

# Shifting Cultivation in Bangladesh, Bhutan, and Nepal: Weighing Government Policies against Customary Tenure and Institutions

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# Shifting Cultivation in Bangladesh, Bhutan and Nepal: Weighing Government Policies against Customary Tenure and Institutions

Compiled by

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# Foreword

Shifting cultivation is a dominant form of farming in the eastern Himalayas, practised by a diverse group of indigenous people from the most marginalized social and economic groups. The survival of these indigenous people and the survival of their forests are inextricably linked. However, policy makers and natural resource managers perceive shifting cultivation to be wasteful, destructive to forests, and unsustainable. Although policies have tried to ban it or 'wean' shifting cultivators away from the practice by incentivizing them to take up alternative options, shifting cultivation persists. Others argue that shifting cultivation should be permitted as it is not only steeped in culture and tradition, but constitutes the main source of livelihood for many shifting cultivators. These two points of view are at odds with each other and do not seek a pragmatic approach. As a result, neither the livelihood issues of the shifting cultivators nor the health of the forest ecosystems on which shifting cultivation depends are properly protected. At the same time, the growing population and intrusive market forces call for improvements in shifting cultivation. Therefore, shifting cultivators and policy makers have no choice but to seek common ground to improve shifting cultivation for farmers and forests. A joint solution is also required to address climate change as good forest cover plays a prominent role in the sequestration of greenhouse gases such as carbon dioxide.

The work of the Nagaland Empowerment of People through Economic Development (NEPED) project and the International Centre for Integrated Mountain Development (ICIMOD) in Northeast India, Bhutan, and Nepal has confirmed that it is possible for policy makers and shifting cultivators to work together. However, more research is necessary to understand how the shifting cultivation policies of governments can be more supportive in addressing the needs of shifting cultivators. The need for more knowledge to understand and address shifting cultivators' land tenure problems becomes clear. In addition, a review of the land use alternatives promoted by governments is also necessary. As a result, a research project titled 'Regional Project on Shifting Cultivation: Promoting Innovative Policy and Development Options for Improving Shifting Cultivation in the Eastern Himalayas' was implemented in Bangladesh, Bhutan, and Nepal.

Research teams were formed in the three countries, which, together with ICIMOD's project team, prepared a research protocol. The research teams carried out the research for their respective countries in keeping with this research protocol. This publication is the main product of their research. It is divided into two parts: Part 1 presents the findings of the study on the effect of government policies on customary tenure and institutions and alternative options. Part 2 presents a discussion of the findings of the three countries as well as some general and country-wise recommendations. It is hoped that the findings of the research will enable governments to improve their shifting cultivation policies, which will, in turn, help shifting cultivators to improve their economic and social status.

**David Molden, PhD**  
Director General

# Glossary

badya	A person who invokes God and offers prayers (Bangladesh)
bandobasti	A government land allotment programme in the Chittagong Hill Tracts, under which customarily owned community lands were allocated to shifting cultivators (Bangladesh)
Bheja	The traditional institution governing shifting cultivation followed by Magars of Nawalparasi (Nepal)
dzongkhags	An administrative unit equivalent to a district (Bhutan)
jhum	The practice of shifting cultivation (Bangladesh)
jhuming	The act of undertaking shifting cultivation (Bangladesh)
jhumiyas	Shifting cultivators (Bangladesh)
Jimmawal	The traditional institution set up by the government to collect 'sherma' and govern shifting cultivation by the Chepangs of Gorkha and Chitwan (Nepal)
karbari	A village functionary (Bangladesh)
khoriya	The practice of shifting cultivation (Nepal)
kipat	Land used for shifting cultivation in Taplejung and Sankhuwasabha by Limbus (Nepal)
kipat	The traditional institution governing shifting cultivation, which replaced 'Suvaangi', followed in Taplejung and Sankhuwasabha (Nepal)
lhose	The shifting cultivation land of the Sherpas (as opposed to the Limbus) in Taplejung and Sankhuwasabha (Nepal)
meesup	A community-based system of protecting forests from fire (Bhutan)
mouza	A group of villages in the Chittagong Hill Tracts covering an area of 3.9–52 square kilometres (Bangladesh)
mukhiya	Head of a household or community (Bhutan and Nepal)
pangzhing	Land used for shifting cultivation and the act of shifting cultivation at high elevations (Bhutan)
para	Village (Bangladesh)
reesup	A community-based system of forest protection (Bhutan)
sadar upazilla	Sub-district (Bangladesh)
saga	A bamboo post placed in the ground to indicate the selection of a piece of land for 'jhum' (Bangladesh)
sherma	A tax on khoriya land paid to the Jimmawal by the Chepangs of Gorkha and Chitwan (Nepal)
suvaangi	The system of land allocation (later called kiptat) for shifting cultivation in Taplejung and Sankhuwasabha (Nepal)
suvaas	Limbu headmen (genesis of the Limbu surname 'Subba') who allocated land under the 'suvaangi' system in Taplejung and Sankhuwasabha (Nepal)
taangsing-khoksing	Cleared and cultivated land collectively owned by the Limbus and governed by customary tenure and institutions in Taplejung and Sankhuwasabha (Nepal)
tsamdrog	Grazing land (Bhutan)
tseri	Land used for shifting cultivation and the act of shifting cultivation (Bhutan)

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The ICIMOD is particularly grateful to the shifting cultivators in the research sites in the three countries for participating in the research and sharing their knowledge and insights about shifting cultivation. Equally, the Centre would like to express its gratitude to the policy makers from the three countries for taking part in the research. ICIMOD’s editorial and publication team also deserve to be acknowledged for their editorial input and for bringing this book to its final form.

# Acronyms and Abbreviations

CHT	Chittagong Hill Tracts
HKH	Hindu Kush Himalayas
ICIMOD	International Centre for Integrated Mountain Development
ILO	International Labour Organization
PCJSS	Parbattya Chattagram Jana Samhati Samiti
RPSC	Regional Project on Shifting Cultivation
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples

# Executive Summary

Policy makers in Bangladesh, Bhutan and Nepal view shifting cultivation as primitive, ecologically destructive, and an economically inefficient use of forest resources. Accordingly, government policies in these countries prescribe settled agriculture, horticulture, cash crop plantations, and fast-growing forest plantations as alternatives to shifting cultivation. However, despite these policies and alternative development strategies, shifting cultivation persists.

A study on good practices in shifting cultivation conducted by ICIMOD and its partners in Bangladesh, Bhutan, India, Myanmar, and Nepal in 2003 concluded that the effect of government policies on shifting cultivation in terms of customary tenure and institutions, as well as the alternative options promoted by the governments, was little understood. Hence, ICIMOD and its partners in Bangladesh, Bhutan, and Nepal conceptualized and implemented a project titled 'Regional Project on Shifting Cultivation (RPSC): Promoting Innovative Policy and Development Options for Improving Shifting Cultivation in the Eastern Himalayas'.

The project, which ran from 2008 to 2012, premised that the alternative options promoted by the governments would transform land tenure from common property to private property, reducing land for shifting cultivation and curtailing shifting cultivators' access to shifting cultivation lands. Accordingly, the project researched the effect of government policies on customary tenure and institutions, as well as alternative options to shifting cultivation. In Bangladesh, the research was conducted in ten villages in Rangamati and Bandarban districts in the Chittagong Hill Tracts (CHT); in Bhutan it was conducted in six villages in six districts where shifting cultivation is prevalent; and in Nepal in seven villages of seven districts in the mid-hills of the Western, Central, and Eastern Development Regions.

The information gathered was largely of a qualitative nature, collected through a literature review, focus group discussions, and key informant interviews. Participants in the focus group discussions and key informant interviews were purposively selected. Group discussions were facilitated by facilitators. The information collected was analysed based on an interpretative philosophy.

## Findings

In Bangladesh, during British rule (1860–1947), shifting cultivation land was classified into two categories – Government Reserved Forest and Unclassed State Forest – that put it under state ownership. Land was allotted to shifting cultivators from Unclassed State Forest for plough cultivation and cash crop plantation. The jurisdiction of customary institutions over the Government Reserved Forest ended, and their jurisdiction over Unclassed State Forest was limited to supporting the state in the allotment of land for plough agriculture and shifting cultivation, the control of forest fires, and the collection of tax. The Deputy Commissioner was empowered to lease Unclassed State Forest for plough cultivation and plantation, divesting traditional institutions of their customary power. During the period when Bangladesh was known as East Pakistan (1947–1971) customary tenure and institutions were weakened further. The state exercised more control over shifting cultivation. The regulation that restricted Bengali immigration into the CHT during the British period was lifted and Muslim refugees from Assam were settled in the CHT. During this period, paper mills and dams were constructed, reducing the land available for shifting cultivation.

The advent of the Bangladesh Period (from 1971) continued to weaken customary tenure and institutions. The restriction on leasing land to non-residents of the CHT was withdrawn and the leasing of land to non-residents for commercial plantation began. The government claimed hill land as state property and started to resettle ethnic Bengalis in the CHT. The control of shifting cultivation by the Forest Department through its Jhum Control Division undermined customary tenure. The 'bandobasti' (land allotment) programme was suspended by the government, depriving many shifting cultivators of private tenure and creating inequity in private tenure. Military establishments and conservation agencies continued to occupy shifting cultivation lands. The authority of the circle chiefs, headmen, and karbaris (village functionaries) granted by the CHT Regulation of 1900 was also ignored. The CHT

Act of 1989 transferred land administration authority from the Deputy Commissioner to the Hill District Councils, but, unfortunately, the Act has not yet been implemented. The CHT Peace Accord of 1997 is yet to be honoured and translated into action.

In Bhutan, the policies that have affected customary tenure and institutions include the Thrimzhung Chhenmo of 1957, various National Assembly resolutions, legislation related to forests and land resources, royal decrees, and agricultural development plans. While shifting cultivators hold distinctive cultural beliefs related to shifting cultivation, customary institutions have long been redundant. The Land Act of 2007 removed shifting cultivation from the category of legal land uses in Bhutan, implying that it cannot be practised. While the law implies that shifting cultivation lands are to be registered as wetland or dryland or as land for horticulture, geophysical unsuitability and lack of financial resources limit the conversion of shifting cultivation land to these uses.

In Nepal, government policies do not recognize shifting cultivation as a legitimate land use. The main policy that affects shifting cultivation is the Forest Act of 1993, which considers shifting cultivation land to be part of national forest, because such land is not registered as private land. This and other acts (such as the Civil Code, 1854 and the Land Act, 1964, among others) make customary tenure over shifting cultivation land and shifting cultivation institutions 'extra-legal'. However, shifting cultivators still use their customarily owned shifting cultivation land, but tenure insecurity discourages them from investing in improving the productivity of this land.

In Bangladesh and Bhutan, alternative options to shifting cultivation are prescribed by government policies. However, government support for developing alternative options in terms of agricultural extension and research services, marketing, credit schemes, and financing need to be improved. In Nepal, as the government policies that affect shifting cultivation do not recognize it as a land use, alternative options have been developed by the shifting cultivators themselves. The alternative options in the research sites in Bangladesh include annual agricultural cash crops, fast growing fruit, mixed fruit gardens with perennials, perennial cash crops, and forest tree plantations. In Bhutan, alternative options include dryland farming, horticulture, and private forestry. In Nepal, the alternative options practised by farmers include cardamom-alder agroforestry, chiraito (*Swertia*, a medicinal herb) plantations, and horticulture-based integrated agroforestry.

## Recommendations

Based on the findings of the study, the following general recommendations are made for all of the countries in the eastern Himalayan region. Country-wise recommendations are available in the Conclusions and Recommendations section.

### General recommendations

The following ten general recommendations are made for all of the countries in the eastern Himalayan region:

**Recommendation 1:** Secure the land tenure of shifting cultivators through individual ownership or as common property.

Policy makers in the region must recognize shifting cultivation as a legitimate land-use category and secure the land tenure of such farmers, be it through individual or group/community ownership. In most areas, shifting cultivation is traditionally practised on commonly owned and managed land. Regimes that place emphasis on individual or private land ownership have deprived many genuine land users from their land tenure rights. States should introduce policies that recognize and strengthen common property regimes. When tenure security is ensured, many things automatically fall into place. Secure tenure encourages farmers to make long-term investments in sustainable and productive farming practices. It also enables them to take greater risks in adopting new knowledge, trying new technologies, and even adopting alternative land use options. Related to this is the issue of reorienting credit policies so that they are sensitive and proactive to common property regimes.

**Recommendation 2:** Focus more on research and development to improve shifting cultivation instead of stopping the practice.

Over the years, successive policies have been informed by adverse views of shifting cultivation and, as a result, the focus has been on stopping this practice, rather than improving it. Policies have also focused on forest conservation, and governments took over land and forest fallows from traditional owners, which has negatively impacted shifting cultivators and their communities. Policies have not focused much on research and development or extension when it comes to small farmers and shifting cultivation. These policies have to be reviewed and streamlined for the benefit of both farmers and states.

**Recommendation 3:** Look beyond land productivity and recognize shifting cultivation for the many benefits (nutritional, cultural, social, and environmental) it provides to the people and the land.

Many government policies and programmes (including extension services), are geared toward supporting settled agriculture and forest plantations. Such policies tend to focus on commercial farming systems, not on small farmers. At the same time, these policies are somehow delinked from livelihood strategies and have a strong economic bias. Agriculture or land-based productivity must be able to see beyond forest plantations, cash cropping, wet rice plantation, horticulture, livestock management, and so forth, to include all other land-use systems. While changes should aim to sustainably maximize production per unit area from all categories of land use, it is important that policies are not at the expense of the farming community or its local biodiversity. Shifting cultivation farms are a treasure trove of biological diversity, with distinctive multi-cropping techniques honed over generations. This form of cultivation maximizes land productivity in a given area using minimal inputs.

**Recommendation 4:** Recognize the importance of small farmers, in general, and the ingenuity of shifting cultivators as innovators, in particular.

Globally, small farmers (including shifting cultivators) produce the largest share of the food we eat. They also maintain ecosystems, biodiversity, landscapes, natural resources, the healthiness and wholeness of food, and diverse cultural traditions, knowledge, and wisdom. Their role must be recognized by policy makers and development practitioners in the region. Shifting cultivators should also be recognized as innovators and conservers of the environment and biodiversity. They have nurtured fallows, innovated soil and water conservation measures, maintained and developed traditional varieties of seeds, preserved biodiversity, and refrained from contaminating the soil with external inputs for generations. Shifting cultivators are also ‘tree cultivators’, for without trees and the forest fallows, shifting cultivation as a system would cease to exist. These inputs must be recognized and policies, rather than trying to replace the system, should focus on the positive aspects of shifting cultivation as it facilitates forest regeneration, promotes biodiversity conservation, and has the potential to grow and produce niche crops and cereals.

**Recommendation 5:** Design alternatives to shifting cultivation in such a way that they are compatible with the local environment, knowledge, institutions, land tenure, and practices.

In trying to change this land use system, customary institutions, traditional land tenure, local agrobiodiversity, and knowledge systems have been lost. It is important to appreciate that farmers have their own understanding of situations and that they adapt or respond according to what they know and have. If changes that are alien to farmers are imposed, it has to be through a steady and participatory process, and not because some policies or laws have been passed by someone else, somewhere else. Any alternative to shifting cultivation must be compatible with the local environment, knowledge, institutions, land tenure, and practices. Perhaps the strategy that could offer the greatest advantages for the least cost and meet with the greatest level of acceptance is the one that reinforces shifting cultivators’ own well-established habit of making optimal use of natural processes.

**Recommendation 6:** Ensure a coordinated approach among institutions and agencies responsible for the development of farming communities, particularly between those responsible for forests and those responsible for agriculture.

Policy directions must be woven into the institutional mandates of the different forest, agriculture, and allied departments (agriculture, land resources, soil and water conservation, veterinary and animal husbandry, rural development) so that there is coordination among the different agencies responsible for the development of farming communities and their livelihoods.

**Recommendation 7:** Ensure that policies address the provisions of international conventions.

Bangladesh, Bhutan, and Nepal are signatories, or on the way becoming signatories, to the Convention on Biological Diversity, Nagoya Protocol, United Nations Framework Convention on Climate Change (UNFCCC), various ILO conventions, and more. The shifting cultivation policies of these countries need to address the provisions of such conventions. For instance, under the UNFCCC, incentive mechanisms such as Reducing Emissions from Deforestation and Forest Degradation (REDD+) are emerging, which the shifting cultivation policies of the countries could consider as an alternative to shifting cultivation.

**Recommendation 8:** Formulate development-oriented policy regimes that facilitate community-based sustainable land use plans and integrate watershed management with agroforestry development.

Shifting cultivation must be recognized at the landscape level as a unique form of agroforestry with a short agriculture phase and long forestry phase. Until recently, most planners and development workers focused on either of these phases, overlooking the synergy between the two. Given that shifting cultivation is practised in large areas, often extending into one or more watersheds, development strategists and policy makers in the region must develop policies that facilitate community-based sustainable land use plans and integrate watershed management with agroforestry development. For too long, policies have inadvertently kept different sectors, land-use systems, and related practices apart, preventing them from learning from one another.

**Recommendation 9:** Enhance the skills and capacities of customary institutions with a focus on mutual learning and growth.

While customary institutions may not have the appropriate management skills to develop and manage integrated community-based land use planning at the landscape level, they are experienced managers when it comes to understanding local practices, values, and traditions. On the other hand, government agencies and officials with all their technical know-how often fail to appreciate local conditions, values, and challenges. It is, therefore, imperative that policies that focus on enhancing capacities must integrate all stakeholders so that there is mutual learning and growth. If local communities and their institutions and government agencies can work together to develop plans that promote different land uses in a given landscape, it will not only help meet livelihood needs and reduce conflict, but also conserve the environment. This will strengthen the governance of resources and promote sustainable land use practices.

**Recommendation 10:** Involve communities in the process of policy formation.

The process of policy formation is as important as the policies themselves. Customary institutions formulate policies in such a way that all members of the community participate in the discussions and formulation processes. This ensures buy-in by community members and fosters a sense of responsibility among the community, which ensures that policies are adhered to. When people are not consulted or represented in policy discussions they will naturally have no way of influencing policies, although they may be adversely affected by such policies, and may simply resolve not to cooperate. Policy makers must, therefore, ensure that there is more participation from all stakeholders – not just in formulating policies, but also in their enforcement.

