

How Can REDD+ Support Climate Change Adaptation of Indigenous Peoples?

Lessons Learned from
Community Forestry in Myanmar

How Can REDD+ Support Climate Change Adaptation of Indigenous Peoples? Lessons Learned from Community Forestry in Myanmar

POINT (Promotion Of Indigenous and Nature Together), 2018

Permission to share

This document is published under a creative commons licence:

Attribution-NonCommercial-NoDerivs 2.0 UK

<http://creativecommons.org/licenses/by-nc-nd/2.0/uk>

Published by:	POINT (Promotion Of Indigenous and Nature Together) https://www.pointmyanmar.org
Written by:	Ling Houn and Christian Erni, with contributions from Naw Khin Moe Aye, Nura and Pyae Pyo Maung
Editing:	Christian Erni
Layout and Cover Design:	Saw Benhur
Photos:	Fig. 16, 17, 20 by Saw Yan Myo Aye, all others by Christian Erni
Maps:	All maps based on Google Earth satellite images; Fig. 01, 02 by Christian Erni, Fig. 15, 24 by Saw Yan Myo Aye

Printed in Yangon by MYINT colour offset

This publication has been produced with financial support from the Rainforest Foundation Norway (RFN).

Table of Contents

1. ABBREVIATIONS AND ACRONYMS	1
2. ACKNOWLEDGEMENTS	2
3. INTRODUCTION	3
Climate change and indigenous peoples	3
Coping with increasing risks and uncertainty: Climate change adaptation in Myanmar	4
Beyond the Plus in REDD+: From carbon to safeguards and adaptation	9
It's resilience that matters: Adaptation concepts and context	10
4. THE STUDY	15
Purpose and methods	15
Study area and its communities	15
Livelihood	19
Shifting cultivation	19
Collection of forest products	23
Animal husbandry and wage labour	25
5. BEING KAREN: ADAPTATION TO A RISKY ENVIRONMENT	26
It wasn't just wild animals: Of robbers, loggers, communists and soldiers	27
Relocation in 1962	30
The curse of teak: State enclosure and forced labour	31
Relocation in 2005	34
The plunder of forests	36

6. ADAPTATION TODAY: PERSISTENT CHALLENGES IN A CHANGING CLIMATE	39
Carving out space in a reserved forest	39
Confronting the companies	40
Asserting their land rights: A joint petition	41
Coping with climate change	44
Community Forestry – Adaptive benefits and limitations	46
Outside support: The RECOFTC project	47
Expectations, hopes and concerns	51
Slaves no more? The importance of land rights	53
7. LESSONS LEARNED FOR REDD+ IN MYANMAR	56
8. RECOMMENDATIONS: HOW REDD+ CAN MAKE A DIFFERENCE	61
9. NOTES AND REFERENCES	66

ABBREVIATIONS AND ACRONYMS

1

CF	Community forest
CFC	Community Forestry Certificate
CFI	Community Forestry Instruction
CFUG	Community Forestry User Group
COP	Conference of Parties
CSO	Civil society organization
FD	Forest Department
IPCC	Intergovernmental Panel on Climate Change
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NGO	Non-government organization
INDC	Intended Nationally Determined Contributions
NDC	Nationally Determined Contributions
NLUP	National Land-Use Policy
POINT	Promotion Of Indigenous and Nature Together
PRA	Participatory Rural Appraisal
REDD+	Reducing Emissions from Deforestation and Forest Degradation
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNFCCC	United Nations Framework Convention on Climate Change

ACKNOWLEDGEMENTS

The study has been accomplished thanks to the generous support and contribution of the members of Shwe Taung Ngwe Taung and Kha Paung villages, especially Saw Aye Saung (chief of Shwe Taung Ngwe village-tract), Saw Issac, Saw Mya (previous chief of Kha Paung village), Saw Thar Kay and Naw Pho Po. The authors of this report would like to express to all of them their sincere gratitude for the time, efforts and wisdom they have generously shared. The authors would also like to thank the Community Forestry User Group members from both villages for sharing their experience in the implementation of community forestry, and the women, men and youth for telling their stories, expressing their views, concerns and hopes, and showing the way forward in addressing the challenges they are currently facing, in particular with regards to land rights and climate change.

Field work for this research was conducted by a team composed of POINT staff members Ling Houg (program coordinator), Naw Khin Moe Aye (senior program officer), Pyae Phyo Maung (program assistant) and Nura (program assistant). Dr. Christian Erni provided support for the preparation and conducting of the field work. The report was written by Ling Houg and Christian Erni, with contributions from Naw Khin Moe Aye, Nura and Pyae Phyo Maung.

The research was made possible thanks to the financial support from the Rainforest Foundation Norway.

Climate change and indigenous peoples

In its latest assessment report,¹ the United Nation's Intergovernmental Panel on Climate Change (IPCC) left no doubt: unless there is immediate action taken to reduce greenhouse gas emissions and help people to adapt, nobody will be spared from the impacts of climate change. However, there are great differences both between nations, and between different social groups within their populations. Generally, developing countries are much more affected than wealthier nations. They are suffering the greatest losses from climate related disasters such as storms, droughts and floods.² As both the IPCC report and the UN's World Economic Survey Report of 2016 conclude, there are also great differences in both developed and developing countries with respect to exposure and vulnerability to the impacts of climate change. According to the latter, "Evidence suggests that the impacts of climate change and structural inequalities are locked in a vicious cycle. Vulnerability and exposure to climate hazards are closely linked to existing underlying inequalities."³ The IPCC found that "People who are socially, economically, culturally, politically, institutionally or otherwise marginalized are especially vulnerable to climate change"⁴.

Indigenous peoples are among the most vulnerable to climate change for several reasons. Being among the poorest of the poor, they simply lack the financial and material resources to prepare for, cope with or recover from additional stress caused by climate change. They often live in remote areas where access to health services is difficult, but will be much more needed as climate change in various ways directly and indirectly impacts human health.⁵ Since a majority of indigenous communities depend for their livelihood on land and natural resources, the various observed and predicted impacts of climate change, on ecosystems and thus on agriculture, fishing, hunting and gathering, pose a threat to their economic survival.

Indigenous peoples tend to live close to nature, in relatively natural environments, rather than in cities, growing and making much of the food and other products that they need to survive. This gives them an extraordinarily intimate knowledge of local weather and plant and animal life. Traditional wisdom on matters such as when to plant crops or where to hunt for food has been accumulated over many generations, but now that the climate is shifting, some of those understandings are proving to be no longer valid.⁶

For many communities, however, it is so far not so much the direct impact of climate change but the impact of measures taken by governments, multilateral as well as non-governmental organizations to mitigate climate change that are undermining their livelihood security. A report submitted to the United Nations Permanent Forum on Indigenous Issues

(UNPFII) already a decade ago found that climate change mitigation measures can have not only beneficial but also negative impacts on indigenous peoples.⁷ The conclusion drawn based on the cases presented in the report still remains valid. Plantations of fast-growing trees or forest regeneration projects for offsetting carbon emissions by private and public companies, and above all large-scale biofuel plantations – in particular oil palm – have led to grabbing of indigenous peoples' land.

One of today's biggest mitigation initiative by the United Nations Framework Convention on Climate Change (UNFCCC) is REDD (Reducing Emissions from Deforestation and Forest Degradation)⁸. It aims to slow down and eventually reverse forest cover loss and therefore contribute to the reduction of carbon emissions in developing countries.⁹ The importance of forest protection in addressing climate change has been further stressed in the UN Environment's recent Emissions Gap Report 2017¹⁰. According to the report, there is a huge gap between the commitments made by countries under the Paris Climate Agreement and the emissions reductions needed to avoid the worst consequences of global warming. Forests can be major contributors to closing this gap, and are thus considered a "a central part of the solution to climate change"¹¹.

Since much if not most of the forests in the countries where REDD+ is implemented lie on indigenous peoples' land, and since in many countries the rights of indigenous peoples over their land, territories and resources are not sufficiently recognized and protected, it is feared that REDD (or REDD+) will have serious negative impacts on indigenous peoples. This fear is heightened from experiences with other mitigation measures, and other pilot REDD+ projects¹². Thus, representatives of indigenous peoples' organizations and communities have very actively engaged in the negotiations within the UNFCCC on the REDD+ mechanism, and in particular in drawing up the social and ecological safeguards for REDD+ that are part of the agreement reached in 2010 at the 16th Conference of Parties (COP)¹³ of the UNFCCC in Cancun, Mexico.¹⁴

Coping with increasing risks and uncertainty: Climate change adaptation in Myanmar

The ultimate objective of the UNFCCC is the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system".¹⁵ Therefore, climate change mitigation, i.e. measures to lessen the impacts of climate change by reducing greenhouse gas emissions, have from the beginning, been given centre stage in the negotiations of the UNFCCC. Adaptation to climate change, i.e. the efforts to prepare societies to cope with the effects of climate change, have been given less attention in the earlier phase of the negotiations. However, adaption became more important later on. "With all parties facing difficulties in achieving their mitigation objectives, debates on what shall be done regarding vulnerability, climate change impacts and adaptation, as well as how to finance these actions became more

relevant.”¹⁶ Some authors referred to an “adaptation turn” in the UNFCCC negotiations.¹⁷ Indeed, in the 2015 COP in Paris that resulted in the adoption of the widely hailed Paris Agreement, adaptation was given more attention than ever before.¹⁸

The UNFCCC’s active promotion of action on adaptation started in 2005, at the 11th COP with the launching of the “Nairobi work programme on impacts, vulnerability and adaptation to climate change”, commonly referred to as Nairobi work program. It was established with the goal “to facilitate and catalyse the development, dissemination and use of knowledge that would inform and support adaptation policies and practices”¹⁹.

