

Rangeland Tenure Transfer

An Analysis of Policy and Legal Issues in Bhutan

Lyonpo Dr. Kinzang Dorji



དཔལ་འབྲུག་ཞིབ་འཇུག་ལྷེ་བཤ

**The Centre for Bhutan Studies & GNH
Studies**

Rangeland Tenure Transfer

An Analysis of Policy and Legal Issues in Bhutan

Copyright © The Centre for Bhutan Studies & GNH Studies

First Published: 2013

Published by:
The Centre for Bhutan Studies & GNH Studies
Post Box No. 1111
Thimphu, Bhutan
Tel: 975-2-321005, 321111
Fax: 975-2-321001
E-mail: cbs@druknet.bt
<http://www.bhutanstudies.org.bt>

Opinions expressed are those of the author's and do not necessarily
reflect the views or policies of the Centre.

ISBN 978-99936-14-71-5

Contents

Acknowledgement	v
List of Appendices	ix
Glossary of Dzongkha Terms Used in the Book	x
List of Tables	xii
List of Figures	xiii
1. Introduction	1
2. Tsamdro Ownership and Grazing Rights	5
3. Livestock Rearing in Bhutan and its Importance	26
4. Policy Analysis of <i>Tsamdro</i> Land Use for Livestock Development	35
5. Analysis of Various Legal Provisions regarding <i>Tsamdro</i> Land	40
6. Feedbacks from various Stakeholders	48
7. Current Status on the Ground	58
8. Recommendations	62
References	74
Appendix I. Chapter 10 of the Land Act of Bhutan 2007	80
Appendix II. <i>Gewog</i> -wise number of households and <i>Tsamdro Thram</i> -holders	84
Appendix III. Draft Pasture Policy, March 1985	93



ACKNOWLEDGEMENT

After almost two years of abrupt retirement from government service, it was a great privilege to work, albeit for a very short stint, for my former ministry in which I have spent 26 years out of my long career in the government. Besides, I was fortunate to have been given an area of work in which I can not only claim to have a good background and knowledge, but also I have been associated with it for a long time starting from my initial days in the Department of Animal Husbandry in the early seventies. So, it was a great honour to work once again with many of my former colleagues who overwhelmed me with their affection and support.

I have tried my best to do justice to the task that I had been assigned with. During the course of my work, I realized the significance and magnitude of the task. Therefore, given the severe time constraint, some of the conclusions I have tried to draw from (1) review of literature on the subject, (2) interview of various selected stakeholders and (3) analyses of the findings, may not necessarily be conclusive. But it can be a good starting point for further review and analysis. I must say that it was a very interesting and satisfying experience, reminiscent of the good old days I spent in the Ministry of Agriculture.

My work could not have been successfully completed without the goodwill and support of many individuals and organizations. As it will be difficult to name them individually, I would like to acknowledge all of them for sparing their valuable time, sharing information and

documents, facilitating my field trip to various Dzongkhags and extending their warm hospitality.

I am highly indebted to HE Lyonpo Dr. Pema Gyamtsho, Minister of Agriculture and Forests, Royal Government of Bhutan, for giving me this opportunity to work for my former ministry and for his guidance and unstinted support. I would like to express my sincere appreciation to Dr. Andreas Schild, Director General of ICIMOD, Kathmandu, for giving me the opportunity to work on a subject which has always been close to my heart. My sincere gratitude goes to Dr. Eklabya Sharma, Ph.D., Programme Manager of Environmental Change and Ecosystems Services of ICIMOD, for his guidance, review of my draft report and for providing useful comments and suggestions for improvement of the report.

I am extremely grateful to Dasho Tenzin Dhendup, Director General of Department of Livestock, and his colleagues, Dr. Tashi Dorji and Mr. Jigme Wangchuk, for their unfailing assistance without which I could not have accomplished my task. I owe a deep sense of gratitude to the four Dzongkhag Livestock Officers, Mr. Deo Kumar Gurung of Trongsa, Mr. Tshering Penjore of Bumthang, Dr. Tshering Dorji of Trashigang and Mr. Dorji Wangchuk of Mongar, for receiving me warmly in their respective Dzongkhags, organizing my meetings and interviews with their livestock farmers, and for the generous hospitality they extended to me and my team. I am also grateful to Mr. Karma Tshering, Chief Forest Officer, Watershed Management Division, and his colleague, Mr. Tshering Gyeltshen, Deputy Chief Research/ Livestock Officer, for their support and for allowing me to use the information they had gathered on *Tsamdro* and *Sokshing* during their interview of various stakeholders

and consultations with the people of Bumthang, Haa, Paro, Samtse and Trashigang Dzongkhags

I would like to sincerely thank the following for their generous time and support:

- Lopen Kinley Penjor, Zhung Dratshang
- Lam Zeko, Drungchen, Trongsa Rabdey
- Dasho Dawala, Dzongda, Trongsa
- Dasho Dorji Sangay, Dzongrab, Trashigang Dzongkhag
- Dasho Tshewang Tobgyel, Sakteng Dungpa
- Dasho Pema Wangdi, Wamrong Dungpa
- Dasho Chhedup, Thrimshing Drangrab
- Mr. Kezang Phunstho, Deputy Chief Land Registrar, National Land Commission
- Mr. Nidup Penjor, Policy and Planning Division, Ministry of Agriculture and Forests
- Mr. Sonam Penjor, Policy and Planning Division, Ministry of Agriculture and Forests
- Mr. Tenzin Duba, Tangsibji Gup
- Mr. Phurpa Wangdi, Sakteng Gup
- Mr. Tashi Dorji, Chaskhar Gup
- Mr. Ap Dorji, Farmer from Saleng

My family deserves my most sincere appreciation and deepest gratitude for not only helping me with the various tasks involved, but also for their encouragement and support. My son Ugyen was my full-time assistant and driver. Ugyen and my other son, Yarphel, helped me with compilation of facts and figures, and typing the tables and annexes. My son-in-law, Karma, was responsible for preparing the graphics and formatting the report. My two

daughters, Nagtsho and Denka, helped me with editing and proof reading of the report. My wife, Aum Pema, was a constant source of inspiration and encouragement as she was by my side all the time providing me with moral and whatever other necessary support required whether while working at my home office, or in the field.

I would like to extend my appreciation to the livestock farmers of Trongsa, Bumthang, Trashigang and Mongar Dzongkhags whom I met during my field trip. They not only shared their historical knowledge, practical wisdom and broader perspectives on *Tsamdro*, but also provided me with useful information and feedback on the implications of the new Land Act regarding *Tsamdro* and *Sokshing*.

I would also like to take this opportunity to thank Dasho Karma Ura, President of the Centre for Bhutan Studies for kindly accepting to publish this monograph as part of the Centre's long list of authoritative works on Bhutanese studies. It is also my pleasure to acknowledge Mr Dendup Chophel of CBS who kindly facilitated the publication of this work.

Lyonpo Dr. Kinzang Dorji
June 17, 2013

LIST OF APPENDICES

- Appendix I: The Land Act of Bhutan 2007 – Provisions pertaining to lease of *Tsamdro*
- Appendix II: *Gewog*-wise total number of households and *Tsamdro Thram* holders
- Appendix III: Draft Pasture Policy 1985

GLOSSARY OF DZONGKHA TERMS USED IN THE BOOK

<i>Tsamdro</i>	Rangeland/Native grassland
<i>Tseri</i>	Shifting or slash and burn cultivation
<i>Kasho</i>	Royal edict
<i>Penlop</i>	Governor
<i>Thram Matham Chenm</i>	Land record with Red Seal
<i>Thrimzhung Chhenmo</i>	The supreme law of the land
<i>Thram</i>	Land records
<i>Dzongkhag</i>	Province/District
<i>Drogpas</i>	Literally it means those who live off the grassland, meaning those high altitude inhabitants who are fully dependent on livestock
<i>Thromde</i>	Urban area
<i>Gewog</i>	Block or a cluster of villages
<i>Kugyer</i>	Private property belonging to members of the Royal Family
<i>Lhengyal Zhungtshog</i>	Cabinet (Council of Ministers)
<i>Tsadroks</i>	Rangeland/Native grassland
<i>Gerab</i>	Central Monk Body and District Monastic Bodies which fall under the purview of Dratshang Lhentshog
<i>Sokshing</i>	Woodlot for collection of leaf litter to be used as bedding for livestock and as a source of organic manure
<i>Balu-Sulu</i>	Shrubs of Rhododendron family growing in the alpine/subalpine areas
<i>Zhung Dratshang</i>	Central Monastic Body

<i>Rabdey</i>	District Monastic Body
<i>Kuchhoe-Bumdoe</i>	Religious prayers
<i>Tendoe</i>	A religious ritual
<i>Torjab</i>	A religious ritual
<i>Yojed</i>	Donation or offering made to religious institutions
<i>Northue</i>	A system of herding of livestock by two equal partners during summer and winter respectively when each partner can keep certain livestock products to himself
<i>Tsadam</i>	Seasonal ban on grazing a particular rangeland
<i>Tsarin-Chhurin</i>	Grazing fee
<i>Langdro</i>	Exclusive rangeland for grazing of draught animals
<i>Lamdro</i>	An area of rangeland en route where the migratory herds would spend overnight during their migration

LIST OF TABLES

Table 1. Dzongkhag-wise summary of Registered Tsamdro ownership (Area in Acres)

Table 2. Dzongkhag-wise forest coverage in percentage

Table 3. Dzongkhag-wise Tsamdro coverage in percentage

Table 4. Livestock population in each Dzongkhag

Table 5. Dzongkhag-wise Livestock Population in Livestock Unit Equivalents

Table 6. Dzongkhag-wise availability of registered Tsamdro per livestock unit

Table 7. Gewogs with Yak Population and their registered Tsamdro areas

Table 8. Pasture Development Inputs Supply during 8th, 9th and 10th Plan

Table 9. Dzongkhag-wise Improved Pasture Area based on Inputs Supply Targets

LIST OF FIGURES

- Figure 1. Registered *Tsamdro* area in each Dzongkhag
- Figure 2. Dzongkhag area and forest coverage
- Figure 3. Total forest coverage (%) in each Dzongkhag
- Figure 4. Dzongkhag area and *Tsamdro* area
- Figure 5. *Tsamdro* area in percentage
- Figure 6. Cattle, buffalo and Yak population in each Dzongkhag
- Figure 7. Horse, mule and donkey population in each Dzongkhag
- Figure 8. Goat and sheep population in each Dzongkhag
- Figure 9. *Tsamdro* area versus Livestock population in each Dzongkhag (in Livestock Unit Equivalents)
- Figure 10. *Tsamdro* area versus Yak population
- Figure 11. Improved pasture area in each Dzongkhags for the year 2007, 2008 and 2009



1 Introduction

Livestock rearing in Bhutan has always been dependent on grazing in the rangeland (*Tsamdro*), which is an age-old tradition. Because of the small size of land holding, on an average each household owns five acres of agricultural land, farmers have always relied on grazing in the rangeland and forests for rearing their livestock such as cattle, Yaks, horses, sheep and goats. So, the traditional livestock species evolved to adapt to rugged terrains and a wide range of areas available for grazing. This has resulted in the adoption of tending and management practices that involve minimum inputs, particularly letting the livestock stray into the forest without any restraint.

The word *Tsamdro* is expansively used for rangelands and traditional grazing lands including alpine natural grasslands and forested areas which stretch across the kingdom from alpine to sub-tropical zones. So, in this book, the word *Tsamdro* has been used instead of rangeland so as

to make it consistent with the provisions of the Land Act of Bhutan 2007. The alpine and sub-alpine grazing areas often referred to as high altitude rangeland are found between 3,000 to 5,000 meters above mean sea level whereas the temperate rangelands fall within an altitude range of 1,500 to 3,000 meters and sub-tropical rangelands below 1,500 meters altitudes. In the strict sense of exclusive use, only the alpine and sub-alpine rangelands are actual grazing areas, whereas the temperate and sub-tropical rangelands, more or less, overlap with forest land and is used for other purposes as well.

Rangelands are also defined as wild open spaces and may include grasslands, shrub lands, woodlands, savannahs, deserts, etc. that characterize half the land on earth. Rangelands around the world are also known as prairies, plains, grasslands, shrub lands, savannahs, steppes, deserts, semi-deserts, arid lands, swards and tundra. Rangelands produce a wide variety of goods and services desired by society, including livestock forage, wildlife habitat, water, mineral resources, wood products, wild land recreation, open space and natural beauty.

Tsamdro, which includes permanent grassland and forests, is the main resource for traditional livestock production in Bhutan. It has been estimated that almost 50 per cent of the fodder resources towards meeting the national fodder requirement comes from natural grassland and forest grazing (Roder, 2000). *Tseri* land, which used to contribute up to 15 per cent of the national fodder requirement (Roder, 2000), is now more or less non-existent with the ban imposed on *Tseri* cultivation by the National Assembly of Bhutan during its 72nd session held in 1993 when it was decided to phase out *Tseri* cultivation by end of

the 7th Plan (1997) due to its negative impact on the overall natural environment as well as its low productivity.

The individual ownership of rangelands in Bhutan was initially established through *Kashos* issued by regional governors such as the Trongsa Penlop, and later reflected in the *Thram Martham Chenmo* (Ura, 2002). The *Thrimzhung Chenmo*, enacted by the National Assembly in 1953, accorded full ownership of *Tsamdro*s to individuals and institutions at par with agricultural land ownership. However, the Land Act of 1979 diluted the ownership of grazing lands by exempting the *Thram* holders from paying any annual tax. By the same token, the Government assumed the authority to take over any grazing land if required to be allotted to landless people for cultivation or if required by the Government for other purposes. In addition, the owners had to obtain written permits from the Dzongkhag authorities to graze one's livestock on one's own grazing land by paying an annual grazing permit fee. The Act also created room for other livestock owners to graze an area of private grazing land if the title holder did not own any livestock. Only the Highlanders (*Drogpas*) were allowed to lease out their grazing land to other livestock owners who did not own or did not have adequate *Tsamdro* of their own. Rangeland may not be bought or sold, since the owner has only usufruct right. According to Dasho Karma Ura (The Herdsmen's Dilemma, published in the Journal of Bhutan Studies, 2002), "With the enactment of the Land Act, 1979, which drew heavily from the 1957 *Thrimzhung*, rangelands became the asset of the nation, i.e. state property. Herdsmen were given right to graze only." According to the Revised Land Act of 2007, "All *Tsamdro* rights maintained in the *Thram* prior to the enactment of this Act shall be deleted from the *Thram*. Upon deletion, the *Tsamdro* land shall be reverted and maintained

as Government land in the Thromde or Government Reserved Forest land in the rural areas. The reverted *Tsamdro* in rural areas shall be converted to leasehold and those in the Thromde shall be maintained as Government land.” It further states that, “The Government shall pay cash compensation to the owners of *Tsamdro* under Land Act 1979 for surrendering their *Tsamdro* rights based on the area registered in the *Thram*.” Chapter 10 of the Land Act of Bhutan 2007, which covers provisions regarding *Tsamdro*, is reproduced in Appendix I.

The present study is an attempt to analyze the situation with regard to ownership pattern of *Tsamdro* prior to the Land Act of Bhutan 2007 vis-à-vis their livestock ownership at present as many are no longer engaged in grazing for their livelihoods; assess the need of individuals, communities and social groups to whom grazing rights need to be leased; and explore policy and legal options available to implement the provisions of the Land Act 2007.

2 Ownership of *Tsamdro* or Grazing Rights

There are only around 5,200 *Thram* holders of *Tsamdro*, out of a total of 126,000 households in the country (Population and Housing Census, 2005), who own 1,236,017.82 acres of *Tsamdro* in the country. The 5,200 *Thram* holders include individuals, communities and social groups such as Dratshang, Rabdey, and other monastic and government institutions according to the records maintained by the National Land Commission. The *Gewog*-wise number of households and *Tsamdro Thram* holders is given in Appendix II.

The National Land Commission and the Ministry of Agriculture and Forests have tried to segregate the above *Thram* holders/*Tsamdro* owners into six different categories as shown in Table 1. The area of registered *Tsamdro* in each Dzongkhag is shown in Figure 1.

Table 1. Dzongkhag-wise summary of registered Tsamdro ownership (Area in Acres)

Dzongkhag	Kugyer	Gerab	Religious	Private	Community	Govt	Total
Bumthang	5,463.96	7,761.91	1,101.25	37,067.06	15,308.81	4,130.82	70,833.81
Chhukha	0	0	0	60,098.00	12,281.97	0	72,379.97
Dagana	0	539	720	8,624.00	13,079.00	0	22,962.00
Gasa	0	5,858.00	2,361.00	23,490.00	1,590.00	0	33,299.00
Haa	3,265.00	0	0	85,718.94	66,012.12	0	154,996.06
Lhuentse		707.81	344.36	14,194.03	10,470.39		25,716.59
Mongar		66	205	10,740.05	9,994.19		21,005.24
Paro	3,430.44	390	5,403.44	55,497.17	36,840.88	0	101,561.93
Pemagatshel				2,355.41	6,489.16		8,844.57
Punakha	19,071.00	2,133.00	0	15,506.00	12,994.00	1,533.00	51,237.00
S/Jongkhar				1,606.20	23,118.61		24,724.81
Samtse	0	0	0	46,434.43	2,153.00	0	48,587.43
Sarpang	0	0	0	365	0	0	365
Thimphu	12,168.70	41,268.47	62.7	122,133.77	41,539.48	134	217,307.12
Trashigang		815.21	105.33	86,524.53	18,277.84	6.46	105,729.37
Trashiyangtse			186	1,795.99	2,028.36		4,010.35
Trongsa	5,081.57	0	5,724.49	33,360.11	11,439.73	6,376.99	61,982.89
Tsirang	0	0	0	100	0	0	100
Wangdue	6,031.39	20,092.63	5,429.16	41,358.50	53,379.10	13,431.90	139,722.68
Zhengkang	3,554.00	0	103	52,797.00	14,198.00	0	70,652.00
Whole country	58,066.06	79,632.03	21,745.73	699,766.19	351,194.64	25,613.17	1,236,017.82
Overall %	4.70	6.44	1.76	56.61	28.41	2.07	100.00

Source: Based on data from National Land Commission.