# Introduction

## Background

The eastern Himalayan region is rich in biodiversity resources, while at the same time being home to some of the poorest people in the world, the majority of whom are indigenous ethnic minorities. World Development Indicators (World Bank 2003) on international poverty show that between 47 and 83% of people in the Hindu Kush Himalayan (HKH) countries, which includes the eastern Himalayas, earn less than two US dollars a day, and between 14 and 38% earn less than one US dollar a day. They remain on the fringes – socially, geographically, politically, and economically. Most of the people of the eastern Himalayas subsist on shifting cultivation, supplemented by hunting and gathering activities. Their survival is inextricably coupled with the health of forest ecosystems.

The policy makers in the region view shifting cultivation as primitive, ecologically destructive, and an economically inefficient use of natural resources. Based on this premise, and despite the fact that shifting cultivation with longer fallow periods can be sustainable, government policies in the countries of the region generally prescribe the transformation of shifting cultivation into settled agriculture, horticulture, cash crop plantations, and forest plantations. Nevertheless, despite the adverse policy environment, shifting cultivation persists.

In 2003, ICIMOD and its country partners in Bangladesh, Bhutan, India, Myanmar, and Nepal documented some of the good traditional and innovative practices related to shifting cultivation. This study confirmed that the impact of government policies on the customary institutions governing shifting cultivation and tenure are little understood, as are the alternatives to shifting cultivation promoted by governments. Based on this study, a workshop called 'Shifting Cultivation Regional Policy Dialogue Workshop for the Eastern Himalayas' was held in October 2004, resulting in the 'Shillong Declaration for Shifting Cultivation in the Eastern Himalayas'. To study the impact of government policies on the customary tenure and institutions governing shifting cultivation and the alternatives to shifting cultivation promoted by governments, ICIMOD and its partners in Bangladesh, Bhutan, and Nepal implemented a research project titled 'Regional Project on Shifting Cultivation (RPSC): Promoting Innovative Policy and Development Options for Improving Shifting Cultivation in the Eastern Himalayas'.

## Rationale and research questions

The Regional Project on Shifting Cultivation (RPSC) premised that:

- Government policies prescribing change in shifting cultivation to settled agriculture, horticulture, cash crop plantation, and timber plantation in the eastern Himalayas would result in a reduction in the total area available for shifting cultivation and subsequent shortening of the fallow phase, resulting in reduced productivity
- The alternative options promoted by governments would transform land tenure from common property, of which everyone gets a share, to private property, resulting in a reduction in access to shifting cultivation resources.

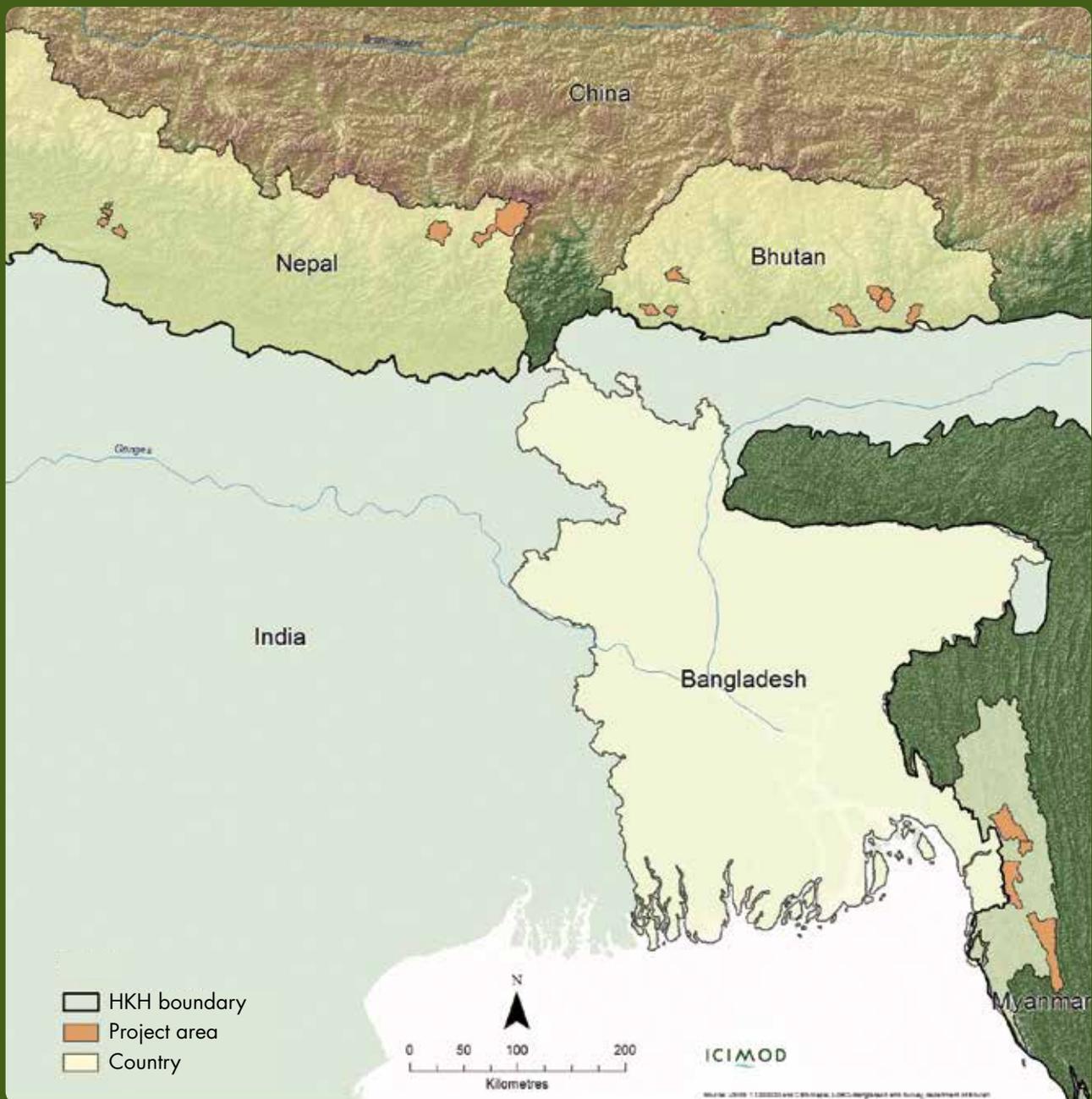
With this in mind, this research study was conducted to determine how government policies modify customary tenure and the institutions governing shifting cultivation and to understand the types and effectiveness of the alternative options promoted by governments. The research was framed around two questions:

- What are the government policies on shifting cultivation and how do they impact on the customary institutions and tenure that govern shifting cultivation?
- What are the alternative options to shifting cultivation promoted by governments?

## Study sites

Bangladesh, Bhutan, and Nepal were chosen for the study. Shifting cultivation is found in virtually all parts of Bhutan, but is traditionally more prevalent in the dzongkhags (districts) of Zhemgang, Pema Gatshel, Samdrup Jongkhar, Mongar, Samtse, and Chukha (Wangchuck and Tashi 2004). Shifting cultivators in Bhutan are generally indigenous communities (e.g., Doyaps and Monpas), who have good knowledge of their environment and a deep respect for natural resources. In Nepal, shifting cultivation is more prevalent among indigenous populations than dominant populations; while in the Chittagong Hills Tracts (CHT) of Bangladesh, it is still practised by many cultural groups across the mid-hills as a major source of livelihood. The study areas in these countries were selected based on the intensity of shifting cultivation, the accessibility of the sites, and the social diversity of the shifting cultivators (Figure 1).

Figure 1: Project areas in Bangladesh, Bhutan, and Nepal



In Bangladesh, the research was confined to ten selected villages in Rangamati and Bandarban districts of the CHT. The CHT is about 13,184 km<sup>2</sup> in area, of which 92% is highlands, 2% medium highlands, 1% medium lowlands, and 5% homesteads and water bodies. The total population of the CHT is about 1.3 million, of which about 51% are indigenous people, comprised of 11 ethnic groups. The main ethnic communities are the Chakma, Marma, and Tripura. Other important ethnic communities are the Mru, Tanchainghya, Bawan (or Bom), Khumi, Khyang, Lushai (or Mizo), Pankho, and Chak (or Sak). The study villages chosen were Deppochari, Duluchari Marma para (village), Kamilachari, Pangkhua para, and Ballalchara in Rangamati District and Ailemara para, Buri para, Jiniaoung para, Chinghlong para, and Ramri para in Bandarban District.

In Bhutan, seven villages were chosen in the dzongkhags (districts) of Bumthang, Chhukha, Mongar, Pema Gatshel, Samtse, Trongsa, and Zhemgang. The villages are Tang, Chimuna, Silambe, Khar, Jigme-Singye-Wangchuck, Nabji-Korphu, and Fangkhar. The study sites were identified during a situational analysis conducted prior to implementing the research (Timsina 2009). Out of the seven research sites, six fall in the subtropical and warm broad-leaved forest zones, while Tang is in the temperate zone. The subtropical forest is in the foothills at elevations of 200 to slightly over 1,000 masl in areas receiving an annual rainfall of 2,500–5,000 mm. Warm broad-leaved forest occurs at a higher elevations (1,000–2,100 masl), with lower rainfall (2,300–4,000 mm per year), and contains a mixture of evergreen and deciduous broad-leaved species.

In Nepal, the research was carried out in seven villages in seven districts in the mid-hills of the Western, Central and Eastern Development Regions. The districts are Nawalparasi in the Western Development Region; Dhading, Gorkha, Makwanpur, and Chitwan in the Central Development Region; and Sankhuwasabha and Taplejung in the Eastern Development Region. The villages are Rudrapur in Nawalparasi, Kurinai/Hackrang in Dhading, Hiklung in Gorkha, Maisirang in Makwanpur, Saipam in Chitwan, Karamarang in Sankhuwasabha, and Lawajin in Taplejung.

Prior to the selection of the research sites, a situational analysis was carried out to understand the prevalence and intensity of shifting cultivation and people's dependence on it for their livelihoods. Based on the outcome of the situational analysis, seven villages from seven districts were selected. Of the five districts in the mid-hills of central Nepal, the Chepang are predominant in four and the Magar in one.

## Methodology

Qualitative data was collected on policies and their effect on customary tenure and institutions for shifting cultivation, as well as on the alternative options promoted to replace shifting cultivation. The data collection tools included a literature review, focus group discussions, and key informant interviews. Checklists were prepared and used to guide the focus group discussions, which focused on the patterns and trends in shifting cultivation, policy formulation forums and processes, customary tenure and the institutions governing shifting cultivation, and the effect of different policies on customary tenure and institutions. Participants in the focus group discussions were purposively selected. Group discussions were facilitated by a research team member and another team member recorded the details of the discussions. To check the outputs of the group discussions, the facilitator summarized and reconfirmed the discussion points and agreements.

In Bangladesh, a total of 195 participants (137 men; 58 women) aged 20–90 years and belonging to six indigenous communities took part in the focus group discussions. The groups were divided into two age ranges: 20–40 and 41–90. The participants included headmen, 'karbaris' (village functionaries), the union parishad chairman, shifting cultivators, and representatives from the local administration, Forest Department, Education Department, Agriculture Extension Department, civil society organizations, and the media. For key informant interviews, informants included shifting cultivators, circle chiefs (Chakma and Bomang), representatives of the Chittagong Hill Tracts Regional Council, headmen, karbaris, academics, activists, and ritual leaders. Many of the participants had practical working experience in shifting cultivation and customary tenure and institutions since the British period and were able to share the changes they had witnessed.

In Bhutan, focus group discussion members were selected from the household information available from the respective 'tshogpas' (village heads). Participants included people of different ages and both men and women. In

total, seven focus group discussions were conducted. Seven key informants who used to practise shifting cultivation (one for each research site) were selected and interviewed to collect information. Key informants and researchers walked around the villages and talked about the historical timeline, customary tenure and institutions, policies, the policy-making process, implementation of shifting cultivation policies, fallow management, and their perceptions about shifting cultivation policy. Key informant interviews were also held with policy makers, retired and serving senior bureaucrats, and development workers in the Ministry of Agriculture and Forests and the National Land Commission of Bhutan on shifting cultivation policies, the policy-making process, and policy-making forums. The majority of key informants were men.

In Nepal, 16 focus group discussions were conducted: one in each village, one at the district headquarters of the respective study districts, and two at the central level (one with the Nepal Chepang Association activists and practitioners and one with the representatives of different indigenous people's organizations representing different indigenous groups). A total of 266 participants took part in the discussions. Key informant interviews were mostly informal and open-ended and the informants included shifting cultivators, village elders, leaders of customary institutions, and professionals in related fields.

The data were analysed based on an interpretative philosophy. In Bangladesh, qualitative information was turned into some form of explanation or interpretation of the people and situations being investigated. The idea was to examine the meaningful and symbolic content of qualitative data. All qualitative data were analysed through a process of content analysis (analysis of major issues of research), logic analysis (exploring cause and effect relations), and analytic induction (generalizing about the research context). The information was also analysed using the opinions of the most representative participants, medium representative participants, and less representative participants. All of the information was then consolidated and interpreted based on the research need.

In Bhutan, qualitative analysis was done with regard to policy content, the policy-making process and forums, and the effect of policies on customary tenure and institutions. Qualitative analysis also covered livelihood outcomes, such as food security; education; social assets; the structure, functions, and processes of shifting cultivation; and factors causing change to the structure, functions, and processes of shifting cultivation. The qualitative information was then triangulated with information from the literature review to arrive at conclusions.

In Nepal, the qualitative information was analysed according to the content and theme of the study. Based on the outcomes of the focus group discussions and key informant interviews, the structure, functions, and processes of shifting cultivation were documented. Next, any changes in the structure, functions, and processes were described. Then, the effects of government policies, the private sector, and civil society programmes were analysed and documented.

It must be mentioned that the research has limitations: the study used qualitative information, which is based on respondents' perceptions, preferences, and beliefs. The limitations of the qualitative approach include difficulties in assessing links and associations that occur between observations, cases, and constructs. During the focus group discussions, the facilitator tried to moderate the sessions so that participants would not be influenced by their peers or elders, but the concerns of underrepresented or disadvantaged groups might be less reflected. In relation to the key informant interviews, the interviewees tried to minimize their own personal bias by selecting appropriate resource persons and by verifying the information gathered through other participatory inquiry processes during consolidation and interpretation. Despite these efforts, residual bias may remain. The interviews lasted about 1 to 1.5 hours each, so the interviewees also may have become tired of providing information during the later part of the interview.

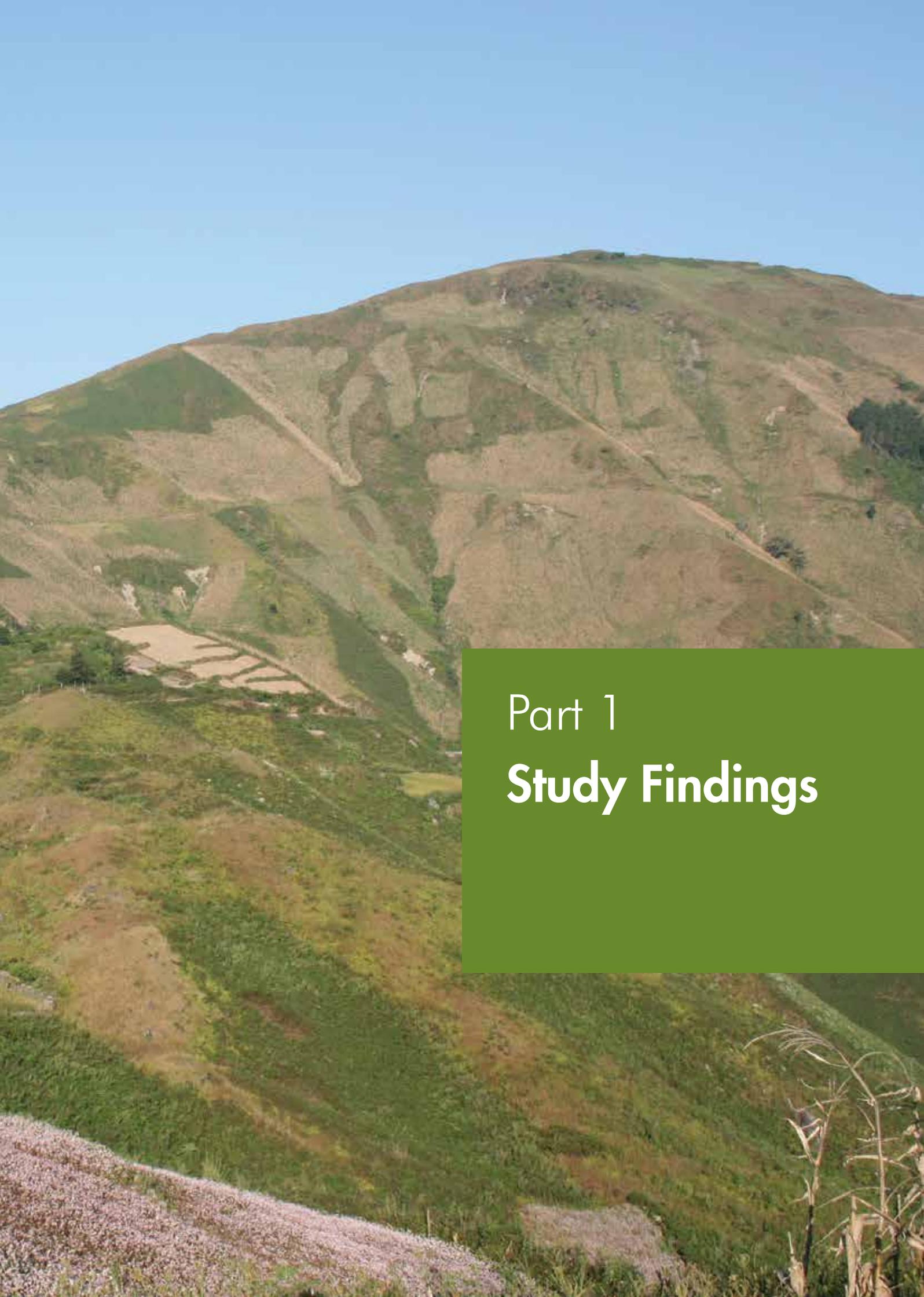
## Structure of report

This report is structured in two main parts. Part 1 presents the findings of the study for each country on customary tenure and institutions (Chapter 2), government policies and policy-making processes (Chapter 3), the effect of policy on customary tenure and institutions (Chapter 4), and alternatives to shifting cultivation (Chapter 5). Part 2 contains a discussion on understanding shifting cultivation, including the need to understand the geophysical/

ecological and social contexts in which it takes place and to distinguish between sustainable and unsustainable forms of shifting cultivation (Chapter 6). It also looks at the centrality of policy and the need for a legal framework that recognizes shifting cultivation as an agricultural and forestry practice and that ensures tenure for shifting cultivators over their land (Chapter 7). Chapter 8 examines some approaches for change and Chapter 9 looks at some key considerations and presents the conclusions, as well as both general and specific country-wise recommendations based on the findings.