Whereas climate mitigation was found to have “a strong global public good characteristic, which incentivizes free riding” on other countries’ mitigation efforts, the benefits of adaptation actions go to those who implement them.²⁰ Consequently, there are stronger incentives for nation states to carry out adaptation measures. The UNFCCC supports national-level adaptation through two programs: the National Adaptation Programmes of Action (NAPAs) and support to the development of National Adaptation Plans (NAPs). NAPs are expected to help the respective countries to increase their adaptive capacities, i.e. to reduce their vulnerability and increase resilience to climate change.

Thus, the adaptation needs identified in NAPs vary in accordance with the nature of the specific climate-related risks faced by a particular country. All countries, however, are facing a common problem in adaptation planning: the high level of uncertainty of future climate change projections.

What Yousefpour et.al. have concluded with regards to climate change adaptation in forest management, pretty much applies to all other efforts in adaptation planning: “...the issue is highly uncertain as there is a lack of complete knowledge or historical parallels. There is uncertainty about the reactions of forest ecosystems to climate change, but more fundamentally, there is considerable uncertainty as to what degree of climate change we are facing. This has important implications for how we adapt decision-making approaches to the new challenge.”²¹

As one of the LDC, Myanmar has received support from the UNFCCC for developing a NAPA.²² It was finalized and published in 2012.

The report summarizes the observed changes in the climate over the past six decades:²³

- A general increase in temperatures across the whole country (~0.08°C per decade), most notably in the northern and central regions;
- A general increase in total rainfall over most regions, however, with notable decreases occurring in certain areas (e.g. Bago Region);
- A decrease in the duration of the south-west monsoon season as a result of a late onset and early departure times; and
- An increase in the occurrence and severity of extreme weather events, including; cyclones/strong winds, flood/storm surges, intense rains, extreme high temperatures and drought.

The predictions for changes by the end of the century are basically an intensification of the already observed changes:²⁴

- Further temperature increase across the country, particularly from December – May and above all in Central and Northern regions; by the end of the century an increase as much as 3.5°C are expected for the Rakhine coastal and Yangon Deltaic region;
- Increased rainfall in general but also increased geographic variability, with some areas (e.g. Arakan in the West) likely to experience a much greater increase than other, as well as temporal variability, i.e. periods of extreme rainfall and periods of long dry spells during the rainy season;
- As a consequence of the above, an increase in the occurrence and intensity of extreme weather events like floods, cyclones and heavy storms winds, temperatures extreme and droughts.

The NAPA identifies factors making Myanmar particularly vulnerable to climate change.²⁵

- Dependence of employment and the national income on climate-sensitive sectors such as agriculture, forestry and natural resources;
- Concentration of populations and economic activities in the coastal zone and low-lying areas that are exposed to climate extremes such as cyclones, storms and floods, as well as long-term climatic impacts such as sea-level rise;

- The geographical location of the country being exposed Southwest toward the Bay of Bengal and its long and low-lying coastal zone stretching across the Arabian and Indo-Chinese Tectonic Plates which expose the country to the risk of cyclones, floods, earthquakes and the resulting tsunamis;
- High level of poverty which limit the capacity of the country to respond to the impacts of climate change;
- Limited technological capacity to prepare for climate change impacts.

Furthermore, as elsewhere in the world, the report found that vulnerability varies among different social groups, “depending on their specific reliance on climate-sensitive income or livelihood sources”.²⁶ However, despite the international recognition of the particular vulnerability of indigenous peoples, Myanmar’s NAPA does not mention them:²⁷

The most vulnerable communities in Myanmar occur in all three agro-ecological zones namely the Hilly, Dry and Coastal Zones and are made up of mainly community group members situated in high risk areas... and participating in vulnerable livelihood strategies e.g. farmers, woodcutters, fisher folk, grocery merchants, casual workers, homemakers, NTFPs collectors and retailers. Furthermore, women and children situated in high impact areas (vulnerable areas and regions/states...) e.g. hilly, coastal, river/lake side areas, as well as urban areas will be negatively affected.

To address the climate change related risks and vulnerabilities the country is facing, Myanmar’s NAPA identifies 32 priority activities for climate change adaptation, called Priority Adaptation Projects, for eight main sectors or themes.²⁸ These were grouped into three levels of priority: The First Priority Level Sectors comprise Agriculture, Early Warning Systems and Forest, the Second Priority Level Sectors identified are Public Health and Water Resources, the Third Priority Level Sector is Coastal Zone and the fourth Energy and Industry, and Biodiversity.²⁹

Two of the three top-priority sectors or themes, agriculture and forest, are critical for the livelihood of the majority of Myanmar’s rural people, and particularly for indigenous peoples.

Through Participatory Rural Appraisals (PRA) with representatives from three township that were found to represent the most vulnerable regions in Myanmar’s three agro-ecological zones: (Hilly Zone, Dry Zone and Coastal Zone) adaptation needs were identified. Based on these, eight to ten Adaptation Project Options were identified and ranked for each of the main sectors or themes.³⁰ The top four of these lists are considered Priority Adaptation Projects for implementation.³¹ For the agriculture sector these are:³²

First priority: Reduced climate change vulnerability of rural and subsistence farmers through locally relevant technologies, climate-resilient rice varieties, and ex/in-situ conservation of plant genetic resources.³³

Second priority: Increased climate change resilience of rural and subsistence farmers in the Dry and Hilly Zones through legume crop diversification and climate-resilient varieties

Third priority: Increasing the climate change resilience of Dry Zone communities by diversifying and intensifying home-gardens through solar-power technology, high-income fruit crops and climate-smart agriculture approaches.

Fourth priority: Reducing the vulnerability of livelihoods in agro-ecological zones to climate change through the transfer of a wide range of high-yielding and climate-resilient rice varieties.

It should be noted that the one need among the ten that is exclusively referring to the climate change challenges and needs among upland communities, most of whom belong to indigenous peoples, has given the lowest ranking and thus was not selected for implementation: "Enhancing the resilience of rain-fed agriculture in the highlands to climate change impacts using ecosystem-based approaches and climate-smart agriculture."³⁴

Likewise, the first on the list of climate change adaptation needs for the forest sector that have been identified during the PRA, "land ownership agreements focused on decentralization of forest ownership e.g. regionally owned and managed forests and/or village owned and managed forests"³⁵, is not reflected at all in the list of the ten priority projects. The four top-priority projects identified and proposed for implementation in the forest sector are:

First priority: Building the resilience of degraded/sensitive forest areas to climate change impacts through reforestation.

Second priority: Community-based reforestation for climate-resilient ecosystems and rural livelihoods in degraded watershed areas of the Central Dry Zone.

Third priority: Community-based mangrove restoration for climate-resilient ecosystems and rural livelihoods in vulnerable and degraded coastal regions.

Fourth priority: Enhancing the climate change resilience of rural livelihoods through community-based restoration at the Indawgyi and Inle Lake watershed areas in the Northern Hilly Region.

Apparently, reducing the vulnerability and increasing resilience of rural farmers and communities are key goals for the agriculture sector, and the involvement and mobilization of communities (i.e. community-based reforestation and restoration) seems to be a key strategy in the priority project of the forest sector.

Beyond the Plus in REDD+: From carbon to safeguards and adaptation

Forest protection is also one of the core components in Myanmar's Intended Nationally Determined Contributions (INDC) submitted to the UNFCCC's COP in Paris in 2015. An INDC (like the final Nationally Determined Contribution, NDC, to be submitted later on) describes how a country intends to contribute to climate change mitigation by reducing greenhouse gas emissions, and how it intends to promote adaptation to climate change after 2020.³⁶

The fact that the forestry sector is mentioned first in the table of Myanmar's planned climate actions reflects the importance it is given in the INDC.³⁷ The INDC reiterates the target of the National Forestry Master Plan to designate 30% of the land area as Permanent Forest Estate and 10% as protected areas by the year 2030. REDD+ is one of the two initiatives mentioned³⁸ through which Myanmar intends to achieve this target.

In 2010, *The Economist* called REDD the "tropical forest's best hope".³⁹ By putting a price on carbon that is kept in forests instead of being emitted when they are cut down, REDD's intention is to create strong incentives for tropical countries to stop deforestation. But this approach has not been welcomed by everyone. Characterized as "commodification of nature", critics have argued that REDD allows industrial countries to avoid having to reduce their own carbon emissions.⁴⁰ This argument is based on the assumption that funding for REDD will come from carbon trading, i.e. the possibility to buy carbon credits that can be freely traded, and bought and used by a company or government as compensation for their own carbon emissions. However, it is not sure what role the carbon market will be in financing REDD+ in the future. At present, almost 90% of the REDD+ finances come from the public sector (the largest share of this being covered by just five countries)⁴¹. But market-based financing is still being considered and it is expected that it will play a more important role "as a critical tool to achieve the additional emission reductions needed to reduce the gap between national reduction targets and the global goal of the Paris Agreement".⁴² But these are only informed predictions since the REDD decision in the Cancun agreement does not include any reference to how REDD will be funded.⁴³

One of the shortcomings of REDD was overcome at the 13th COP when the scope of activities qualifying for inclusion was expanded from reducing deforestation and forest degradation to include conservation of existing forest carbon stocks, sustainable forest management and the enhancement of forest carbon stocks. Since then it is referred to as "REDD plus".