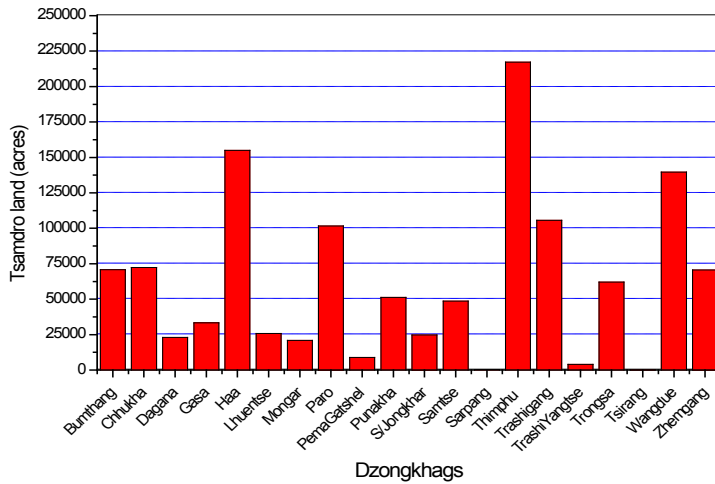


Figure 1. Registered *Tsamdro* area in each Dzongkhag

The total area of registered *Tsamdro* in the country is 1,236,017.82 acres according to the *Thram* records, which works out to around 5,002 square kilometers or 13 per cent of the country’s geographical area. This is in stark contrast to the land use data of Ministry of Agriculture according to which only 3.9 per cent of the country’s area is under natural pastures. The Dzongkhag-wise area and percentage of forest and *Tsamdro* coverage are as shown in Table 2 and Table 3, respectively. Figure 2 shows the Dzongkhag area and forest cover in each Dzongkhag. The total forest coverage in terms of percentage in each Dzongkhag is shown in Figure 3. This figure shows that all Dzongkhags, except for Gasa and Thimphu, have greater than 50% forest cover. The *Tsamdro* area is compared against the Dzongkhag area for each of the Dzongkhags in Figure 4. Figure 5 shows the percentage of *Tsamdro* area in each Dzongkhag.

Table 2. Dzongkhag-wise forest coverage in percentage

Sl. No.	Dzongkhag	Dzongkhag Area (sq. km)	Forest Cover Area (sq. km)	Forest Cover (% of Dzongkhag area)
1	Bumthang	2,708.46	1,602.20	59.34
2	Chhukha	1,882.38	1,545.24	82.39
3	Dagana	1,724.32	1,434.34	83.25
4	Gasa	3,117.74	1,038.67	33.32
5	Ha	1,897.18	1,422.22	74.82
6	Lhuentse	2,847.46	1,949.37	68.75
7	Mongar	1,947.28	1,702.93	87.48
8	Paro	1,293.22	787.32	60.99
9	Pemagatshel	1,030.04	918.47	89.72
10	Punakha	1,108.26	957.58	86.30
11	Samdrup Jongkhar	1,878.79	1586.77	85.15
12	Samtse	1,304.05	983.32	75.92
13	Sarpang	1,660.28	1,369.23	83.02
14	Thimphu	1,785.58	815.39	45.58
15	Trashiyangtse	1,427.77	1,149.11	80.88
16	Trashigang	2,184.64	1,846.70	84.72
17	Trongsa	1,807.29	1,520.84	84.13
18	Tsirang	638.80	496.08	77.58
19	Wangdue	4,029.03	2,833.59	70.28
20	Zhemgang	2,421.74	2,172.52	89.88
TOTAL		38,694.31	28,131.89	72.70

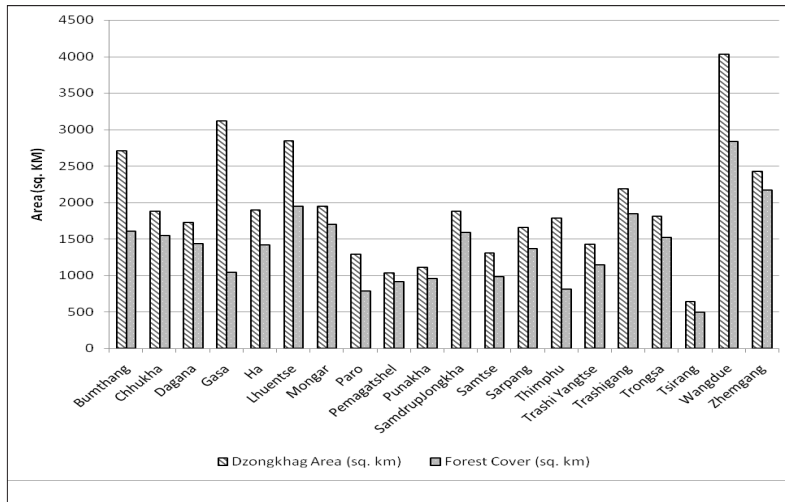


Figure 2. Dzongkhag area and forest coverage

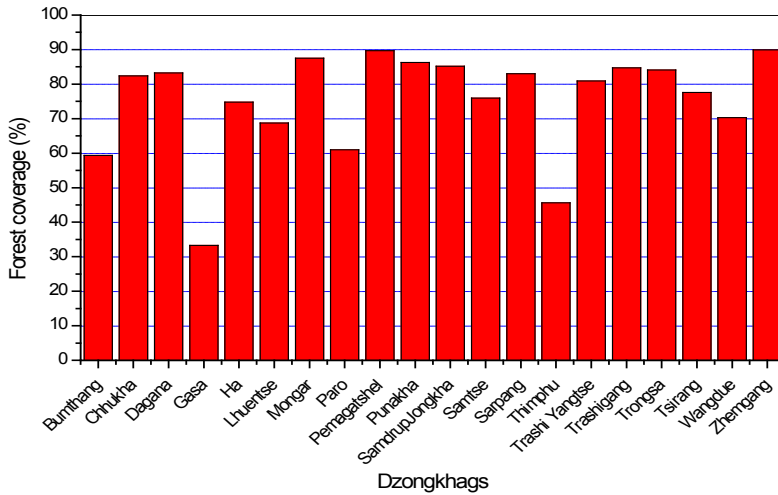


Figure 3. Total forest coverage (%) in each Dzongkhag

Table 3. Dzongkhag-wise Tsamdro coverage in percentage

Sl. No.	Dzongkhag	Dzongkhag Area (sq. km)	Tsamdro Area (sq. km)	Tsamdro Area (% of Dz. area)
1	Bumthang	2,708.46	286.66	10.58
2	Chhukha	1,882.38	292.91	15.56
3	Dagana	1,724.32	92.93	5.39
4	Gasa	3,117.74	134.76	4.32
5	Ha	1,897.18	627.25	33.06
6	Lhuentse	2,847.46	104.07	3.65
7	Mongar	1,947.28	85.00	4.37
8	Paro	1,293.22	411.01	31.78
9	Pemagatshel	1,030.04	35.79	3.47
10	Punakha	1,108.26	207.35	18.71
11	Samdrup Jongkhar	1,878.79	100.06	5.33
12	Samtse	1,304.05	196.63	15.08
13	Sarpang	1,660.28	1.48	0.09
14	Thimphu	1,785.58	879.41	49.25
15	Trashi yangtse	1,427.77	16.23	1.14
16	Trashigang	2,184.64	427.87	19.59
17	Trongsa	1,807.29	250.84	13.88
18	Tsirang	638.80	0.002	0.00
19	Wangdue	4,029.03	565.45	14.03
20	Zhemgang	2,421.74	285.92	11.81
	TOTAL	38,694.31	4,737.96	12.93

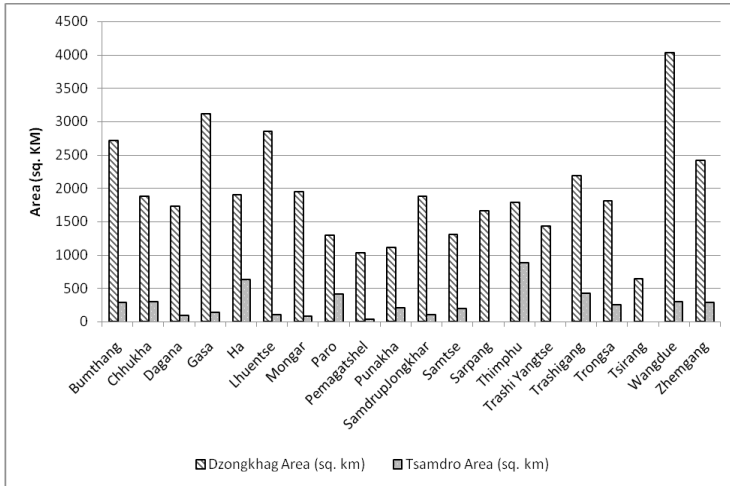


Figure 4. Dzongkhag area and *Tsamdro* area

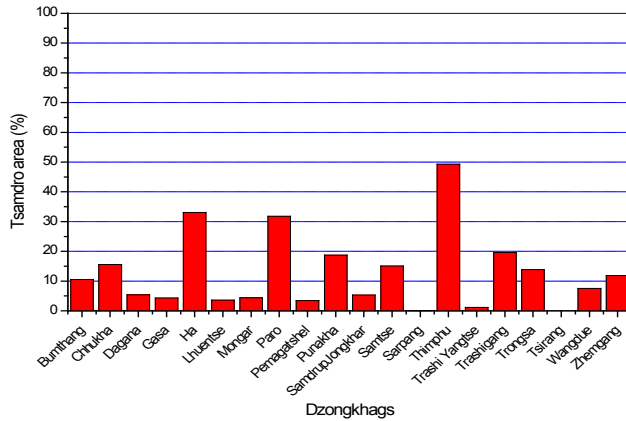


Figure 5. *Tsamdro* area in percentage

It can be seen from the above tables that the distribution of registered *Tsamdro* between Dzongkhags is highly skewed, more so if one compares it with the livestock population of the respective Dzongkhags, as shown in Table 4. Figure 6, 7 and 8 show livestock population in each Dzongkhag.

Table 4. Livestock population in each Dzongkhag

Sl. No.	Dzongkhag	Cattle	Buffalo	Yak	Horse	Mules	Donkey	Sheep	Goat
1	Bumthang	10884	0	3984	1368	155	9	794	2
2	Chukha	38004	29	0	480	99	5	987	9800
3	Dagana	16430	50	0	449	14	1	496	4340
4	Gasa	947	0	9511	509	605	2	56	0
5	Ha	8287	0	3583	686	539	2	0	158
6	Lhuntse	12860	0	454	1649	111	4	84	29
7	Mongar	27341	0	0	2153	528	18	29	202
8	Paro	15740	0	4314	1054	232	79	5	170
9	Pemagatshel	8603	0	0	803	417	5	0	40
10	Punakha	11361	0	0	700	38	0	1	36
11	Samdrup Jongkhar	18184	0	0	1243	353	13	84	1031
12	Samtse	35734	479	0	227	72	0	3900	13798
13	Sarpang	20564	204	0	282	4	0	714	3269

13 • Ownership of Tsamdro or Grazing Rights

Sl. No.	Dzongkhag	Cattle	Buffalo	Yak	Horse	Mules	Donkey	Sheep	Goat
14	Thimphu	2969	0	11073	937	221	42	18	30
15	Trashigang	30662	0	11093	6067	0	0	2049	0
16	Trashiyangtse	11108	0	622	1308	270	6	34	89
17	Trongsa	11196	0	979	436	56	3	756	0
18	Tsirang	12482	261	0	238	0	0	693	5644
19	Wangdue	20022	0	2787	918	58	4	2583	379
20	Zhemgang	12250	0	0	1330	453	8	0	82
	Total	325628	1023	48400	22837	4225	201	13283	39099

Source: DoL/MoAF Livestock Statistics 2008

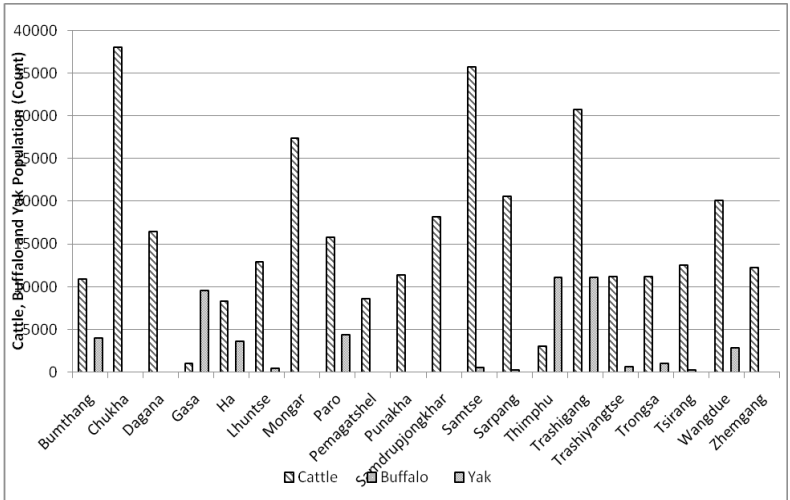


Figure 6. Cattle, buffalo and Yak population in each Dzongkhag

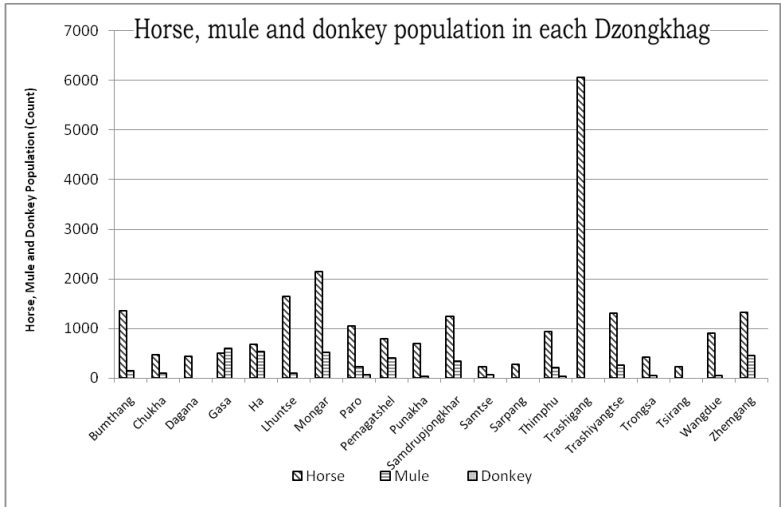


Figure 7. Horse, mule and donkey population in each Dzongkhag

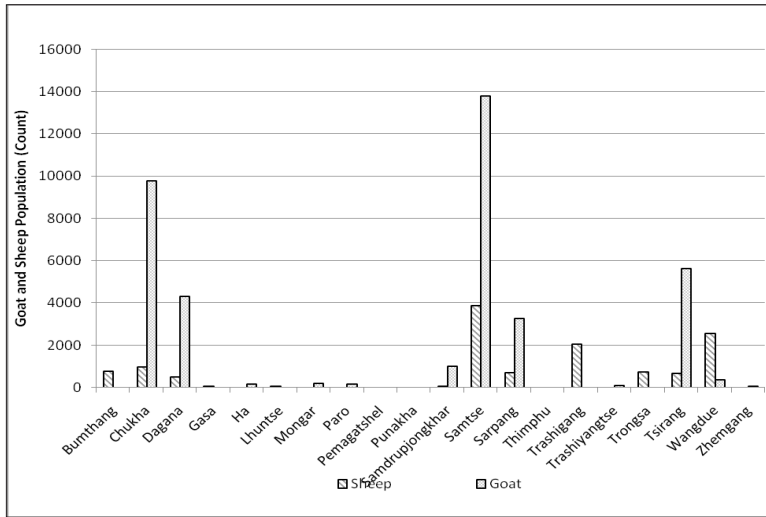


Figure 8. Goat and sheep population in each Dzongkhag

The livestock population converted to Livestock Unit Equivalents for easier comparison between *Tsamdro* acreage and grazing livestock is shown in Table 5 and Figure 9.

Table 5. Dzongkhag-wise Livestock Population in Livestock Unit Equivalents

Sl. No.	Dzongkhag	Livestock Population
1	Bumthang	15,486
2	Chhukha	34,018
3	Dagana	15,559

16 • *Rangeland Tenure Transfer*

Sl. No.	Dzongkhag	Livestock Population
4	Gasa	9,168
5	Haa	11,064
6	Lhuentse	13,604
7	Mongar	26,304
8	Paro	18,676
9	Pemagatshel	8,460
10	Punakha	10,857
11	Samdrup Jongkhar	17,651
12	Samtse	35,505
13	Sarpang	19,307
14	Thimphu	13,150
15	Trashigang	45,533
16	Trashiyangtse	11,483
17	Trongsa	11,535
18	Tsirang	12,272
19	Wangduephodrang	23,026
20	Zhemgang	11,726
	TOTAL	364,384

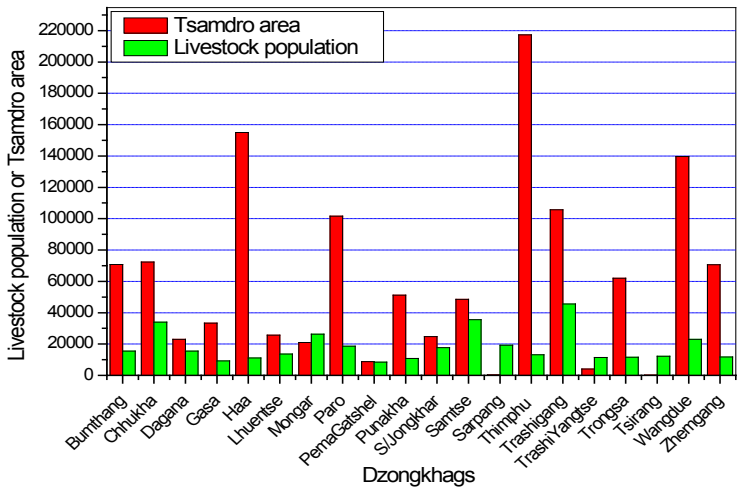


Figure 9. Tsamdro area versus Livestock population in each Dzongkhag (in Livestock Unit Equivalents)

From the above comparison, it can be seen that the current availability of registered *Tsamdro* is very low at a national average of 3.96 acres per livestock unit as against the estimated minimum requirement of 13 acres per livestock unit as mentioned in the Draft Pasture Policy of 1985. The requirement varies substantially between different agro-climatic regions as under:

1. Alpine region - 25 acres per livestock unit
2. Temperate region - 10 acres per livestock unit
3. Sub-tropical region - 5 acres per livestock unit

The Dzongkhag-wise availability of registered *Tsamdro* per livestock unit is shown in Table 6.

Table 6. Dzongkhag-wise availability of registered *Tsamdro* per livestock unit

No.	Dzongkhag	Registered <i>Tsamdro</i> (acres)
1	Bumthang	4.570
2	Chhukha	2.130
3	Dagana	1.450
4	Gasa	3.630
5	Haa	14.000
6	Lhuentse	1.900
7	Mongar	0.800
8	Paro	5.440
9	Pemagatshel	1.050
10	Punakha	4.720
11	Samdrup Jongkhar	1.400
12	Samtse	1.370
13	Sarpang	0.020
14	Thimphu	16.530
15	Trashigang	2.320
16	Trashiyangtse	0.350
17	Trongsa	5.370
18	Tsirang	0.008
19	Wangduephodrang	6.070
20	Zhemgang	6.030

Further, the people of Bumthang, Haa and Paro also own substantial areas of registered *Tsamdro* in neighboring Dzongkhags such as Lhuentse, Mongar, Trongsa, Zhemgang, Chhukha and Samtse, which are registered in their names but in the *Thrams* of the respective Dzongkhags of its location.