Part 1  
**Study Findings**

# Customary Tenure and Institutions

## Bangladesh

Shifting cultivation was the only form of agriculture in the Chittagong Hill Tracts in 1860 (Lewin 1869) and was governed by customary tenure and institutions. 'Tenure' can be understood as a system of many different bundles of rights that are enforceable. These rights can operate simultaneously and overlap on the same piece of land, constituting a hierarchy of rights (Andersen 2011). Institutions represent responsibilities in the form of the rules, norms, and standards that need to be complied with while exercising tenure rights.

In the words of the Dutch anthropologist Mey, who conducted an extensive study of the CHT: "To the shifting cultivators, land was common property; the village community, kinship groups, and sometimes the spirits were considered as the ultimate owner of the land; individual families had the right to usufruct only" (Mey 1984, cited in Tripura 2008). This statement is a good description of how the tenure system is understood by the 'jhumiyas' (shifting cultivators) of the CHT. In the CHT, 'jhum' (shifting cultivation) has remained one of the prominent traditional occupations, one that has been followed by successive generations of indigenous people and their communities, and that is rooted in customs and practices that were established prior to the colonization of the region in the 19th Century (Roy 2000, cited in Chakma et al. 2007). Historically, jhumiyas have enjoyed certain traditional rights and have a special relationship with the land they cultivate.

A common characteristic of indigenous people of the region is the centrality of their connection to the land and natural surroundings, which is the source of their social identity and spiritual and cultural distinctiveness. This connection reflects indigenous peoples' economic and cultural dependence on ancestral lands (Andersen 2011). Prior to the colonization of the CHT by the British in 1860, rights over land and other natural resources of the indigenous people were governed by customary tenure and traditional institutions founded on local customs and traditions dating back many centuries. Access to, use, use change, and the transfer of shifting cultivation land were dealt with as per rules relating to customary tenure and institutions. According to Anderson (2011), customary law is based on village rules, which neighbouring villages are generally aware of and comply with. Under customary tenure, the jhumiyas of the CHT enjoyed land rights, which were inherent and inalienable. Roy (2000) maintains that indigenous land rights are conceptualized within the framework of a separate legal regime, distinct from that of the rest of the country.

Literature on customary tenure and institutions is scarce and scattered. Most of the literature focuses on the land tenure system brought about by colonization. Therefore, the question of customary tenure and institutions should be understood by placing it within the broader political-historical context of the CHT. A relatively recent survey by Rafi and Chowdhury (2001) made the following observations about the land tenure system(s) of the shifting cultivators, which are not necessarily uniform throughout the CHT:

- A good portion of the 'paharis' (hill dwellers), particularly those living far away from townships, are not aware that a legal document is required to claim ownership of land and have been using the land since time immemorial without legal documents.
- Many paharis have 'social' (accepted by the community), but not legal ownership of hill land, although some hills are legally owned.
- Among the paharis, after 'jhuming' (shifting cultivation) is carried out on common property land, a farmer may establish his social ownership of the land (hill) by planting timber or fruit trees on it and by taking care of the same for several years. After planting timber or fruit trees on the hill, jhuming is not practised and this piece of land becomes an orchard. It is believed that in the case of settlements on such land by the government, farmers will be the first to receive legal ownership with title (Rafi and Chowdhury 2001, p 57).

These observations were also validated by this study. Table 1 illustrates the characteristics of the two types of land tenure: customary versus legal.

**Table 1: Comparison of customary and legal land tenure systems**

Customary tenure	Legal tenure (accorded by the state)
<ul style="list-style-type: none"> <li>• Managed by society</li> <li>• Allocated to different people by the community (both individual and cultural ownership)</li> <li>• Ownership is created/made possible through cultural, ritual, and social processes</li> <li>• Ownership has both economic and cultural/social aspects</li> <li>• Transmitted from one generation to the next</li> </ul>	<ul style="list-style-type: none"> <li>• Land is ultimately owned by the state</li> <li>• Individual ownership is on an economic basis only</li> <li>• Lacks cultural and social ownership</li> <li>• Influenced by development and modernization under the leadership of the state</li> </ul>

Prior to colonization, the different indigenous groups in the CHT were governed by tribal chiefs and ritual heads. Originally, tribal chiefs, also called rajas, were selected based on their ability to protect the tribes and provide social justice; however, later, the position became hereditary. The tribal chief’s primary work was to provide social justice to his fellow tribesmen and, most importantly, to grant permission to a community or household to engage in jhum cultivation in a particular area. Tribal chiefs also collected land tax, often in kind. The tribal chiefs had developed some structures to regulate jhum. It is believed that the Chief Circle system of the British had many elements of customary institutions. For example, the Chief Circle system retained tribal heads/clan heads, which were below the tribal chiefs (e.g., the tribal heads/clan heads were Gosthi Pradhan among the Chakma, Aamu among the Tangchungya, and Ruwaza among the Marma).

Traditionally, customary institutions were responsible for the entire area and regulated tenure, social order, peace and security, rituals, justice, and so forth. The tribal heads/clan heads were responsible for granting permission for jhumming to farmers and collecting tax. They had to deposit some portion of the tax to tribal chiefs/rajas, who were loyal to the then Mughal emperors; some of them also gave a portion of the tax directly to the Mughal emperors, but the Mughal emperors never interfered in their political autonomy (Qanungo 1998). Jhum tax is handed over to a raja at an event called a ‘raj punya’, which is still considered a major event in all three circles in the CHT, although the people of the CHT consider the raj punya observed in Rangamati, the Chakma Circle, to be the most important and vibrant.

For the Chakma, there was a tribal chief, also called a king or raja. The administrative set up of the Chakma consisted of the king and senior government officials (dewans, naibs, khisas, and shiqdars, etc.) appointed by the raja-run administration, who would collect revenue in their respective portion of the territory (Qanungo 1998). The raja was the ultimate authority, but everyday administrative activities were undertaken by senior government officials. The dewan, according to Dr Buchanan-Hamilton, ruled the territorial divisions (ibid.) like a governor. The title ‘dewan’ actually connoted ownership of the land assigned to an official for administration, and Chakmas named their villages according to the dewan to which they belonged. There was no fixed tenure of office for the local dewans. In fact, they could exercise authority and perform governmental functions so long as circumstances were favourable (ibid.).

The customary institutions relied on shared rules, norms, values, and practices that underpinned the jhum system. Jhumming in the CHT had never been haphazard and arbitrary, but, instead, was systematic and regulated by the common rules and cultural practices of the tribal groups. Through the practice of jhum, the jhumiyas give meaning to their life and expressed their worldview through rituals. In general, for indigenous peoples, land is not only a natural resource generating an economically productive base for its inhabitants, but also one of the fundamental sources of culture, social relations, political power, identity, and belonging (cf Myers 1989; Wilmsen 1989, 1973). Shifting cultivation in the CHT is not merely an economic activity for survival, it is also closely connected with cultural practices and religious beliefs and makes the spiritual existence of the farmers possible. More information on the procedures and belief system followed by the shifting cultivators of the CHT is give in Annex 1.

## Bhutan

It is not known if customary tenure and institutions governed shifting cultivation in Bhutan. Perhaps the presence of the state was always pervasive. It became evident during this research that even before the enactment of formal laws in Bhutan in 1957, the tenure of shifting cultivation lands rested with the state. Individual households were granted the right to use land and other natural resources by the state. The enactment of formal laws, such as the Land Act of 1979, has certainly abrogated community-based customary land tenure systems by institutionalizing the private ownership of shifting cultivation land. For example, the Bhutan Forest Act of 1969 annulled all customary rights and replaced customary institutions such as 'reesup' (a community-based system of forest protection) and 'meesup' (a community-based system of protecting forests from fire) with government agencies (Wangchuk 2001). However, in 1985, the government revived the customary institution of reesup. Similarly, the Forest and Nature Conservation Act of 1995 contributed to the abrogation of the customary institutions related to the management of forest resources. Despite this, customary practices and beliefs continue to influence shifting cultivation in Bhutan. For more information on these see Annex 2.

## Nepal

In Nepal, shifting cultivators have a unique economic, social, and cultural relationship with the land they cultivate. The customary community ownership of 'khoriya' (shifting cultivation) lands still prevails among the Magars of Nawalparasi District. The Chepangs of Gorkha and Chitwan districts, on the other hand, have graduated to individual customary tenure of khoriya lands. The Limbus of Taplejung, believed to be descendents of the ethnic Saawaayethaangs, use 'taangsing-khoksing' (cleared and cultivated) land governed by customary tenure and institutions. The taangsing-khoksing land was neither sold nor bought, but owned collectively by Limbus on a clan basis. All land, including forests, meadows, and pastures, was under the jurisdiction of the Limbu headmen, called 'suvaas' in Limbu language, who later came to be called as 'subbas' in Nepali language. The right to use taangsing-khoksing land was granted by suvaas and the system of allocating use rights was called 'suvaangi'. No one, particularly new immigrants, could practise shifting cultivation without the permission of the suvaas.

Unlike sedentary agriculturists, shifting cultivators not only grow crops, but also hunt and gather on khoriya lands. In addition to the land used for shifting cultivation, the shifting cultivators exercise collective ownership over forests, wildlife, and water resources in their locality and organize collective fishing, bird trapping, and animal hunting. However, the Chepang from one village do not participate in collective fishing, bird trapping, and hunting in rivers and forests under the customary ownership of another village. There is mutual understanding among the Chepangs as to which of the forests and rivers are owned customarily by which village. This customary tenure is regulated by norms and rules that are socially recognized for both individually-owned khoriya lands and collectively-owned common natural resources. The Chepangs paid tax to the government for khoriya cultivation, confirming their customary claim over it. There is documented evidence of ownership of chiuri trees (*Bassia butyraceae*, also known as the butter tree), confirming the Chepangs' claim of customary ownership of the land on which these trees grew.

Different indigenous groups living in different geo-climatic settings and with different cultures and history perform different cultural ceremonies and rituals. However, each group has some important cultural practices and shared norms that regulate the practice of shifting cultivation. The customary institutions that regulated (and in some cases are still regulating) shifting cultivation in the study area are 'Bheja' (among the Magars of Nawalparasi), 'Sherma' and 'Jimmawal' (among the Chepangs), and 'Kipat' (among the Limbus in Taplejung and Sankhuwasabha) (see Annex 3 for more information).

# Government Policies and Policy-Making Processes

## Bangladesh

The shifting cultivation policy of Bangladesh began during the British Period (1860–1947) and continued through the East Pakistan Period (1947–1971) and into the Bangladesh Period (since 1971). Soon after the annexation of the CHT in 1860, the British began policy interventions targeted at increasing revenue from forests. Shifting cultivation or 'jhum' was discouraged and plough cultivation introduced. According to Roy (2004), the policy interventions declared forested land to be 'Government Reserved Forest', converted natural forest into monoculture teak plantations, categorized forested land and plantations as Government Reserved Forest, prohibited settlement and jhum cultivation in reserved forests, protected headwater forests, and granted government subsidies and tax rebates to plough cultivators. These policies also imposed regulations (Rules 51 and 52 CHT Regulations) and discouraged the immigration of Bengalis into the CHT (Van Schendel et al. 2000). The British also restricted the inheritance of land in the CHT by non-residents.

During the East Pakistan period, the policy to regulate jhum and restrict the indigenous peoples' access to forest resources continued. According to Roy (2004), during this period, restrictions on the immigration of people into the CHT were removed to encourage Bengali traders; the power of circle chiefs was curtailed; Muslim refugees from Assam were resettled; jhum cultivation was regulated more strictly to increase harvests and avoid wastage; the maintenance of village forest reserves (village common forests) was encouraged; and the role of circle chiefs and headmen in 'mouza' (a group of villages) forest conservation was strengthened.

As recommended by the Industrial Conference held in West Pakistan in 1949, the large-scale Karnaphuli Paper Mill, one of the largest in the East, was established in the CHT. Hills began to be levelled, deep ravines and crevices filled, and thick and dense forests were cleared to make way for the paper mill. The establishment of the Kaptai Dam was another major policy intervention. Some policy interventions were made in the form of a Deputy Commissioner's Order. The Deputy Commissioner's Order on Mouza Reserves (issued 3 August 1968) required headmen and karbaris to administer and maintain forests in mouzas, improve them through planting, and protect them from illegal felling and encroachment. The Deputy Commissioner's Order on Preventing Fire Hazards in Jhum Land (issued 11 January 1967) ordered headmen, supported by karbaris, to control fire hazards in jhum and convert jhum cultivation to orchards as much as possible.

During the Bangladesh period, in 1979, Rule 34 of the CHT Regulation 1900 was amended to remove the restriction on the settlement of non-CHT residents. In the same year, the government claimed the hilly lands of the CHT as state property. According to Roy (2004), the Jhum Control Division of the Forest Department was set up to control jhum. An Agriculture Development Corporation was established to promote horticulture, and the use of fertilizers in jhum was supported. Plantation forestry continued. The maximum land allotment for local people was reduced from 25 acres to 5–10 acres. Restrictions on the leasing of land to non-CHT residents were lifted and the settlement of non-residents in the CHT was introduced. The leasing of land for commercial use to non-resident rubber planters and industrialists started and rubber plantations were established through the CHT Development Board.

In 1972, the jhumiyas formed a political party called the Parbattya Chattagram Jana Samhati Samiti (PCJSS) to unify all ethnic groups in the CHT to counter Bengali nationalism and press for their political rights, including customary tenure and institutional rights. This political movement led the Bangladesh Army to set up military establishments in the CHT, and conflict between the army and the military wing of the PCJSS ensued. In order to resolve the conflict and grant political rights to jhumiyas, the CHT Act of 1989 was enacted, followed by the CHT

Peace Accord of 1997. The Act and Accord provided for the transfer of the administration of the Bazaar Fund to the Hill District Councils; restrictions on the leasing of land to non-resident entrepreneurs; an increase in the area of Government Reserved Forest by adding Unclassified State Forest (resisted by the Forest and Land Rights Committee); the promotion of 'participatory' forestry in circle and mouza areas by the Forest Department; an increase in hydro-electricity by raising the water level of reservoirs; the granting of land to landless hill peoples; the cancellation of land leases granted to non-residents; the transfer of land administration authority from the Deputy Commissioner to the Hill District Councils; the cancellation of the enhanced Government Reserved Forest programme; and the promotion of social forestry in Government Reserved Forest. It is also pertinent to mention here that the Government of Bangladesh ratified the International Labour Organization (ILO) Convention 107 (Indigenous and Tribal Populations Convention, 1957) in 1972 and the International Convention on the Elimination of Racial Discrimination in 1979.

Regarding the policy-making process, an indigenous administrative system, which was also a policy-making forum, existed at three levels in Bangladesh: village, mouza, and territory (Roy 2000). A village, the basic administrative unit, had a karbari as its leader, appointed from among the villagers directly by the rajas or on the recommendation of the mouza headman. The karbari was responsible for all matters related to that village, including settling disputes over land and natural resources management. A mouza had a headman or headwoman who was responsible for tax collection, peace and security, the allocation of agricultural lands including jhum, the conservation of natural resources, and the enforcement of customary laws. At the territorial level, rajas had authority over their entire territory.

Today, even though this indigenous administrative system still exists, the functionaries of the system have virtually no role in, or influence over, policy making. It is reported that not only ordinary tribal communities or citizens, but even learned persons, politicians, and Hill District Councils are not appropriately involved in policy making in the CHT. The CHT Regulation Act of 1900, which curtailed the power of the functionaries of the indigenous administrative system and undermined customary tenure and institutions, is evidence of the fact that there was no forum or process for participatory policy making during the British period. The Act appropriated the lands of the indigenous people and put them under the administration of the colonial government. Similarly, during the East Pakistan period, the karbaris, headmen, and circle chiefs were not involved in policy making. For example, the indigenous leaders were not involved in decision making during the development of the Kaptai Dam or the Karnaphuli Paper Mill. Neither the circle chiefs nor the people of the CHT were asked their opinion about these interventions in their day-to-day lives (Van Schendel et al. 2000, p 75). During the formulation of the Hill District Council Act of 1989 and the CHT Peace Accord of 1997, the circle chiefs were partially involved, but, at the grassroots level, the karbari and headmen were not involved.

Hence, it can be said that policy making in relation to the CHT is centralized at the national level and follows an undemocratic and non-participatory process. As a result, policies remain unknown, even to senior district government officials, let alone the community leaders and community organizations. Local communities in the CHT have never been properly involved in the policy formulation process, even if this was required by the policy document, as it is, for example, in the Hill District Council Act of 1989. This research confirmed that, at the union level, government officials and administrators have little knowledge about policies. The people of the CHT are also not informed about the international conventions or policies that Bangladesh is party to, such as ILO Conventions 107 and 169, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the World Bank's Indigenous Peoples Policy, the Asian Development Bank's Policy on Indigenous Peoples, and so on.

## Bhutan

In Bhutan, the first government policy to regulate 'tseri' (shifting cultivation) was the Thrimzhung Chhenmo of 1957, which granted the ownership of trees on tseri land to owners if the trees were not older than 12 years. The other laws and policies relevant to tseri were the Forest Act of Bhutan, 1969; Land Act, 1979; National Forest Policy, 1974; Land Act, 2007; Forest and Nature Conservation Act, 1995; and various cadastral surveys and agriculture programmes.

The Forest Act of 1969 nationalized forests and restricted the open practice of tseri. The Land Act of 1979 granted the legal ownership of tseri and 'pangzhing' (shifting cultivation at higher elevations) land, along with trees younger than 12 years of age, to individual households for domestic purposes tax free. It also allowed trees to be sold for commercial purposes, with payment of taxes to the government. The Land Act prescribed the conversion of tseri to dryland and wetland farming, as well as the conversion of tseri older than 12 years to Government Reserve Forest, without cash compensation or the provision of alternative land to the owners. The National Forest Policy of 1974 prescribed that tseri and pangzhing should be eradicated through cash compensation, alternative employment, and intensive agriculture. The Forest and Nature Conservation Act of 1995 legitimizes the declaration of any land as land of national importance, including tseri and other private land. The Forest and Nature Conservation Rules 2006 allow the registration of trees and forestry crops that are planted or grown naturally on registered private lands as private forest, which contradicts Section 82 (8C) of the Rules, which states that tseri left fallow for 12 years or more should revert back to the state as Government Reserve Forest. It also contradicts Provision 9.9 of the Land Act 2007. However, the Forest and Nature Conservation Rules 2010 grant rights over trees to owners, without them having to register the trees as private forest. Owners can use their trees for domestic purposes, with permission from forestry officials, without paying any royalties. For commercial use, however, the owners have to pay royalties to the government.