As mentioned above, REDD has also been criticized for the negative impact it can have on the environment, indigenous and other forest-dependent communities. To a large extent as a result of the consistent engagement of environmental, human rights and indigenous peoples' organizations in REDD negotiations, the Cancun agreement's decision

on REDD includes environmental and social safeguards. Among others, it provides for “the effective participation of relevant stakeholders, in particular, indigenous peoples and local communities”. However, the safeguards are only to be “promoted and supported” by the countries implementing REDD; they are not considered an indispensable precondition for implementing REDD and it is left to the countries to decide what they mean by “promoting and supporting” them. Likewise, while the agreement refers to the UN Declaration on the Rights of Indigenous Peoples, it does so only vaguely and in a footnote.⁴⁴

In addition to climate change mitigation REDD+ is now expected to have various environmental, social and governance co-benefits, like biodiversity conservation and improved ecosystem services, poverty alleviation, improved land tenure security, and more transparency and local participation in forest management and policies.⁴⁵

In recent years, as adaptation has become more prominent in the agenda of UNFCCC negotiations, REDD+ is expected to have yet another purpose: to contribute to climate change adaptation. According to a UN-REDD info brief, “Depending on how REDD+ strategies and programmes are structured, the implementation of REDD+ activities has the potential to maintain and enhance ecosystem services important for adaptation”, and “The way REDD+ is implemented can also influence society’s adaptive capacity”.⁴⁶

It’s resilience that matters: Adaptation concepts and context

Vulnerability and resilience are two key concepts for understanding climate change adaptation. They help assess the risks a community is exposed to, and its capacity in coping with these risks. The IPCC defines vulnerability⁴⁷ as

The degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity.

Accordingly, the IPCC defines adaptation as⁴⁸

Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, e.g. anticipatory and reactive, private and public, and autonomous and planned. Examples are raising river or coastal dikes, the substitution of more temperature-shock resistant plants for sensitive ones, etc.

And resilience is defined as⁴⁹

The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organisation, and the capacity to adapt to stress and change.

Resilience and adaptive capacity are closely linked and the two concepts are often used interchangeably.⁵⁰

Traditionally, the term resilience has often been associated with the ability of a system – whether community or household – to ‘bounce back’ after a shock or stress. Climate change however adds an extra layer of complexity, as it is widely acknowledged that significant structural changes may be needed to adapt to local impacts. With this in mind, trying to bounce back and keep the same functions and structures (resilience) may not be sufficient. Systems therefore need the capacity to adapt and transform themselves (in some cases radically); this we call adaptive capacity.

As discussed above, it is often argued that poor and marginalized population groups, among them indigenous peoples, are most vulnerable to climate change. However, some authors have pointed out that there is an apparent paradox since “relatively poor groups such as pastoralists in the West African Sahel or smallholder agriculturalists in Bangladesh have demonstrated great resilience to environmental change”, but that this autonomous adaptation by the poor is often overlooked in efforts to address climate change.⁵¹

Indeed, merely pointing at the vulnerability of indigenous peoples to climate change means ignoring the fact that their communities have for millennia been able to survive and flourish in some of the world’s most challenging environments, like the arctic, deserts, high mountains and tropical forests. Critical for their adaptive success is their intimate relationship with and thus their in-depth knowledge of the natural environment.⁵²

In-depth knowledge of the natural environment is only one of the capabilities that contributes to a community’s capacity to adapt, and thus its resilience to climate change. The concept of “community capitals”⁵³ has been used to assess the degree of a community’s resilience to climate change. Conceived as the “resources of a community that are invested for the collective wellbeing of the entire community”, different types of community capitals have been distinguished: natural or environmental capital (natural resources, ecosystem services), economic capital (material property, financial resources), built capital (roads, buildings, heavy equipment), human capital (the personal skills and abilities, education and health of individuals) and social capital (the social connections within a community and between the community and the outside world, e.g. kinship, social networks, governance system, access to power holders and power brokers), and cultural capital (worldview, values, and norms).⁵⁴ The presence and absence of these capitals determine how strong a community’s resilience and thus its capacity to adapt is.⁵⁵

The socio-political context is a key determinant of community capitals. Laws and policies regulate – and in the case of indigenous peoples and other marginalized groups often constrain – access to and rights over natural resources, local self-governance and participation in decision making, and access to social services. Furthermore, various

external forces interact with climate impacts, putting additional stress on the community and its environment and thus may constrain its capacity to adapt.

For example, a study⁵⁶ conducted in Maliau district in North Kalimantan province in Indonesia found:

Malinau communities generally cope well with heavy rainfall events, but flooding has been exacerbated by upstream deforestation and damage caused by coal mining. The number of coal mining concessions has increased, as has the demand for land, leading to even more deforestation and less farmland availability, and to pollution and sedimentation of the Malinau River, all of which exacerbate the adverse impacts. The natural capacity of the Malinau River to accommodate excess precipitation has been greatly reduced. The overall degradation of the river was also cited as an underlying cause of flood damage.

In the Asian highlands, too, the impacts of climate change are not the only, and so far not the most important, drivers of change:⁵⁷

A host of other drivers interact with climate signals to produce complex regional responses across ecological and social systems. In the highlands, chief among these anthropogenic drivers of change are urbanization/ infrastructure development, land-use/agricultural practices, upstream/downstream water management and ongoing nation-state security conflicts.

Several studies showed that in the Himalayas, “urban population growth and increasing market-based resource consumption in the context of climate change have reduced forest extent and increased the amount of cultivated and degraded lands while general water resources have declined”⁵⁸. Across the Asian highlands, the shift from subsistence to market-oriented cash-crop production has increased household incomes in many areas, but soil loss and runoff have also increased “with unknown downstream effects”⁵⁹. Of particular concern are water resources. The construction of dams and roads, habitat degradation, withdrawal and pollution of water have severe impacts on biodiversity and water security for people.⁶⁰ The authors of the study referred to here conclude⁶¹:

And as climate change continues, new interactive social drivers of regional change (international REDD+ policies, the rising influence of private business over natural resource management and infrastructure development, land tenure changes) may gain influence in the coming years. Given historical political inequities between highland and lowland peoples... and the general lack of knowledge of linkages across upstream/downstream gradients and social–ecological systems in the highlands, we can expect more surprises even as our knowledge grows.

In Myanmar, climate change and the government's response in the form of mitigation and adaptation action are happening in a context of social, political and economic changes of unprecedented scale and speed. Democratization, economic reforms, and the legal and policy reforms underpinning them, are transforming communities even in the remotest corners of the country, providing both new challenges and opportunities. All these changes are expected to interact in yet unknown complex ways with the impacts of climate change, adding to the uncertainties they are already facing.

Yet, indigenous communities in Myanmar have over millennia adapted not just to their natural, but also to a socio-political environment that has posed equal if not greater challenges to their ability to maintain a self-sufficient and self-determined life.

Like in other parts of Southeast Asia, pre-colonial society in Myanmar was shaped by the interaction of powerful lowland states and highland tribal communities.⁶² States sought to attract and often forcefully capture people and keep them in densely settled areas around the state centre, as wet-rice farmers for easy taxation and a source of corvée labour and for forced conscription. In order to avoid taxation and slavery, tribal peoples (many of whom later came to identify themselves as indigenous peoples⁶³) kept or took to the hills. Along with the waxing and waning of the power of lowland states came a rising and ebbing of pressure on and attempts to subjugate the tribal peoples at their peripheries, and thus the extent to which they were able to maintain their autonomy.

The British colonial state extended control over large parts of the forested uplands by declaring all forests Crown Land and thus state property. The intention was mainly to secure access to teak and other valuable timber. In areas designated as Reserved Forests settlement and land use by upland communities were severely restricted. The post-colonial government continued with the forest policy introduced by the British, and under the Burmese Way of socialism after 1962 further expanded state control over land and resources by declaring all of them as state property. Furthermore, all major industries, including timber business, oil extraction and mining, were nationalized. The legacy of firmly established state control over land and resources is the absence of any legally recognized ownership of land by individuals or communities, and thus the non-recognition of customary tenure in the constitution and current laws of Myanmar. Concessions for plantations or mining were granted over large areas of land, and with increasing foreign investment after the political, economic and administrative reforms following the 2010 election, land grabbing accelerated rapidly. It is continuing unabated to this day, particularly in conflict areas. Various ethnic groups have for decades fought against the military regime for independence or, today in most cases, for autonomy within a federal system of government. Cease fire agreements have been made with most armed groups, but fighting continues in Kachin, Shan and Rakhine states.

Despite the new government's commitment to address land conflicts, it appears powerless to act against the vested interests driving these land grabs. According to a Global Witness

campaigner, “What we’ve seen in Myanmar’s land sector is a transition from military rule to a form of gangster capitalism. In many cases the army has merely swapped its uniforms for suits, with military officials and their cronies retaining firm control of the country’s land sector”.⁶⁴

Such social, economic and political complexities need to be taken into account when trying to gain a proper understanding of the impact of climate change on indigenous peoples in Myanmar in the context of expanding state control and increasing competition over land and resources. POINT has tried to examine this by means of the following case study among Karen communities in the Bago Yoma in Central Myanmar, an area which has a long history of state intervention in forest management and thus community land use. This area was one of the first areas where Community Forestry (CF) projects were implemented in Myanmar, and the long history of CF here allows us to identify important lessons that can help designing REDD+ policies and projects, in particular with regards to strengthening the adaptive capacity of indigenous communities.

Purpose and methods

The study area has a long history of state intervention in forest management and community land use. And in this area, one of the first Community Forestry projects has been implemented. This study will take a look at what difference Community Forestry made for livelihood security and forest conservation, and the adaptive capacity of the community members involved.

In many respects, Community Forestry is pursuing similar goals like REDD+. By returning control of forests to communities it is hoped that the twin goals of forest protection and improvement of livelihood of the communities involve. Tenure security has been found a key precondition for the success of Community Forestry.