Tsirang Dzongkhag has the smallest area of *Tsamdro* registered in the *Thram* of just 0.50 acre under Semjong *Gewog* although it had 12,482 cattle, 261 buffaloes, 238 horses, 693 sheep and 5,644 goats in 2008. The Dzongkhag with the second smallest area of *Tsamdro* is Sarpang with an area of 365 acres registered under Jigmecholing (Surey) *Gewog* only although it had 20,564 cattle, 204 buffaloes, 286 horses, 714 sheep and 3,269 goats.

Conversely, Thimphu Dzongkhag has the largest area of 217,307.12 acres of registered *Tsamdro*, out of which 68,538.38 is registered under Dagala *Gewog*, 50,499.59 under Lingzhi *Gewog*, 17,405.34 under Soe *Gewog*, 16,467.33 under Toepisa *Gewog*, 15,230.03 under Naro *Gewog* and rest under the other five *Gewogs*. It has 2,969 cattle, 11,073 Yaks, 1,158 horses, 42 donkeys, 18 sheep and 30 goats. Haa Dzongkhag has the second largest area with 154,996.06 acres of which 54,268.54 acres are under Bji *Gewog*, 46,021.46 acres under Sama *Gewog*, 25,847.59 acres under Katsho *Gewog* and the rest in the other three *Gewogs*. It has 8,287 cattle, 3,583 Yaks, 1,227 horses and 158 goats. Wangduephodrang Dzongkhag has the third largest area of 139,722.68 acres of which 36,294.79 acres are under Sephu *Gewog* followed by 18,012.83 acres under Kazhi, 12,744.79 under Gasetsho Wom, 11574.80 under Phobji and the rest under other *Gewogs*. It has 20,022 cattle, 2,787 Yaks, 980 horses, 2,583 sheep and 379 goats. Trashigang has the

fourth largest area of 105,729.37 acres of which 42,799.06 acres are under Sakteng *Gewog*, 40,780.50 under Merak *Gewog* and the rest in the other 15 *Gewogs*. It has 30,662 cattle, 11,093 Yaks, 6,067 horses and 2,049 sheep. Paro has the fifth largest area with 101,561.93 acres, of which 31,528.09 acres under Lamgong *Gewog*, 26,990.10 under Tsento *Gewog* and the rest under the other eight *Gewogs*. It has a livestock population of 15,740 cattle, 4,314 Yaks, 1,365 horses, five sheep and 170 goats. Among the smaller Dzongkhags, Bumthang has the seventh largest area with 70,833.81 of which 28,633.40 is under Chhoekhor *Gewog*, 16,108.45 under Chhumey *Gewog* 14,988.35 under Tang *Gewog* and 11,103.61 under Ura *Gewog*; with a livestock population of 10,884 cattle, 3,984 Yaks, 1,532 horses and 794 sheep. Gasa has 33,299.33 acres, of which 17,896 is under Lunana *Gewog*, 14,866 acres under Laya *Gewog* and the rest in the two other *Gewogs*. It has 847 cattle, 9,511 Yaks, 1,116 horses and 56 Sheep.

Interestingly, the largest areas of registered *Tsamdro* are obviously under those *Gewogs* where Yak rearing is practiced as shown in Table 7 and Figure 10.

Table 7. *Gewogs* with Yak Population and their registered *Tsamdro* areas

Sl. No.	<i>Gewog</i>	Yaks	<i>Tsamdro</i> (acres)
1	Chhoekhor	3,131	28,633.40
2	Chhumey	595	16,108.45
3	Tang	50	14,988.40
4	Ura	208	11,103.61
5	Laya	4,524	14,866.00
6	Lunana	4,987	17,896.00
7	Bji	1,907	54,268.54

Sl. No.	Gewog	Yaks	Tsamdro (acres)
8	Katsho	1,125	25,847.59
9	Uesu	55	17,005.47
10	Doteng	488	5,143.56
11	Lamgong	1,944	31,528.09
12	Lungnyi	61	3,707.02
13	Tsento	1,791	26,990.10
14	Wangchang	30	4,925.42
15	Dagala	3,325	68,538.38
16	Lingzhi	3,379	50,499.59
17	Mewang	92	14,434.15
18	Naro	2,591	15,230.03
19	Soe	1,686	17,405.34
20	Merak	5,106	40,780.50
21	Sakteng	5,907	42,799.06
22	Shongphu	79	2,873.32
23	Drakteng	152	5,121.62
24	Korphu	129	27,319.94
25	Langthil	346	18,937.61
26	Nubi	251	4,512.26
27	Tangsibji	101	6,091.46
28	Bomdeling	622	1,038.84
29	Dangchhu	9	8,005.15
30	Gangte	173	6,480.55
31	Kazhi	841	18,012.83
32	Nyisho	3	2,764.35
33	Phobji	117	11,574.80
34	Sephu	1,644	36,294.79
	Total	48,400	671,724.22

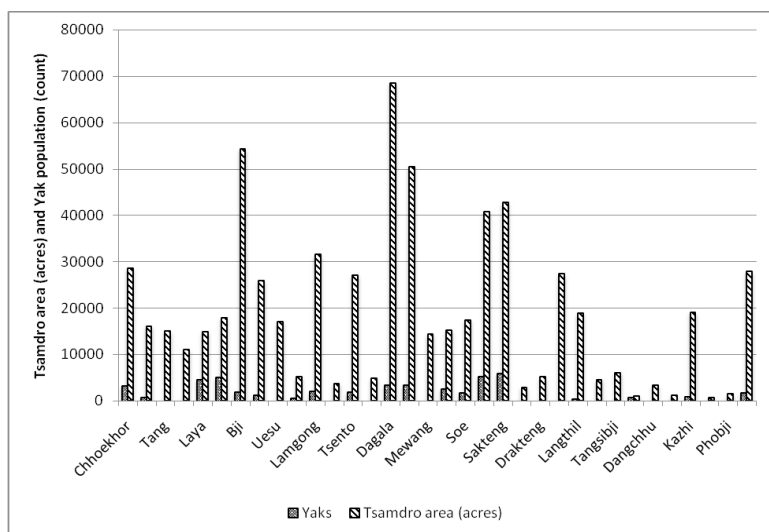


Figure 10. Tsamdro area versus Yak population

It can be seen from the above that more than half of the total acreage of registered *Tsamdro* in the country is under the above 34 *Gewogs*. According to the statistics maintained by the Department of Livestock, only 2.2% of our population is involved in Yak rearing.

The skewed distribution or rather skewed registration of *Tsamdro* could be attributed to the following:

1. *Tsamdros* have never been surveyed or measured to obtain accurate acreage nor was it possible to do so due to various obvious reasons.
2. What has been recorded in the *Thram* is based on the visual or ocular estimation by the village headmen who were compelled to put a figure with no attention paid to inaccuracy of measurements and its consequences in the future (Ura, 2000). This was probably done during

the time when a new system to levy grazing land tax was being introduced in the country. Since then, no effort seems to have been made to get accurate areas of *Tsamdro*.

3. It can also be hypothesized that the acreage was deliberately under-reported so as to avoid paying higher tax.
4. The 1979 Land Act required that, "Grass and water in the neighborhood of a village where horses and cattle graze, and Government land within the radius of one mile from the village which has not been registered in anybody's name will be treated as community grazing ground for grazing and watering of horses and cattle of that village, without payment of both cost of land and tax. Such land if not registered earlier should be registered in the *Thram* of the community of that village." However, the following 58 *Gewogs* do not have any registered *Tsamdro* in the name of their communities:
 - Balujhora, Darla and Phuentsholing under Chhukha Dzongkhag;
 - Tshangkha under Dagana;
 - Goen Khatoe and Laya under Gasa;
 - Wangchang and Lungnyi of Paro;
 - Goenshari of Punakha;
 - Four *Gewogs* of Samdrup Jongkhar;
 - 12 *Gewogs*, except Bangra, Dorokha and Laherini of Samtse;
 - 11 *Gewogs*, except Jigmechholing, of Sarpang;
 - Khamdang under Trashiyangtse;
 - All the 12 *Gewogs* of Tsirang;
 - Adhang, Bjena, Dangchu, Gangte, Gase Tshogom, Gase Tshowom, Kazhi and Phobji under Wangduephodrang; and
 - Goshing and Ngala under Zhemgang.

In addition, Lokchina, Kurtoe, Thangrong, Chhimung, Chongshing, Yurung, Ramjar and Daga *Gewogs* have negligible areas (less than 100 acres) of community registered *Tsamdro*. On the other hand, all the above *Gewogs* have fairly large number of livestock which graze mostly in the neighborhood areas whether forested or not.

5. Grazing in the vicinity of the village, whether forested or not, was an age-old tradition well before the laws were enacted. So, people have de-facto ownership rights over their traditional grazing grounds whether it was registered in their *Thram* or not. It seems strict enforcement of the law was also not done by the authorities concerned.
6. With *Tsamdro* transaction frozen by the 1979 Land Act, opportunity for correction of the acreage was also lost as no sale or purchase of *Tsamdro* could take place after 1979.
7. So, what is registered in the *Thram* is not a correct reflection of the actual situation on the ground. It is felt that the actual area traditionally grazed by livestock is much more than what is reflected in the names of individuals, communities or institutions, as well as the large tracts which have been grazed for centuries which are not reflected in the *Thram* records at all.
8. Since formal survey of *Tsamdros* has never been carried out, nor boundary demarcations done officially, the so-called boundary limits are known only to the individual owners.

Almost all the 205 *Gewogs* have fairly large population of livestock irrespective of whether there is registered *Tsamdro* under a *Gewog* or not. It is also a fact that in all the *Gewogs*, our farmers raise their ruminant livestock and horse population through grazing on the *Tsamdro* or forest land whether it is in the alpine, sub-alpine, temperate or

sub-tropical zones. In addition, along the southern border, in some places Indian cattle used to graze on our side and the people of Pemagatshel would take their cattle down to Assam during winter. This practice has now been stopped since the ULFA/Bodo problem due to security reasons. Unfortunately, very little research seems to have been done on sub-tropical livestock rearing practices as well as for improvement and development of feed and fodder resources.

It is a known fact that most of the development infrastructure such as roads, power transmission lines, schools, hospitals, extension centers and any other facility are built on Government Reserved Forest and by extension on registered *Tsamdro* or traditional grazing areas. But this has never been reflected in the *Tsamdro* records due to the presumption that all such infrastructure are being built on Government land. If a proper survey of such *Tsamdro* land lost to development infrastructure is done, it may add up to quite a large area which has become unavailable for livestock grazing or for leasing out to livestock farmers in keeping with the provisions of the Land Act 2007.

3

Livestock Rearing in Bhutan and its Importance

Livestock rearing has been an integral part of the farming systems in the country for ages, and livestock, particularly cattle and Yaks, were an important source of wealth, prosperity and status along with grazing land, arable land and labor (Ura, 2002). It must be recognized that livestock is very much a part of rural livelihood in Bhutan, and it forms a part of the fabric that links other elements of socio-economic structure of individual households and communities (Wangchuk, 2002). In spite of the importance of this sector, planned development of the sector was initiated only in the early sixties when the first five-year development plan was launched in the country. It was accorded high priority in the initial plan programs due to its importance to the country's economy and the majority of the population being dependent on livestock for food and nutrition, as well as a source of farm income. At one time, this sector used to receive the second largest budget allocation from the government after agriculture.

The Department of Animal Husbandry was established in 1961 during the first Five-year Plan with the following objectives:

- (a) Prevention of livestock diseases and epidemics which used to take a heavy toll in the country;
- (b) Introduction of better yielding breeds and better draught animals into the country for improving the productivity and draught power of the local animals through cross breeding; and
- (c) Education of farmers in modern animal husbandry practices so as to make livestock keeping more remunerative.

The focus of the development programs in the initial Plan periods seems to have been on infrastructure development for providing animal health, and introduction and multiplication of improved breeds. As a result, the local cattle population went up considerably as infectious and contagious diseases which used to take a heavy toll due to frequent outbreaks could now be prevented through preventive measures and treatment. For example, the country's cattle population which was around 137,118 in 1973 went up to 340,763 in 1990.

The adaptive trials carried out with a large number of various exotic breeds of cattle had resulted in the identification of a few breeds which were suitable for our agro-climatic and farming conditions. But a feed and fodder program to address the feeding and nutritional requirement of livestock, particularly for improved breeds, seems to have been missing in the initial plans. This was incorporated later particularly through donor assisted projects such as the ones in Samtse and Bumthang. So, from the Fifth Plan onwards, a more systematic and organized livestock

development program with focus on three broad areas, namely (1) breed improvement for enhancing productivity and production, (2) feed and fodder development program for enabling the improved breeds to fully express their better and higher potential for production, and (3) animal health program to prevent and protect livestock from pests and diseases which would otherwise affect the potential for enhanced productivity and production. Accordingly, free distribution of fodder seeds, fertilizers and inoculants were made from the Fifth Plan onwards to encourage livestock farmers to grow improved pasture species which was mostly in the traditional grazing areas due to their inability to spare agricultural land for feed and fodder production.

Table 8 shows pasture development targets for 8th, 9th and 10th Plan based on the inputs supplied by the Department of Livestock, and accordingly area of improved pasture supposed to have been developed by the farmers during the last three years. Dzongkhag-wise improved pasture area based on inputs supply targets is shown in Table 9 and Figure 11.

Table 8. Pasture Development Inputs Supply during 8th, 9th and 10th Plan

Pasture Development Inputs Plan Wise												
8th Five Year Plan (1997-2002)												
Plan Year	8th plan demand and Supplied			Total Pasture Acreage			Winter Fodder	Total seed	Value Nu. in M			
	Temperate	Sub-tropical	Winter Fodder	Temperate	Sub-tropical	Winter Fodder						
1997-1998	11,715.00	3,555.00		15,270.00	1,018.70	1,015.71		16,285.71	0.90			
1998-1999	8,176.00	2,382.00		10,558.00	710.96	680.57		11,238.57	0.85			
1999-2000	10,082.00	2,995.00		13,077.00	876.70	855.71		13,932.71	1.05			
2000-2001	1,122.00	2,375.00	2,525.00	6,022.00	97.57	678.57	72.14	6,772.71	0.35			
2001-2002	7,042.00	1,193.00	9,502.00	17,737.00	612.35	340.86	271.49	18,349.34	1.12			
Grand Total	38,137.00	12,500.00	12,027.00	62,664.00	3,316.26	3,571.43	343.63	66,579.06	4.27			
9th Five Year Plan (2002-2008)												
Plan Year	9th plan demand and Supplied			Total Pasture Acreage			Winter Fodder	Total seed	Value Nu. in M			
	Temperate	Sub-tropical	Winter Fodder	Temperate	Sub-tropical	Winter Fodder						
2002 - 2003	7,037.00	1,193.00	9,502.00	17,732.00	670.19	340.86	271.49	18,344.34	1.122			
2003 - 2004	11,889.00	3,681.00	1,280.00	16,850.00	1,132.29	1,051.71	36.57	17,938.29	2.101			
2004 - 2005	11,479.00	3889.00	14,092.00	29,460.00	1,093.24	1,111.14	402.63	30,973.77	2.010			
2005 - 2006	9452.00	3,189.00	11,680.00	24,321.00	900.19	911.14	333.71	25,565.86	2.027			

2006 - 2007	9,661.00	4,854.00	16,044.00	30,559.00	920.10	1,386.86	458.40	32,404.26	2.105
2007 - 2008	4,419.00	2,097.00	10,082.00	16,598.00	421.00	599.00	288.00	17,906.00	0.972
Total	53,937.00	18,903.00	62,680.00	135,520.0	5,137.01	5,400.71	1,790.8	125,226.5	10.337
10th Five Year Plan (2008-2013)									
	10th plan demand and Supplied				Total Pasture Acreage				
Plan Year	Temperate	Sub-tropical	Winter Fodder	Total Seed	Temperate	Sub-tropical	Winter Fodder	Total seed	Value Nu. in M
2008 - 2009	11,469.00	6,090.00	23,949.00	41,508.00	1,092.29	1,740.00	684.26	43,932.26	1.122
2009 - 2010				0.00	0.00	0.00	0.00	0.00	2.101
2010 - 2011				0.00	0.00	0.00	0.00	0.00	2.010
2011 - 2012				0.00	0.00	0.00	0.00	0.00	2.027
2012 - 2013				0.00	0.00	0.00	0.00	0.00	2.105
Total	11,469.00	6,090.00	23,949.00	41,508.00	1,092.29	1,740.00	684.26	43,932.26	9.365

Source: Department of Livestock, MoAF.

Table 9. Dzongkhag-wise Improved Pasture Area based on Inputs Supply Targets

Dzongkhag	2007	2008	2009
Bumthang	2,978.60	2,558.00	2,910.01
Chukha	242.60	514.99	840.23
Dagana		79.80	222.98
Gasa		167.43	141.07
Haa	2,116.00	1,311.56	2,116.10
Lhuentse	257.20	303.28	417.48
Mongar	2,183.00	2,149.14	2,326.00
Paro		341.76	658.45
Pemagatshel		854.84	958.97
Punakha	114.90	64.91	114.12
Samtse		118.27	425.40
Sarpang	133.50	42.86	216.30
Samdrup Jongkhar		1,513.00	1,823.00
Trashiyangtse	204.70	175.50	244.66
Trashigang	1,543.40	1,247.00	1,426.00
Thimphu	286.40	376.00	274.40
Trongsa	1,057.00	709.94	1,035.85
Tsirang	315.50	51.50	327.79
Wangdue	364.10	2,688.06	366.39
Zhemgang		787.20	1,149.73
Total	11,796.90	16,055.04	17,994.93

Source: Department of Livestock, MoAF.