Tseri also received the attention and deliberations of the National Assembly. Based on the resolutions of the Assembly (in its 19th session of 1963, 26th session of 1967, and 30th session of 1969), rules were framed to prevent fires from spreading from shifting cultivation land to Government Reserved Forest, and community-based fire watchers were appointed. In 1969, the 30th session of the National Assembly resolved that tseri be converted to agriculture and that the cultivators pay the same tax prescribed for tseri until the first crop was harvested from the converted land. In 1979, the 50th session of the National Assembly reiterated the provisions of the Land Act 1979 and the Forest Act 1969 in matters related to rights over trees on tseri land. In 1980, the 52nd session of the National Assembly, cognizant of the fact that the government was not ready to enforce the Land Act of 1979, passed a resolution to allow people entirely dependent on tseri to practise shifting cultivation. Then, in 1983, in the 58th session, the National Assembly passed a decision to lend impetus to the conversion of tseri to any other land use. In the same session, it decided that the owners of tseri should be allowed to sell tseri land that was unsuitable for conversion to other uses to the government at the prevailing government rate at that time.

In the Fifth Five Year Plan (1982–1986), the Ministry of Agriculture planned a programme to convert tseri to wetland, dryland, and orchards, based on land suitability classification. However, from 1982–1983, several dzongkhags (districts) voiced their concern that the conversion of tseri land would cause hardship for many families and requested the government to provide substitute land or cash compensation. The objective of phasing out tseri could not be pursued further as the government could not provide land substitutes or cash compensation.

The Government of Bhutan, through its first cadastral survey (1957–1974), measured shifting cultivation land and granted ownership to rural households through the registration of the land as tseri/pangzhing in their 'thram' (land ownership record). The government implemented the second cadastral survey to improve the cadastral records from 1980 to 1997. The third cadastral survey (2007–2013) considered granting ownership of tseri land with a fallow length of more than 12 years to the traditional owners, if the land was not omitted from thram previously. Recently, a royal decree was issued granting the owners of tseri lands with a fallow length of more than 12 years the option to convert it legally to private forest, in accordance with the Forest and Nature Conservation Rules 2006.

In relation to agriculture, during the Fifth (1982–1986) and Sixth (1987–1991) Five Year Plan periods, the Department of Agriculture gave a cash incentive of 300 Bhutanese ngultrum (USD 4.85) per acre for terracing and 100 Bhutanese ngultrum (USD 1.62) per acre for contour bunding to encourage the conversion of tseri to sedentary agriculture. Under its horticultural programme, the Department of Agriculture, during the Sixth Five Year Plan, also initiated an integrated horticulture development programme. This programme encouraged pangzhing cultivators in high-altitude areas to opt for cash crop cultivation. However, the land development programme could not continue in the Seventh Five Year Plan, because of management and monitoring problems. Instead, the focus in the Seventh Five Year Plan shifted to supporting farmers to integrate new techniques into existing production systems (including tseri) and identified agroforestry as one of the new production systems. The Department of Agriculture, during

the Ninth Five Year Plan (2002–2006), invested in increasing road access to rural areas, including tseri areas, improving extension services, and providing research support, as well as improving market linkages to increase the production and marketing of agricultural products. In the Tenth Five Year Plan (2008–2013), the Department of Agriculture continued with cash incentives for improving the tseri land that had been converted to dryland and horticulture. Its horticulture programme continues to support the conversion of tseri and pangzhing to horticulture. Under the livestock and fodder development programme, the government continues its support of the conversion of tseri and pangzhing into pasture in order to improve the cash income of shifting cultivators. In 2004, the Ministry of Agriculture planned to purchase tseri land with an estimated budget of USD 1.2 million for the six eastern dzongkhags, where 50% of households were practising tseri. The plan, however, fell through because of a lack of funding.

The shifting cultivation policy-making forum in Bhutan is comprised of His Majesty's Secretariat, the National Assembly, various ministries, technical departments, the Dzongkhag Yargay Tshoghdues (district councils), and Gewog Yargay Tshogchung (sub-district councils). The National Assembly came into being in 1953 and, besides its legislative function, the Assembly also deliberates on development issues of national significance. However, it appears that legislation is enacted as proposed by the ministries. On issues of national significance, the National Assembly has followed a practice of inviting agenda points from the grassroots communities through the National Assembly Members (people's representatives) and later through the Dzongkhag Yargay Tshoghdues (which were introduced in 1981). This practice provided a forum for rural households to participate in identifying issues of national significance through their representatives in the Dzongkhag Yargay Tshoghdues. Through this practice, the people's representatives were obliged to disseminate the National Assembly resolutions to their constituencies.

Bhutan's sectoral policies and programmes were formulated and implemented by the technical departments with little or no participation from farmers. The Department of Agriculture prepared and implemented plans and programmes related to tseri/pangzhing, while the livestock plans and programmes were prepared and implemented by the Department of Livestock. Similarly, the first and second cadastral surveys were planned and implemented by the Department of Land Records and the Survey of Bhutan, respectively.

Close scrutiny of the National Assembly proceedings relevant to tseri/pangzhing reveals that the deliberations were based on the rationale that the negative environmental impacts inherent in tseri/pangzhing had to be reduced in a manner that would tackle the socioeconomic problems of the tseri/pangzhing farmers. This rationale underscores the fact that the National Assembly was empathetic to the problems faced by tseri farmers. The National Assembly, while cognizant of the negative environmental impacts of tseri, was also conscious of the economic plight of the shifting cultivators. A review of chronicles did not reveal any evidence that the laws governing tseri/pangzhing were shaped by research and analysis. The proponents of the legislation apparently framed the legislative provisions based on their own professional opinion.

## Nepal

Land policy can be defined as the "political choice made concerning the distribution of power between the states, its citizens, and local system of authority" (Commission of the European Communities 2004). In Nepal's context, the policy makers' view of land in the past remained guided by very crude economic principles by which they viewed land as a commodity with only economic value. Regmi's (1978) extensive study on land ownership and tenure in Nepal shows how the Hindu state put other comparatively autonomous 'peasantry' systems under the domain of state taxation.

At present, there is no specific policy governing shifting cultivation in Nepal. However, legislation, policies, and programmes that affect shifting cultivation include the Civil Code, 1854; Land Act, 1964; National Forest Act, 1993; international treaties and conventions such as ILO Convention 169 and UNDRIP; and the Three Year Plan Approach Paper (2010/11–2012/13), which contains sections on Agriculture and Food Security, Land Reform and Management, and Forest and Soil Conservation. The Civil Code of 1854, introduced after the Rana oligarchy assumed the state's executive power, recognized land tenure as an issue of civil rights. The Code stated, "As long as the tenants continue paying rent, lands cannot be confiscated from him, even if he leaves the land barren". Among

other things, the Civil Code concerned itself with collecting rent or land tax and did not grant land tenure rights to shifting cultivators. As paying land tax was relatively expensive in those days, many were made to believe that, even if they did not pay tax, no one could force them to leave their land or stop farming. While the Civil Code did elaborate on how a cultivator of a particular piece of land could retain his/her tenancy rights over the land, even now there is no policy that directly addresses the tenure rights of shifting cultivators.

The Land Act of 1964 was a major land reform initiative and is considered the most important policy step in the land reform history of Nepal. The Act has already been amended eight times: Five times directly and three times through judicial administration reform. The main objective of the Land Act was to stop intermediaries, such as land owners and 'jimidaris' (individuals responsible for tax collection at the village level), from collecting taxes by transferring the responsibility for tax administration to the government. The imposition of ceilings and tenancy reforms, including rent regulation and the certification of tenants (registered tenants), were some other objectives of the Act. Despite being the most important land reform legislation in the country's history, it remained silent on the issue of shifting cultivators. The much talked about securing of tenancy rights was only applicable to those lands that were taxable. The survey that followed the Land Act did not recognize 'khoriya' (shifting cultivation) land as farmland. Thus, khoriya land was not surveyed as taxable agricultural land. Only land that could produce enough to pay tax to the government was considered farmland. As a result, shifting cultivators were denied their right to ownership.

The National Forest Act of 1993 denies the existence of khoriya, although it is an age-old practice. Provision 4(e) of the Act states:

*"National Forest means all Forests excluding Private Forests within the Kingdom of Nepal, whether marked or unmarked with forest boundary and the term shall also include waste or uncultivated lands or unregistered lands surrounded by the Forest or situated near the adjoining Forest as well as paths, ponds, lakes, rivers or streams and riverine lands within the Forest."*

Provision 2(a) defines forest as an area fully or partly covered by trees. In keeping with this definition, the district forest offices, Leasehold Forestry Programme, and Community Forestry Programme consider khoriya land to be forest land. As khoriya involves alternating between fallow and cropping phases and moving from one plot to another every few years, the regenerated vegetation on fallow land was treated as forest. However, khoriya lands are agricultural lands on which people combined forestry and agriculture (agroforestry). Extending the jurisdiction of the National Forest Act over khoriya lands, therefore, remains questionable.

International treaties and conventions (ILO 169 and UNDRIP) also relate to shifting cultivation. Article 13 of ILO Convention 169 states that the term 'land' shall include the "concept of territories, which covers the total environment or the areas which the peoples concerned occupy or otherwise use" and ILO Convention 111 gives the "right to practice a traditional occupation". These ILO Conventions provide the basis for formulating a pro-shifting cultivation policy (cf Aryal and Kerkhoff 2008). Similarly, Article 25 of UNDRIP states that:

*"Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their territorially-owned or otherwise occupied and used land, territories, water and coastal areas and other resources and to uphold their responsibilities to further generation in this regard."*

Therefore, the relationship of indigenous peoples (shifting cultivators in this context) to their land should not be understood only in a normative, (centralized state) rule-centred sense, but rather in the shifting cultivators' own terms. Despite Nepal being a signatory to the aforementioned ILO conventions and UNDRIP, the provisions of these international conventions are not reflected in its national policies.

Nepal's Three Year Plan Approach Paper (2010/11–2012/13) does not pay sufficient attention to shifting cultivation, perhaps due to the lack of understanding of indigenous land use practices and the land tenure system by the policy makers. While the paper mentions agriculture food security (pp 70–74); land reform and management (pp 75–77); and forest and soil conservation (pp 78–82), it fails to mention shifting cultivation. The 'Agriculture and Food Security' policy under the plan recognizes the need to ensure the availability and accessibility of food

to the ultra-poor and rural communities. It notes the need to increase agricultural production and control soaring food prices. However, this policy does not mention food production from shifting cultivation. To deal with the issues surrounding food production and shifting cultivation a new policy is needed.

The section on 'Land Reform and Management' in the Three Year Plan Approach Paper states, "There is an urgent need to ensure the access of landless and poor people to land by solving the problems such as tenants' rights...". This plan recognizes the need to formulate national land policy and land use policy based on scientific criteria and to revise existing rules and regulations; manage landless and agriculture dependent families appropriately; recategorize land on the basis of land use; and build capacity for enhancing agricultural production. However, the policy is silent on shifting cultivation.

The section on 'Forest and Soil Conservation' in the plan treats 'khoriyafadani' (slashing for shifting cultivation) as illicit felling (p 78). This confirms the policy makers' view of shifting cultivation, but does not take into account the situation as perceived by the shifting cultivators themselves. This policy further restricts the tenure rights (and livelihood options) of shifting cultivators.

The policy-making agencies that deal directly with shifting cultivation are the Ministry of Land Reform and the Ministry of Forest and Soil Conservation. The stakeholders that the policies affect are not given the opportunity to take part in policy making. There are no forums in which the shifting cultivators can register their concerns. Because of the 'success' of community forestry in Nepal, the community users group or a few leaders of the Federation of Community Forestry Users Nepal (FECOFUN) are invited to meetings and workshops related to policy making, but their interests often conflict with the interests of shifting cultivators. The process of policy making in Nepal is generally centralized, top-down, and non-participatory.



# Effect of Policy on Customary Tenure and Institutions

## Bangladesh

During its regime in Bangladesh, the British designated about a third of the CHT as 'Government Reserved Forest' and the remaining two-thirds as 'Unclassed State Forest'. The CHT Regulation of 1900 put government forest under the authority of the Department of Forests and Unclassed State Forest under the administration of the Deputy Commissioner. It prohibited jhuming and settlement in Government Reserved Forest. Natural forests were converted to monoculture teak plantations. Forested land and plantations were categorized as 'Government Reserved Forest'. Jhumiyas were restricted to jhuming and building homesteads in the Unclassed State Forest. Rule 41A of the CHT Regulation of 1900 recognized the customary rights of jhumiyas to use timber, bamboo, grazing resources, and other minor forest resources for domestic purposes. It also granted them other rights, such as to hunt and use water resources.

The lifting of the restriction on Bengali immigration into the CHT during the East Pakistan period allowed the resettlement of Muslim refugees from Assam. Combined with the establishment of the Karnaphuli Paper Mill and the Kaptai Dam, this immigration policy reduced the land available to the jhumiyas. The Kaptai Dam created an upstream reservoir of 650 km<sup>2</sup>, displacing 100,000 people – more than a quarter of the population at that time – mostly Chakma, from their ancestral homes. The dam inundated more than 53,976.91 acres, representing 40% of best plough land in 125 mouzas, for which the majority of jhumiyas received no compensation.

In contemporary Bangladesh, the withdrawal of the restriction on the leasing of land to, and settlement of, non-residents led to the resettlement of ethnic Bengalis in the CHT. In 1979, the government claimed the hill land as state property, denounced customary tenure, and resettled 400,000 landless Bengali families on the land, rendering 100,000 local people homeless and landless. The leasing of land to non-residents for commercial plantations, such as rubber, led to plantations and horticulture development on forest land, further reducing the land available for jhuming and increasing the insecurity of the jhumiyas over land tenure. The control of jhum by the Forest Department's Jhum Control Division also undermined customary tenure. Similarly, the reduction in the ceiling of land allotted to the settlement of local people, under a programme called 'bandobasti', from 25 acres to 5–10 acres affected the access of jhumiyas to agricultural land. The recent suspension of the bandobasti programme by the government has deprived many jhumiyas of the opportunity to own private land creating tenure inequality among jhumiyas.

With the in-migration of Bengali people to the CHT continuing, a large number of indigenous families have already lost their ancestral homesteads and lands, making them socioeconomically vulnerable. The loss of their common land has compelled many displaced indigenous families to migrate to India (Gain 1995; Roy 1995). The present study confirmed that the land and forests used by jhumiyas in the research areas continues to be encroached on by military establishments and conservation agencies.

Government policies have also undermined customary institutions. The British introduced the Regional Circle Regulation in 1884, which divided the CHT into five circles, namely: the Chakma Circle of King Harish Chandra, the Circle of Mong King, the Circle of Bomang, the Sadar Sub Divisional Khasmahal, and the Sangu Sub Divisional Khasmahal. Subsequently, Rule 3 of the Chittagong Hill Tracts Regulation of 1892 divided the entire district into 33 'baks' or 'taluks' (portions). Rule 4 of the Regulation created 376 mouzas (an area of approximately 4–52 km<sup>2</sup>) in the three circles. Then, the CHT Regulation Act of 1900 was introduced, which formalized circles and sub-divisions. In this new system, rajas were supported by headmen at the mouza level and karbaris at the village level.

Under colonial rule, the jurisdiction of customary institutions was restricted to regulating matters related to jhuming on Unclassed State Forest. The circle chiefs and headmen were made to collect tax and deposit it with the Deputy Commissioner. Headmen were authorized to regulate access to jhum on Unclassed State Forest. They were also given the power to grant permission to jhumiyas to use timber, minor forest products, water resources, and grazing resources for domestic purposes and to grant access to forests on Unclassed State Forest for hunting and gathering. The forests categorized as Government Reserved Forests were taken out of the jurisdiction, along with the portion of Unclassed State Forest leased by the Deputy Commissioner for plough cultivation and plantation.

The policy of East Pakistan made the role of circle chiefs and headmen even more ceremonial. These traditional leaders were “smoothly integrated into the new state structure” (Van Schendel et al. 2000), resulting in the abolition of the rights of zamindars, talukdars, and dewans. Customary institutions were ignored in the decision to set up the Kaptai Dam and Karnaphuli Paper Mill. The Deputy Commissioner’s office exercised even more control over jhum. The customary institutions were directed to maintain village forest reserves and conserve mouza forests.

The Bangladesh period began with a political move by the indigenous peoples of the CHT, which had deep policy implications. Rafi and Chowdhury (2001, p 27) states:

*“As a result of discriminatory policies against the paharis (hill people) over a long period, resentment combined with political consciousness gradually grew in them. They felt that they were subjected to economic, political, and religious subjugation which was increasingly endangering their identity. Such an attitude compelled them to stand for safeguarding their identity and the integrity of their homeland. In response to this concern a delegation called on Prime Minister Sheikh Mujibur Rahman on 15 February 1972 with a charter of demands [...] He dismissed the charter [...] advised [the hill people] to accept integration into the new state by ‘becoming Bengalis’. In response [the hill people] established PCJSS in 1972 and Shanti Bahini the military wing of PCJSS in 1975.”*

An armed resistance by tribal people ensued, in response to which the Bangladesh Government took a number of administrative and development measures in the CHT, and eventually passed the Hill District Act in 1989 and a Peace Accord was signed in 1997.

The Hill District Act requires the government to transfer administration of the Bazaar Fund to the District Hill Councils. Under this Act, the allotment of land for the settlement of non-residents and the leasing of land to non-residents are to be frozen, land is to be granted to landless hill people, and leases of land to non-residents are to be cancelled. The land administration authority is to be transferred from the Deputy Commissioners to the District Hill Council, of which the chairman and two-thirds of the members must be tribal people from the CHT. Land disputes are to be settled by the Land Commission. The Act restores the roles and functions of all traditional institutions, including the circle chiefs, headmen, and karbaris. It also retains the provision for taxing jhum and grazing from CHT Regulation 1 of 1900, as well as the right of tribal peoples of the CHT (as in CHT Regulation 1 of 1900) to occupy Unclassed State Forest up to maximum of 30 decimals (0.3 acres) outside municipal areas for the purpose of homesteading, with the permission of the headman of the concerned mouza, without obtaining any formal settlement from the Deputy Commissioner (cf Chakma et al. 2007; Roy 2004; Rafi and Chowdhury 2001). The conversion of forest to ‘Government Reserved Forest’ is to be stopped. However, unfortunately, the Government of Bangladesh continues to flout the Hill District Act, as well as the authority of the circle chiefs, headmen, and karbaris granted by the CHT Regulation 1900.

