: Past and Present.....	148
7.2.1	Livestock feed sources: Comparison of agro-ecological regions.....	148
7.2.1.1	Common Property Resources: Forest and Pastureland.....	150
7.2.1.2	Private farm land.....	152
7.2.1.3	Other sources (Commercial concentrate feed, purchase crop by products/hay).....	153
7.3	Seasonal livestock feed deficit: An agro-ecological regions comparison.....	153
7.4	Environmental challenges from market based livestock production intervention.....	155
7.4.1	Livestock practices and environment pollution.....	155
7.4.1.1	Water pollution from farm based livestock waste: A case from Chitwan district.....	156
7.4.1.2	Soil and air pollution from livestock processing wastes: A case from Lalitpur district.....	157
7.4.1.3	Pastureland degradation: A case from Mustang district.....	158
7.5	Conclusion.....	159
<b>CHAPTER 8 CONCLUSION.....</b>		<b>161</b>
8.1	Synthesis and conclusion.....	162
8.2	A framework for gender and inclusive rural livestock development.....	170
8.3	The contribution of the study to the existing literature on livestock production and management.....	173
8.4	The contribution to political ecology: A gap in the theory.....	176
8.5	Future implications and predictions for smallholder livestock production and management systems.....	176
8.6	Limitations of this research, and future research.....	178
<b>BIBLIOGRAPHY.....</b>		<b>180</b>
<b>APPENDICES.....</b>		<b>198</b>



## LIST OF TABLES

3.1	Selection criteria for the six research communities representing the three agro-ecological regions.....	45
3.2	Data and information collection matrix for key objectives of the research study.....	47
3.3	List of criteria/indicators of socio-economic stratification identified by people during the focus group discussions, 2007.....	53
4.1	Composition of agricultural GDP by region and products groups in 1995.....	62
4.2	Distribution of agricultural land area in various forms of tenure systems before 1952.....	71
4.3	Mean number of livestock per household by class, caste and ethnic groups.....	76
5.1	Change in roles of livestock in smallholder agricultural production in Nepal.....	88
5.2	Laws against cow slaughter in Nepal.....	94
5.3	Per capita consumption of meat and milk for South Asian countries in 2002.....	98
5.4	Reasons for preferences for buffaloes.....	106
5.5	Different sizes of poultry farms that exist in Nepal.....	113
6.1	Average hours spent on various economic activities in Nepal.....	125
6.2	Average hours to carry out daily livestock activities by gender between the three agro-ecological regions from the six research communities.....	128
6.3	Comparison of average hours spent on daily livestock activities by gender between the three categories of socio-economic class.....	129
6.4	Comparison of average hours spent carrying out daily livestock activities by gender between caste and ethnic households.....	132
6.5	Perception of workload the livestock activities and the introduction of techniques to minimise work load.....	134
6.6	Comparison of self evaluated score of decision making between men and women “before and after” market based livestock intervention, by caste and ethnicity.....	137

6.7	Comparison of self evaluated score of access to and control over livestock resources between men and women “before and after” market based livestock intervention by caste and ethnicity.....	141
7.1	Farmers responses about livestock feed sources "before and after" market based livestock intervention across the three agro-ecological regions.....	149
7.2	Farmer perceptions of seasonal livestock feed deficits, and mitigation approaches during the feed deficit season.....	154
7.3	Farmers perception of the types of environment problems emerging in the research districts.....	156

## LIST OF FIGURES

1.1	Analytical framework for this thesis structure.....	8
2.1	Sustainable rural livelihood framework.....	27
3.1	Distribution of households surveyed by caste and ethnic group for the six research communities.....	50
3.2	Gender distribution of those interviewed for the household survey in the six research communities of the three districts.....	51
4.1	Distribution of farm land between caste and ethnic groups.....	74
4.2	A case study of a family in Shaktikhor village of Chitwan District, who moved from poor to medium class as a result of goat farming.....	78
4.3	Comparison of income sources from on and off-farm activities between class, caste and ethnic groups.....	80
4.4	Comparison of income sources from different livelihood activities between class, caste and ethnic groups.....	81
4.5	Comparison of livelihood activities between six communities from three agro-ecological regions of Nepal.....	83
5.1	The concept of contemporary smallholder livestock production in mixed farming systems.....	87
5.2	Trends of meat and milk production in South Asia from 1994 to 2007.....	97
5.3	Meat produced from different livestock types in South Asia and the World, 2007.....	99
5.4	Livestock population trends in Nepal from 1994/95 to 2007/08.....	100
5.5	Livestock distribution between the three agro-ecological regions of Nepal in 2007/08.....	101
5.6	Meat supply trends of various livestock in Nepal from 1991/92 to 2007/08.....	101
5.7	Sources of meat supply in Nepal for 2008.....	102
5.8	Comparison of milk production between buffalo and cattle from 1991 to 2008.....	102
8.1	A framework illustrating the progress and constraints of the current rural livestock development in Nepal .....	172

## LIST OF BOXES

5.1	Preference for goats by poor and marginalised farmers.....	110
5.2	Goats for socio-cultural reasons: Lalitpur district.....	111
6.1	Activities which count as “work” (including informal economic activities).....	123
6.2	List of selected non-work activities/non-economic activities.....	124

## LIST OF MAPS

3.1	Location of Mustang, Lalitpur, and Chitwan districts representing the three agro-ecological regions of Nepal.....	42
3.2	Study sites from Mustang district.....	43
3.3	Study sites from Lalitpur district.....	44
3.4	Study sites from Chitwan district.....	44

## LIST OF PLATES

3.1	Household survey.....	57
3.2	Group discussion.....	57
4.1	Mustang district in the mountain region.....	68
4.2	Lalitpur district in the hill region.....	69
4.3	Chitwan district in the Terai region.....	69