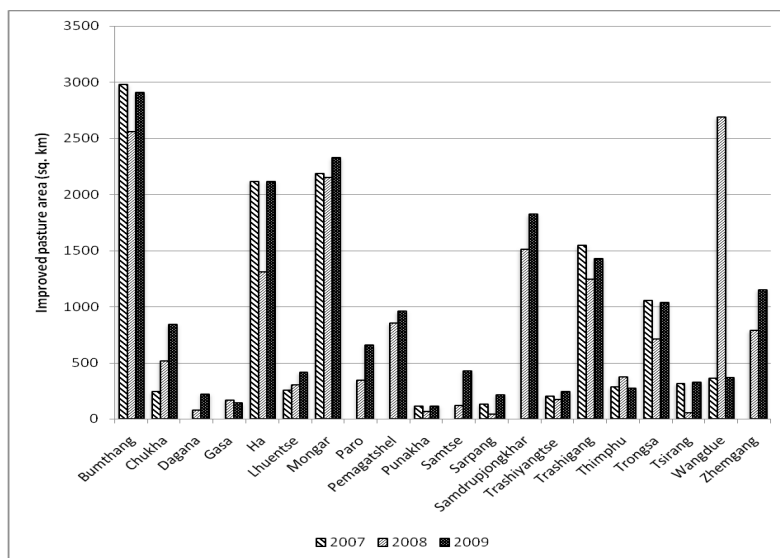


Figure 11. Improved pasture area in each Dzongkhags for the year 2007, 2008 and 2009

In Bhutan, over 77.5% of the households own cattle, 65.5% own poultry, 37.5% own pigs, 23.8% own horses, and sheep, goat and buffaloes are owned by 20% of the farming households. In addition, around 2.2% own Yaks, who incidentally are fully dependent on them for their livelihood and socio-economic well being. Hence, livestock rearing is still an integral component of the overall mountain farming system in Bhutan. It plays a vital role in enhancing rural economy, food security and employment generation. Livestock also plays a crucial role in agriculture through provision for draught power, given the limitations for farm mechanization due to difficult topography, and manure as a source of soil nutrient which is so crucial for organic farming. It is the general belief among the Bhutanese population that

the unique Bhutanese agriculture system would collapse or would not exist without these crucial inputs from the livestock sub-sector.

Today, the country has 212,045 local cattle (Nublang breed), 1,405 pure Mithun, 28,185 Mithun cross, 996 pure Jersey, 57,717 Jersey cross, 80 pure Brown Swiss, 5,200 Brown Swiss cross, 48,400 Yaks, 1,023 buffaloes, 27,263 equines, 13,283 sheep and 39,099 goats, based on the 2008 livestock census. This can be compared to 337,787 local cattle including Mithun cross, 16,553 cross bred cattle, 35,639 Yaks, 4,344 buffaloes, 25,768 horses, 46,734 sheep and 36,847 goats in 1988. So, the local cattle population, Nublang plus Mithun cross, has gone down by 96,152, buffaloes by 3,321 and sheep by 33,451 during the last 20 years. On the other hand, the total cross bred cattle population has gone up by 47,440; Yak population has gone up by 12,761; horses by 1,495 and goats by 2,252.

This is a clear indication that the policy adopted by the Royal Government for promotion of improved breeds to enhance productivity and increase livestock production on the one hand, and reduction of unproductive cattle as well as discouraging migratory system of cattle rearing was not only in the right direction, but also in keeping with the rapidly changing socio-economic conditions in the country. The Jersey cross has proven itself to be the ideal breed for Bhutan as it is doing well not only under stall feeding conditions, but also under limited forest grazing. It has adapted well to the various agro-climatic conditions stretching from that of the sub-tropical conditions of Samtse and Sarpang through to the cool temperate conditions of Bumthang and Haa. The future of dairy farming in the country lies, without any doubt, on the Jersey-Nublang cross

which is not amenable to migratory herding. Traditionally, of course, the most preferred breed has been the Mithun cross because of its many merits such as fecundity, surefootedness in the forest, browsing ability, higher milk yield, high fat content, etc. Its only demerit is that it requires large area of forests for browsing as compared to open grazing (Mithuns are browsers rather than grazers), and thus the need for migratory herding. But with the pure Mithun breed itself being threatened with extinction in its original habitat of north-east India (Arunachal Pradesh, Nagaland, Manipur and Mizoram), the future of this breed does not bode well for our farmers. So, sedentary livestock farming with Jersey-cross cattle seems to be the only option available to our farmers in the future.

4

Policy Analysis of *Tsamdro* Land Use for Livestock Development

A rethinking of the livestock development policy was done for the Fifth Plan based on the experiences gained during the previous Plans and keeping in view the long term needs and emerging challenges of the country. The revised broad objectives set for this sector were to achieve self-sufficiency in livestock products such as milk, butter, cheese, meat, eggs and fish; and to contribute to enhancing rural income. It was also felt that the traditional migratory herding of cattle was not only unproductive but it was also detrimental to forest and environment. One of the key policies for livestock development formulated during the Fifth Plan was the Draft Pasture Policy of 1985 (Appendix III) which was submitted to the National Assembly of Bhutan which had in turn directed the Department of Animal Husbandry to implement it on a trial basis. This policy was formulated with the following objectives:

- (a) To improve the feed value of the roughages for the better performance of genetically superior breeds which has been introduced in the country because of their excellent performance as compared to the local breed.
- (b) To stop the migratory system by providing sufficient pasture land in the particular area and thereby reducing the mortality rate of animals and disease outbreak in the country thus saving the nation's wealth of livestock.
- (c) Uniform distribution of pastureland amongst the farmers which will enable them to adopt a proper system of land use pattern.
- (d) To control erosion problems by providing sufficient vegetative coverage of the soil and also through propagation of fodder trees in the steep slopes and erosion prone areas.
- (e) Nationalizing the registered pastureland, either private or community, and reallocation of such pastures according to stock units to effect the proper utilization of feed resources.
- (f) Improvement of grasslands/pastureland through introduction of high yielding nutritious fodder species through appropriate techniques thereby increasing the stock carrying capacity of a given area.

Accordingly, during the Sixth Plan (1987-92), 35 *Gewogs* under Bumthang, Trongsa, Wangdue, Chhukha, Samtse, Lhuentse, Mongar, Trashigang, Pemagatshel and Samdrup Jongkhar Dzongkhags, which were endowed with better and higher potential for livestock development, were identified as Livestock Priority areas for intensive development aimed at expeditious implementation of development programs so as to get better results and achieve faster impact. It was in this livestock priority area that, for the first time, the Department of Animal Husbandry had acquired the private grazing land

belonging to *Kugyer*, and then leased out to livestock farmers for growing improved fodder for their livestock. Accordingly, the Lhengye Zhungtshog had decided, during its 77th meeting held on 26 June 1986, that Nu 200 per acre will be the compensation for acquisition of private grazing land for government purposes. According to *Thram* records of the National Land Commission, the Department of Livestock and Ministry of Agriculture and Forests has ownership over the following *Tsamdro* land (18,310.75 acres), most of which were acquired during the Fifth Plan:

- 145.53 acres under *Ura Gewog* of Bumthang Dzongkhag,
- 523.62 acres under *Tang Gewog*,
- 2,259.70 acres under *Chhoekhor Gewog*,
- 3,600 acres under *Korphu Gewog* of Trongsa Dzongkhag,
- 2,500 acres under *Korphu Gewog* registered in the name of Forest Department,
- 7,631.90 acres under *Sephu Gewog* of Wangduephodrang Dzongkhag,
- 1,650 acres under *Trong Gewog* of Zhemgang Dzongkhag.

Unfortunately, after one Plan period, this approach of concentrated area development was discontinued as the government decided to pursue a uniform and equitable development approach during the Seventh Plan. However, a comprehensive implementation proposal of the Draft Pasture Policy during the Seventh Plan was put in place. The salient features of this proposal included formation of a committee with representatives from the Home Ministry, Department of Forests, Department of Agriculture, local Dzongkhag Administration and Department of Animal Husbandry; acquisition of *Tsamdro* rights; transfer of *Tsamdro* rights to individuals on payment of cost of *Tsamdro* land or on

lease; and development with improved pasture. The draft Pasture Policy and its implementation on trial as mandated by the Royal Government were reviewed from time to time, and shortcomings and challenges faced on the ground identified so as to improve upon it. There are a number of reports available on the issue based on the studies done by various individuals in the field, which supported the approach proposed in the draft policy (Gyamtscho, 2000 and 2002). The findings and recommendations of such studies were deliberated during the national pasture policy workshops held between 2001 and 2005. A draft Rules and Regulations Governing Leasing and Use of Government Reserved Forest Land for Pasture Development prepared for implementation during the Ninth Plan is also available on record. Consequent upon the enactment of the Land Act of Bhutan 2007, the National Land Commission has issued a comprehensive Rules and Regulations for Lease of Government Reserved Forest Land and Government Land (revised in 2009) which includes provision for lease of *Tsamdro* (Section 15). More recently, the Department of Livestock has prepared the Final Guidelines/Procedures to be followed during the implementation of the 2007 Land Act and execution of lease titles. The Minister of Agriculture has also submitted a proposal entitled Guidelines for the Distribution and Sustainable Management of High Altitude *Tsadroks* which outlines the modalities for lease of alpine and sub-alpines grazing land to Yak herder communities.

The issue of pasture or grazing policy was not only debated actively over the years but also pursued vigorously through a number of workshops organized by the Ministry of Agriculture. A National Grazing Policy Workshop was held in Bumthang in August 2001, followed by a Workshop on Grazing and Pasture Development in Thimphu in November

2004 and a National Workshop on Rangeland Management Policy and Strategies, supported by ICIMOD, held in Bumthang in November 2005. In the mean time, a Land Act Review Committee formed by the Ministry of Agriculture in 2004 to review the 1979 Land Act had also started looking at the issue of *Tsamdro* and by 2005, they had already decided to propose for its nationalization based on the justifications mentioned above, and the tremendous amount of work done on it earlier and the experiences gained.

5

Analysis of Various Legal Provisions regarding *Tsamdro* Land

The provisions which govern the use of *Tsamdro* land are contained in the Land Act 2007, Forest and Nature Conservation Act 1995 and various decisions taken by the National Assembly of Bhutan from time to time. The historical aspect of the ownership of *Tsamdro* has already been elaborated above. It can be seen from the above that the Royal Government has been gradually working towards nationalization of registered *Tsamdro*, and the decision taken by the 87th National Assembly of Bhutan was the culmination of a policy pursued gradually but consistently for a long time spanning over a period of many decades. The rationale behind the incorporation of this provision in the Land Act 2007 can be enumerated as follows:

1. Most of the owners of large *Tsamdro* holdings and/or livestock numbers have given up livestock rearing thereby freeing their pastures. According to the

livestock census data maintained by the Department of Livestock, there is hardly any farmer who own very large herds of cattle any more. In the olden days, influential people and the religious institutions used to own herds of hundreds of cattle and Yaks which is not in vogue anymore;

2. To redistribute such large areas of freed *Tsamdro* to livestock farmers who do not own any *Tsamdro*, and in most cases, they are already using the same *Tsamdro* any way;
3. To ensure equitable access to one of the country's important natural resources, the *Tsamdro* land;
4. To allow development and management of leased *Tsamdro* land with improved pasture which was, so far, not possible under the provisions of the Forest Act;
5. To discourage the existing "low-input, low-output" farming system under which migratory herding is being practiced;
6. To resolve the present conflict in land use between forest and grazing; and
7. To respond to changing situations and ground realities where most large *Tsamdro* owners/holders have given up livestock rearing.

The most salient features of the Land Act 2007 are:

1. All *Tsamdro* rights maintained in the *Thram* prior to the enactment of this Act shall be deleted from the *Thram*. Upon deletion, the *Tsamdro* land shall be reverted and maintained as Government land in the *Thromde* or the Government Reserved Forests land in the rural areas.
2. The reverted *Tsamdro* in rural areas shall be converted to leasehold and those in the *Thromde* shall be maintained as Government land.
3. The Government shall pay cash compensation to the owners of *Tsamdro* under Land Act 1979 for

- surrendering their *Tsamdro* rights based on the area registered in the *Thram*.
4. After 10 years from the date of enactment of this Act, *Tsamdro* shall be leased only to a lessee who is a resident of the Dzongkhag where the *Tsamdro* is situated.
 5. An individual household or community owning livestock shall be eligible to lease the reverted *Tsamdro* which have been converted to Government Reserved Forests land for use as *Tsamdro*.
 6. While leasing *Tsamdro*, preference shall be given to the previous right holders and community.
 7. Highlanders who are directly dependent on *Tsamdro* may retain their *Tsamdro* rights under lease irrespective of possession of livestock and their herd size.
 8. The individuals or communities who have the customary *Tsalam* and *Chhulam* rights on any leased *Tsamdro* shall continue to enjoy such rights.
 9. Grazing and pasture development on *Tsamdro* shall be permitted based on a *Tsamdro* management plan. The Department of Forests, Department of Livestock, and the lessee shall be responsible to prepare *Tsamdro* management plan.

The two most important changes made to the previous laws are:

1. The ownership rights of *Tsamdro* is being appropriated by the state but through payment of compensation; and
2. Pasture development, which was so far not allowed, will now be allowed but based on a *Tsamdro* management plan.

In this context, it is felt important to look at the provisions of the Forest and Nature Conservation Act 1995 relating to *Tsamdro*, for reconciliation with the provisions of the new

Land Act and for liberal interpretation as follows:

1. 3(e). Forest means any land and water body, whether or not under vegetative cover, in which no person has acquired a permanent and transferable right of use and occupancy, whether such land is located inside or outside the forest boundary pillars, and includes land registered in a person's name as *Tsamdog* (grazing land) or *Sokshing* (woodlot for collection of leaf litter).
2. 3(g). Forest Produce includes the following whether or not found in the Forests:
3. (ii). Wild plants and parts or products of wild plants including flowers, seeds, bulbs, roots, fruits, leaves, grasses, creepers, reeds, orchids, bamboo, cane, fungi, moss, medicinal plants, herbs, leaf mould, or other vegetative growth, whether alive or dead.
4. 8. Government Reserved Forests
 - (a) All Forests are declared to be Government Reserved Forests.
5. 10. Prohibited Acts in Government Reserved Forests
 - (a) Except pursuant to a permit or rules issued by the Ministry, the following acts are prohibited in Government Reserved Forests:
 - i. clearing or breaking up of any land for cultivation or any other purpose;
 - ii. setting fire, except controlled campfires, or leaving any fire including a campfire burning in such manner as to destroy, damage, or endanger trees, any forest produce or wildlife;
 - iii. felling, girdling, lopping, tapping, uprooting, or injuring any tree and removing any timber or other forest produce or quarrying.
6. 12. Taking Forest Produce from Government Reserved Forests for Domestic Use

- (a) In addition to the collection of leaf mould, fodder and improvement of Sokshing as provided in the Sections Ka 3.5 and 8.5 of the Land Act, the Ministry may make rules to allow taking of forest produce without a permit.

7. 30. Grazing

- (a) The Ministry may issue rules regulating grazing in Government reserved Forests, subject to such conditions as may be prescribed.
- (b) Where the head of department determines that land located in Government Reserved Forests is suffering from soil erosion or other environmental degradation, he may, after consulting with the appropriate local authority, order that grazing on such land be stopped for a specific time or be permitted only under such specified conditions.
- (c) Cattle trespassing in a Reserved Forest which has been lawfully closed to grazing shall be deemed to be doing damage to plantations, regeneration and catchment areas, and may be seized and a suitable fine as prescribed by the Ministry will be levied.

8. 31. Fire Protection

- (b) The Ministry may issue rules governing the use of fire in Government Reserved Forests, including requiring permits for all fires (except controlled campfires) in Government Reserved Forests and requiring that permits be obtained for setting of fires near Government Reserved Forests in areas and in seasons where fire is particularly dangerous. Violation of such rules shall be punishable as an offence under Section 10(b).

According to the provisions of the Forest and Nature Conservation Act, all *Tsamdro* land overlap with Government Reserved Forests and by extension, any grazing of livestock on the *Tsamdro* will have to be regulated by the provisions of the Act, and Rules and Regulations issued under it. The most restrictive provisions are:

1. Clearing or breaking up land for cultivation of improved fodder species;
2. Using fire in the sub-alpine areas for burning shrubs for the purpose of pasture improvement which has been practiced traditionally; and
3. Felling, lopping, tapping or uprooting any tree which is required for pasture management and improvement purposes.

The restriction mentioned at (1) above will now be addressed by Section 247 of the Land Act 2007 under which pasture development on *Tsamdro* will be allowed based on a *Tsamdro* management plan. Beginning from the Fifth Plan, the Department of Animal Husbandry used to distribute millions of Ngultrums worth of fodder seeds and fertilizers to farmers every year to enable them to grow improved fodder species on the *Tsamdro*. But the impact on the ground is hardly visible as farmers would develop an area this year but would have abandoned it the next few years due to lack of ownership as well as restrictions from the Forest Department.

In the past, shrub invasion has been periodically eliminated through burning. Following the ban of fires in the early 1970s, encroachment by shrubs particularly, unpalatable species of *Rhododendron*, *Junipers* and *Berberis* have increased with serious consequences for grazing (Gyamtsho, 2002). There seems to be some confusion among

the forestry officials in the interpretation of the legal provision regarding the use of controlled fire for pasture management. While the understanding of the department and its officials has always been that no fire other than controlled campfires can be allowed in the Government Reserved Forests, the liberal interpretation of Section 10 of the Forest and Nature Conservation Act of 1995 should allow other types of fire to be made in the Government Reserved Forests if specific permits are obtained from the Ministry of Agriculture. There is also a record of His Majesty the King having graciously commanded, in 1981, for use of fire to burn shrubs like *Balu-Salu* for improvement of high altitude pastures. Shrubs can be controlled either through prescribed or supervised burning. This is a standard rangeland management tool in the United States and Australia (Gyamtscho, 2002). The reason why this is being highlighted is that controlled burning of bushes and shrubs in the alpine and sub-alpine pastures has become absolutely urgent as in most places, the pastures are being choked and overtaken very fast by shrubs and bushes. The issue regarding lopping of trees and other aspects of *Tsamdro* management also needs liberal interpretation of the provisions of the Forest Act by the officials of the Forest Department which should not be a problem as it functions under the same Ministry of Agriculture and Forests.

There have also been regular deliberations in the sessions of the National Assembly of Bhutan and decisions taken on issues regarding *Tsamdro* and forest use, as any decision taken by the government impact directly on the lives of the farming population. As articulated above, the Royal Government, keeping in view the larger interest of the country and its people, had adopted policy measures to encourage rearing of improved livestock which included

incentives for keeping improved breed and disincentives for maintaining large number of particularly unproductive stock, migratory herding of cattle and use of traditional method of forest grazing. This was done through taxation policy such as levying of progressive cattle tax and increasing the grazing permit fee substantially. For example, the nominal cattle tax imposed earlier was revised to Nu One per head of cattle up to 10 heads and beyond 10 heads, the annual tax required to be paid to Nu five per head of cattle. Similarly, the grazing permit fee was revised from Nu One for a five-year period to Nu 100 per occasion or annually if grazing was to be done on traditional *Tsamdro* as against Nu Five only if grazing was to take place on improved pasture. Based on a submission made by the public of Mongar to retain the earlier permit fee of Nu one, the 70th Session of National Assembly had deliberated on the issue, but no changes were made.

6

Feedback from the Selected Stakeholders

This author visited a number of Dzongkhags considered important from the point of view of the importance of *Tsamdro* to the people, both who own them as well as those who need *Tsamdro* to rear livestock. A number of stakeholders representing communities and institutions, which own large areas of *Tsamdro*, were also interviewed. The interviews and consultation meetings were very useful in that the author was able to get a wide spectrum of their views representing those of *Tsamdro* owners as well as those who do not own *Tsamdro* but need them to rear their large number of livestock.