## Bhutan

According to Bhutan’s Policy and Planning Division (2010a), the area under shifting cultivation in Bhutan has decreased by 12% (from about 183,859 acres in 2000 to 162,123 acres in 2008). At the same time, the area under orchards has increased by 13% (from 21,240 acres to 22,983 acres), which is possibly attributable to the government policy of encouraging farmers to turn shifting cultivation land into orchards. The present study confirmed that in Chimuna, Dachen, Tang, Fangkhar, Khar, and Silambi most of the shifting cultivation areas have been converted to orchards, dryland, or fallows. In Nabji-Korphu, shifting cultivation is still practised, although no longer legal.

Under the Land Act 2007, which is being enforced by the government, all shifting cultivation lands are being converted to 'kamzhing' (dryland farms), orchards, and wetlands. In Khar, in Pema Gatshel District, the process of converting shifting cultivation land to dryland, orchards, and other horticultural land has already begun (Dorji 2011).

An ongoing Sustainable Land Management Project is being implemented by the Department of Agriculture to expedite the conversion of shifting cultivation land to other categories (Department of Agriculture 2011a). The project is being piloted in eight 'geogs' (sub-district) across the country and includes the giving of cash incentives (Bhutanese ngultrum 3,000, approximately USD 49, per acre) to farmers converting their shifting cultivation lands into terraced dryland. So far, the project has converted more than 4,500 acres of tseri land into terraced dryland. The incentives are, of course, only available to those in the pilot sites.

The private ownership of shifting cultivation land has long been institutionalized by the Government of Bhutan. Hence, an assessment of the effect of government policy on customary institutions in Bhutan was not carried out by this study.

## Nepal

The Civil Code of 1854 was probably the first document of 'unified' Nepal that mentioned the requirements for claiming ownership of farm land. The Code provided that if a tenant paid rent, their land could not be confiscated, implying that land that is not registered will become land belonging to no one (*terra nullius*). Due to the nature of shifting cultivation, in which cultivation plots are rotated, it was not practical for the farmers to pay tax on the land they cultivated. As a result, many shifting cultivators who farmed on marginal lands were unable to register their lands. This was probably the first document to (indirectly) overrule customary tenure over shifting cultivation lands. Shifting cultivation lands remain unrecognized in Nepal even today. However, shifting cultivators continue to exercise *de facto* ownership over such land, conflicting with the provisions of the forest legislation.

The Land Act of 1964 endorsed previous land reform initiatives, including the abolition of 'kipat' (shifting cultivation) land. This Act did not recognize shifting cultivation as a type of farming practice; therefore, the government did not bother to register kipat land as taxable land or private land. Thus, customary tenure over shifting cultivation land, and the customary institutions that regulated this tenure, did not receive legal recognition. Under this Act, shifting cultivators became forest squatters. They were never made beneficiaries of any agricultural extension programme or farming system improvement programme. Hence, they lost the customary ownership of the land they had been cultivating for generations and became vulnerable in terms of livelihood options. However, in the eastern part of the Nepal, some had their *khoriya* lands registered as 'khar baari' (land for growing thatch grass) and 'charan' (grazing land).

# Alternatives to Shifting Cultivation

## Bangladesh

### Adoption of alternative options

The research confirmed the adoption of a number of alternative options in the CHT, grouped into five categories: annual cash crops (turmeric, ginger, aroids, etc.); fast growing fruit (pineapple, banana, papaya, etc.); mixed fruit gardens with perennials (mango, litchi, jujubes, citrus, guava, lemon, etc.); perennial cash crops (cashew nuts, coffee, etc.); and forest tree plantations. Distinct variations were observed in the alternative options practised in the different study areas in the CHT, and by different ethnic communities. In Rangamati District, 78% of respondents had adopted annual cash crops (turmeric, ginger, etc.) as the major alternative to shifting cultivation. But in Bandarban District, only 41% of respondents reported adopting annual cash crops; in this district, fast growing fruit (pineapple, banana, papaya) was a more popular alternative, cultivated by 58% of respondents. In Rangamati District, only 35% of respondents reported cultivating fast growing fruit. The establishment of mixed fruit orchards with perennials (mango, litchi, jujubes, a citrus fruit called malta, and mandarin) was reported as a new and emerging option in the hilly areas, mostly adopted by solvent farmers and those with large land areas. The coverage of this option is much higher in Bandarban than in Rangamati. The large-scale commercial cultivation of perennial cash crops (cashew nut, coffee) has become an option in Bandarban District in recent years. But this option is not used in Rangamati District. Fifteen per cent of respondents in Rangamati and 36% in Bandarban reported growing forest trees as an alternative.

The adoption of alternative options also varied among the different ethnic communities. The Bawm and Tripura communities in Bandarban adopted fast growing fruit and mixed fruit gardens with perennials. The Mro and the Murma communities adopted annual cash crops. In Rangamati District, the Chakma community adopted annual cash crops and fast growing fruit almost equally, while the Pankhua and the Tanchanga preferred annual cash crops. The other options (perennial cash crops and forest tree plantations) were used by well-off farmers, irrespective of their ethnic community. When asked about the reason for choosing the above alternative options, most of the respondents cited higher production, better income, less labour, the declining yield of jhum crops, and the decreasing scope for shifting cultivation as main reasons for adopting alternative land use options in the CHT.

Technically, it is clear that the crops in each of the alternative options adopted by farmers are environmentally suitable to the agro-ecology of the CHT. However, in most cases, the farmers used local varieties, which produce a low yield. In addition, the farmers do not practise improved cultural management of their crops, mainly due to a lack of necessary inputs and technological support.

Economic profitability is a major concern in the adoption of any land use system. The farmers of the CHT would not adopt a new land use system unless it provided sufficient economic benefits. Farmers in the CHT reported that the cultivation of annual cash crops as an alternative to jhum gave better yields and more cash income. Rasul (2009) reported that annual cash crops provided the maximum benefit (gross and net), followed by timber and horticulture. He also reported that the jhum system provided the least benefit, at a quarter of that of annual cash crops and half of that of commercial horticulture. For annual cash crops, the net benefit is reportedly almost double that of timber crop plantations. He also reported that the total cost is the highest for cash crops, followed by timber plantations and horticulture. The total cost is the lowest for agroforestry, followed by jhum. Therefore, economic return and the availability of capital are important determinants of the adoption of alternative options. More than 80% of the respondents reported that annual cash crops gave better yield and higher income. On the other hand, fast growing fruit was found to be more advantageous than other options as a farmer can harvest several crops continuously over 3–4 years from one planting. Fast growing fruit crops are also less labour intensive and guarantee regular and continuous earnings all year round.

For annual cash crops, the growing technique and harvesting involve loosening the top soil resulting in higher soil loss and fertility degradation. So this option, although economically most profitable (Rasul 2009), entails more environmental hazards and, therefore, is not feasible for hill slope agriculture. On the other hand, options such as fast growing fruit, mixed fruit orchards with perennials, and forest tree cultivation involve fewer disturbances to the top soil and allow the formation of a green coverage on the soil, resulting in less soil loss and higher fertility than annual cash crops. Hence, these options are more environmentally friendly than annual cash crops and are suitable for sloping land farming. Arya (1999) also concludes that perennial fruit trees are well suited to the CHT region as a sustainable alternative to shifting cultivation.

Socially, opinions about the effect of alternative options on the customs and culture of shifting cultivators are mixed. Most agree that, although shifting cultivation provides most of the food varieties families require, it fails to ensure food security. As a result, the majority of shifting cultivators are adopting suitable alternative options to generate cash income, which they use to access goods from the market. The attitude, especially among young respondents across all ethnic communities, seems to be changing. As the adoption of alternative options provides cash income, most of the respondents are amenable to adopting locally suitable alternative options, if financial and technological support is available. A change in gender roles was also observed with the adoption of alternative options. The men are more involved in the establishment and management of alternative options, as well as in the marketing of the produce.

### Availability and use of inputs

Regarding the availability and use of different inputs for alternative options, variations were observed in different places and among different ethnic communities in the CHT of Bangladesh. Most of the respondents from 'sadar upazillas' (sub-districts) in both study districts reported using chemical fertilizers and chemical pesticides for annual cash crops and quick growing fruit. On the other hand, only 15% of the farmers in the remotest sadar upazilla used chemical fertilizers and chemical pesticides. However, most of the respondents reported using chemical fertilizers and chemical pesticides, as suggested by the dealers and sales representative or based on their own experiences, but did not know or maintain the recommended dose for each crop. About 65% of respondents reported the use of smoke and ash to control insect pests and improve soil fertility. In the case of quality seeds and seedlings/saplings, in most cases the farmers arranged access to these through exchange programmes among the farmers. However, sometimes fruit seedlings/saplings were provided by the Department of Agriculture Extension, Chittagong Hill Tracts Development Board or non-governmental organizations. In addition, quality seeds, seedlings, and saplings are available at some government and private nurseries in the district headquarters.

Regarding the availability of chemical fertilizers and chemical pesticides, most of the respondents reported that there are government registered dealers in the sadar upazilla headquarters from where chemical fertilizers and pesticides are collected by the farmers. However, most of the respondents reported that the majority of the farmers do not use sprayers or foot pumps to apply the chemical pesticides, irrespective of the area and ethnic community, and only 5% of the rich farmers use a sprayer for the application of pesticides.

### Management practices

Improved cultural management practices are key to improving the growth and development of plants for greater agricultural production. The cultural management practices used in hill slope agriculture are usually different from those used in plain land agriculture. When asked about the cultural management practices used in the hill slopes, almost all of the respondents reported that they had not adopted any improved cultural management practices, except for weeding. However, 5% of farmers who had adopted annual cash crops as an alternative to jhum reported using mulch for moisture conservation. The majority of hill slope farmers do not apply any soil conservation practices in their jhum crops or for the alternative options they have adopted. Less than 10% of respondents reported that the tribal farmers had no knowledge or ideas about improved cultural management practices for agricultural crops such as pruning, mulching, water management, or soil moisture or nutrient conservation practices for hill slope agriculture, irrespective of the study area and tribal community.

## Extension approaches

The Department of Agriculture Extension is the main body responsible for disseminating improved and innovative agricultural technology throughout the country, including the CHT, for agricultural development, which is mainly done through regular extension services. Some other government and non-governmental organizations are also involved in the dissemination of improved agricultural technology through special project support. The adoption of improved agricultural technology largely depends on the availability of extension support services. So, when asked about the agricultural extension support services available and received by shifting cultivators in the CHT, 70% of respondents reported that the tribal farmers receive almost no extension services or technological support for the adoption of alternatives to jhum, while 22% reported receiving technological support. The extension support from the Department of Agriculture Extension in the most remote areas (such as Pankhuapara and Thanchi para) is almost non-existent. However, technological support and extension services from the Department of Agriculture Extension are reported to have been received by the farmers in the sadar upazillas in both of the study districts, especially in the well-connected areas. The Bawm and Chakma communities reported receiving more support and services from the Department of Agriculture Extension than other communities.

Regarding the type of extension support, the respondents reported that less than 5% of tribal farmers received training and technological advice on improved production techniques for alternative options. Some received input support, such as quality fruit saplings, fertilizers, and pesticides, etc. This extension and input support was mainly provided by the Department of Agriculture Extension, Chittagong Hill Tracts Development Board, Bangladesh Agriculture Research Institute (BARI), and some non-governmental organizations through special projects implemented in the CHT. On the other hand, the respondents reported that almost no farmers received any financial support (credit). Although the Government of Bangladesh has declared a low interest rate for agricultural credit support, tribal farmers do not usually apply for loans due to the complex procedures involved. However, the majority of respondents expressed a need for strong and continuous technological and input support, as well as financial support, for the expansion of profitable alternative options throughout the CHT.

## Bhutan

In Bhutan, the government has introduced a number of alternative livelihood options including horticulture crops, improved crop varieties, agroforestry options, private forestry concepts, and land management activities such as contour bunding and land terracing. Slowly, farmers have started practising some of these new land use options, such as orchards, land terracing, the intercropping of legumes with maize, and the conversion to pasture sown under maize fields or grown separately in tseri to dryland. Based on a review of the secondary literature, focus group discussions, and key informant interviews, three prominent land use options were identified in the research areas: dryland farming (potatoes, pasture, cereals, and legumes); horticulture crops (oranges, cardamom and ginger); and private forestry.

## Dryland farming

It is state policy in Bhutan to stop shifting cultivation and convert tseri/pangzhing land into wetland, dryland, orchards, and private forest. Since the 1980s, deliberate efforts have been made to implement this policy. During the Fifth and Sixth Five Year Plans (1981–1992), the government gave cash incentives to farmers who built stone terraces (300 Bhutanese ngultrum, approximately USD 4.85, per acre) or contour bunds (100 Bhutanese ngultrum, approximately USD 1.62, per acre) on their tseri lands to convert them to dryland. However, the cash handouts did not continue after the Sixth Five Year Plan due to a lack of funds. Without the cash incentives, the farmers could not develop the land. A lack of manpower also was a factor. As mentioned in the earlier section, the Sustainable Land Management Project converted more than 4,500 acres (1,821 hectares) of tseri land into terraced dryland in the pilot sites. Dryland farming as an alternative is also being practised on pangzhing land.

In Tang, the pangzhing system has largely been replaced by potato cropping and improved pasture. The change to potato farming, in particular, can be attributed to two major factors – the arrival of a farm road in 1987 and the

use of inorganic fertilizers. The farm road, which is 21 km long (and has now been upgraded to feeder road status), connects Tang to the national east-west highway and the vast markets in India and Bangladesh. This farm road has made large quantities of fertilizer available for use to sustain production year after year. The fallow period that was necessary in the past to replenish soil nutrients is no longer relevant. As for improved pasture, a change happened in the 1990s when the Swiss-funded Helvetas project introduced Brown Swiss cattle in Bumthang dzongkhag and improved pasture was needed in order to feed these high producing cattle. Today, Tang, along with other 'geogs' (sub-districts) in Bumthang, is a major producer of dairy products.

### Horticulture

The most popular alternative to tseri/pangzhing, which has been encouraged by the government and taken up spontaneously by the farmers themselves, is horticulture crops, mainly oranges, potatoes, cardamom, and ginger. Bhutan enjoys a comparative advantage in the region with regard to the growing of horticulture crops, which is being capitalized on. The promotion of horticulture crops is one of the key points in Bhutan's Economic Development Policy 2010 (Gross National Happiness Commission 2011a), and it seems to be taking shape. The ample support from the government and the ready markets in India and Bangladesh have combined to make these crops dominant in the southern belts of Bhutan where tseri once flourished. For instance, in the year 2000 there was an estimated 1.7 million orange trees; by 2007, this figure had increased to 3.2 million (Department of Agriculture 2011b). Table 2 shows how the percentage of crops grown in the cultivated area is changing in favour of cash crops. The share of cereals is declining, while that of vegetables, fruit, and other crops (legumes, oilseeds, etc.) is increasing. It is clear that farmers are adopting cash crops. However, how much these crops are encroaching on tseri is impossible to determine from the data, as the 2008 census simply did not collect information on crops grown on tseri/pangzhing land.

Table 2: Share of crops in cultivated area

Type of crop	2000 (% share of crops)	2008 (% share of crops)
Cereal	79.1	64.5
Vegetable	8.9	21.7
Fruit	5.1	6.8
Other crops	6.9	7.0
Total	100	100

Source: Adapted from Policy and Planning Division 2010a

It is understood from the focus group discussions that the promotion of horticulture crops, especially citrus, on tseri converted to dryland is picking up in many areas. Horticulture crops such as citrus are seen by the farmers as one of the most attractive alternative uses for land not suitable for annual cropping. However, it is important to support farmers with demonstration/research plots and extension services on improved fruit tree production management practices. It is also important to support the creation of markets to absorb the increased production of fruit in the future. The use of improved soil management practices to enhance soil fertility will permit farmers to increase the period of cultivation and decrease the fallow period. Efforts to demonstrate land terracing and counter bunding should continue as a regular extension activity. The introduction and promotion of other fruit crops and new crop varieties, besides maize, would increase the productivity of the land per unit of area.

### Private forestry

Private forestry is a concept that the Department of Forests and Park Services of Bhutan has been promoting among farmers for decades. However, adoption has been very slow. The story is quite different now with the National Cadastral Resurvey Program (2008–2013). Tseri land that is overgrown with forest is now being registered as per the 'Ngarthram' (previous land record) by the National Cadastral Resurvey Program and, most likely, will eventually be registered as private forest (Dorji 2011). Although it seems that farmers will have no choice this time, they will still get to keep their land as private forest. Otherwise, strictly speaking, according to the Forest and Nature Conservation Act 1995, private land left fallow for more than 12 years (and, thus, overgrown with forest) would automatically revert to government reserved forest. Thus, it is apparent that this policy will have a huge impact on shifting cultivation.

## Nepal

As elsewhere in the region, traditional shifting cultivation in Nepal is in transition. The alternative options being practised included cardamom-alder agroforestry in Sankhuwasabha District, chiraito-based shifting cultivation in Taplejung District, and horticulture-based agroforestry (agri-horti-silviculture) in central Nepal. In general, shifting cultivators with large landholdings and small families are adopting these alternative options.

### Cardamom-alder agroforestry

Shifting cultivators at lower altitudes in Pawakhola, Sankhuwasabha are practising cardamom-alder agroforestry in their shifting cultivation lands. Cardamom (*Amour subulatum*) is a cash crop with good market value. The popular varieties in Pawakhola are ramsai, chippsai, varlange, and kupringe. Cardamom is a shade-loving plant and grows well under the shade of the alder tree (*Alnus nepalensis*). Large cardamom is considered highly suitable for cultivation on sloping land, especially the moist land on the side of rivulets. It was the farmers themselves who introduced large cardamom agroforestry to eastern Nepal from Sikkim, India, where it is a traditional practice. Only later did the Agriculture Development Bank start providing loans and the District Agriculture Development Office support farmers with planting material. Cardamom is popular as a cash crop because, compared to other crops, it requires minimal labour during cultivation and harvesting.

### Chiraito plantation

In Taplejung, the commercial cultivation of chiraito is the main alternative adopted. Farmers cultivate maize and chiraito on shifting cultivation lands. Chiraito grows best on freshly-burned sloping land where there is enough rainfall and moderate sunlight. Compared to cardamom, chiraito is less affected by pests and diseases. For chiraito cultivation, the slashing and burning is done from March to May. Some farmers cultivate only chiraito, while some cultivate it in between rows of maize plants. The chiraito seeds are broad cast on shifting cultivation land. The plant usually takes around 18 months to mature, depending on the variety, soil fertility, and altitude. Farmers say that the chiraito is ready to be harvested after three years. Harvesting is done in November and December.