Therefore, this study sought to identify lessons learned from the experiences with Community Forestry that are relevant for REDD+ in Myanmar. It hopes to help design policies and programs on climate change mitigation and adaptation, in particular REDD+, that are more responsive to the needs of indigenous and other forest-dependent communities, and thereby help strengthen their capacity to adapt to climate change.

Both participatory learning and action (PLA) and standard social research methods were used. The main body of data was collected by means of qualitative methods, i.e. focal group discussions with the help of PLA methods (community mapping, time line, weighing scale etc.), group interviews, individual/key informant interviews, transect walks and ocular visits to fields and forests, drawing genealogy graphs in individual or small group discussions and mapping with the help of Google satellite images. The data was complemented by studying secondary sources.

Field work was conducted during three field trips between May and September 2018 by a research team comprising the POINT staff Ling Houg, Naw Khin Moe Aye, Nura and Pyae Phyo Maung. The team had the support and guidance of Dr. Christian Erni.

Study area and its communities

The study villages are located in the Bago Yoma, a low range of mountains and hills running North-South between the Irrawaddy and Sittaung river basins in Central Myanmar. Few peaks are higher than 500 meters above sea level, the highest being Mt.Popa in the North with 1,518 meters.

The two villages studied are Kha Paung and Shwe Taung Ngwe Taung, lying at 423 meters (Kha Paung) and 440 meters (Shwe Taung Ngwe Taung) above sea level. They are two of the three villages that comprise Shwe Taung Ngwe Taung village-tract, which is part of Pauk Khaung Township in Bago region. The two villages are located on the roadside of the Pyay-Taunggoo highway, only about a five minutes-drive from each other.

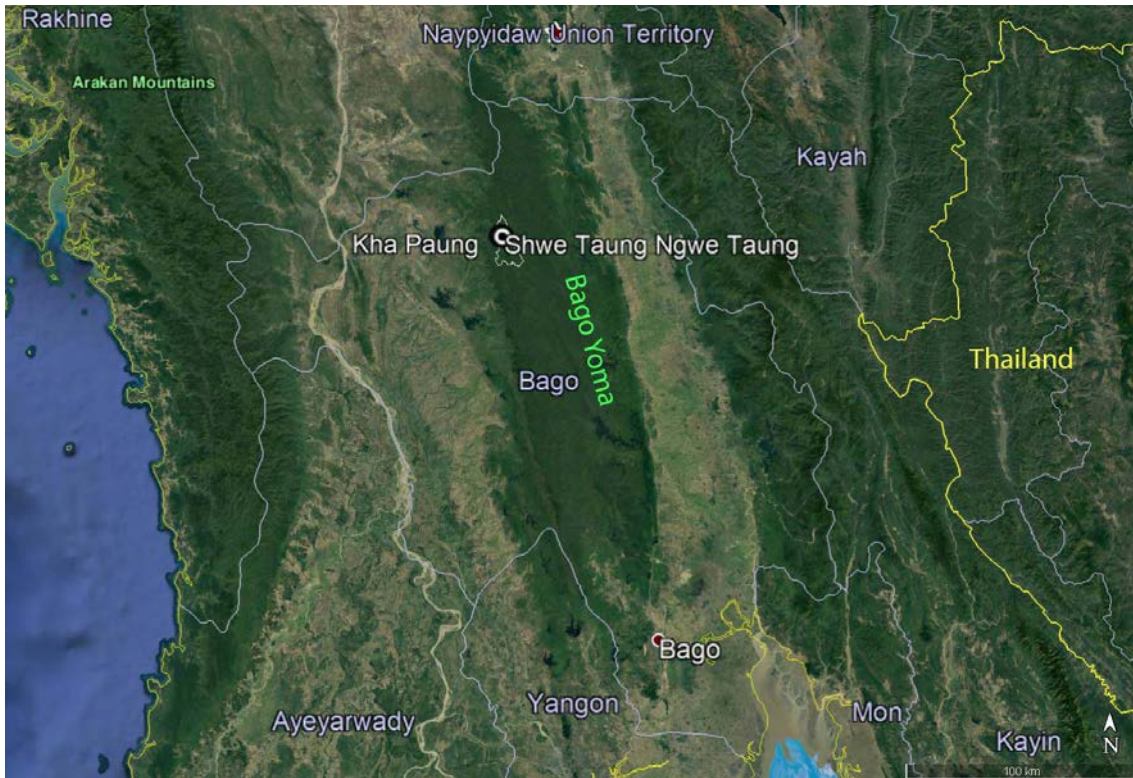


Fig. 01. Geographical location of Kha Paung and Shwe Taung Ngwe Taung in the Bago Yoma.

The nearest towns are Pauk Khaung, which lies about 34 miles away, and the district capital Pyay, about 56 miles away to the West. To the East, Okktwin lies 70 miles and Taunggoo 80 miles away. There are two regular buses between Pyay and Taunggoo passing through these villages. Since the road is tarred, the villagers can reach these towns fairly quickly by bus, car or by motorbike, their most common means of transport.

There is a primary school up to grade 7 in Shwe Taung Ngwe Taung village. In Kha Paung village, there is a nursery school run by the Karen Baptist Convention (KBC) and a primary school. Students from Kha Paung village attend grade 5 to 7 in Shwe Taung Ngwe Taung. Those who accomplished grade 7 are going to Pauk Khaung town to attend grade 8 to grade 11. Pauk Khaung township is a two-hour drive from the two villages.

There is a clinic and a midwife in Shwe Taung Ngwe Taung. The midwife is in charge of the three villages in the village-tract. In Kha Paung village, there is no clinic but there is a midwife who has health care training from a private nursing school. As a result, the people from Kha Paung rarely come to the midwife in Shwe Taung Ngwe Taung. When there are serious health problems the villagers mostly go to Taung Lel hospital, Pauk Khaung general hospital and Pyay General Hospital.

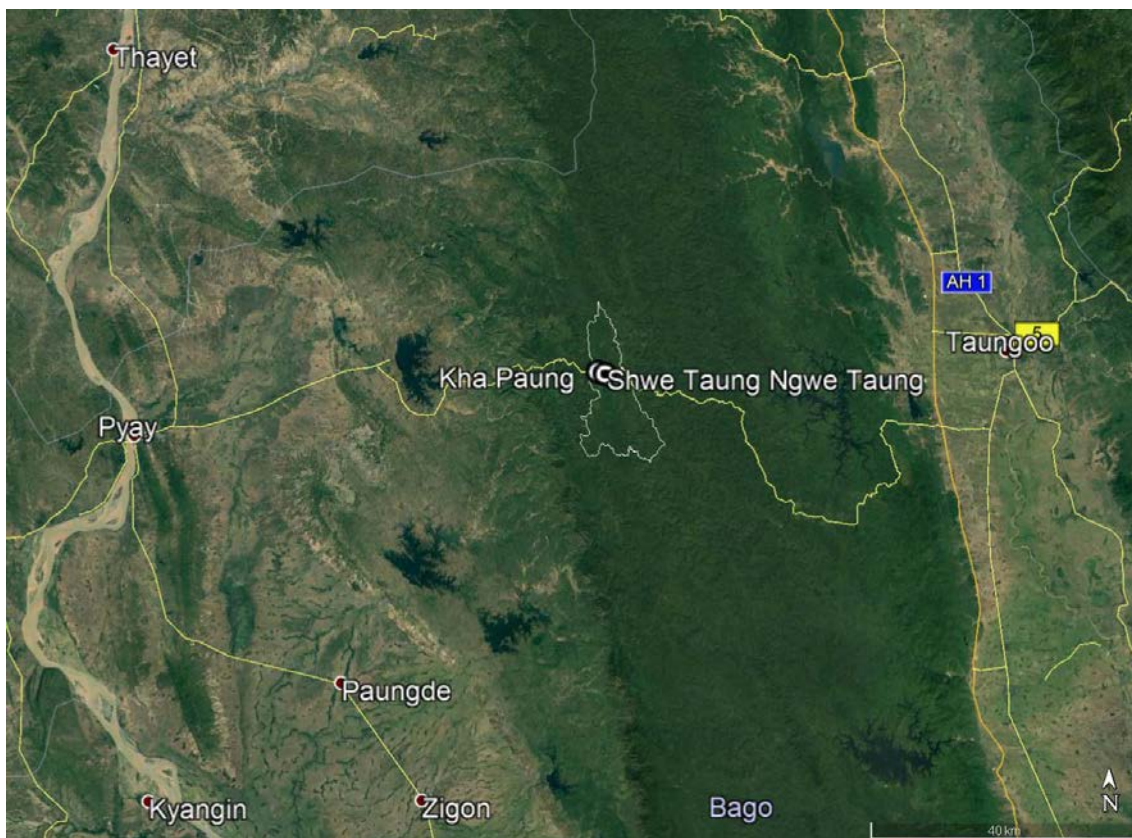


Fig. 2. Location of Kha Paung and Shwe Taung Ngwe Taung territories along the Pyay-Taungoo road.



Fig. 03. Bago Yoma landscape: Regenerating forests and young teak agroforests near Shwe Taung Ngwe Taung

The people of Shwe Taung Ngwe Taung and Kha Paung villages belong to the Sgaw Karen indigenous people. The Sgaw Karen have lived in the Bago Yoma mountains probably since centuries, but their presence has been documented only from the 19th century by British administrators and foresters.⁶⁵ The two villages were established only in 2005 when the people were resettled there by the government. However, these relocation sites are within the traditional territories of the two communities. They continue to use most of their land, some households continue to live temporarily, and a few permanently in their previous settlement site.

The two villages have been part of Okktwin township until 12 years, when the township boundaries were redrawn and they became part of Pauk Khaung township. Unfortunately, the boundary now runs through the village territories and some of their land is still in Okktwin township.