The report of the staff of Watershed Management Division of Ministry of Agriculture and Forests, based on the interviews and consultation meetings they had conducted recently in Bumthang, Haa, Paro, Trashigang and Samtse

Dzongkhags, and the consultancy report of Dr. Pema Chophyel, AMS Consultant on Rangeland Management in Bhutan, based on his work in Sengor and Merak-Sakteng, have been found useful and complimentary to the work being done by this author. This author did not visit some of the Dzongkhags they had already visited to avoid duplication of efforts and as advised by them. A visit to the southern Dzongkhags was not felt necessary as the issues concerning *Tsamdro* are quite straight forward. Although these Dzongkhags have a large number of livestock, the areas of registered *Tsamdro* are almost non-existent, which in itself is a major contradiction with the ground situation. Therefore, the issue of *Tsamdro* in southern Dzongkhags deserves special attention, and this may be a very good time and opportunity to address the long-festering problem in the overall interest of our livestock farmers.

The feedback can be summarized as follows:

1. Those farmers who own registered *Tsamdro* and livestock are not in favour of assumption of the ownership of the *Tsamdro*s by the Government as stipulated by the Land Act 2007. But one must note that the total number of such farmers in the country is a small minority. There are just about 5,200 *Thram* holders of *Tsamdro* in the country which include communities, social groups and even government organizations out of a total household number of 126,000 in the country as per the Population and Housing Census report of 2005.
2. Those farmers who own livestock but do not have registered *Tsamdro* in their names, who are in absolute majority, are all for nationalization as foreseen in the Land Act in the hope that their long-felt need for *Tsamdro* will be fulfilled at last under the provisions of the new Land Act.

3. The owners of the largest area of *Tsamdro* in the country, the Zhung Dratshang and the Rabdeys, subscribe to the decision taken by the National Assembly in 2007 to nationalize *Tsamdro* as they have also been gradually phasing out their livestock as they feel it does not fit into their realm of function as well as the return from such pursuits is negligible. According to the Zhung Dratshang representative, the total number of livestock owned by the Zhung Dratshang and the Rabdeys in the whole country put together today may be around 400 heads only. In fact, some of them have been anxiously waiting for the implementation of the new Land Act for which necessary documentation were kept ready for surrendering their *Tsamdro* to the Government to receive compensation, and when nothing was seen happening, enquiries were made with relevant government authorities. They would like the Government to take over their livestock as well on payment of compensation. Their representatives this author met were of the opinion that, as always, the Royal Government will not ignore the interest of the Dratshang and will continue to support it in the best manner possible in view of the important role it plays for the well-being of the people and the country. So, they had full confidence in the Government that whatever decision it took, the Dratshang's interests will be fully protected. They would prefer cash compensation which can be invested wisely in such instruments as company shares for their future sustainability, and only in some selected cases, land substitution if found feasible. They are not in favour of the government providing in-kind support such as butter and cheese required for the regular religious prayers and rituals they have to perform, such as *Kuchhoe-Bumdoe*, *Tendoe*, *Torjab*, etc., as compensation for their *Tsamdro* as it may not be a sustainable and long-term policy. Rabdeys such as

Trongsa have already submitted to the Government to take over not only their *Tsamdro* but also their other *Yojed* land on payment of compensation so that such land could be allotted to present users/ sharecroppers as *Kidu*. They feel that the present users should have unbridled right to graze their livestock and that the highlanders deserve such incentive so that they can continue to practice their age-old trade of livestock rearing and also because their physical presence along the international border areas help to enhance our country's security.

4. It is understood that most of the owners of large *Tsamdro* holdings have given up livestock rearing since a long time. Some had sold their *Tsamdro* to the Government while some continue to rent it out to others who are in need although it is against the provisions of the Land Act 1979 as well as 2007. With the public becoming aware of nationalization, those who have been using *Tsamdro* belonging to others are not willing to pay *Tsarin* anymore.
5. In Bumthang Dzongkhag, 177 individuals, communities, and social groups including Dratshang and Rabdey, out of a total of 2,870 households, have registered *Tsamdro* in the *Thram*. The individual *Tsamdro* owners are not at all in favour of the new law although those who have surplus *Tsamdro* would like to surrender it to the Government on receipt of compensation. They informed this author that they had not only reported their grievance to the Government but that they had also received assurance from the Government that status quo will be maintained. They felt that the compensation rate should vary based on the quality of their *Tsamdro*. Their main complaint is that in Dzongkhags like Mongar and Zhemgang, the local people had started using their *Tsamdro* even before they took their livestock down in winter thereby creating difficulty for them to graze their livestock, resulting in conflict

with the local population. They want the Government to address this grievance, as well as continue to have the right over their *Tsamdro* in other Dzongkhags as long as they want. It was informed that Tang *Gewog* has completely stopped migration of livestock to their winter grazing ground in Lhuentse Dzongkhag after the people had adopted improved breeds and improved pastures as well as to avoid unnecessary conflicts with the local people of Lhuentse. The number of migratory herds has been going down over the years with encouragement and support from the Government to go for improved breeds of cattle which yield much more milk along with development of improved pasture to provide round the year feeding resource. For example, out of 32 households in lower Chhoekhor, only two households would still take their cattle to winter *Tsamdro*. Similarly, in Ura, there were just three households who were involved in Yak rearing, and only seven households who continued to practice migratory herding of cattle, the rest having adopted sedentary practice with improved cattle and pasture according to a report by the staff of Watershed Management Division. There were other issues such as same *Tsamdro* being owned by different owners for use as summer and winter pastures for grazing by cattle and Yaks respectively or for grazing by cattle belonging to different owners at different seasons which needed to be sorted out before implementation of the new law.

6. Similarly in Haa Dzongkhag, those who own *Tsamdro* are not in favour of the new law whereas those who do not own *Tsamdro* are fully supportive of the Land Act 2007. There are 323 *Tsamdro* owners in Haa out of a total household of 2,290 in the Dzongkhag. Cattle from Eusu, Katsho and Sama *Gewogs* migrate for winter *Tsamdro* under Samtse Dzongkhag where they are kept for almost eight months in a year. Majority of the migratory cattle are managed under a

unique arrangement called *Northue* system in which one partner looks after the cattle when they are in the winter *Tsamdro* and the other partner when it is in the summer *Tsamdro*. The two partners have equal share in the cattle. However, each partner has exclusive right over milk and other dairy products accruing out of the whole herd during their seasonal custody of the animals. It has been reported that the overall livestock population of Haa Dzongkhag has gone down by almost 50 percent during the last 10 years or so which is an indication that migratory herding is on the decline with increasing adoption of improved breeds. The Yak population has gone down due to shortage of manpower and reluctance of the younger generation to take up the hard and back-breaking profession of being a livestock farmer. There is widespread lease of particularly winter *Tsamdro* in Samtse Dzongkhag on *Tsarin-Chhurin* basis although not permitted by the 1979 Land Act. But with the enactment of the new Land Act, lessees are refusing to pay *Tsarin-Chhurin* thereby creating disputes which have ended up in the court of law. With regard to *Tsamdro* for Yaks, there is winter fodder shortage as the same *Tsamdro* is grazed by the cattle during summer and conflict with people across the border regarding *Tsamdro* along the international Border.

7. The people of Mongar Dzongkhag are all fully supportive of the new law governing *Tsamdro* as individual ownership of *Tsamdro* is quite limited. There are just 367 *Tsamdro Thram* holders out of 7,348 households under the Dzongkhag. They felt that the Royal Government had decided to amend the law governing the *Tsamdro* to address the grievances of the people who did not own any *Tsamdro*. Almost half of the private registered *Tsamdro* are under Saleng *Gewog* and most of it belongs to people from Bumthang. The present community *Tsamdro*s under Tsamang, Tsakaling, Chali, Chaskhar, Shelremung,

Ngatshang, Mongar, Drepung and Saleng *Gewogs* used to belong to Wangdichholing Palace. The local people had access to these *Tsamdro*s only during winter when the royal herds were brought down from Bumthang to graze in them. During the rest of the year, around six months in summer, the local cattle could not be grazed as it was off limits, with what used to be called as *Tsadam*. It was due to the kindness and generosity of the Royal Family that these *Tsamdro*s were given to the local communities almost free of cost (in exchange for a few Jatshams according to Ap Dorji of Saleng) some 30 years ago (before the enactment of the Land Act of 1979) that they belong to them now and can use it throughout the year. In Chaskhar, even those *Tsamdro* which belonged to individuals were converted into community *Tsamdro* for the larger benefit of the community. The people of Saleng had to bring down their cattle to warmer areas of the *Gewog* as they did not have adequate fodder resources for winter feeding. The initiative of the Government to lease out some 1,356 acres to the 21 households recently has been highly appreciated by the people. But there were restrictions imposed by virtue of their being located within Thrumshingla National Park as well as damages caused to their pastures by migrating herds belonging to the people of Ura which needs to be addressed.

8. Paro Dzongkhag has drastically reduced the migratory population of livestock particularly from Paro valley. There are 247 *Thram* holders of *Tsamdro* out of 7,118 households in the Dzongkhag. According to the Dzongkhag Livestock sector staffs, no major issues regarding the new law governing the *Tsamdro* has been brought to their notice although livestock from Naja and Dogar *Gewogs* migrate to Chhukha Dzongkhag during winter. Staffs of the Watershed Management Division had visited the high altitude areas of Soe Nubri under Lamgong *Gewog* and Soe

Yaksa under Tsento *Gewog* recently to assess the opinion of the people who are fully dependent on Yaks for their livelihood. The people of these areas fully subscribe to the new law as they feel it is a big *Kidu* from the Royal Government to the high altitude communities who live under very harsh and difficult conditions. Most of the *Tsamdro* belong to people from the valley below or to social groups such as Rabdey and other religious institutions. They also provide security to the nation by their presence along the international border which is otherwise open to poaching from across the border. They appreciate the support received from the Government and ICIMOD which has been very useful. But more needs to be done to improve the fodder resource by providing other inputs and allowing removal of shrubs and bushes which have overtaken their pastures.

9. The people of Samtse Dzungkhag are fully supportive of the new law as they can now have access to *Tsamdro*s which belonged to the people from Haa so far. The people of Dorokha under Samtse Dzungkhag welcome the new law as the *Tsamdro* in their Dzungkhag is mostly owned by the people of Haa for winter grazing of their cattle. They graze their cattle during summer by paying *Tsari-Chhurin* to the original owners from Haa. Earlier, besides taking their cattle, the people of Haa would migrate down to Dorokha during winter with their horses for transportation of orange crop to Samtse. But now with the road accessibility to Dorokha since the last few years, the people of Dorokha do not need their horses for orange transportation anymore which is likely to act as a disincentive for migration from Haa to Dorokha during winter.
10. The people of Merak and Sakteng *Gewogs* of Trashigang Dzungkhag are distraught with problems arising out of the new Land Act apparently due to rumours, conjectures and misinformation. Due

to ignorance of the new provisions of the Land Act concerning *Tsamdro*, speculations are rife. While the previous *Thram* holders are anxious about losing their *Tsamdro* to others, those who do not own *Tsamdro* or those who do not have adequate *Tsamdro* expect to get others' *Tsamdro* on lease in accordance with the new law. As a result, disputes arise when violation of traditionally respected *Tsamdro* boundaries take place. The Sakten Dungpa informed that disputes are increasing day by day and sometimes physical fights take place between individuals. He was worried that such fights could pose serious threat to lives of those involved. The other area of major concern was grazing of their winter pastures outside their own *Gewogs* by the local cattle, and widespread and rampant conversion of their traditional winter grazing areas, which they have been using so far by paying *Tsarin-Chhurin*, into community forests. Such conversions have taken place in at least five places under Phongme, Radhi, Shongphu, Khaling and Kangpara *Gewogs*. They felt that in most cases, this was done deliberately to deny their traditional grazing rights. They were also very apprehensive about losing ownership of their *Tsamdro*, which they treat as their *Phazhing*. The new provisions of the Act was explained to them clause by clause when it became very clear that except for ownership in their name, their interests were fully protected by clauses such as, "243. Highlanders who are directly dependent on *Tsamdro* may retain their *Tsamdro* rights under lease irrespective of possession of livestock and their herd size;" "244. The lease for Highlanders shall be for a period not less than 30 years with the possibility of extension;" and "245. With the exception of the *Tsamdro* leased to Highlanders, there shall be no sub-leasing of *Tsamdro*." So, they want the Government to implement the new law at the earliest so that anxiety and serious disputes

which are cropping up can be avoided. According to the Dzongkhag Livestock sector, the people of other *Gewogs* of the Dzongkhag have no issue regarding *Tsamdro* and the new law.

11. The people of Trongsa are anxiously waiting for implementation of the new Land Act as they believe that it is in the overall interest of the people although those few who own *Tsamdro* wish that the old system could remain. In Tansibji *Gewog*, 226.50 acres of *Tsamdro* was already demarcated for lease to 69 households of the *Gewog* but had to be delayed because of demand of compensation from the *Thram* holders. The Dzongkhag Administration feels that there has to be clearly spelt out procedures for implementation of the new law so that the implementation is quick and smooth. Issues of grazing of draught bulls in far-away forests in the traditional manner (*Langdro*) and dual ownership of certain areas of *Tsamdro* as *Lamdros* for Royal herds and for normal grazing by the villagers were raised. Allotment of community land to individuals has in some cases caused tremendous inconvenience to the whole community which should be avoided in the future.

7

Current Status on the Ground

The revised Land Act was approved by the 87th National Assembly of Bhutan on 27 June 2007, and came into force with effect from 1 January 2008. However, the Government decided to defer the implementation of the provisions regarding *Tsamdro* and *Sokshing*. In the mean time, it is reported that:

1. The need to obtain grazing permit fee of Nu 100.00 per individual livestock owner/herder, irrespective of whether one owns *Tsamdro* or not, has been discontinued since 2008. Such permits would be issued to each applicant giving details of grazing area, number of cattle permitted to graze, number of days allowed to graze in each area, the month in which to graze in the given area and the tax to be paid, etc. But with the need for such permits discontinued, a free-for-all situation has been created whereby some people have started grazing on other's *Tsamdro*, particularly winter grazing areas of migratory herds. This has created a lot of difficulties for the *Thram* holders and their livestock resulting, in some cases, into serious communal disharmony and social tension;

2. Whenever and wherever disputes have reached a court of law, the judiciary has no choice but to adjudicate in accordance with the provisions of the new Act, as it has been done in case of Haa Dzongkhag. But in Merak and Sakteng, it was informed that the courts have refused to accept any litigation regarding *Tsamdro* apparently based on instructions from Thimphu. This has caused a lot of resentment and difficulty among the people;
3. The provisions of the new Act are being enforced selectively in places where it is conducive. 208.73 acres to 21 households in Sengor and 181.41 acres to 31 households in Gogona are already being leased out. Trongsa Dzongkhag had processed for lease of 226.50 acres to 69 households under Tangsibji *Gewog*, which has unfortunately been held up as the original *Thram* owners have not received any compensation;
4. In the absence of proper dissemination and education of the new elements in the revised Act, there seems to be confusion and misinterpretation of the law in many places. For example, in Phongme *Gewog*, some *Tsamdro* land which used to be grazed by the Yaks of Merak-Sakteng in winter on payment of *Tsarin* to the people of Phongme have now been converted into Community forest after the Yak herders refused to pay the traditional *Tsarin-Chhurin*. As a result, the Yak owners are being penalized if their Yaks happen to stray into the so-called community forest area. This has apparently created a lot of hardship for the Yak herders and also become a source of communal disharmony. Similar cases have also been reported in Haa;
5. In some Dzongkhags, misleading interpretations such as the new Act restricting or debarring livestock from other Dzongkhags from grazing in the traditional host Dzongkhags seem to have been made, thereby

creating unfortunate discord and conflict among various communities.

6. According to the survey conducted by the Watershed Management Division, majority of the livestock farmers who do not own any *Tsamdro*, and who are in absolute majority, will benefit if the new law is implemented. Even those *Tsamdro* owners who would have preferred the status quo have reconciled to the new reality. They are willing to cooperate with the government in the implementation provided they receive government support for alternative sources of their livelihood or help them to practice sedentary livestock farming.
7. The people by and large are aware that the decision taken by the National Assembly in 2007 are meant to benefit the larger population, to facilitate livestock development, rationalize distribution of national wealth, to correct past mistakes, ensure equity, and prudent and sustainable use of our natural resources.
8. In spite of arguments for and against the impact of grazing on the natural environment and forests, one needs to be more realistic by being able to overcome the sectoral bias and personal sentiments, as there is evidence all around of the negative impact, be it in the alpine, temperate or subtropical areas which is substantiated by reports of various individuals and consultants. In some places, of course, there may be other factors at play in addition to livestock grazing.

So, some kind of a “free-for-all” situation seems to be prevailing in some places at present threatening not only the livelihood of many livestock farmers particularly the Highlanders (*Drogpas*), who are entirely dependent on livestock, but also weakening the core values of livestock farming in the country. Therefore, a decision whether to implement or revoke the relevant provisions of the new Act

needs to be taken at the earliest.

With regard to livestock ownership by *Tsamdro Thram* holders, most of the large *Thram* holders have given up livestock rearing since many years due to various reasons such as poor economic return, shortage of manpower, opportunity for other more profitable crops such as horticulture, adoption of improved breeds, accessibility by motorable roads, etc. Substantial areas of *Tsamdro* belonging to *Kugyer* were also acquired by the Department of Animal Husbandry during the 5th Plan, and later leased out to livestock farmers in various parts of the country. *Kugyer Tsamdro*, in some places, have been donated to the Government for building development infrastructure and some to the people as far as I know of. Most of the *Tsamdro* belonging to *Kugyer*, religious institutions and large individual holders are today used by the local population for grazing of their livestock as the former do not keep livestock any more. There is quantitative data to support this statement. The owners of large areas of *Tsamdro* also used to own large herds of cattle practicing migration between summer and winter pastures. These systems evolved under a social and political setting favoring large herds owned by influential people and monasteries. In the last four decades, the social structure of Bhutan has changed dramatically which has also directly influenced the livestock production system. While large migrating herds have declined drastically in the temperate and sub-tropical regions, small and medium sized farms have increased their livestock numbers. Therefore, it is of paramount importance that laws, rules and regulations governing the use of a very important national resource such as *Tsamdro* need to be adapted to these changing needs.