### Horticulture-based integrated agroforestry

Horticulture crops, mainly fruit, conserve the environment, while at the same time generating income for shifting cultivators. The main crop species cultivated in Nepal are banana (*Musa acuminata*), pineapple (*Ananas comosus*), ipil ipil (*Leucaena* spp.), bakaino (*Melia azaderach*), and broom grass (*Bromus inermis*). Farmers in central Nepal (Kakada, Siddhi, Jogimara, Dhaubadi, and Bhumlichowk) are earning comparatively more income from agroforestry than traditional shifting cultivation. In order to promote horticulture-based agroforestry, shifting cultivators in some sites in central Nepal are establishing integrated hedgerows on their shifting cultivation lands from which they are harvesting fruit, legumes, vegetables, and fodder and forage. This style of cultivation has the added benefit of improving soil fertility and controlling erosion.



## Part 2

# Discussion and Conclusion

Shifting cultivators – despite their immense, time-tested knowledge, land use management practices, traditional institutions, and traditional tenure – continue to be perceived as destroyers of natural resources, particularly forests. Their innovations and contribution towards the conservation of biodiversity, nurturing of forest resources, and maintenance of sustainable land use systems are largely ignored in policies and research, which generally focus on providing alternatives to shifting cultivation rather than improving the existing system. It is clear from the findings of this study that the policies of the countries of the eastern Himalayas must change to recognize shifting cultivation and better accommodate the needs of shifting cultivators, as well as conservation and development agendas. Towards this, Part 2 discusses the context in which shifting cultivation takes place, the impact of the erosion of customary tenure and institutions on shifting cultivators, and possible entry points for change. It also outlines some key considerations to take into account and makes some country-wise recommendations.

# Understanding Shifting Cultivation

## The geophysical/ecological and social contexts

When discussing shifting cultivation, it is imperative to understand it from two perspectives: the geophysical/ecological context and the social context. In terms of the geophysical and ecological context, shifting cultivators inhabit mountainous (or hilly), rough, and steep terrain, which is often unsuitable for irrigation, terraces, or the use of machinery. Therefore, shifting cultivators have to depend on human labour and hand tools. Shifting cultivation is solely rainfed and consists of mixed cropping practices.

In terms of the social context, shifting cultivation is a comprehensive farming system, often practised on community land and, therefore, based on the principles underpinning common property regimes. This practice is not just about the production of food and resource management, but is closely linked to the cultural, social, and spiritual needs of the shifting cultivators. Shifting cultivation is, therefore, deeply ingrained in the lives and institutions of those practising it.

In order to appreciate shifting cultivation in its given context, the tenure environment in which it is practised must also be understood. Historically, shifting cultivation land tenure has been governed by customary laws in which shifting cultivation land was owned communally. Individual shifting cultivation households inherited shifting cultivation rights. Contemporarily, there are two scenarios: farmers who have control and ownership over their land and those who do not. These two scenarios play a major role in how farmers use their land and how cultivation is managed.

## Sustainable vs. unsustainable forms of shifting cultivation

There are also different types of shifting cultivation; while some are sustainable, others may not be. It would, therefore, be wrong to blindly categorize shifting cultivation as just one system. A simple, but effective, way to roughly differentiate between the two is to identify shifting cultivation systems with a fallow cycle of more than ten years as sustainable and those with less as unsustainable. Cultivation systems with a short fallow period, generally, do not allow the forest to regenerate and limit the revitalization of soil fertility, thus affecting productivity.

The lack of understanding of shifting cultivation means that decisions regarding this practice are often driven by conservation agendas or a desire for economic productivity, not by any comprehensive outlook that encompasses production, conservation, and sustainable livelihoods. While there is no denying that certain forms of shifting cultivation are not sustainable, it would be wrong to demonize the entire practice. Unfortunately, policies over the years have been based on a negative view of shifting cultivation and have systematically strived to either change it (largely to cash crop production) or replace it with different land use systems that sedentarized the practice. Many of the introduced options, which are usually input intensive, irrigation dependent, and horticulture- or forestry-based, have been unsuitable to local conditions. On the other hand, such programmes have, in many places, converted fallow land into forests or permanently converted fallow forests into non-forest land uses.

Once shifting cultivation is understood, policies can be formulated to protect against unsustainable forms of shifting cultivation and support sustainable forms, which have positive benefits for the environment, while at the same time sustaining farmers' livelihoods and culture. More research is needed into both the context in which shifting cultivation takes place and sustainable and unsustainable forms of the practice in order to better inform policy on shifting cultivation.

# The Centrality of Policy

The formulation of policies that recognize shifting cultivation and the tenure of shifting cultivators over their land – and that support shifting cultivators to improve their shifting cultivation practices, as well as, where appropriate, adopt alternative practices – is central to solving the issues of shifting cultivation.

## An unsupportive policy environment

The policy environments in Bangladesh, Bhutan, and Nepal are all at different stages and, therefore, have different impacts on land use practices. In Bhutan, the government has been the most proactive and, in many ways, responsive to feedback from field-level officers. Government policy, however, continues to be forestry biased vis-à-vis shifting cultivation. The situation in Nepal is very different, as this practice does not figure in any of the official policy documents or legislation. However, researchers are optimistic that there is scope within existing laws and policies to accommodate the practice. Shifting cultivation may be able to be included in community forestry plans and programmes, but only after the tweaking existing policies. In the CHT of Bangladesh, the situation is again different, as shifting cultivation and traditional institutions are recognized by law; however, these laws and policies have not been fully implemented by the government. The situation also varies within each country. Except for the common fact that governments are trying to do away with shifting cultivation, there are few similarities in national policy regimes across the eastern Himalayan region.

Irrespective of the policy frameworks in each country, there continues to be large areas under shifting cultivation, both on private and government land. Shifting cultivation is by far the most dominant land use type among the marginal ethnic communities in the CHT of Bangladesh and in pockets across Bhutan and Nepal. Although there have been visible changes in the way shifting cultivation is practised, particularly in the different cropping systems, it continues to operate at a subsistence level and most farmers are facing poor productivity, shortened fallows, insecure land tenure, and even prosecution. Shifting cultivators face an uphill battle, as the policy environment is neither encouraging nor supportive. Across the eastern Himalayan region, government programmes and schemes are generally designed to provide alternatives to shifting cultivation and there is no research or development agenda that supports shifting cultivation in agriculture, forestry or development strategies.

## The nationalization of shifting cultivation land as forests

The advent of colonial rule and the establishment of the modern state led to states amassing large tracts of forests as national resources through proclamations and national policies. Irrespective of the governance system, states ultimately emerged as all-powerful entities owning and controlling all types of forests, unregistered land, and any other land that could be afforested through the nationalization process. Among the laws aimed at reducing, controlling, or banning shifting cultivation, forest and land laws have most affected shifting cultivation, often by nationalizing communal land. The forest policies of all three countries (except for the reverting of forest fallows to government reserve forests in Bhutan and the regulation of shifting cultivation in the CHT) do not have much space for incorporating shifting cultivation as a proper land use category or as part of development plans. Shifting cultivation continues to be viewed as a land use system that is destructive to forest ecosystems. Even the forestry component in shifting cultivation – the fallow period – is not considered or recognized as regenerating forests by either policy makers or foresters.

A prominent issue that crops up when discussing shifting cultivation and policy is the dilemma faced by government ministries and departments. There is no doubt that shifting cultivation is an agroforestry system, but its dual nature has meant that it is shuttled between agriculture and forestry policy areas, with neither taking responsibility. Unfortunately, in most cases, it is the forest and land use policies, not the agriculture policies, that seem to mention

shifting cultivation. Most such policies are restrictive or directive, without much scope for local interpretation in their implementation. A good policy must be enabling and not just a set of restrictions on how or what people should or should not do. Rather than just coming up with more and more compartmentalized policies, there is an urgent need to review existing policies to identify points of convergence and facilitate the participation of local people in development interventions; enable access to support mechanisms that promote sustainable land use; improve the productivity and living standards of farmers; and conserve forests.

State policies in particular have limited access to fresh land for shifting cultivation, banned the use of fire, and introduced programmes to phase out or ban such practices. The process of forest nationalization has, thus, resulted in decreased local property rights over forests and, in many ways, negatively “increased users’ short-term exploitative behaviour, leading to degradation of forests” (Dorji et al. 2006). On the other hand, the ambiguity of the definition of forests in the codified laws (e.g., in Nepal) and lack of clarity as to whether or not shifting cultivation is a legal land use category (e.g., in Bhutan) have created confusion, which has often gone against the interests of traditional forest-based farmers. While the nationalization of forests was basically aimed at the conservation of resources for future use, it has in many ways negatively impacted the livelihoods of numerous indigenous communities across the region.

## **The erosion of customary tenure and institutions**

While customary tenure and institutions are well recognized in the CHT, Bhutan and Nepal have obliterated the traditional institutions governing shifting cultivation in the process of codifying their laws and governance. Furthermore, the forest policies of all three countries are strongly protective of state forests and have little scope to benefit forests and other resources that were traditionally owned or managed. This has negatively impacted common property regimes, as well as nullified traditional land use and ownership systems, thereby denying such communities their rights over resources and to follow their traditional practices.

Most policies are top down, driven by a one-sided state agenda, and have little or no space for the participation of local or traditional communities and their institutions. These policies, while striving to conserve national forests, have disrupted the traditional land use and tenure systems of indigenous peoples and uprooted the traditional institutions governing such practices and tenure systems.

The privatization of shifting cultivation land, promoted by policies, is a new concept for shifting cultivators. Individual ownership brought in restrictions and alienated shifting cultivators from their land, creating conflict within communities. When land and forests came under state ownership, customary tenure was ignored and community institutions left high and dry. This created a vacuum in land management on the ground.

As forests and land were no longer under the community institutions and as there were no government representatives to monitor violations of the laws governing government forests and lands, such lands in the interior areas were encroached upon and exploited without regulation by the community or the state. If the establishment of more effective institutions does not follow the dissolution of traditional local institutional arrangements, common property becomes open access – and this is exactly what ensued in many areas across the region. Local people were forced to become illegal squatters on their own ancestral lands because the state, with its agenda to conserve forests, took over ownership of forests and related resources. Such actions by the state have often been arbitrary and without any involvement by local communities in decision making, thus ignoring the livelihood needs and rights of its citizens.

The dilution of customary tenure and institutions by policies and programmes that discourage shifting cultivation and promote other sedentary or cash crop-based land use systems have impacted the way the younger generation relates to customary institutions. These policies and programmes have alienated youth from traditional land use practices and knowledge systems. When people’s dependency on common property resources is reduced, it directly diminishes their dependency on customary tenure systems and the institutions that govern it.

However, everything is not lost; there have been cases of once-abolished traditional local resource management institutions being recognized and incorporated into laws and adopted as effective resource management strategies (Wangchuk 2001). In Bhutan, for example, in 1985 during the Fifth Five Year Plan, the government revived the customary institution of 'reesup' for forest protection. A review by the Department of Forests showed that this approach was effective in bringing the government administration closer to local communities, as the local people preferred talking to someone from the village about their problems instead of an outsider.

The reports from the three countries studied all indicate that the impact of policies has been so strong that it has eroded traditional systems of customary land tenure and their institutions. While a few institutions do still exist and function as they always have, most have been altered or obliterated by government programmes designed to change or replace the shifting cultivation system. Policies that address the needs and interests of shifting cultivators in these countries are important to protect their livelihoods and way of life. Any solution to shifting cultivation must first address the root causes of the problems facing shifting cultivators, as well as ensure access to resources, secure land tenure, and influence over decision making.



# Entry Points for Change

## Alternative options

According to this study, farmers in the CHT of Bangladesh, Bhutan, and Nepal are willing to accept changes or alternatives to land use, so long as the alternatives are physically suitable to the land and their practices. However, alternatives to shifting cultivation have not been so successful, despite all the policies, incentives, and penalties designed to stop or reduce shifting cultivation over the years. To understand why, we need to understand the reasons why farmers practise shifting cultivation. The fact that farmers continue to practise shifting cultivation, even when it is unproductive or illegal, is a strong indication that shifting cultivation is being practised for reasons beyond mere economics. To most farmers, shifting cultivation is more than just an agroforestry activity – it is a way of life. However, the system and its practitioners are little understood and policies and development strategies have not been able to capitalize on the richness and opportunities of this system.

Unfortunately, most policies in the region are not yet informed by good research or baseline information; this is even more pertinent when it comes to topics such as shifting cultivation. Among the three countries studied, Bhutan has been most forthcoming in terms of informed policy making by commissioning studies and reviews of systems and policies. However, even Bhutan still does not have a clear policy that addresses the issue of shifting cultivation, its tenure, and customary institutions. Bhutan's more recent initiatives to convert shifting cultivation to dryland cultivation are well documented, but its success has still been on a very small scale and usually within pilot programmes and funded projects. Farmers, according to the country report, opine that shifting cultivation is the most suitable land use in sloping areas with little or no irrigation opportunities. The economic justifications highlighted in this study for continuing shifting cultivation in Bhutan include: crop production from shifting cultivation converted into wages offers a better wage per day of labour than other work; no external inputs other than labour and some seeds are required to produce shifting cultivation crops and enrich the soil; shifting cultivation crops are not affected by marginal variations in climate; and shifting cultivation does not require high-level management capabilities.

In the CHT of Bangladesh, traditional indigenous farmers not only grow crops on their shifting cultivation land, but also hunt and gather food to supplement their nutritional requirements and generate income. For them, the land they cultivate is more than just a means of production, as they have a spiritual relationship with it. While alternatives, especially those that are horticulture- or vegetable garden-based, have been successful, these are often sustained by farmers with large landholdings. Small landholding farmers continue to farm their shifting cultivation plots, even if they have alternate options, as it is from shifting cultivation plots that they obtain their food security.

Government policies and programmes promoting exotic cash crops and other high yielding crops on private or individual lands, while enhancing the income of successful farmers, often fail to see the more subtle impacts of such interventions on the social and physical capital of communities. This is very important because poor farmers often depend on each other for survival, and ignoring such capital can have disastrous impacts on communities and their resources. Input-intensive cash crops are often picked up by relatively well-off farmers, as the poor cannot afford or sustain such investment or practices; hence, such interventions rather than bringing about equality or equity in society, have further widened the gap between the 'haves' and the 'have-nots'.

In general, shifting cultivators are more than willing to adopt suitable alternative options, as long as they are physically viable, culturally acceptable, and economically sustainable. What generally prevents them from doing so, besides hostile geophysical conditions, are the benefits and risks; lack of sustained support mechanisms; lack of access to markets; and, more importantly, insecure land tenure. Government policies also tend to directly introduce alternatives or technologies that are alien to the people and their practices.

Hence, policies must not just aim at changing practices by providing alternatives, but must recognize the diverse cultivation practices in the region and develop programmes that make them sustainable and enhance livelihood options. Rather than simply giving shifting cultivators alternative land use options, they should be provided with options that supplement their practice, so long as it is sustainable and productive. Given that shifting cultivators often have limited land; insecure land tenure; limited access to credit, information and markets; and poor skills and knowledge about new crops, governments must first of all formulate policies that address such concerns and then move on to other long-term alternatives.

The country reports produced for this study indicate that secure land tenure, access to good land for cultivation, and recognition of customary traditions, rights, and institutions are essential for traditional cultivators to improve their practices and enhance productivity per land unit. Farmers are keen to improve land productivity and enhance their livelihoods and, in many places, have started experimenting with different crop selections, interacting with markets, and even making institutional changes to make way for changes. Policies must look into such issues without past prejudice and learn to understand and accept existing good land use practices so that the way forward is developed with a sense of collective responsibility and participation.

## Community participation

Researchers, development strategists, and policy makers need to reassess the situation in the eastern Himalayas to evolve policies reflecting and responding to the ground realities. Unfortunately, to date, policies in the region have generally been top down or supply driven, with little or no scope for any debate or public involvement. This has alienated the very people for whom the policies were framed. At the same time, the policies that have been framed have often lacked support mechanisms on the ground. Existing policies tend to be based on the assumption that resources managed by the government ensure better conservation and that providing incentives or alternatives to traditional farmers will wean them away from unsustainable practices. However, when resources are nationalized, it is often the poor traditional farmers, not the large farmers, who are deprived of their rights and access to land and resources, and, consequently, their means of livelihood and food security.

Over the years, Nepal has successfully involved communities in forest management through its flagship community and leasehold forestry programmes. While there have been successes and the experiences from community and leasehold forestry could provide lessons for further improving such programmes, there are no examples of community farming practices such as shifting cultivation being part of such initiatives. According to the researchers in Nepal, the existing policy framework, although not explicitly favourable to shifting cultivation, does provide opportunities to incorporate sustainable forms of shifting cultivation, based on the same principle of community participation that led to the success of community forestry. Involving traditional farming communities could reduce conflict between different interest and user groups. According to the Nepal country report generated for this study, there have been cases of conflict caused by policies that arbitrarily granted traditionally owned and managed forest land to other user groups. This is a glaring example of how codified laws that do not take into account customary tenure and institutions can create conflict. On the other hand, community involvement in forest management can provide ample opportunity for the evolution of comprehensive management plans and, with the correct impetus, could take advantage of traditional cultivation practices such as shifting cultivation to further improve both forestry and livelihood activities. However, a lot depends on how policies are interpreted at the local level.

At the regional level, except in the CHT of Bangladesh, the status quo of not recognizing shifting cultivation as a land use has neither helped the conservation agenda nor eliminated the practice. Rather it has complicated the challenges, as both practitioners and law enforcers have been forced to confront each other, rather than working together. At the same time, the taking over of unregistered forests by the state has had repercussions, including encroachment on state forests. The state does not usually have adequate manpower to enforce its laws in remote areas and prevent encroachers, leading to policies being ineffective or inconsistently applied. Other factors in the failure of state policies include the lack of awareness of the people themselves. However, in many cases, what seems to matter most is that people are not consulted in such land acquisition processes and, as a result, there is no buy-in to policy initiatives by local people.

Although there have been visible changes to state policies to accommodate people's participation, many policies – rather than adopting a development-based approach – continue to be policing and restrictive, with regulations that penalize violations. Unfortunately, such policies have not yielded much success and must be realigned towards collective action and growth in a participatory and inclusive manner.