Shwe Taung Ngwe Taung has 91 households and a total population of 494 (254 male and 240 female) people. Most of them are Catholic Christians, a few are Buddhist. In Kha Paung village, there are 73 households and the total population is 382 (male 199 and female 183). Most of the villagers are Christians (Baptist and Catholic), some are Buddhists.



Fig. 04. The school and houses of Shwe Taung Ngwe Taung located along the Pyay-Taungoo road.



Fig. 05. Children of Kha Paung village.

Livelihood

The main components of the present livelihood system of these two villages are shifting cultivation, animal husbandry, collecting forest products, hunting and wage labour. They are the sources from which the villagers make a living and maintain their food security.

Shifting cultivation

Shifting cultivation is the main activity by which the villagers make a living. Shifting cultivation is a practice of land use still widely used in the world's tropical and sub-tropical areas. It is also called rotational farming, swidden farming/agriculture or slash-and-burn agriculture. The latter name usually carries a negative connotation, reflecting the widespread prejudicial view that it is a destructive and wasteful form of agriculture. Shifting cultivation is a form of agriculture in which the natural vegetation (usually forest) is cut and burned, the cleared field used for a short period of cultivation, followed by a comparatively long period of fallow during which the forest vegetation grows back. After a few years, the cycle is repeated.

In Shwe Taung Ngwe Taung and Kha Paung, the fallow period used to be 14 to 15 years. But since the village was moved closer to the road and the shifting cultivation areas lie far from the village, the villagers are rotating in areas closer to the new village where there are more land pressures, and as such the fallow period is now only five to ten years.

Villagers grow paddy rice, cotton and many kinds of vegetables, herbs and tubers such as sesame, chili, tomato, corn, cucumber, pumpkin, white pumpkin, taro, yam, roselle, beans, lady finger, snake gourd, bitter gourd, gourd, eggplant and cassava. Different types of rice that are grown, like kaukyint (piso in Karen), which can be harvested after five months, or kaugyi (pipink in Karen), which can be harvested in six months. They also grow sticky rice. Rice is the main staple food. Doing shifting cultivation is a system of self-sufficiency and people do not need to depend on the market for rice.

There is a rice mill in Shwe Taung Ngwe Taung village where customers have to pay 800 MKK (0.60 US\$) to polish (de-husk) one tin (about 40 litres) of rice. Since the village was resettled to be closer to the road, the villagers started to buy vegetables, chicken, pork, meat, fish, fish paste and processed food (noodles, snacks etc.) from traders from the lowlands.



Fig. 06. Shwe Taung Ngwe Taung villagers planting rice on a new shifting cultivation field.



Fig. 07. Harvesting corn that has been intercropped with upland rice.

Shifting cultivation is also a source of cash income, the most commonly sold crops being sesame, cotton and chili. The villagers sell to traders who come to the village to buy their products. When a family does not harvest enough paddy, they meet the needs of the family through selling these cash crops. A single viss (1.6 kg) of cotton is 1,200 kyat (0.90 US\$) at the village market and 1,500 MKK (1.10 US\$) at Pauk Khaung market. The estimated average amount of cotton produced by a household in one year is 50 viss (80 kg). One viss of dried chilli is 5,000 kyat (3.70 US\$), for green chilli they get 2,000 kyat (1.48 US\$). Chili grows particularly well on 20-year-fallow land. For a tin of sesame, they get 20,000 kyat (14.85 US\$). In recent years they also started growing turmeric for cash, and for one viss of dried turmeric they receive 5,000 kyat (3.70 US\$).

Some women process cotton in the traditional way and make traditional clothes for the family. They use roots and leaves of plants for dyeing in different colours. However, of the skills of weaving and making traditional clothes is decreasing among the youth.



Fig. 08. Some families still grow their own cotton and women process it to make traditional clothes: Elder from Kha Paung wearing a traditional one-piece men's dress.

Before 2004, the people of Shwe Taung Ngwe Taung and Kha Paung only focused on shifting cultivation and harvested enough food to meet their needs. Since 2004, there have been changes in their livelihood. They started selling bamboo, working in road construction, timber extraction and in teak plantations. According to the villagers, they now harvest less than in the past from shifting cultivation. It is above all the youth who are doing wage labour, but outmigration of youth is still very low and about 90% of them are still working in shifting cultivation.

According to the villagers, the reason for decreasing production in shifting cultivation is not just the lower investment of labour in shifting cultivation, but also the shorter fallow period. The shortening of fallow period is not because of scarcity of land but due to the difficulty to reach every shifting cultivation plot since they were moved beside the road. Young fallow typically has more weeds, thus requiring more labour for weeding, and is less fertile than old fallow.

In Shwe Taung Ngwe Taung village, the average number of plots used for shifting cultivation from 2002 to 2008 is 68.3 plots in a year. As shown in the table 1, the use of land in the village has fluctuated over the years, but overall increased from 57 to 79 plots. After the relocation, the number of plots used in the territory of neighbouring villages has significantly increased. This is due to the difficulties of accessing farming land in the now more remote parts of their own territory.

Shifting cultivation plots of Shwe Taung Ngwe Taung village

Year	No of plots in Territory	No of plots outside territory	Total Plots
2002	56	1	57
2003	66	0	66
2004	75	0	75
2005	66	5	71
2006	56	5	61
2007	53	16	69
2008	55	24	79

Source: Map of shifting cultivation plots in Shwe Taung Ngwe Taung from 2002 to 2008 by Shinya Takeda

Since 2013, officers of the Forest Department have come to the villages to tell the people to stop shifting cultivation and to change to agroforestry. However, almost all the households from these two villages continue doing shifting cultivation for their livelihood. But the villagers themselves predict that more people will depend on agroforestry in the near future. Some of them now have Community Forestry plots and started with teak plantation. At the same time, due to the climate change, there are problems with growing rice. Usually they plant rice in May, but lately they could plant only in June. Some are changing their livelihood system also by opening small shops, adopting new agricultural practices such as introducing agroforestry in which they plant banana, mango, lime and jackfruit, and by undertaking wage labour outside of the village.

Collection of forest products

The forest is a crucial source of food and other necessities of the villagers. It provides different kinds of resources such as timber and bamboo for buildings, bamboo for making baskets (handicrafts), firewood and food like bamboo shoots, mushrooms, many kinds of leaves, shoots and roots as well as game. Forest is also a source of cash income, the most commonly sold products being elephant foot yam (*Amorphophallus paeoniifolius*), heart leaved moonseed (*Tinospora cordifolia miers*, a herbal medicine called Bone Myay Yar Zar in Burmese) bamboo, timber and orchids etc.

In the past, the villagers mainly collected orchids for cash income. In 2010, they started collecting elephant foot yam and heart leaved moonseed. For one viss of fresh elephant foot yam they currently get 300 kyat (0.22 US\$), for dry yam about 5,000 kyats (3.70 US\$). One viss of heart leaved moonseed earns them 1500 to 2000 kyat (1.11 to 1.48 US\$).

People collect these forest products when they have time and need cash. They are able to collect between five and ten viss of elephant foot yam per day. A trader in the village dries the yam and sells it in Mandalay, the second largest city of the country.

Selling of timber and bamboo is another source of income in the village. The villagers harvest timber for domestic use or for sale. When the people in the village need posts and planks, they usually cut them themselves or, when they are not able to do that, buy them from other villagers. Now it is difficult to find timber near the village and they have to go at least five miles away from the village to get it.

Some people make basket and mats from bamboo for sale. One basket costs about 10,000 kyat (7.42 US\$). They also bring bamboo to the roadside for sale to traders, most of whom are from Pauk Khaung. The traders get permits from the Forest Department for extracting bamboo and poles and many outsiders from the lowlands come and cut bamboo in the territory of Kha Paung and Shwe Taung Ngwe Taung, some of them also illegally. The legal traders have to pay tax to the Forest Department for the poles and bamboo harvested. The Forest Department issues permits for certain forest plots and for a fixed duration. However, traders often ignore the regulations and cut bamboo and poles also outside the allotted plots.



Fig. 09. Elder in Kha Paung splitting bamboo in preparation for weaving baskets. They are a source of cash income for those who have the skills.

Animal husbandry and wage labour

Animal husbandry is also a key aspect of village livelihood systems. Most of the villagers raise cattle and buffalos and use them for hauling wood, bamboo and other materials such as firewood or products from shifting cultivation, and sell them when in need of cash. There are only few cattle since the villagers mostly raise buffalos. The animals are grazed in the forest near the village.

They also raise pigs and chicken. Raising pig is mainly for income generation and pigs are usually sold in the village. In recent years, the villagers have not benefitted much from raising chicken and pigs because many of them died due to disease.

Some of the villagers, mostly youth, are doing temporary or permanent wage labour outside the village. Temporary wage labour is mostly done in road construction. Some of young people from the village are employed as truck drivers or their assistants, responsible for loading and unloading cargo. Some men work as elephant mahouts for logging companies in Kachin state, and a few women in these two villages work as sales persons in gold shops in Yangon and as housemaids in Singapore.



Fig. 10. Cattle are used to haul wood and bamboo and are an important source of emergency cash.