8 Recommendations

In view of the fact that nationalization of *Tsamdro* land was pursued consistently for almost three decades on grounds of equity, prudence and sustainable use of natural resources, and in keeping with changing socio-economic conditions in the country, the decision of the National Assembly of Bhutan to nationalize the *Tsamdro* by revising the Land Act in 2007 seems to be the culmination of a long and well thought-out process, and therefore justified. It is further substantiated by the fact that majority of the farming population do not own any *Tsamdro* land as around 75 per cent of the registered *Tsamdro* in the country is owned by around 5,200 owners only. Besides, many of the larger *Tsamdro* holders, whether individuals or institutions, have long given up livestock rearing due to various reasons mentioned elsewhere in this report. The skewed distribution of registered *Tsamdro* among Dzongkhags and within Dzongkhags is a matter of serious concern which needs to be rectified. In this, the de facto rights being exercised by livestock farmers at present

needs to be recognized and regularized. This is likely to contribute tremendously to further development of the livestock industry in the country.

Nationalization of *Tsamdro* had already taken place under the Land Act of 1979 (Ura, 2002). The Land Act of Bhutan, 2007, reinforces this law and provides further details for enforcement of the new policy. In any case, the usufruct rights are more or less guaranteed under the new law so long as an individual continues to own livestock for his livelihood and well-being. The fact that the Royal Government will allow lease of *Tsamdro*/government reserved forests even for commercial farming under its Economic Development Policy further reinforces the argument for implementation of the provisions pertaining to *Tsamdro* in the country. It will only be proper that we follow one set of rules for everyone.

Acquisition of *Tsamdro* land from private owners and leasing it out to livestock farmers is not new to Bhutan as it was started as far back as the 80s under the High Altitude Area Development and Highland Livestock Development Projects when around 15,000 acres of *Tsamdro* was acquired and leased out to farmers for pasture development in Bumthang, Mongar, Trongsa and Wangduephodrang Dzongkhags. Recently, 208.73 acres of *Tsamdro* land in Sengor were leased out to 21 households and 154.10 acres to 30 households of Gogona on the approval of the National Land Commission based on the 2007 Land Act. In fact, some of the Gomchen communities of Gogona have been using *Tsamdro* land on lease for dairy farming since the 1970s.

It is felt that the nationalization of *Tsamdro* gives the Ministry of Agriculture and Forests tremendous opportunity to review and rethink its livestock development policy, and

thereby reorient its strategies and programs for the future. The timing seems to be perfect as the country is making rapid progress on the socio-economic front on one hand, and is in transition to the next level of development on the other, with new policies being put in place by the first democratically elected government. At the same time, the country is faced with numerous challenges such as rural-urban migration, farm labor shortage, unemployment, poverty (which is mostly a rural phenomenon), etc., all of which need to be addressed at the earliest. Farming has been a way of life for the Bhutanese for centuries and hence it is part of its living culture. It is not only the largest employer in the country today but also contributes in numerous ways to the people's aspiration for happiness and well-being. Those farmers who live along international borders provide security to our country's independence and sovereignty. Therefore, these farmers deserve more than what they are getting from the Government to continue to lead their lives in pursuit of Gross National Happiness.

The following recommendations are made based on the review of the past and present policies, work done on this issue so far, the current situation on the ground and keeping in view the future prospects for livestock farming in the country:

1. It is recommended that the Royal Government implement the provisions of the Land Act of Bhutan 2007 pertaining to *Tsamdro* as soon as possible. This recommendation is based on the fact that there are only 5,202 *Thram* holders of *Tsamdro* out of a total household number of 126,000 in the country, many holders of large areas of *Tsamdro* are no longer involved in livestock rearing, and majority of livestock farmers do not own any *Tsamdro*.

Therefore, the benefit of implementing the new Act will go to the majority population of the country. Any further delay in the implementation is likely to create more confusion, communal disharmony and an increase in litigation cases. This may ultimately impact negatively on livestock rearing, which is one of the main sources of employment and rural income, as well as peace and tranquility among the rural population.

2. There seem to have been lots of rumors, conjectures and misinformation about the new law particularly regarding *Tsamdro* and Sokshing. This has probably happened as the *Chimis* who attended the 87th National Assembly, after enacting the revised Land Act, could not educate the people regarding the resolutions, as was customary, as they had to resign immediately thereafter with the dissolution of the National Assembly in 2007. It was not just the people, but even most of the officials this author met who were not conversant with the new provisions regarding *Tsamdro*. As a result, the apprehension among the *Tsamdro* owners is not unfounded. To add salt to injury, there has been misinformation as well as speculations. In some Dzongkhags, initiatives taken by the people as well as local administration were definitely not in keeping with the provisions of the Land Act which has further created serious doubts among *Tsamdro* owners about their future interests. It is, therefore, recommended that the content of the revised Land Act be disseminated clearly and widely to address misinformation and misconception which seems to prevail at present. It must be noted that under the new Act, the rights of the livestock farmers to graze one's livestock in his/her earlier *Tsamdro* through lease is fully guaranteed.
3. The *Tsamdro Thram* records of the National Land Commission needs to be revisited as cases of dual ownership, incomplete information, as well as

doubtful figures have emerged. Such shortcomings, if true, could be attributed to the fact that the *Tsamdro Thram* records did not have to be updated after 1979 Land Act as no *Tsamdro* transactions were allowed under the Act. But this is extremely important to be sorted out before submission to the Government for release of funds for payment of compensation, and to determine who should get the compensation for a particular area of registered *Tsamdro*.

4. Lease of *Tsamdro* land should be considered both on an individual as well as community basis depending upon the ground realities such as geography and practical applicability. This would be particularly relevant to Highlanders of Merak and Sakteng where there is very little community *Tsamdro* and very strong sentiments attached to their ownership. Section 243 of the Land Act of Bhutan 2007 guarantees them the right to get on lease whatever *Tsamdro* they owned so far irrespective of possession of livestock and their herd size.
5. The people have requested that the annual lease fee should be fixed at a reasonable and affordable level. This author strongly endorses this request based on the fact that the *Tsamdro* owners did not have to pay any taxes in the past. They had to pay Nu 100 only per grazing permit per year irrespective of the size of the *Tsamdro* as well as size of livestock number being grazed on the *Tamdro*. By keeping the annual lease small and affordable, it will act as an incentive to livestock farmers.
6. The strategy and modality for lease of alpine, temperate and sub-tropical *Tsamdro* should be clearly differentiated and different approaches adopted as the opportunities and challenges are quite different from one another. Highlanders have been given special privilege under the new Act in that except for *Thram* ownership being acquired by the government,

they will continue to enjoy almost the same rights and privileges afforded to them earlier. The people of those Dzongkhags who still practice migratory herding needs to be given a different treatment from those who practice sedentary farming, and as mentioned earlier in southern Bhutan, the issue of *Tsamdro* needs special attention.

7. *Tsamdro* belonging to religious organizations such as Zhung Dratshang, Rabdeys and other religious institutions should be taken over by the Government by paying the same rate of compensation, and leased out to the present users. The Government should help these organizations to invest the compensation money wisely for future sustainability of these important institutions. Land substitution may also be considered in cases and places where feasible. There is a lot of expectation and hope among the herders who are either looking after livestock belonging to the above religious bodies or are using them through formal or informal arrangements. The Government could help them in disposing off their livestock as well.
8. The peculiar challenges faced by the herders of Bumthang, Haa, Paro and any other Dzongkhag involving inter-Dzongkhag migration of their cattle demands special attention at least for the immediate future. This is based on the fact that trespassing on their winter *Tsamdro* has become a major problem for them, and consequently communal disputes are on the rise. Similarly, the problem faced by the people of Merak and Sakteng with regard to their winter grazing areas should be addressed at the earliest. One consideration could be to repeal Section 239 which says that after 10 years from the date of enactment of the Act, *Tsamdro* shall be leased only to a lessee who is a resident of the Dzongkhag where the *Tsamdro* is situated. This seems to be the sore thumb as far as the current owners of such *Tsamdro*

are concerned. With fast realization of the fact that migratory herding is not only uneconomical, but also due to various other factors such as lack of manpower to look after livestock, advent of sedentary livestock rearing with improved breeds and improved pastures, the numbers of such herds are dwindling, and their days are definitely numbered.

9. Since all traditional *Tsamdro*/grazing land, particularly around the villages are not registered in the *Thram*, the Government should consider leasing such areas based on the de-facto rights so far exercised by the communities. One example which can be mentioned here, based on personal experience, is that there is only 298 acres of community *Tsamdro* registered in the name of the whole community of Chhali *Gewog* although in practice the entire area, other than agricultural land, around the *Gewog* is grazed by the village cattle, some as summer pastures and others as winter pastures. The actual area being grazed at present will run into tens of thousands of acres. Similar situation prevails in almost all *Gewogs* and villages.
10. Highlanders who did not own *Tsamdro* should be given government land on lease for grazing their livestock as it is not possible for them to get any *Tsamdro* belonging in the past to others as per Section 243 of the new Land Act. They could also be given *Tsamdro* belonging to individuals who are no longer domiciled in the *Gewog* such as those who have opted for resettlement but continue to own *Tsamdro* in their former place of residence. Conversely, those individuals who are not registered residents of the *Gewog* should not be eligible to get any *Tsamdro* on lease as per Section 250 of the Land Act.
11. It has been widely reported that the quality of traditional *Tsamdro* has been going down with restrictions imposed on improvement by strict

forestry rules. It is recommended that clearance of shrubs and bushes within a leased *Tsamdro* should be allowed to improve the quality of rangeland as empowered by Section 247 of the Land Act. This is expected to help in containing the need for larger areas of *Tsamdro* to be leased out.

12. As far as the nationalization of *Sokshing* is concerned, the decision seems to have been taken without much thought and study. There has been serious negative impact of the Land Act 2007 on *Sokshing* as the former rights holders have gone out almost with vengeance to cut the same trees that they have looked after and protected so far. It has also been reported that the Department of Forest officials have started giving permission to cut trees from *Sokshing* to others as well. This has resulted in rampant cutting and deforestation. As requested by the people, it is recommended that the Government should consider repealing this provision in the Land Act of 2007.
13. Rangeland Management: In spite of the fact that more than 50 per cent of livestock feed and fodder resource is from the rangeland, a proper strategy and plan is lacking, besides the lack of rangeland specialists and managers. The introduction of a course on Rangeland Management at the College of Natural Resources and subsequent deployment of a cadre of rangeland managers seems necessary and justified.

The following areas of policy may also be worth a review by the Ministry of Agriculture and Forests in the larger interest of the livestock farmers of Bhutan:

1. The current subsidy policy has remained more or less the same for the last 25 years or more. It may be an appropriate time to look at the possibility

of introducing some amount of direct subsidy for livestock development if the government wants farming to continue (1) to employ a large proportion of our population, (2) contribute to the enhancement of rural income, and (3) contribute to the national self-reliance and food security.

2. Natural resource management including rangeland management and sustainable use policy vis-à-vis the need to maintain 60 per cent forest cover, and the recent decision of the Royal Government to maintain Bhutan as a Carbon Neutral country are important goals which are without challenges. Since the pre-investment survey conducted in the early 80s, natural resource study and mapping for the whole country has never been done. It is felt that *Tsamdro* and forest resurvey could be done simultaneously to assess the ground situation at present and to plan for the future in order to achieve the above objectives. With massive infrastructure building for hydropower, roads, schools, health facilities, industries, hospitality and tourism, etc., taking place, most (if not all) of which impact on *Tsamdro* and Government Reserved Forest land, this may be a good opportunity to take stock of the situation on the ground and plan for the future. According to the Rules and Regulations for Lease of Government Reserved Forest and Government Land issued by the National Land Commission, besides *Tsamdro*, Sokshing and land for commercial agriculture; Government Reserved Forest land can be leased out for business infrastructure (Industrial Estate); mining activity; hydropower and other renewable energy projects; private schools; telecom, mobile and electric towers; power substations/transformers; installation of crushing machines for road construction; housing activities and real estate development (housing colonies, recreational parks, etc.); information technology (IT) parks; service industries (e.g. hotels, vehicle workshops, sawmills,

market sheds, etc.); activities of both government and private corporations; and any other business activities outside industrial estates.

3. Feed and fodder development policy: Various papers and reports seem to suggest that not enough is being done on the research and development aspect of this important subject. The same technology package which was introduced in the 80s seems to be continuing in spite of lack of tangible impact. Both human resource and infrastructure are lacking at present as well as the coverage of different agro-ecological zones. The neglect of the sub-tropical areas in terms of research and technology development seems quite glaring. There seems to be very little knowledge on the indigenous practice of feed and fodder management to build upon.
4. Synchronization of laws, rules and policies of various sectors particularly under the RNR sector and liberal interpretation of some of the laws seems to be urgently required if working at cross purposes is to be avoided.

However, the implementation of such a far-reaching reform will require tremendous amount of resources, time and effort on the part of the Government which seems to have been overlooked. Numerous constraints are foreseen if the new law is to be implemented, such as:

1. The correct information on *Tsamdro* holdings, their locations and present use are scanty particularly with many large owners having given up livestock;
2. An analysis of those livestock farmers who need *Tsamdro* on lease and who are in majority has to be done, which involves a tremendous amount of work. In spite of the best efforts, this information in terms of quantity could not be obtained in Thimphu as well as from the Dzongkhags as it seems such information

- has never been collected and maintained;
3. Very little work has been done to understand the livestock production systems in the sub-tropical areas in particular with regard to pasture development;
 4. Government support for rangeland management has been minimal due to the lack of trained rangeland managers as well as due to their remote locations;
 5. Cooperation and coordination between various sectors such as Forest, Agriculture, etc. seem to have been minimal, and sometimes they seem to be working at cross purposes;
 6. Government support to the livestock sector at present is minimal and lacks incentive for farmers to opt for organized farming by putting in extra efforts and resources;
 7. Conflicting laws, rules and regulations governing use of *Tsamdro* seems to have been the biggest bottleneck for pasture improvement and thereby for the overall livestock development in spite of the tremendous potential; and
 8. Development plans and programs have always been prepared with uniform approach thereby lacking extra incentives for those who are entirely dependent on livestock and where potential for development opportunities are better.

To implement the new provisions regarding *Tsamdro*, the following measures have to be taken:

1. Detailed analysis of the *Thram* holdings particularly with regard to double ownership such as *Tsamdros* belonging to one owner as summer pasture for cattle while at the same time, the same *Tsamdro* belonging to another owner for use as winter pasture for Yaks. In addition, there are supposed to be *Tsamdros* which are disputed between different communities as to its ownership and use;

2. Field verification of doubtful and disputed sites;
3. Estimation of compensation payment and mobilization of resources. Presuming that there are 1.236 million acres of *Tsamdro* in the country according to the *Thram* records of National Land Commission, less what has already been acquired by the Government, the total compensation amount will be around Nu 242.00 million at the compensation rate of Nu 200 per acre, and assuming that one plot of *Tsamdro* will be eligible for one compensation only irrespective of the number of owners involved;
4. Detailed analysis of livestock holdings of individuals, communities and social groups which will require leasing of *Tsamdro* from the Government;
5. Survey and demarcation of the *Tsamdro* areas to be leased out to individuals, communities and social groups according to their livestock strength irrespective of whether they were registered or not;
6. Preparation of *Tsamdro* management plans;
7. Signing of lease agreements;
8. Implementation of *Tsamdro* management plans;
9. Regular monitoring of the progress of implementation of *Tsamdro* management plans;
10. Review of policy for Government support to livestock farmers who are entirely dependent on livestock for their livelihood and well-being;
11. A new policy on natural resource management and plan put in place for implementation followed by immediate implementation;
12. Introduction of a course on Rangeland Management at the College of Natural Resources; and
13. Placement of Rangeland Managers in the Dzongkhags and *Gewogs* with priority given to those areas which warrant immediate attention.

References

- Animal Husbandry Department, 1985. Draft Pasture Policy. Thimphu, Bhutan.
- Animal Husbandry Department, undated. Draft Pasture Policy and Its Implementation during the 6th FYP. Thimphu, Bhutan.
- Animal Husbandry Department, undated. Pasture Policy during Seventh Plan. Thimphu, Bhutan.
- Animal Husbandry Department, 1987. Journal of Animal Husbandry, Volume 9.
- Animal Husbandry Department, 1988. Journal of Animal Husbandry, Volume, 10.
- Animal Husbandry Department, 1992. Bhutan Journal of Animal Husbandry, Volume 13.
- Animal Husbandry Department, 1993. Bhutan Journal of Animal Husbandry, Volume 14.
- Chophyel, P., 2009. Rangeland Management in Bhutan: A Consultancy Report. GEF/The World Bank.
- Department of Animal Husbandry, 1985. Journal of Animal Husbandry, Volume 8.
- Department of Forestry, 1987. Manual of Forestry Orders. Thimphu.
- Department of Livestock, MOAF, 2008. Livestock Statistics, 2008.
- Department of Livestock, MOAF, 2010. Final Guidelines/ Procedures to be followed during the implementation of the 2007 Land Act with respect to lease of *Tsamdro*.

- Dorjee, J., 1986. Estimation of Animal Feed Requirements in the Kingdom of Bhutan. Thimphu: AHD.
- Dorjee, J., 1993. Livestock Development and Pasture Management. Thimphu: National Environment Commission.
- Dorji, S, 2003. Grazing Review (Pasture Policy) and Status of Government land allotted on lease to for pasture development during the 6th Five Year Plan. Bumthang, Bhutan.
- Gibson, T., 1990. Final Report. Highland Livestock Development Project, RGOB/ADB.
- Gibson, T., 1991. Bhutan Field Programme Review and Development Mission. TCP/BHU/0051, RGOB/FAO.
- Gyamtsho, P., 2000. Economy of Yak Herders. Journal of Bhutan Studies, Volume 2, Number 1. Thimphu.
- Gyamtsho P., 2002. Condition and Potential for Improvement of High Altitude Rangelands. Journal of Bhutan Studies, Volume 7, Thimphu.
- Gyamstho, P., 2010. Guidelines for the Distribution and Sustainable Management of High Altitude Tsadroks. MOAF. Thimphu.
- Gyeltshen, T., Yonten, Nirola, H., Rai, K.K. and Tshering, N., undated. Assessment and Monitoring of Grassland Resources. CORRB/MOA. Thimphu.
- Gyeltshen, T., Yonten, Nirola, H., and Tshering, N., undated. Effect of prescribed fire on regeneration of forage species in shrub dominated rangeland: Intermediate findings. Thimphu.
- Gyeltshen, T, and Tshering, N, 2010. Draft *Tsamdro* and Sokshing report east. Watershed Management Division, MOAF. Thimphu.