# Conclusions and Recommendations

Shifting cultivators are among the most marginal farmers and survive in harsh physical conditions with limited access to productive land and little or no irrigation. They are rich in natural resources, traditional skills, local knowledge, and social capital, but poor in cash. Over the years, they have been subjected to policies that are not based on research and ground realities, which have resulted in socioeconomic, environmental, tenure, and institutional problems. Even the best policies are useless if people do not have secure land tenure, because without it, no real investment or improvements can be made. Policies have been penalty-driven, as opposed to incentive driven, which has alienated the target beneficiaries. The best results are achieved from policies that enable and empower people and involve and empower community-based organizations and traditional institutions in resource management. Furthermore, policies require adequate funding to ensure that they are translated into action. Policies do not result in development unless they are well supported with good infrastructure networks and long-term services that are affordable and meaningful to local people. The challenges facing shifting cultivators, among many other things, include declining land productivity, reduced fallow cycles, unfriendly policy environments, uncertain land tenure, limited access to markets, poor infrastructure, the denial of customary tenure and institutions, prosecution, and negative perceptions about them and the practice of shifting cultivation. The following general and country-wise recommendations are made to overcome these challenges, based on the findings of the study.

## General recommendations

The following ten general recommendations are made for all of the countries in the eastern Himalayan region:

**Recommendation 1:** Secure the land tenure of shifting cultivators through individual ownership or as common property.

Policy makers in the region must recognize shifting cultivation as a legitimate land-use category and secure the land tenure of such farmers, be it through individual or group/community ownership. In most areas, shifting cultivation is traditionally practised on commonly owned and managed land. Regimes that place emphasis on individual or private land ownership have deprived many genuine land users from their land tenure rights. States should introduce policies that recognize and strengthen common property regimes. When tenure security is ensured, many things automatically fall into place. Secure tenure encourages farmers to make long-term investments in sustainable and productive farming practices. It also enables them to take greater risks in adopting new knowledge, trying new technologies, and even adopting alternative land use options. Related to this is the issue of reorienting credit policies so that they are sensitive and proactive to common property regimes.

**Recommendation 2:** Focus more on research and development to improve shifting cultivation instead of stopping the practice.

Over the years, successive policies have been informed by adverse views of shifting cultivation and, as a result, the focus has been on stopping this practice, rather than improving it. Policies have also focused on forest conservation, and governments took over land and forest fallows from traditional owners, which has negatively impacted shifting cultivators and their communities. Policies have not focused much on research and development or extension when it comes to small farmers and shifting cultivation. These policies have to be reviewed and streamlined for the benefit of both farmers and states.

**Recommendation 3:** Look beyond land productivity and recognize shifting cultivation for the many benefits (nutritional, cultural, social, and environmental) it provides to the people and the land.

Many government policies and programmes (including extension services), are geared toward supporting settled agriculture and forest plantations. Such policies tend to focus on commercial farming systems, not on small farmers. At the same time, these policies are somehow delinked from livelihood strategies and have a strong economic bias. Agriculture or land-based productivity must be able to see beyond forest plantations, cash cropping, wet rice plantation, horticulture, livestock management, and so forth, to include all other land-use systems. While changes should aim to sustainably maximize production per unit area from all categories of land use, it is important that policies are not at the expense of the farming community or its local biodiversity. Shifting cultivation farms are a treasure trove of biological diversity, with distinctive multi-cropping techniques honed over generations. This form of cultivation maximizes land productivity in a given area using minimal inputs.

**Recommendation 4:** Recognize the importance of small farmers, in general, and the ingenuity of shifting cultivators as innovators, in particular.

Globally, small farmers (including shifting cultivators) produce the largest share of the food we eat. They also maintain ecosystems, biodiversity, landscapes, natural resources, the healthiness and wholeness of food, and diverse cultural traditions, knowledge, and wisdom. Their role must be recognized by policy makers and development practitioners in the region. Shifting cultivators should also be recognized as innovators and conservers of the environment and biodiversity. They have nurtured fallows, innovated soil and water conservation measures, maintained and developed traditional varieties of seeds, preserved biodiversity, and refrained from contaminating the soil with external inputs for generations. Shifting cultivators are also ‘tree cultivators’, for without trees and the forest fallows, shifting cultivation as a system would cease to exist. These inputs must be recognized and policies, rather than trying to replace the system, should focus on the positive aspects of shifting cultivation as it facilitates forest regeneration, promotes biodiversity conservation, and has the potential to grow and produce niche crops and cereals.

**Recommendation 5:** Design alternatives to shifting cultivation in such a way that they are compatible with the local environment, knowledge, institutions, land tenure, and practices.

In trying to change this land use system, customary institutions, traditional land tenure, local agrobiodiversity, and knowledge systems have been lost. It is important to appreciate that farmers have their own understanding of situations and that they adapt or respond according to what they know and have. If changes that are alien to farmers are imposed, it has to be through a steady and participatory process, and not because some policies or laws have been passed by someone else, somewhere else. Any alternative to shifting cultivation must be compatible with the local environment, knowledge, institutions, land tenure, and practices. Perhaps the strategy that could offer the greatest advantages for the least cost and meet with the greatest level of acceptance is the one that reinforces shifting cultivators’ own well-established habit of making optimal use of natural processes.

**Recommendation 6:** Ensure a coordinated approach among institutions and agencies responsible for the development of farming communities, particularly between those responsible for forests and those responsible for agriculture.

Policy directions must be woven into the institutional mandates of the different forest, agriculture, and allied departments (agriculture, land resources, soil and water conservation, veterinary and animal husbandry, rural development) so that there is coordination among the different agencies responsible for the development of farming communities and their livelihoods.

**Recommendation 7:** Ensure that policies address the provisions of international conventions.

Bangladesh, Bhutan, and Nepal are signatories, or on the way becoming signatories, to the Convention on Biological Diversity, Nagoya Protocol, United Nations Framework Convention on Climate Change (UNFCCC), various ILO conventions, and more. The shifting cultivation policies of these countries need to address the provisions of such conventions. For instance, under the UNFCCC, incentive mechanisms such as Reducing Emissions from Deforestation and Forest Degradation (REDD+) are emerging, which the shifting cultivation policies of the countries could consider as an alternative to shifting cultivation.

**Recommendation 8:** Formulate development-oriented policy regimes that facilitate community-based sustainable land use plans and integrate watershed management with agroforestry development.

Shifting cultivation must be recognized at the landscape level as a unique form of agroforestry with a short agriculture phase and long forestry phase. Until recently, most planners and development workers focused on either of these phases, overlooking the synergy between the two. Given that shifting cultivation is practised in large areas, often extending into one or more watersheds, development strategists and policy makers in the region must develop policies that facilitate community-based sustainable land use plans and integrate watershed management with agroforestry development. For too long, policies have inadvertently kept different sectors, land-use systems, and related practices apart, preventing them from learning from one another.

**Recommendation 9:** Enhance the skills and capacities of customary institutions with a focus on mutual learning and growth.

While customary institutions may not have the appropriate management skills to develop and manage integrated community-based land use planning at the landscape level, they are experienced managers when it comes to understanding local practices, values, and traditions. On the other hand, government agencies and officials with all their technical know-how often fail to appreciate local conditions, values, and challenges. It is, therefore, imperative that policies that focus on enhancing capacities must integrate all stakeholders so that there is mutual learning and growth. If local communities and their institutions and government agencies can work together to develop plans that promote different land uses in a given landscape, it will not only help meet livelihood needs and reduce conflict, but also conserve the environment. This will strengthen the governance of resources and promote sustainable land use practices.

**Recommendation 10:** Involve communities in the process of policy formation.

The process of policy formation is as important as the policies themselves. Customary institutions formulate policies in such a way that all members of the community participate in the discussions and formulation processes. This ensures buy-in by community members and fosters a sense of responsibility among the community, which ensures that policies are adhered to. When people are not consulted or represented in policy discussions they will naturally have no way of influencing policies, although they may be adversely affected by such policies, and may simply resolve not to cooperate. Policy makers must, therefore, ensure that there is more participation from all stakeholders – not just in formulating policies, but also in their enforcement.

## Bangladesh

Based on the findings of the study, the following recommendations are made for Bangladesh:

**Recommendation 1:** Take concrete steps to implement the Local Government Council Act, 1989 and the CHT Peace Accord, 1997.

The Local Government Council Act of 1989 and the CHT Peace Accord of 1997 require the Bazaar Fund Administration to be handed over to the Hill District Council. Land is to be granted to landless hill people and the leasing of land to non-resident entrepreneurs is to be stopped. Land already leased to non-residents is to be cancelled. Bengali resettlement in the CHT is also to be stopped. Authority over land administration is to be transferred from the Deputy Commissioner's office to the Hill District Council and land disputes are to be settled by the Land Commission. The enhanced Government Reserved Forest programme is to be cancelled and social forestry promoted in Government Reserved Forest. However, so far, the Act and the Accord are yet to be enforced and implemented.

**Recommendation 2:** Remove the administrative plurality in relation to land administration by transferring land administration authority to the Hill District Council, as required by the Local Government Council Act, 1989 and the CHT Peace Accord, 1997.

At the moment, circle chiefs, the Forest Department, and the Deputy Commissioner's office are all involved in land administration in the CHT. The Forest Department and the Deputy Commissioner's office have jurisdiction over Government Reserved Forest and 'Unclassed State Forest' and the circle chiefs play a customary role in administering matters related to land settlement, jhum, timber and minor forest products, grazing resources, water resources, and hunting, etc. This administrative plurality causes tenure conflicts between customary institutions and government agencies. Often a piece of land used for shifting cultivation granted under customary law is claimed as Government Reserved Forest by the Forest Department and 'Unclassed State Forest' by the Deputy Commissioner's office at the same time.

**Recommendation 3:** Revive the 'bandobasti' (land allotment) programme to grant ownership certificates to shifting cultivators based on their customary entitlement, with the participation of traditional institutions, such as headmen and karbari, in keeping with the CHT Regulation, 1900; the Local Government Council Act, 1989; and the CHT Peace Accord, 1997.

The government has suspended the allotment of land to jhumiyas through the bandobasti programme. This has created inequity in the granting of private tenure over land to jhumiyas, as some received private tenure and some did not. To overcome this inequity the bandobasti programme needs to be revived.

**Recommendation 4:** There is a need for the Government of Bangladesh to align its policies with the provisions of the international conventions that it has ratified, including ILO Convention 107, and to ratify other conventions that give due recognition to the rights of indigenous people, specifically ILO Convention 169.

The Government of Bangladesh has ratified the Indigenous and Tribal Populations Convention, 1957 (ILO Convention 107) and the International Convention on the Elimination of All Forms of Racial Discrimination. However, the Government of Bangladesh has been denying the existence of indigenous peoples in Bangladesh in the international arena and is yet to ratify the Indigenous and Tribal Populations Convention, 1989 (ILO Convention 169).

**Recommendation 5:** The support required to transform shifting cultivation land to alternative land uses requires improvement and, where this transformation is untenable because of lack of private tenure, there is a need to develop shifting cultivation on its own merits.

The government's policy is to transform jhum to plough agriculture to horticulture, commercial plantations, and forests. There is no policy to develop jhum per se. Furthermore, the financial inputs, technical and research support, enterprise development and marketing support, capacity building, and private land tenure required for the transformation of shifting cultivation to alternative options is far from adequate. Where support does exist, the extension approach is top-down focusing only on technology transfer. Extension workers do not have sufficient knowledge of the local context (environment, culture, languages), which makes the extension approach and programmes inappropriate.

## Bhutan

Based on the findings of the study, the following recommendations are made for Bhutan:

**Recommendation 1:** Institutionalize participatory policy making in shifting cultivation policy making.

While the decentralization process in Bhutan began in the 1980s, in relation to policy-making processes and forums, the research findings revealed that policy making in shifting cultivation has been centralized and non-participatory, except for some deliberations in the National Assembly.

**Recommendation 2:** Formulate a policy that reconciles conservation goals with the development needs and interests of shifting cultivators.

The shifting cultivation policy objective is dictated predominantly by the professional views of technocrats and policy makers. While many shifting cultivators consider shifting cultivation a necessity on account of the lack of

alternatives in many locations, policy makers, lawmakers, bureaucrats, researchers, and extension workers prioritize environmental protection over the socioeconomic development of shifting cultivators.

**Recommendation 3:** Remove inconsistencies in implementation of the legal ban on shifting cultivation and inform local governments of the discrepancies that exist through an education and awareness campaign.

There is a discord between policy and practice in Bhutan. The ban on shifting cultivation is not implemented uniformly or consistently. In most of the study sites, 'tseri' (shifting cultivation) is not allowed, whereas in one of the study sites (Nabji-Korphu), it is allowed as long as a fallow period of less than 12 years is maintained.

**Recommendation 4:** Develop specific policy provisions to address the issue of tseri land that is geophysically unsuitable or difficult to convert to dryland farming, particularly in remote areas where orchards are not a viable alternative for marketing reasons, and consider recognizing shifting cultivation as a suitable land use category for such land in remote areas.

The Land Act of 2007 annulled tseri and 'pangzhing' (shifting cultivation at higher elevations) as official land use categories. However, this study confirmed that many farmers are still practising tseri, because tseri land is often geophysically unsuitable for conversion to dryland farming and farmers cannot afford the financial investment it takes to convert such tseri land to dryland (or wetland or orchards) without adequate financial and technical support from the government.

**Recommendation 5:** Research is needed to find out to what extent shifting cultivation land can be converted to dryland or other uses and to identify solutions for land for which conversion to the uses prescribed by the Land Act, 2007 is not feasible.

Financial investment is needed to implement the activities prescribed by the Land Act of 2007. The programme funding that was available in the past has stopped. The existing cash incentives for the conversion of shifting cultivation land to other land uses apply only in the pilot areas, while the investment required goes beyond the pilot areas, as the Act is intended to be enforced nationwide. As shifting cultivation is banned legally, there is literally no research interest or investment available to improve and innovate shifting cultivation.

**Recommendation 6.** Research efforts are needed to find a solution to the problem of diseases in horticulture crops.

Since the 1970s, the Government of Bhutan has encouraged farmers to adopt other land use options as alternatives to shifting cultivation. A great area of concern with regards to the alternative options, particularly horticulture cropping, is the diseases that are threatening to wipe out horticultural crops. All three crops commonly adopted in Bhutan – oranges, cardamom, and ginger – are susceptible to disease, for which remedies are not available at the present time.

## Nepal

Based on the findings of the study, the following recommendations are made for Nepal:

**Recommendation 1:** Formulate a separate policy to govern and develop shifting cultivation in Nepal.

In Nepal, shifting cultivation is yet to be recognized by the state as a legal land use and a form of farming, despite the fact that it is an age-old farming practice prevalent in 20 of the 75 districts of Nepal. As a result, there is no policy that governs and supports the development of shifting cultivation per se.

**Recommendation 2:** There is a need to settle the dispute between the state and the shifting cultivators in relation to the legality of the definition of national forest as well as to grant formal ownership of shifting cultivation lands to shifting cultivators in the central region (as has been done in eastern Nepal).

For centuries, shifting cultivators had customary tenure rights over the land and natural resources associated with shifting cultivation. However, state laws and policies turned customary tenure rights into extra-legal rights, and the

state laws do not formally recognize customary tenure. The Land Act of 1964 does not recognize shifting cultivation as a farming practice in Nepal, and the Government of Nepal has not been concerned with registering shifting cultivation land as taxable land or private land, leaving space for the Forest Act 1993 to consider shifting cultivation land as national forest. Shifting cultivation lands have been, and are being, converted to community forests and leasehold forests, although shifting cultivators inherited this land ancestrally based on customary tenure. However, in the eastern part of Nepal, the state has granted formal ownership of shifting cultivation lands to shifting cultivators, while many of their compatriots in central Nepal have not received formal ownership. Shifting cultivators question this discrepancy as well as the legality of the definition of national forest and contest the right of the state to delegitimize their customary tenure. The Department of Forests claims de jure ownership of shifting cultivation lands, while shifting cultivators continue to exercise de facto ownership.

**Recommendation 3:** To help shifting cultivators with small landholdings to improve their economic situation there is a need for the state to grant formal tenure (individual or collective), based on customary tenure.

Shifting cultivation must be legalized as a land use category to make the conversion of shifting cultivation land to alternative uses legitimate, which would enable the provision of support (such as credit, research and extension, marketing, and enterprise development). Shifting cultivation areas are being converted to horticulture, broom grass plantations, and dryland farming by the shifting cultivators themselves, or through the support of some non-governmental organizations, to improve their economic and social wellbeing. In most cases, the total landholding of shifting cultivators is small and shifting cultivation land is often the only land they hold.

**Recommendation 4:** The Government of Nepal needs to amend its laws and policies to bring them in line with Indigenous and Tribal Peoples Convention, 1989 (ILO Convention 169), Convention concerning Discrimination in Respect of Employment and Occupation (ILO Convention 111), and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

The Government of Nepal is a signatory to ILO Convention 169, Article 13 of which defines 'land' as "the territories, which covers the total environment or the areas which the peoples concerned occupy or otherwise use". ILO Convention 111 guarantees the right to practise a traditional occupation. However, provisions of the laws enacted by the state, such the Land Act of 1964, Forest Act of 1993, Nepal Biodiversity Strategy 2002, Leasehold Forestry Policy 2002, and the National Park and Wildlife Conservation Act contradict the provisions of these ILO conventions and UNDRIP.