BEING KAREN: ADAPTATION TO A RISKY ENVIRONMENT

Karen is the generic name that has been given to people belonging to several distinct ethno-linguistic groups living in the Bago Yoma in Central Myanmar, in and near the Irawaddy delta, the mountainous border of eastern Myanmar and adjacent areas in the North and West of Thailand. ⁶⁶

Karen-speaking people have lived in what is now Myanmar for hundreds of years, particularly in the border areas with Thailand since the 13th century. However, there are hardly any written records from the time before the 19th century, and thus little is known about their history until colonial administrators, explorers and missionaries wrote about them.⁶⁷ According to an estimate made by the British Superintendent of Forests in 1876, there were five thousand Karen living in the Tharrawaddy and Prome hills, which are part of the Bago Yoma (Bago Mountain Range) of today's Bago region,⁶⁸ and British colonial records mention Karen settlements in the area of today's Pha Kaung township in connection with the establishment of reserved forests there in 1884.⁶⁹

As Renard argues, the absence of pre-colonial records has two reasons:

Not only did chronicles ignore these forest dwellers because they were 'uncivilized', members of these groups themselves often actively sought to avoid attracting the attention of their neighbours. For centuries they deliberately lived in remote areas out of the way of stronger groups.

Villages were sometimes surrounded by elaborate defences of bamboo poles and pickets with intricately devised gates. Many times the reasons for such fortifications were to keep tigers and other wild animals out. Other times the object of the defences was human prowlers.⁷⁰

Like for other indigenous peoples in Southeast Asia, living in the hills was for the Karen a way to avoid taxation, forced labour and conscription, or outright slavery at the hands of powerful pre-colonial lowland states, and ensured them a high degree of economic and political autonomy. As a result of the interaction between hill and valley populations over the centuries, throughout Southeast Asia, a socio-cultural dichotomy between hill and valley societies had emerged. James Scott argues that the presence of two fundamentally different forms of society in Southeast Asia – states in the valleys and along the coasts, non-state people (identified as "tribals in colonial "taxonomies") in the hills, forests, swamps and archipelagic labyrinths – have evolved not as a result of the geographical isolation of the latter – but as a result of choice.⁷¹

It wasn't just wild animals: Of robbers, loggers, communists and soldiers

Historical suspicion and fear of lowland Burmans has been pronounced among the Karen in Phak Kaung. Prior to the forced relocations by the government, they lived in small settlements, not only in order to be closer to their fields, but also to be less easily detected by unwelcomed strangers. As British forest officials noticed, the Karen were not willing to give up their life as shifting cultivators in the hills.

Forest officials were surprised when Karen refused to trade that lifestyle for a more settled and financially remunerative life in the plains. They should not have been surprised. Cultivators feared increased vulnerability to the predation of powerful political and economic groups which such a move implied.⁷²

But life in the hills was not always safe and easy either. Elderly people still remember the time when robbers roamed the hills and plundered whatever they found of value in Karen settlements. In these days, the still thickly forested hills were home to rich wildlife, some of which also posed a constant threat to the livelihood and security of people. Elephants and tigers are very dangerous when encountered on remote forest trails, livestock was lost to the latter and fields had to be protected from the former as well as a host of other animals like wild boar, monkeys or parrots.

After independence, the Bago Yoma was for some time home to other unwelcome visitors: fighters of the communist party which made the Bago Yoma their main base until the mid-1970s, when they were driven out by central government forces.⁷³ Elderly Karen have unpleasant memories. They felt intimidated by the presence of men under arms, but also because they often were forced to part with food to help feed the communist soldiers. At the same time, they were harassed by central government forces since they were suspected to be collaborators of the communist insurgents, and they were forced to serve as porters.

At that time, the people of present-day Shwe Taung Ngwe Taung and Kha Paung villages lived in six small settlements. According to elders, the present Shwe Taung Ngwe Taung village is composed of the people who used to live in three of these settlements: Upper Phyu, Lower Phyu and Pha Ye. When the British came to this area, they referred to these settlements as "huts" because the houses were made of bamboo only. Therefore, the people started to refer to these villages as *te*, the Burmese word for hut.

These settlements were regularly moved from one place to another place when the distance to new shifting cultivation fields became too far. People may have settled in one location and done shifting cultivation for ten years. When the shifting cultivation land near the settlement became fallow land and new fields had to be cut further away, they built new houses in a location closer to the new fields where they lived for another couple of years. Later, when the fallow forest in the previous cultivation area had regenerated

enough, they moved back to their old settlement site. For this reason, there were many settlements or te inside their territory. The settlements were usually named after the person who was the head of that hut or settlement, like U Narti Te, U Tharmon Te, Pho Hla Te, U Pwint Te, Pho Tay Te, U Pho Tok Te, U Pho Saw Te, U Pa Sein Te and U Aung Bwe Se Te. However, the villagers do not remember the years when each of these settlements were founded.

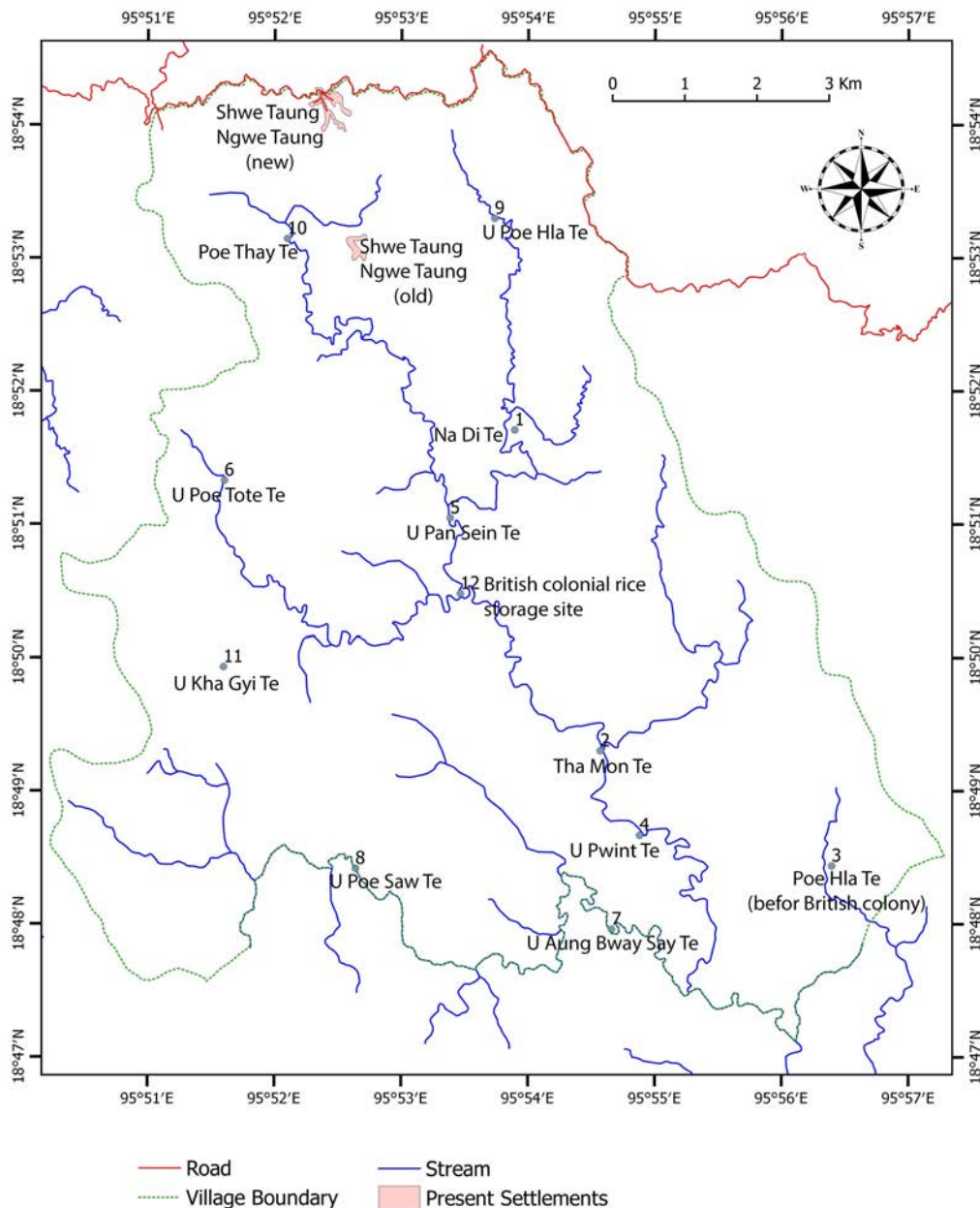


Fig. 11. Map of historical settlements (Te) of Shwe Taung Ngwe Taung village

The present Kha Paung village is composed of the former settlements Upper Kha Paung, Lower Kha Paung and Nyaung Khayar. During British time, these three villages were administered by chief Shwe Moe who lived in Lower Kha Paung. Lower Kha Paung was also called Shwe Moe Te after the name of the chief of these three settlements. After the death of Shwe Moe, Wah Lay became chief of these three villages and the village was renamed as Wah Lay Te.