- Gyeltshen, T. and Tshering, N., 2010. Consultation Meeting with the cattle herders of Haa Dzongkhag. WMD, MOAF. Thimphu.
- Gyeltshen, T., 2010. Report on Land Act 2007 on the Nationalization of *Tsamdro* and *Sokshing*. Watershed Management Division, MOAF. Thimphu.
- Harrison, P.G., 1991. Final Report. Highland Livestock Development Project, RGOB/ADB.
- Helvetas, Bhutan, 1991. Annual Report of Helvetas assisted Projects in Bhutan.
- Miller D.J., 1985. The Development of Range Management in Bhutan, *Bhutan Journal of Animal Husbandry*, Volume 8, Thimphu, AHD/RGOB.
- Miller D.J., 1987. Grassland Resources of Bhutan, *Bhutan Journal of Animal Husbandry*, Volume 9, Thimphu, AHD/RGOB.
- Miller, D. et al, 1990. Draft Interim Report. Highland Livestock Development Project, RGOB/ADB.
- MOA, 2000. Forest and Nature Conservation Rules of Bhutan, 2000, Volume I.
- MOA, 2000. Forest and Nature Conservation Rules of Bhutan, 2000, Volume II.
- MOA, 2001. Proceedings of the National Grazing Policy Workshop, Bumthang, August 21-24, 2001. RGOB
- MOA, 2003. Revised Forest and Nature Conservation Rules, Volume II.
- MOA/ICIMOD/EU/ACB, 2005. Proceedings of National Workshop on Rangeland Management Policy and Strategies. Bumthang, Bhutan.
- Moktan, M.R., Norbu, L., Nirola, Dukpa, K., Rai, T.B. and Dorji, R. 2008. Ecological and Social Aspects of

Transhumant Herding in Bhutan. Mountain Research and Development, Volume 28, No. 1, February 2008: 41-48.

National Land Commission, undated. Gist List of *Tsamdro* Holdings in the country, Volume I.

National Land Commission, undated. Detailed List of *Tsamdro* Holdings of Chhukha, Dagana, Gasa, Haa (Volume II?).

National Land Commission, undated. Detailed List of *Tsamdro* Holdings of Haa, Lhuentse, Mongar, Paro, Pemagatshel, Punakha, Samdrup Jongkhar, Thimphu (Volume III?).

National Land Commission, undated. Detailed List of *Tsamdro* Holdings of Thimphu, Trashigang, Trongsa, Tsirang, Wangdue (Volume IV?).

National Land Commission, undated. Detailed List of *Tsamdro* Holdings of Wangdue, Trashiyagtse, Zhemgang, Paro, Sarpang, Samtse, Bumthang (Volume V?).

National Land Commission, 2007. Land Rules and Regulations of the Kingdom of Bhutan, 2007.

National Statistical Bureau, 2005. Results of National Population and Housing Census 2005, pages 428 to 432. Thimphu, Bhutan.

Norbu, C., et al, 2003. Types of Land Degradation in Bhutan. Journal of Bhutan Studies, Volume 8. Thimphu.

Norbu, L., 2002. Grazing Management in Broadleaf Forests. Journal of Bhutan Studies, Volume 7, Thimphu.

RGOB, 1953. Thrimzhung Chhenmo.

RGOB, 1979. Land Act.

- RGOB, 1995. Forest and Nature Conservation Act of Bhutan, 1995.
- RGOB, 2000. National Environment Assessment Act, 2000.
- RGOB, 2007. Land Act of Bhutan 2007.
- Rinzin and Dorji, J., undated. Rules and Regulations Governing Leasing and Use of Government Reserved Forest Land for Pasture Development. DOL/MOA.
- Roder, R., Wangdi, K., Gyamtsho, P., and Dorji, K., 2001. Feeding the Herds: Improving Fodder Resources in Bhutan. ICIMOD, Kathamdu, Nepal.
- Roder, W., 2002. Grazing Management of Temperate Grassland and Fallows. *Journal of Bhutan Studies*, Volume 7, Thimphu.
- Tamang, N.B., and Perkins, J.M., 2005. Cattle Management systems in Humid Subtropical Areas of Western Bhutan. *Journal of Bhutan Studies*, Volume 13. Thimphu.
- Thinley, P., and Rinzin, undated. Status of National Grazing and *Tsamdro* Policy and Land Lease for Pasture Development. Bumthang, Bhutan.
- Tshering, K., 2010. Draft Report on Consultation Meeting with *Tsamdro* and Sokshing Owners of Lower Choekhor, Bumthang. Watershed Management Division, MOAF. Thimphu.
- Tshering, K., 2010. Draft Report on *Tsamdro* and Sokshing tenural system in a Limbo – Traditional Rights in No-man’s Land: A Case Study of *Tsamdro* and Sokshing in Ura *Gewog*, Bumthang. Watershed Management Division, MOAF. Thimphu.
- Tshering, K., Dorji, S., Gyeltshen, T., Phuntshok, J., Tenzin, J. and Tshering, N., 2010. Back to Office Report on

- Trip to Nubri and Yaksa, Paro Dzongkhag. WMD, MOAF. Thimphu.
- Ura, Karma, 2002. The Nomad's Gamble. *Journal of Bhutan Studies*, Volume 7, Thimphu.
- Wangchuk, T., 2000. Change in the Land Use System in Bhutan: Ecology, History, Culture and Power. *Journal of Bhutan Studies*, Volume 2, Number 2. Thimphu.
- Wangchuk, S., 2002. Grazing Management in National Parks and Protected Areas: Science, Socio-economics and Legislation (Tenure). *Journal of Bhutan Studies*, Volume 7, Thimphu.
- Wangchuk, K., and Dorji, T., undated. Animal Feed Production and Management in Bhutan, CORRB/MOA. Bumthang, Bhutan.

Appendix I

Chapter 10 of the Land Act of Bhutan 2007- Use of *Tsamdro*

Deleting *Tsamdro* from *Thram*

235. All *Tsamdro* rights maintained in the *Thram* prior to enactment of this Act shall be deleted from the *Thram*. Upon deletion, the *Tsamdro* land shall be reverted and maintained as the Government land or the Government Reserved Forests land in rural areas.
236. The reverted *Tsamdro* in rural areas shall be converted to leasehold and those in *Thromde* shall be maintained as the Government land.

Overlapping *Tsamdro* rights with registered land

237. In the event a plot of land has both *Tsamdro* right and permanent ownership right, the latter shall prevail only if it is covered by the cadastral map and is lawfully registered in the *Thram*.

Cash compensation for *Tsamdro* rights

238. The Government shall pay cash compensation to the owners of *Tsamdro* under Land Act 1979 for surrendering their *Tsamdro* rights based on the area registered in the *Thram*.

Confining lease within *Dzongkhag*

239. After 10 years from the date of enactment of this Act, *Tsamdro* shall be leased only to a lessee who is a resident of the *Dzongkhag* where the *Tsamdro* is situated.

Eligibility to lease *Tsamdro*

240. An individual household or community owning livestock shall be eligible to lease the reverted *Tsamdro* which have been converted to Government Reserved Forests land for use as *Tsamdro*.
241. While leasing *Tsamdro*, preference shall be given to the previous rights holders and community.
242. Except as provided in Section 243 of this Act, *Tsamdro* shall be leased based on herd size.

***Tsamdro* lease to Highlanders**

243. Highlanders who are directly dependent on *Tsamdro* may retain their *Tsamdro* rights under lease irrespective of possession of livestock and their herd size.
244. The lease for Highlanders shall be for a period not less than 30 years with the possibility of extension.

No sub-leasing of *Tsamdro*

245. With the exception of the *Tsamdro* leased to Highlanders, there shall be sub-leasing of *Tsamdro*.

Rights to *Tsalam* and *Chhulam* on *Tsamdro*

246. The individuals or communities who have the customary *Tsalam* and *Chhulam* rights on any leased *Tsamdro* shall continue to enjoy such rights.
247. Grazing and pasture development on *Tsamdro* shall be permitted based on a *Tsamdro* management plan. The Department of Forests, Department of Livestock, and the lessee shall be responsible to prepare *Tsamdro* management plan. The following shall be the basic profile of a *Tsamdro* management plan.

- a) Identification of the land:
 - 1. Name and location.
 - 2. Total area of the land.
 - 3. Map showing the location and boundary.
- b) Identification of the lessee:
 - 1. Name of the lessee.
 - 2. Citizenship identity number.
 - 3. Permanent address.
 - 4. Resident working members.
 - 5. Total number of animals.
- c) Management:
 - 1. List of activities to improve the productivity of *Tsamdro*.
 - 2. Location of a dwelling house for herders and shelters for livestock during lease period.
 - 3. Measures to protect the improved *Tsamdro*, e.g. fencing.
 - 4. Time schedule to implement the planned activities.
 - 5. Any assistance and monitoring from the Departments of Livestock and Forest and local Authority.
 - 6. Terms and conditions on deviation from the plan.

Prohibition to use *Tsamdro* for other purposes

- 248. The *Tsamdro* on lease shall not be used for any purposes other than those prescribed in the *Tsamdro* management plan.
- 249. No permanent infrastructure shall be established on the *Tsamdro* lease. Unless renewed, upon expiry of lease, the lessee shall not continue with any activities on *Tsamdro* or no infrastructure shall remain on the land.

Annulment of lease

- 250. If a Highlander abandons his place of domicile, the *Tsamdro* lease shall be annulled.

251. Except as provided in Section 243 of this Act, the *Tsamdro* lease shall not subsist if a leaseholder no longer owns a livestock. The *Tsamdro* lease shall be revoked after 180 days of disowning livestock.
252. If *Tsamdro* is sub-leased by a lessee other than Highlander, the lease shall be annulled.

No transaction of *Tsamdro*

253. Except as provided for Highlanders in Section 245 of this Act, there shall be no transaction of *Tsamdro*, which is on lease. The lease may however, within the stipulated lease period, be inherited.

Maintaining *Tsamdro* records

254. The Ministry shall maintain the records of *Tsamdro* on lease.

Appendix II

Gewog-wise No. of Households and Tsamdro Thram-Holders

1 Bumthang

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
1.1	Chhoekor	1,538.00	69	28,633.40
1.2	Chhumeey	622.00	39	16,108.45
1.3	Tang	349.00	53	14,988.35
1.4	Ura	361.00	16	11,103.61
	TOTAL	2,870.00	177	70,833.81

2 Chhukha

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
2.1	Sampheling (Bhalujhora)	1,431.00	106	1,642.10
2.2	Bjachho	2,114.00	28	1,636.24
2.3	Bongo	2,313.00	83	11,682.03
2.4	Chapcha	698.00	13	3,260.55
2.5	Darla	1,631.00	94	1914.9
2.6	Dungna	127.00	60	10245.54
2.7	Geling	356.00	101	18074.22
2.8	Getana	144.00	13	1253.76
2.9	Lokchina	407.00	49	5660.4
2.10	Metakha	93.00	57	12454.73
2.11	Phuentsholing	5,168.00	151	4555.7
	TOTAL	14,482.00	755	72,380.17

3 Dagana

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
3.1	Deorali	251.00		
3.2	Dorona	149.00	4	
3.3	Drujeygang	532.00	3	586.00
3.5	Emeray/Gaserling	261.00	11	2420.00
3.6	Gozhi	488.00	1	
3.8	Kana/Kalizinkha	350.00	22	5755.67
3.9	Khipisa	223.00	14	2641.66
3.10	Lajap	165.00	10	5001.33

3.11	Lhamoyzingkha	520.00		
3.12	Nichula	94.00		
3.14	Trashiding	307.00	3	
3.15	Tsangkha	286.00	6	0
3.16	Suntale/ Tsendagang	339.00	5	
3.17	Tseza	385.00	38	6557.98
	TOTAL	4,350.00	117	22,962.64

4 Gasa

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
4.1	Goenkname	197.00	3	471.00
4.2	Goenkhatoe	132.00	2	66.33
4.3	Laya	229.00	60	14,866.00
4.4	Lunana	169.00	124	17,896.00
	TOTAL	727.00	189	33,299.33

5 Haa

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
5.1	Bji	660.00	41	54,268.54
5.2	Gakiling		6	2,073.67
5.3	Katsho	671.00	38	25,847.59
5.4	Samar	324.00	152	46,021.46
5.5	Sombaykha	167.00	44	9779.33
5.6	Eusu	468.00	42	17005.47
	TOTAL	2,290.00	323	154,996.06

6 Lhuentse

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
6.1	Gangzur	652.00	56	2,317.88
6.2	Jarey	216.00	30	3,675.45
6.3	Khoma	391.00	36	4,315.09
6.4	Kurtoe	186.00	92	537.45
6.5	Menbi	487.00	19	2053.84
6.6	Minjay	291.00	19	6824.91
6.7	Metsho	243.00	32	3402.18
6.8	Tsenkhar	535.00	12	2164.89
	TOTAL	3,001.00	296	25,291.69

7 Mongar

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
7.1	Chaskar	457.00	2	288.00
7.2	Chhali	345.00	5	298.00
7.3	Drametse Tshogom	783.00	16	365.31
7.4	Drametse Tshowom/ Balam	227.00	29	465.75
7.5	Drepong	601.00	20	203.31
7.6	Gongdue	267.00	10	1497.54
7.7	Jurmey	285.00	15	119.44
7.8	Kengkhar	423.00	5	165
7.9	Mongar	1,327.00	14	182.98
7.10	Narang		12	165.48
7.11	Ngatshang	384.00	23	704.18
7.12	Saleng	616.00	70	6769.01
7.13	Shermung	383.00	51	2916.96
7.14	Silambi	289.00	57	1651.03
7.15	Thangrong	369.00	7	50.56
7.16	Tsakaling	374.00	7	2980.8
7.17	Tsamang	218.00	24	2181.89
	TOTAL	7,348.00	367	21,005.24

8 Paro

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
8.1	Dogar	424.00	29	5762.17
8.2	Dopshari	619.00	12	1,577.15
8.3	Doteng	190.00	3	5,143.56
8.4	Hungrel	344.00	1	200
8.5	Langong	706.00	17	31,528.09
8.6	Lungnyi	680.00	20	3707.02
8.7	Naja	611.00	92	15,167.20
8.8	Shaba	845.00	10	6561.22
8.9	Tsento	905.00	40	26990.1
8.10	Wangchang	1,794.00	23	4925.42
	TOTAL	7,118.00	247	101,561.93

9 Pemagatshel				
	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
9.1	Chhimung	176.00	10	128.33
9.2	Chongshing Borang	228.00	3	39.00
9.3	Dechhenling	502.00	2	2,000.00
9.4	Dungmin	355.00	4	286.00
9.5	Khar	411.00	3	213.34
9.6	Nanong	532.00	9	422.34
9.7	Norbugang	910.00	4	4500
9.8	Shumar	853.00	15	374.9
9.9	Yurung	318.00	2	12.66
9.10	Zobel	596.00	25	868
9.11	Chhokhorling			
	TOTAL	4,881.00	77	8,844.57
10 Punakha				
	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
10.1	Bjimena		5	3,470.00
10.2	Chhubu	350.00	25	1,805.00
10.3	Dzomi	584.00	5	1,260.00
10.4	Goenshari	129.00	9	2,993.00
10.5	Guma	816.00	14	6888
10.6	Kabji	447.00	18	19042
10.7	Lingmukha	124.00	13	5314
10.8	Shengana	284.00	3	1721
10.9	Talo	368.00	8	1428
10.10	Toewang	285.00	32	7316
	TOTAL	3,387.00	132	51,237.00
11 Samdrup Jongkhar				
	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
11.1	Deothang	557.00	4	4,395.74
11.2	Gomdar	960.00	16	769.80
11.3	Langchenphu	394.00		
11.4	<u>Lauri</u>	<u>697.00</u>	24	2,335.16
11.5	Martshala	545.00	52	8202.9
11.6	Orong	2,482.00	22	3991.21

11.7	Pemathang	297.00		
11.8	Phuntshothang	576.00		
11.9	Samrang	22.00		
11.10	Serthi	421.00	12	4401
11.11	Wangphu		5	629
	TOTAL	6,951.00	135	24,724.81

12 Samtse

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
12.1	Bara	606.00	27	6,494.00
12.2	Biru	573.00	39	200.44
12.3	Chargharey	640.00		
12.4	Chengmari	763.00	9	6,871.00
12.5	Denchhukha	238.00	27	1,861.36
12.6	Dorokha	891.00	89	12,812.85
12.7	Dungtoe	329.00	21	3,111.79
12.8	Lahireni	492.00	46	433.53
12.9	Mayona	242.00	70	8,844.36
12.10	Pagli	2,017.00	71	871.83
12.11	Samtse	1,624.00	79	3,446.35
12.12	Sipsu	696.00		
12.13	Tading	790.00	60	2,128.42
12.14	Tendu	877.00	40	1,511.50
12.15	Ugyentse	315.00		
12.16	Yoeseltse	541.00		
	TOTAL	11,634.00	578	48,587.43

13 Sarpang

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
13.1	Bhur	289.00	No registered <i>Tsamdro</i>	
13.2	Chhuzargang	483.00	No registered <i>Tsamdro</i>	
13.3	Dekiling	732.00	No registered <i>Tsamdro</i>	
13.4	Dovan	397.00	No registered <i>Tsamdro</i>	
13.5	Gelephu	2,635.00	No registered <i>Tsamdro</i>	
13.6	Hiley	473.00	No registered <i>Tsamdro</i>	

13.7	Jigmechholing	678.00	17	365
13.8	Sengye	126.00	No registered <i>Tsamdro</i>	
13.9	Serzhong	394.00	No registered <i>Tsamdro</i>	
13.10	Shompangkha	746.00	No registered <i>Tsamdro</i>	
13.11	Tarithang	45.00	No registered <i>Tsamdro</i>	
13.12	Umling	348.00	No registered <i>Tsamdro</i>	
	TOTAL	7,346.00	17	365.00

14 Thimphu

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
14.1	w	723.00	15	6,080.74
14.2	Chang	16,450.00	49	13,956.99
14.3	Dagala	247.00	49	68,538.38
14.4	Geney	184.00	8	1,841.32
14.5	Kawang	591.00	28	12,853.25
14.6	Lingzhi	120.00	36	50,499.59
14.7	Mewang	844.00	23	14,434.15
14.8	Naro	39.00	26	15,230.03
14.9	Soe	37.00	21	17,405.34
14.10	Toebisa	454.00	17	16,467.33
	TOTAL	19,689.00	272	217,307.12

15 Trashigang

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
15.1	Bartsham	424.00	6	385.66
15.2	Bidung	391.00	2	847.93
15.3	Kanglung	1,342.00	28	3,799.27
15.4	Kangpara	518.00	22	2,583.38
15.5	Khaling	908.00	36	5,537.50
15.6	Lumang	985.00	14	581.23
15.7	Merak	270.00	86	40,780.50
15.8	Phongme	599.00	18	1,266.99
15.9	Radhi	848.00	3	285.36
15.10	Sakteng	546.00	100	42,799.06
15.11	Samkhar	1,066.00	16	1,485.12

15.12	Shongphu	716.00	17	2,873.32
15.13	Thrimshing	537.00	4	911.22
15.14	Udzorong	624.00	20	1,062.51
15.15	Yangnyer	507.00	11	530.32
	TOTAL	10,281.00	383	105,729.37