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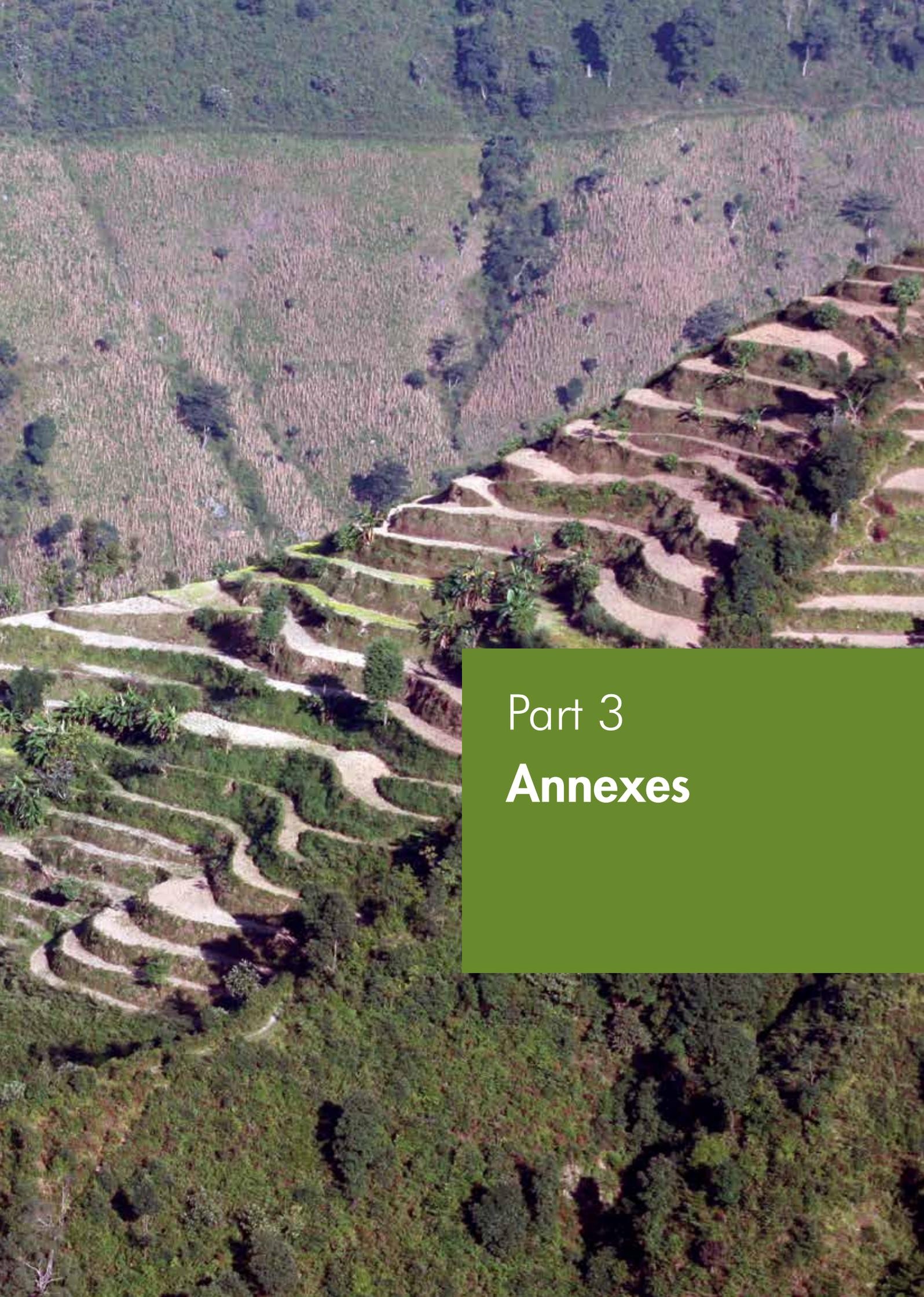
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Part 3

**Annexes**

# Annex 1: Practices and beliefs around ‘jhuming’ in Bangladesh

In the Chittagong Hill Tracts of Bangladesh, the shifting cultivation cycle is tied to the people’s belief system and integrated into their cultural life and institutions. Households can choose jhum plots by placing an object called a saga (a short bamboo post with one end fixed to the ground and the other end split in which two bamboo sticks are placed in a crisscross pattern). Customarily, saga, which can be placed only on an undisputed piece of land, ensures that same jhum plot is not selected by more than one household.

After the saga is placed, some soil and earthworms are put inside it. A fist full of soil is taken home and put under the farmer’s pillow before going to sleep. God is invoked to make a dream and the dream is checked. If the dream is bad (e.g., of fire, being chased by somebody, blood, or dancing while cooking, etc.) then a decision is usually made to cancel the plot. However, in some cases, a ‘badya’ (person who invokes God and offers prayers) may be asked to predict whether or not it would be possible to cultivate jhum, after making an offering to God, despite the bad dream. The badya communicates with God and either approves or disapproves of the shifting cultivation site. If anyone knowingly or unknowingly puts the saga on already occupied land then the saga is disregarded. A person(s) who gains rights through saga can jhum on the same land in the following year.

Reserving excessive land through saga beyond actual need is considered ‘greed’ and not allowed by the community. If one willingly withdraws the saga and declares that they will not continue jhuming in the following year, the ‘karbari’ (village functionary) should be informed and will then allow others to put saga on that land. After choosing the plot, permission is sought from the headman. The permission, in principle, assures the farmer the right to jhum, but the rights to hunt, gather honey, and use trees, flax and cane to make huts can also be exercised.

If a jhum plot is chosen by a group, then the jungle is cut under the instructions of the karbari and, after burning, the plots are distributed through a lottery system. If someone wants to jhum in another ‘para’ (village), permission has to be sought from the karbari of the concerned para. The headman and karbari jointly decide on the allocation and demarcation of jhum plots.

There are beliefs and superstitions that underlie the culture of jhum in the Chittagong Hill Tracts. For instance, the Chakmas believe that if a monkey or iguana is found in the process of slashing or jhuming it is a bad omen and jhuming should be discontinued. In addition, rituals are preformed, such as ‘thamanna puja’, which is a collective form of worship for a good harvest and good health, and ‘pavan puja’, a ritual blessing to ensure uniform and smooth burning. Before harvesting, ‘fung’, a ritual to invite Laxmi (the goddess of wealth), is performed in the hope that food stocks will last a long time.

## Annex 2: Practices and beliefs around ‘tseri’ in Bhutan

In Bhutan, the villages of Chimuna, Tang, Khar, Silambi, Phangkhar, and Jigme-Singye-Wangchuck were selected as research sites. Some of the traditional practices and rituals followed in the research sites are summarised in Table A.

Table A: **Customary practices and rituals prevalent in Chimuna**

Practice/ ritual	Description	Status	Purpose
<i>Kuchoe</i>	Offering milk, cheese, food and butter during upland rice cultivation in tseri land	Continuing	To please local deities, avoid claims on land ownership of tseri by others, and prevent illness
<i>Khendum</i>	Sacrificing three roosters at home	Continuing	To prevent illness
<i>Tsheku</i>	Sacrificing a pig	Discontinued due to advice of je khenpo (religious leaders) to stop animal sacrifices	To prevent illness
<i>Salam jab</i>	Offering rice, food, drinks, and pig sacrifices	Continuing	To prevent illness, death, and mishaps to humans and domestic animals

In Jigme, Singye, and Wangchuck, prior to 1957 and the inception of formal policies and legislation in Bhutan, customary tenure and institutions governed shifting cultivation. Mukhiyas (heads of households) customarily owned large tracts of shifting cultivation land and forests. The mukhiya decided where to cultivate and which crops to grow. He also ensured that a foxtail millet cake offering (*gengyae*) was made to pray to the local deities for a good harvest.

These areas were once ruled by the Doya Raja, during whose reign an area was selected for shifting cultivation by digging the soil three times with the help of a hoe in a forest and then waiting three days. If a jungle fowl or pheasant crowed within three days, the area was considered unsuitable for cultivation. If no sound was heard, an offering to the ‘wild cat’ (tiger) was made on the fourth day. Rituals were performed before starting shifting cultivation activities (see Table B).

Table B: **Customary practices and rituals in Jigme, Singye, and Wangchuck**

Practice/ ritual	Description of practice	Status	Purpose
<i>Gengyae</i>	An offering of foxtail millet cakes to local deities (the mukhiya decides where to cultivate tseri and which crops to grow and makes the offering; however, an increase in family size has led to the separation of family members and, if they cannot afford to make the offer by themselves, a joint offering is made by the main households)	Continuing	To please local deities, prevent illness, and ensure a good harvest
<i>Tengla</i>	The main offering by households wherein pigs are sacrificed once every three years by groups of 3–6 households	Continuing	To prevent illness and death
<i>Khenduma</i>	The sacrifice of male pigs once every three years and offerings distributed to people	Continuing, but younger generation not as interested	To ensure a good harvest from tseri land
<i>Zipdag</i>	Female pig offerings made by tseri households	Continuing	To ensure a good harvest from tseri, without damage from wild animals and hail storms
<i>Losar lo</i>	Like <i>gengyae</i> , this practice is performed in the same month when Losar Lo is celebrated	Continuing	For good life and wellbeing
<i>Chezay</i>	Cock sacrifices and offerings performed at the time when herds are moved from shifting cultivation land to another place	Continuing	To avoid human and cattle falling off cliffs

The Doya, an indigenous Bhutanese tribe that live in Jigme, Singye, and Wangchuck, have their own unique traditional dress, speak their own dialect (Doyapkha), and practice Bon as their religion. Animal sacrifice is an integral part of their culture. Since time immemorial, the head of the family substitutes for a priest in performing rituals. Dead family members are mummified inside a tree trunk (called 'moru levigata') and buried in upright position surrounded by stones and mud near homes. Dead bodies are not burnt, as burning is believed to cause death to all family members. Just like Bon, shifting cultivation is an integral part of the Doya people's culture and livelihood.

In Tang, in the past 30–50 years, the practice of 'pangzhing' (shifting cultivation) was very common. Prior to the introduction of formal laws in 1957, rich people or landlords controlled large fields of pangzhing and used to make decisions and control good and fertile pangzhing. Other farmers sought use rights from the landlords and rich people, who paid tax to the government, which confirmed that the ownership of pangzhing lands was with the state. Most farmers had use rights over three plots and cultivated them over a cycle of three years.

In Fangkhar, shifting cultivation was common. While the land was owned by the state the local people were granted use rights. They paid tax to the state in kind through local landlords. Since 2004, shifting cultivation plots were gradually brought under permanent cultivation through conversion to orchards fuelled by markets. Land ownership is now individual and has been legitimized through land certificates.

Farmers believed that the eighth, tenth, fifteenth, twenty-fifth and thirtieth days of Bhutanese calendar were auspicious days and did not cut trees or burn shifting cultivation fields on these days to avoid killing insects and invisible beings. They also performed rituals to tame the evil spirits that they believe dwell underneath stones and in old trees. Seed broad casting and planting were carried out on auspicious days to avoid pests and disease infestations. Dead bodies were not cremated near fields during the flowering of crops as they believed that any foul smell or smoke would result in a poor yield. They performed rituals such as 'bondpo' and 'kharam' (the building of effigies to invoke 'Yule-shep-da', a local guardian deity) to safeguard their crops against depredation by wild animals and to avert curses from neighbours. Before the harvest, the farmers performed 'ailanawang', a ritual to please the goddess of harvest. When crops reached maturity, the seeds from good mother crops were harvested as a seed source and 'chankey' (a local alcohol) was brewed from the first harvest and offered to ailanawang. Without the completion of this ritual, harvested crops were forbidden to be transported across mountains and rivers.

Nabji-Korphu falls within Jigme Singye Wangchuck National Park. The key informant interview confirmed that, in the past, tseri was practised rampantly by individuals in any part of the government reserve forest without formal consent or approval. Shifting cultivation land was owned by the state or members of the royal family and shifting cultivators were granted use rights. They paid annual tax, in kind, to the royal family through the caretakers of their lands.

Before embarking on tseri cultivation in a particular forest patch, farmers used to blaze a tree to mark the land for tseri cultivation. Men performed the more difficult tasks, such as building makeshift huts and slashing bushes, while women sowed seeds and weeded. Even now, although state policy does not allow shifting cultivation, the villagers continue to undertake shifting cultivation on their private land, after seeking approval from the Jigme Singye Wangchuck National Park authority.

In Khar, prior to introduction of formal laws in 1957, tseri land tenure belonged to the state. A 'khochi' or landlord granted farmers the right to use land for shifting cultivation and collected land tax on behalf of the government. According to an old lady called Pedon, aged 78 years, there were only 23 households in the Khar 'chiwog' (group of villages) when she was a child. The farmers practised tseri wherever they liked on a first come first served basis. There were no conflicts about land ownership and access to other resources such as forests and water. Then, in 1965, shifting cultivation lands were measured and private ownership was granted to individual households.

According to Wangchuk and Tashi (2004), numerous beliefs prevail in the area. It is believed that thick bushes and big trees are home to spirits. The farmers seek the permission of these spirits to slash and cultivate the land. Therefore, on the first day of slashing, a small ceremony used to be conducted during which alcohol and food was offered to the spirits. During the offering, the farmers sought permission from local deities to slash and burn and for

protection during slashing and requested the deities to guard and provide high yields by warding off evil spirits. It is, therefore, a common sight to find a protecting object called a 'kharapshing' (a wooden phallus) erected at strategic locations to ward off bad luck and curses. The ceremony is also meant to tell local deities to stay away and be careful during slashing and burning. Another reason for the offering is to beseech the deities to bestow good luck on the person doing the slashing.

Buddhists name each year after one of twelve animals: rat, bull, tiger, rabbit, dragon, snake, horse, sheep, monkey, bird, dog, and pig. If shifting cultivation will take place in the year of the tiger, it is considered inauspicious for a person born in the year of the tiger to take part in the slashing work. So, one reason for making an offering is to seek the blessing of local deities for those persons to take part. If the offering is not made then it is believed that the person carrying out the slashing will sustain cuts or have an accident during the slashing. Another belief is 'sum sum bubu', which means that the third, thirteenth, twenty-third days of a month are the days on which organisms will occur in great numbers. Slashing, burning and weeding are not performed on these days and it is believed that if your slashing begins on those days insects will attack the crops and reduce the yield.

The village of Silambi derives its name from a fodder tree called 'silamdee' in the local dialect. In Silambi, shifting cultivation land belonged to the state. A 'kochi' or landlord regulated the use rights and collected tax on behalf of the government. According to the key informant, silambi was once forested land. A few highland herders from Bumthang, a neighbouring district, came and settled with their cattle. The herders converted the land from forest to community 'tsamdrog' (grazing land). As a part of their transhumance livelihood strategy, herders used the tsamdrog for winter grazing only, returning to their highland pastures in the summer. During the summer, local residents who took care of tsamdrog enjoyed usufruct rights over the tsamdrog. The local residents bought the grazing rights in the 1980s and converted the tsamdrog to kamzhing (dryland) through a royal decree.

In the past, when tseri was practised, the farmers cultivated tseri in groups of 2–3 households. All tseri plots are now being converted to dryland in the government records, although not always in practice. Farmers say that it is difficult to maintain soil fertility on drylands because of the low cattle population and shortage of farm labour. To cope with this problem, farmers keep part of their drylands fallow for 1–2 years to let the grass and shrubs, such as *Eupatorium odoratum*, grow and add organic matter to the soil.

# Annex 3: Customary institutions governing 'khoriya' and 'taangsing-khoksing' in Nepal

## Bheja (Magars of Nawalparasi, Nepal)

The 'Bheja' is a traditional institution that sets rules for 'khoriya' (shifting cultivation) followed by Magars in Nepal to this day. Such rules are followed by all members of the community. In terms of organization, all of the households of the village constitute the members of the Bheja. It is not mandatory to be a member, but as the Bheja sets all of the rules and regulations regarding access to, and utilization of, resources, it is not practical for a household not to join the Bheja. The Bheja has a traditional leader, often called as 'mukhiya', who is selected every year by community by consensus. The mukhiya may continue for several years once selected. In the past, mukhiyas were considered the social and ritual leader of the village.

The Bheja selects the khoriya site and fixes the dates for the slashing, collecting, burning, and planting. It also fixes a day for the 'garangcha gwarnche' (shaman) to make smoke on the top of Devchuli Mountain, which can be seen from surrounding villages. The smoke serves as a bush telegraph to inform the villagers that they can begin burning the slashed materials in their khoriya fields. This is done to regulate and avoid unwanted forest fires, as well as to manage the labour required for burning collectively. The Bheja also performs a 'khoriya-pooja' (religious ceremony) involving all of the khoriya cultivators in the community. This is basically to thank the ancestral gods for a good harvest as well as to discuss plot selection and fix the date for setting the fire on top of Devchuli Mountain.

## Sherma and Jimmawal (Chepangs, Nepal)

According to key informant interviews, 'sherma' was a form of tax that the Chepangs of Gorkha, Chitwan, Dhading, and Makwanpur districts in Nepal paid (both in kind and cash) to the government through the Jimmawal institution, which seems to have been imposed by the state to collect tax from the Chepangs. This system functioned until the advent of the Panchayat regime in the 1960s. Even today, sherma is prevalent among Chepang khoriya cultivators in the sense that if a khoriya owner rents out his/her khoriya land to others for share cropping or for a certain amount to be paid back to the owner annually, then the khoriya is said to be rented out for sherma. According to key informant interviews, the Jimmawal institution was quite elaborate. The system was run by different functionaries. The Jimmawal was responsible for giving permission for khoriya cultivation and collecting sherma. The mukhiya and 'gaurang' were responsible for depositing sherma to the district headquarters, for which they received one man-day of free labour from the community and some farm produce out of sherma collected in kind. The 'kaarobaare' delivered messages, commands, and the orders of the Jimmawal and mukhiya to the villagers. The 'dwaree' or 'mijaar' assisted in collecting tax and providing security to the mukhiya. The role of the mukhiya still exists in terms of providing advice to the villagers when collective decisions (e.g., about repairing the trails, etc.) need to be made. Similarly, in some festivals, such as Dashain (the harvest festival), the villagers get together at the mukhiya's house to celebrate.

## Kipat (Taplejung and Sankhuwasabha, Nepal)

Use rights over 'taangsing-khoksing' (shifting cultivation) land were customarily allocated by the 'suvaas' (or subbas) and the system of allocation was called 'suvaangi'. In 1774, the Gorkha Kingdom annexed Limbuwan (Limbu territory) through an accord and the 'Suvaangi' customary institution was renamed 'Kipat'. Although the Limbus were then, and even today, known as the Kipat owners, the term Kipat is not a Limbu language term. Kainla (2010, pp 11–13) writes, "Before the Gorkha kingdom's victory campaign, there was no such word as 'Kipat'

in Limbuwan". The word Kipat and other words related to the Kipat system and tenure were borrowed from the khas Nepali language. In this sense, the Limbu's indigenous land tenure was co-opted by the state to fulfil its own purpose of tax collection. The state did so, firstly, by coining the new term Kipat to refer to the Limbus' collective land tenure system and, secondly, by appointing the Limbu headmen as the local functionary (suvaangi or subba) to serve the state as tax collector and local policy implementer. The Suvaangi/Kipat was the main land tenure institution in the eastern hills of Nepal until the Birta Land Abolition Act, 1959 and Land Reform Act, 1963 brought it to an end.

The Sherpas from Sankhuwasabha and Taplejung used a different term – 'lhose' – to denote khoriya (shifting cultivation land). In the Sherpa/Tibetan calendar, there is a cycle of 'lo khorbchugnyi' every 12 years. Each lo, or year, is named after a particular animal, which means a cycle of 12 years has 12 different animals. Lhose also used to have a 12-year fallow period. It seems that each family owned different plots of lhose land, rotating them every 12 years. Another noted feature of the Sherpa community in the study area is that, for them, certain activities are prohibited during certain seasons of the year. For example, wood harvesting activities are prohibited during spring, while slashing and cutting are prohibited during summer.

All of the ethnic groups practising shifting cultivation are marked by reciprocity (reciprocal hospitality, gift exchange, and labour exchange), often between relatives and kinship groups. Labour exchange, founded on the principle of reciprocity and mutual support, is common in the study areas and major khoriya work is done collectively.











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