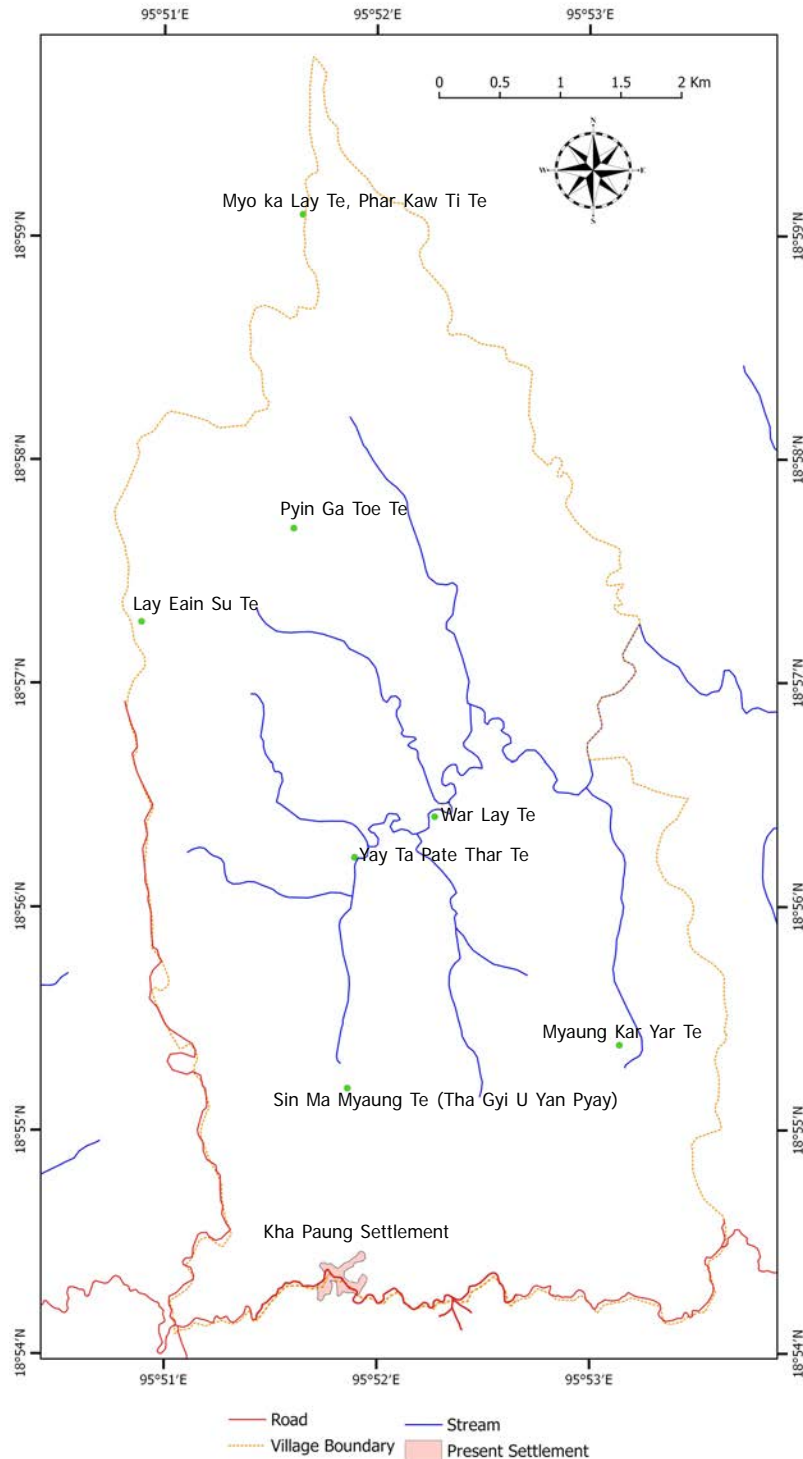


Fig. 12. Map of historical settlements (Te) of Kha Paung village

Relocation in 1962

When the military started to fight the communists in the region it applied the co-called Four-Cuts Policy originally devised by General Ne Win in the 1960s as military strategy against the Burmese Communist Party and the Karen National Union.⁷⁴ The Four-Cuts Policy has been applied later again, and is currently used in Kachin and Shan State.⁷⁵ The strategy sought to isolate the communist or ethnic fighters and draw them out by cutting off supply of food, funds, news and new recruits. As part of this strategy, whole villages were forcefully resettled with severe consequences for its inhabitants.

In 1962, the military imposed the Four-Cut-Policy in Bago Yoma and resettled Upper Phyu, Lower Phyu and Pha Ye together with Upper Kha Paung, Lower Kha Paung and Nyaung Khayar in one large village at block 50 in Phyu Kune Reserved Forest. The settlement was named “Shwe Taung Ngwe Taung” by a battalion commander. The people were ordered to move to Shwe Taung Ngwe Taung in May 1962, and were given only a month to do that. They had to build bamboo houses at the relocation site and go back and forth to bring rice from their barns in their old villages. At the same time, they had to serve as porters for the army to bring materials from Nyaung Win, which is about 40 km away. They also had to serve as porters when soldiers came to the village. Thus, people were too busy to be able to plant their fields in time. They could start planting only in July. Fortunately, the villagers were still able to harvest enough rice in that year.

The villagers were forced to serve the army as porters for several years. During this time, the villagers left their children in the relocation site while they worked on their fields in their territory. They stayed there and worked one or two weeks and went back to be with their children. It was a very difficult time for them.

In 1963, Forest Department Range Officer U Win Haung came to the area and found that the three Kha Paung settlements had been relocated. He collected information on Kha Paung villagers’ forced relocation and submitted a letter to the regional officer with the request to be allowed to return to their original settlement site. A month later, the permission was granted and Upper Kha Paung, Lower Kha Paung and Nyaung Kayar villagers went back to their own territory. When they returned to their own land, the three villages decided to live together and all three villages settled in Upper Kha Paung village. Saw Mya Said remembers that people were very happy, that they forgot their pain and difficulties. Doing shifting cultivation became easier because they were again closer to their farm land.

In the new village Shwe Taung Ngwe Taung, a school was built and soldiers taught the students for three years. When the situation in Bago Yoma returned back to normal, the soldiers withdrew from Shwe Taung Ngwe Taung. After that Christian missionaries taught the students. In 1995, the minister of the Ministry of Forestry, U Shit Shwe visited Shwe

Taung Ngwe Taung and started supporting two teachers. The minister asked timber extraction companies operating in nearby areas to support them with food and give some cash donations. In addition, the minister also provided some support from the planning and finance department's budget for living allowances. However, until 1997 the teachers did not stay permanently at the village because of difficult transportation and malaria. At that time, the villagers themselves hired two teachers by giving 50 tin of rice in a year to each of them. In 1996, a new minister U Aung Pone continued supporting the village till 1997. In 1998, the government appointed teachers for the village and the school is continuing until today.

The curse of teak: State enclosure and forced labour

Bago Yoma used to be densely forested, containing dense stands of valuable timber, particularly teak. In pre-colonial times, the cutting and sale of teak was already a state monopoly, and under British colonial rule this was handed over to British timber companies and Burmese contract loggers. Despite the high densities of the much-desired teak in natural forests, the British started establishing teak plantations in Bago Yoma as early as 1856.⁷⁶ They hired the German, Dietrich Brandis, as superintendent of the teak forests of Pegu division and, inspired by the traditional shifting cultivation he observed among the Karen there, he helped develop what has come to be known as the taungya system of establishing tree plantations.⁷⁷

Under this system, Karen villagers provided labour for clearing, planting and weeding teak plantations. In return, they were allowed to plant crops for the first few years between the trees. As the teak trees grew, villagers were moved to new land and repeated the process. As a result of this process, many villagers became dependent on the state forestry service, and local resistance to the state takeover of forests became increasingly difficult.

As a forest officer reported in 1868, Karen headman he had approached, "openly admit that they look upon the sowing of teak in their *taungyas+ as taking the bread from the child's mouth."⁷⁸ And Raymond Bryant concluded in his article that, "In this manner, the hill Karen recognized the threat taungya forestry posed to their relatively independent lifestyle. And, as they quickly made plain, they adamantly refused to trade that way of life for a more settled regime in the valleys below."⁷⁹

After independence, Myanmar's Forest Department has continued with the taungya forestry system, but in an entirely different context: As the military regime had taken control and launched massive operations against the communists and ethnic groups that were fighting for independence, all over Bago Yoma and in the forested uplands of other parts of the country, communities were forcibly resettled under the Four-Cut Policy, and many were forced to work in taungya forestry.

In present-day Phak Kaung township, teak logging has been conducted since 1856,⁸⁰ and teak reforestation started in the Reserved Forests of that area in 1884⁸¹. As elsewhere in the country, these Reserved Forests were inhabited by people, who, by British colonial law, were not supposed to remain there. Thus so-called “Karen areas” were excluded from the Reserved Forests.

A so-called Karen area was lent to the Karen who lived in the reserved forests, where cultivation was prohibited in principle. They were allowed to practice shifting cultivation but had to work for the government, especially on plantations, whenever requested. The impact of this policy on their life was relatively low because plantation work was irregular and the area from which the Karen area was excluded was small. Additionally, unoccupied land existed outside the Karen area and the manpower of the government was limited, so they could migrate according to their custom if they had any complaint.⁸²

After independence, the government of Myanmar resumed timber extraction in Phauk Kaung township under the administration of the Myanmar Timber Enterprise (MTE). Qualified teak trees were girdled and when they were dry, cut and pulled down to the streams with elephants, and in the rainy season floated downstream. In 1992, MET started carrying logs by trucks and made logging roads in the forest.

During the rule of the military’s Revolutionary Council (1962 to 1974), the government implemented a 10 years teak plantation project in the Bago Yoma. The villagers were given wage for slashing the vegetation, clearing the remains after burning, planting teak and weeding. When the project was stopped the people working in plantation went back to their villages.

In 2004, the government started giving concession to companies for timber extraction. Thai Wai company had a concession until 2005, Dagon company until 2007, Pein Ti company until 2008 and Pacific company until 2012.



Fig. 13. Signboard of a teak plantation along the Pyay-Taungoo road. Several companies have been granted teak plantation concessions on and near the community land of Kha Paung and Shwe Taung Ngwe Taung.



Fig. 14. Working elephants along the Pyay-Taungoo road. They are still used in forestry and teak plantations in the Bago Yoma.

Bamboo and pole extractions also started in 2010. Wealthy people from the nearby lowland and towns applied for permission from the Forest Department. Permissions were given for certain forest management plots,⁸³ but there was no control and cutting occurred unimpeded in nearby plots as well. Since there has been hardly any control and due to rampant corruption, these companies and entrepreneurs have heavily overexploited their concession areas, and illegal logging has been widespread throughout the area. Recently, the Forest Department stopped issuing permissions for bamboo and pole extraction in the Bago Yoma.