16 Trashiyangtse

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
16.1	Bumdeling	390.00	30	1,038.84
16.2	Jamkhar	313.00	13	236.20
16.3	Khamdang	671.00	7	11.81
16.4	Ramjar	301.00	4	96.33
16.5	Toetsho	474.00	5	351.00
16.6	Tomzhang	409.00	14	648.90
16.7	Yangtse	804.00	42	1,341.20
14.8	Yalang	402.00	12	286.07
	TOTAL	3,764.00	127	4,010.35

17 Trongsa

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
17.1	Dragteng	516.00	22	5,121.62
17.2	Korphu	220.00	60	27,319.94
17.3	Langthil	556.00	115	18,937.61
17.4	Nubi	1,009.00	46	4,512.26
17.5	Tangsibji	438.00	64	6,091.46
	TOTAL	2,739.00	307	61,982.89

18 Tsirang

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
18.1	Barshong	148.00	No registered <i>Tsamdro</i>	
18.2	Beteni	218.00	No registered <i>Tsamdro</i>	
18.3	Dunglegang	224.00	No registered <i>Tsamdro</i>	
18.4	Gosaling	277.00	No registered <i>Tsamdro</i>	
18.5	Kikhorthang	902.00	No registered <i>Tsamdro</i>	

18.6	Mendrelgang	301.00	No registered <i>Tsamdro</i>	
18.7	Pataley	259.00	No registered <i>Tsamdro</i>	
18.8	Phuentenchhu	231.00	No registered <i>Tsamdro</i>	
18.9	Rangthangling	284.00	No registered <i>Tsamdro</i>	
18.10	Semjong	233.00	1	0.50
18.11	Tsholingkhar	353.00	No registered <i>Tsamdro</i>	
18.12	Tsirangtoe	221.00	4	
	TOTAL	3,651.00	5	0.50

19 Wangdue Phodrang

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
19.1	Athang	152.00	22	9,736.88
19.2	Bjena	521.00	43	7,460.23
19.3	Daga	261.00	32	11,072.78
19.4	Dangchhu	332.00	38	8,005.15
19.5	Gangte	355.00	36	6,480.55
19.6	Gasetsho Gom	349.00	27	1,726.99
19.7	Gasetsho Wom	246.00	11	12,744.79
19.8	Kazhi	297.00	44	18,012.83
19.9	Nahi	152.00	7	2,198.00
19.10	Nyisho	467.00	12	2,764.35
19.11	Phangyuel	236.00	18	7,119.76
19.12	Phobji	346.00	21	11,574.80
19.13	Ruepisa	353.00	23	2,139.61
19.14	Sephu	417.00	70	36,294.79
19.15	Theedtsho	1,743.00	3	1,542.00
	TOTAL	6,227.00	407	138,873.51

20 Zhemgang

	Gewog	No. of Households	Tsamdro Holders No	Tsamdro Acreage
20.1	Bardo	373.00	23	2,930.00
20.2	Bjoka	155.00	6	1,998.00
20.3	Gozhing	298.00	17	395.00
20.4	Nangkor	617.00	88	16,568.00
20.5	Ngangla	431.00	10	37.00
20.6	Phangkhar	220.00	23	2,491.00

92 • *Rangeland Tenure Transfer*

20.7	Shingkar	325.00	37	11,517.00
20.8	Trong	960.00	90	34,716.00
	TOTAL	3,379.00	294	70,652.00

Total Tsamdro holders in the country	
	5,205.00

Total No. of Households in the country	
	126,115.00

Appendix III

Draft Pasture Policy, March 1985

Royal Government of Bhutan, Ministry of Agriculture & Forestry, Animal Husbandry Department

Background and Justifications

Inadequate feed and fodder resources and poor quality pastures are the major constraints to the livestock development in the country. The country has an estimated area of about 1 million acres of registered pasture land of which nearly 40% is scrub, unproductive and very low yielding. In spite of the large areas of pasture land, the nutritional availability for livestock is inadequate, mainly due to inferior quality of natural grass land and general absence of good quality legumes. The grazing value of native vegetative cover is poor and crop rotations at present do not provide much quality fodder due to lack of proper cropping pattern. Throughout most of the temperate regions, there is a serious feed shortage during the winter months due to low soil temperature and moisture content which retards plant growth.

According to recent statistics the livestock population in the country has been estimated as follows:

Cattle	-	300,000
Yaks	-	26,000
Sheep	-	40,000
Goats	-	42,000
Buffaloes	-	4,292
Horses	-	22,985

The estimated stock carrying capacity of local pasture and improved pasture are as follows:

Carrying Capacity of local pastureland taking 40% as unproductive

1. Subtropical region – 5 acres per livestock unit
2. Temperate region - 10 acres per livestock unit
3. Alpine region – 25 acres per livestock unit

Carrying capacity of improved Pasture land

1. Subtropical region – ½ acre per livestock unit
2. Temperate region – 1 acre per livestock unit
3. Alpine region – 25 acres per livestock unit

At an average, the native pasture can carry 1 livestock unit on 13 acres which means a total requirement of 45,00,000 acres to maintain 350,000 livestock units to be established by the end of the plan period. This work out to a deficit of 35,00,000 acres if no steps are taken. At present the shortage of pastureland is not felt due to the alternative grazing and feeding like fallow lands, forests and crop residues which is not (encouraged) in more stabilized form of livestock farming. However, if appropriate steps are taken to improve the pasture land through the introduction of a pasture policy involving a systematic form of distribution and improvement, the stock carrying capacity of the existing pasture lands can be enhanced to 2.16 acres to 1 livestock unit. The shortage can be made up by abolishing the *Tseri* system and its conversion into pasture land.

An important feature of grazing practices of livestock in the country is seasonal migration from home area of the farmers to warmer places where mainly browsing in the forest is available. A considerable proportion of farmers, however, adopt stationary or semi-migratory type of livestock

farming. A very small proportion of livestock rearers have their own pastures and a good majority grazes their animals on Government or community land. The farmers do not either improve their own pastures or take efforts to improve the grazing areas belonging to the Government or community pasture land.

In the Alpine region, *Brogpas* do not own land for grazing their “*Lanor*” (Yaks). Many herds are being grazed on rented private land on payment of relatively high charges in cash and/or kind. Problem of Yak feeding is felt by all, especially those who do not own pasture land, during the winter periods.

Presently, the Department of Animal Husbandry has undertaken to augment fodder/grass production and improving grass lands/pastures. These measures are not making much headway because of existing land use/land ownership laws and policies covering private and village pastures. Large areas are under private ownership and many of these do not have direct interest in livestock raising, and hence lease out lands to others for grazing purposes. The latter, not having ownership of these lands do not take measures to improve the livestock carrying capacity of the grazing lands. Resulting from this social outlook on pasture, there is a heavy pressure on the grass lands and consequently they are overgrazed to such an extent that not only palatable plants have degenerated but also the landscape is exposed to erosion and ecological imbalance. This tragedy can only be salvaged through the introduction of exotic high yielding nutritive grasses and legumes and/or appropriate fodder trees for which the necessary social atmosphere needs to be created as a pre-requisite.

The results of the work done so far on pasture improvement indicate that improved pasture yields 10 times more than the native pasture species in the temperate regions under favorable conditions. In the sub-tropical areas, the yield is expected to be greater because there is round the year growth. In the Alpine regions, the result is expected to improve substantially with the implementation of this policy because of controlled grazing and improved pasture inputs.

Objectives

The pasture policy of Bhutan is formulated with the following objectives:

1. To improve the feed value of the roughages for the better performance of genetically superior breeds which has been introduced in the country because of their excellent performance as compared to the local breed.
2. To stop the migratory system by providing sufficient pasture land in the particular area thereby reducing the mortality rate of animals and diseases outbreak in the country thus saving the nation's wealth of livestock.
3. Uniform distribution of pastureland amongst the farmers which will enable them to adopt a proper system of land use pattern.
4. To control the erosion problems by providing sufficient vegetative coverage of the soil and also through propagation of fodder trees in the steep slopes and erosion prone areas.
5. Nationalizing the registered pastureland, either private or community and reallocation of such pastures according to stock units to effect the proper utilization of feed resources.

6. Improvement of grasslands/pastureland through introduction of high yielding nutritious fodder species through appropriate techniques thereby increasing the stock carrying capacity of a given area.

Pasture Policy

The pasture policy will come into force with effect fromin super cession to the section 8 covering pasture Law under the land law – 1979.

1. All the existing pastureland in the country will be nationalized.
2. All registered private pastureland will be purchased by the Government at the prevailing government rate (i.e. Nu. /- per acre)
3. All the community pastureland (whether registered or not) will be nationalized without paying any compensation.
4. After nationalization of pastureland, the Government will re-distribute such lands to the farmers on the basis of livestock unit owned by the farmers as per item 6 of this policy.
5. The pasture land will be allotted to farmers on lease system for a period of 30 years.
6. While allotting pasture land the following acreage per livestock unit are suggested:
Alpine region – 10 acres per livestock unit
Temperate region – 1 acre per livestock unit
Sub-Tropical region – ½ acre per livestock unit
7. While the norms at item 6 of this policy are based on carrying capacity of improved pasture, a farmer may graze his excess stock in the open grazing lands as per item 8 of this policy after obtaining the permission from the concerned authority, for a period of five years within which the pastureland allotted to him/

her will be improved.

8. After allotting pastureland to farmers, any surplus land within that area should be demarcated as open grazing land to enable the farmers to graze their animals as mentioned at item 7 of this policy. For such grazing, license should be obtained.
9. Pastureland which is allocated nearby villages (*Ningkhor Tsamdrog*) will be allotted to the maximum.
10. The pastureland which falls under the following slope percentage may be allotted to the farmers and if pastureland exceeds the mentioned slope percentage, such land will not be allotted.
Alpine Region – up to 60 percent
Temperate Region – up to 50 percent
Sub-tropical Region – up to 50 percent
11. During the allotment of pastureland rocky, unproductive and water shed areas should be left out.
12. High altitude inhabitants (*Brogpas*) should be permitted to burn/clear bushes and shrubs. As per His Majesty's command to Director of Animal Husbandry on 19th January 1981, such burning will be jointly done by the Department of Forest and Animal Husbandry. It should be ensured that these cleared areas are re-sown with legume seeds immediately to prevent possible effects of erosion.
13. While allotting pastureland to the alpine herders who have migratory system due to climatic condition, allotment should be done at the rate of 50% in the alpine and 50% in the sub-alpine areas respectively in direct proportion to the length of grazing period in respective areas as per the norms suggested at item 6 of this policy.
14. While the 50% distribution of pastureland in Alpine

and in the sub-alpine applies only to the high altitude herders due to natural limiting factor, such allotment will not be entitled by the farmers residing in temperate and sub-tropical regions.

15. A farmer owing less than 30 stock unit in the livestock priority area will be allotted with 300 acres in the alpine region.
16. In the Dzongkhags where there are no registered pastureland and livestock rearing is a livelihood, allocation will be done from the existing grazing land.
17. Farmers who are interested to set up livestock farms but have no pastureland will be allotted with pastureland as per the norm suggested at item 6 of this policy provided that the farmers identify an area from the open grazing land and the irrigation resources are available in the proposed area. Under such condition, a maximum period of three years is allowed to enable him to establish farm and improve pasture failing which the allotted land will be confiscated with the existing infrastructure without any compensation.
18. Pastureland allotted to individuals should be improved through removal of under-growth (scrub, bushes), cultivation of grass and legume through appropriate techniques and fencing.
19. If any individual fails to improve his pastureland within five years of allotment, the land will be seized by the government without compensation, and allotted to the needy farmers.
20. Any standing or naturally growing trees in allotted pastureland will remain the property of government as per the Bhutan Forest Act 1969. But in the process of pasture improvement work, if technically found that such trees needs felling, permission have to be obtained from the Department of Forest.

21. Fodder trees planted by the individual in his pastureland shall be used by him for lopping purposes only. For use as timber, either for personal or commercial purposes, it should be governed by Forest Act 1969.
22. No combined grazing system will be entertained. Renting of pastureland on individual basis and selling of allotted pasture is completely ruled out.
23. Fine shall be imposed for unauthorized grazing as in case of destruction of cereal crops by cattle as stipulated in the Land Act 1979.
24. Should there be any forest fire initially started from a farmer's pastureland, the farmer will be penalized as per the Bhutan Forest Act 1969.
25. Allotment of pastureland near the National Highway or any motor able road will be done in accordance with the section 20 of the Bhutan Forestry Act 1969.
26. Any stream that flows through the allotted pastureland will be considered as common stream.
27. While allotting pastureland, consideration should be given to respect the tradition system if "chulam" and "Tsalam" with a maximum road breadth of 5 ft (i.e. 2.5 ft from both sides of allotted pastureland).
28. If at any time, the Government requires any pastureland, the Government has the right to take over such land as per section Ka 6-8 and Ka 8-2 of the Land Law 1979.
29. Purchase of pastureland and re-allocation will be done by Animal Husbandry Department in collaboration with Forest Department and Ministry of Home Affairs.
30. Migration of cattle from temperate to sub-tropical zone shall be allowed to a maximum of five years during which the farmer will complete the improvement

work on his temperate pasture.

31. A nominal lease tax on the pastureland acreage basis will be levied. The following are suggested:

Alpine Region – Nu. 0.30 per acre

Temperate Region – Nu. 3 per acre

Sub-tropical Region – Nu. 6 per acre

Pasture Development

1. In alpine regions, natural pasture land will be improved through annual fertilizing, burning of bushes, over-sowing and controlled grazing management. Introduction of exotic species will be carried out to produce fodder for conservation during the lean period.
2. In lower temperate zones and subtropical zones, fodder species are recommended, and appropriate practices, pasture management, fodder conservation and intercropping of fodder with orange will be carried out.
3. Pasture inputs like seed and fertilizer will be given free of cost during the first two years and after that charged with full cost.
4. Pasture inputs will be made available at every Animal Husbandry sections of the various Dzongkhags for distribution/sale.

5. IMPLEMENTATION

The Department of Animal Husbandry shall be the sole executing agency in collaboration with the Forest Department, Ministry of Home Affairs and the various Dzongkhag Administration offices. A committee comprising of the above agencies need to be set up for implementing the work. It should be first started on the alpine and temperate pasture in the Livestock priority areas not only because the

bulk of pastureland lies in this category, but also because this will allow for the planning and implementation of appropriate steps to contain the livestock population of this area within itself so that when the nationalization takes place in the sub-tropical regions, farmers are not affected by the loss of grazing lands in the lower regions. Until such time as the improvement of the alpine and temperate pasture has reached a stage where the area allotted can carry the specified stock numbers, the traditional practice of migration may be continued as a transitional measure for a maximum period of five years.

Pasturelands situated near or around a village (*Nenkor Tsamdog*) must be divided in such a way that every household owning draught animals and milch cows can get a share of it. In areas where no open '*Nenkor Tsamdog*' is available such as Tsirang, a plot of forestland for plantation of fodder trees in the ratio 10 trees to 1 livestock unit may be given.

The process of nationalization and redistribution should be completed within 20 years (Annexure I). Simultaneous to this process, a planned strategy of improving the quality aspects of the grasslands should be adopted through the introduction of exotic grasses and legumes, fodder trees and suitable management practice.

The following plan of implementation can be proposed:

Stage 1 – Collection of information:

The following information need to be collected through the respective Dzongkhag Administration:

- A list of household owning registered pastureland along the acreage as in format A.
- A list of village owning community pastureland

with the acreage in format B.

- A list of all the households within the block-wise owning/not owning livestock along with the class of livestock in format C.

Stage 2 – Physical verification

Physical verification of the information collected in stage 1 through surveying of each holding in Format D._

Stage 3 – Data Compiling

Compilation of data collected in format D block-wise or district-wise and work out an unbiased system of redistribution taking into account all the factors recorded in format C and D. This will ensure that every household gets an equal share of each type of grassland, moreover the extremes such as very steep slopes, water shed areas, etc. can be left out and appropriate utility strategies planned such as plantation of fodder trees in keeping with the Social Forestry Act. Streams passing through an individual pasture can be demarcated as community (Government) property.

Stage 4 – Payment of owners

Owners of private pasture shall be paid Nu.30 per acre irrespective of the climatic division into sub-tropical, temperate or alpine. Payment must be made only after the physical verification is satisfactorily attested by the Department of Animal Husbandry.

Stage 5 – Redistribution

Redistribution shall be done on the basis of animal units calculated from the format B. The calculation of animal unit shall be based on the following assumption:

- a) Cattle – 1 adult = 1 livestock unit _____
2 calves below 2 years = 1
livestock unit
- b) Sheep – 5 adults = 1 livestock unit
8 lambs = 1 livestock unit

While allotting the land, the farmers would need to sign an agreement as shown in Annexure II. A license will then be issued to the owners legalizing his right to graze or cultivate the leased for fodder production as appended (Annexure II).

Stage 6 – Improvement of leased land

Together with the Department of Animal Husbandry through its extension service and professional expertise, each farmer should formulate a package of pasture improvement programme.

This shall be aimed at improving the quality and quantity of the fodder through the introduction of exotic grass and legume species, appropriate fertilizing and management practices. The improvement programme shall follow the redistribution programme simultaneously so that the time gap between unimproved pasture and improved pasture is shortened accordingly thereby enabling the implementation of the whole programme in a systematic manner. During the establishment year, seeds shall be given free of cost and it is envisaged even if reseedling is necessary farmers will be able to purchase the seeds on full cost or produce their own requirements. Phosphatic fertilizers and others, if necessary after determination of soil tests, should be given free of cost in the establishment year and the following year so as to arouse the interest of the farmer by the benefits of fertilization so that by the third year they shall be prepared to buy their own requirement. Moreover, manure can be used to

replace the chemical fertilizers gradually since from experiments, it was found that after seven years of continuous manuring on improved pasture, the yield from this treatment overtakes that of superphosphate. The improvement programme must be carried out over a period of five years. For implementing the improvement programme, the following inputs will be made available to the farmers:

	Establishment year	2 nd year	3 rd year
Grass and legume seeds	Free	-	-
Fertilizers (Phosphorous)	Free	Free	-
Fencing	Long term credit	-	-
Fodder tree seedling	Free	-	-

Well established pasture can last for years if managed properly. To manage the improved pasture effectively and beneficially, fencing becomes an essential precondition for the success of that pasture development programme. Therefore, long

term credit loans should be made available to the farmers, recovery of which can be made from grass seed production on their arable fields or through alternative sources. Annual targets for improvement will need to be worked out systematically so that realistic goals are achieved.

Stage 7 – Advisory and control service

A strong service with the dual function of advisory and policing shall need to be set up by the Department of Animal Husbandry. Inputs like seeds and fertilizers should be made easily available to the farmer as required (either free or on full cost). The leased pasture lands will need to be visited not only to confirm proper utilization but also to chalk out appropriate techniques of improvement and management of the pastures so that the farmers get the maximum production from their holdings.

The service should also be authorized to implement the pasture Act of the Royal Government of Bhutan.