The Karen communities have not been able to prevent illegal logging and the entry of outsiders into their territories because they lie within Reserved Forest and thus they have no legal right over their land and resources. As a result, their forests have been decreasing both in area and quality.

Relocation in 2005

In 2005, the villagers were again relocated to their present villages on the Pyay-Taungoo road which had been constructed in 1962. The relocation was done by order of the central government following article 144 of the Myanmar the Panel Code (amended in 1974), according to which no settlements are allowed in Reserved Forest. The government originally planned to relocate Kha Paung and Shwe Taung Ngwe Villages to Shin Ma Nyaung Pin in Okktwin township. But the villagers asked the authorities not to move them there but to relocate them near the Pyay-Taungoo road, where the villagers now live.

The people were not willing to move again but were forced to do so. They were ordered to move all houses within three months from March to May 2005. They started building bamboo houses in the new location. Those who did not start to move their houses were threatened by the authorities. The villagers helped each other to dismantle their houses one by one. One week they dismantled one house, next week another house. The time of forced relocation coincided with the time of cutting new shifting cultivation fields. Therefore, the men went for cutting their fields, while the women carried materials to the new settlement location. The authorities had promised financial support for relocating the buildings to the roadside, but none was forthcoming.

The old village is about one mile away on foot from the new village and can now also be reached by motorbike on a newer, two-miles long trail. The old village has a good source of water but there is water scarcity in the new village. Six households of Shwe Taung Ngwe Taung stayed in the old village, but three of them also have houses in the new village and those who are Christians come to the new village for church service on Sunday. Army General Ye Ko Ko donated seven million kyat (about US\$4,500 at present exchange rate), and two million kyat (US\$1,300) were given by the Ministry of Education to build a school.

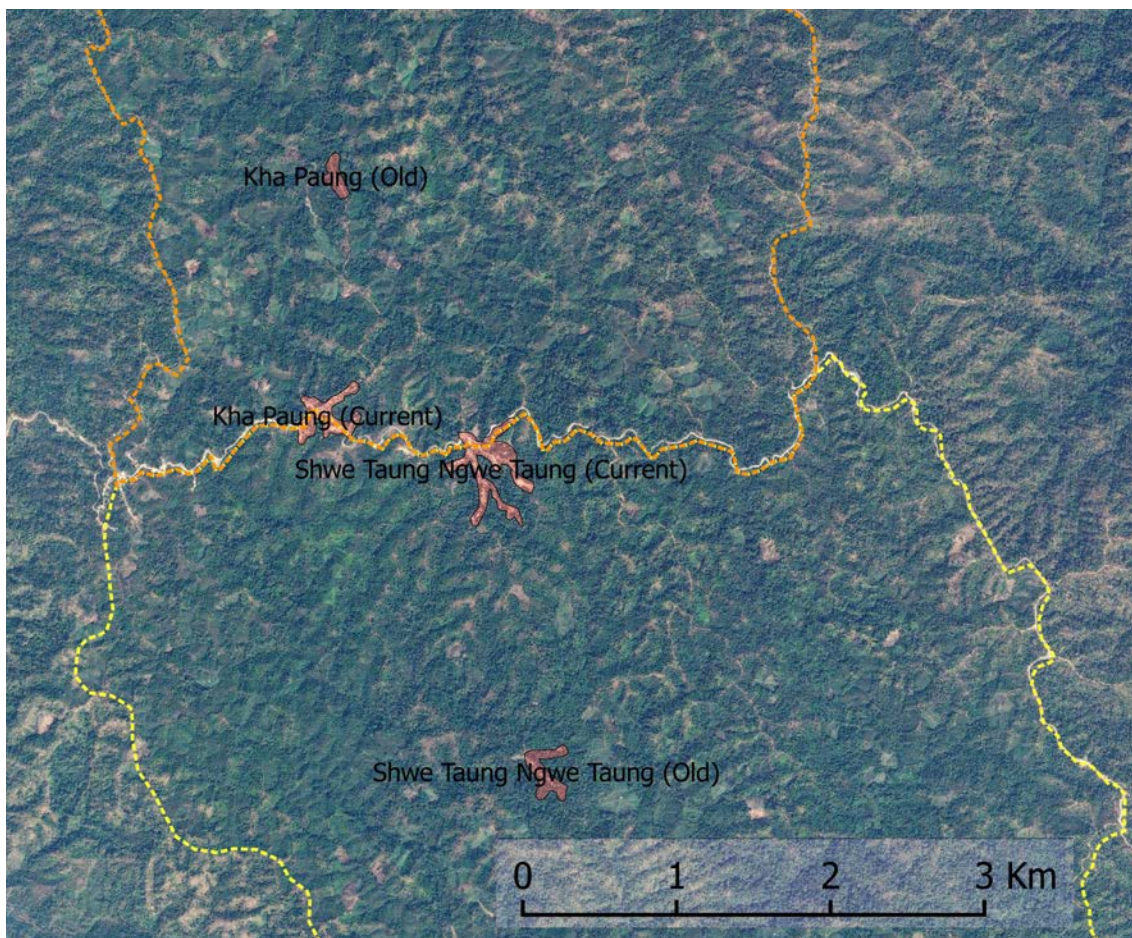


Fig. 15. Location of the old and new settlements after relocation.



Fig. 16. Fruit trees and bananas in old Kha Paung settlement. Nobody lives there permanently any more.



Fig. 17. Women in old Shwe Taung Ngwe Taung settlement pounding and winnowing rice. A few families still live there permanently.

The plunder of forests

Over the past decades, the people of Shwe Taung Ngwe Taung and Kha Paung have observed severe forest degradation and loss of wildlife as a result of overharvesting and overhunting. As mentioned above, due to unsustainable timber harvesting since the British era the forests in the Bago Yoma have been severely degraded. In 2017, the government banned timber harvesting in the whole of Bago Yoma for 10 years. However, some legal timber harvesting and above all illegal logging, illegal harvesting of poles and bamboo by outsiders are still ongoing.

Some community members tried to stop the cutting of poles and bamboo by outsiders on their land, but in most cases, they just refused to listen, arguing that the area is a Reserved Forest, that the villagers do not own it and have no right to forbid them to cut bamboo or poles. In other cases, they offered some small compensation. Outsiders also stole vegetables from the communities' shifting cultivation fields. The cattle, which the outsiders are using for transporting logs, poles or bamboo, destroyed some of the villagers' crops since they let them graze freely in the fields and fallow lands of the communities.



Fig. 18. Truck transporting bamboo on the Pyay-Taungoo road leading through Shwe Taung Ngwe Taung village.

Outsiders' impact has also been devastating on wildlife. Bago Yoma has been home to many kinds of wild animals such as elephants, tiger, gaur, barking deer, sambar, wild pig, monkey and many others. But today, the villagers can see only barking deer, wild pig, and sometimes monkeys. Other species have almost completely disappeared.

What is special about the Karen in this area is that unlike other indigenous peoples they have not hunted wild animals by using guns, bows and arrows, but only with traps. Both hunting and their traditional way of catching fish and prawns in the streams were sustainable ways of using wildlife and aquatic resources.

In the past, the villagers of Kha Paung and Shwe Taung Ngwe Taung did not hunt much. They used to make traps around shifting cultivation fields to protect the crop from wild pigs and other animals. More often than from traps or hunting, they got meat of wild animals which were killed by wild dogs. When they heard wild dogs chasing an animal they went to search for the kill and took some of the meat. But they always left some for the wild dogs. According to elders, they used to get barking deer, wild pig and other small animals killed by wild dogs every week or at least once a month.

Wildlife started disappearing when outsiders came to their territory and laid hundreds of traps made of steel wire and nylon, and hunted them with muzzle-loader guns, in Karen called *pe palo*. Meat, skins and other valuable parts of wild animals were sold in Mandalay and Pauk Khaung. The villagers themselves did not make traps like the outsiders and they do not have guns.

Since 2004 the villagers of Shew Taung Nge Taung and Kha Paung state that they have not seen traces of tiger, elephants and sambar deer anymore. Since 2010, even barking deer and monkeys are rarely seen and one has to go further away from the settlements to find those animals. The wild animals which are still found in their territory are wild pigs. In 2017, one of the villagers from Kha Paung village caught five wild pigs by traps.

In the past, there were lots of fish and prawns in the streams and the villagers used baskets made of bamboo to catch them. Later, the peoples from the lowland used poison (in Burmese called italay) to catch fish. As a result, fish and prawns became almost extinct and even wild animals that drank the poisoned water died.

ADAPTATION TODAY: PERSISTENT CHALLENGES IN A CHANGING CLIMATE

Making a living in the rugged, densely forested Bago Yoma poses considerable challenges. But with shifting cultivation the Karen communities living there have a form of land use well adapted to the inherently poor upland soils, and while forests harboured many dangers in the form of wild animals, they also provided a wealth of resources critical for villagers' survival. The intimate relationship with and in-depth knowledge of their natural environment has been the basis of their adaptive success and thus their livelihood security. However, they had to deal with even greater adaptive challenges posed by the wider socio-political environment ranging from lowland robbers, taxation, forced labour, restriction by forest policies, illegal loggers, to insurgents, state security forces and the related forced relocations.

In all this, the Karen communities have shown considerable resilience. They have been able to absorb disturbances while retaining their basic socio-economic structure and ways of functioning. Small communities held together by close kinship ties, sharing goods and labour, with an agricultural system that allows for the flexibility to move to other places in the face of threats, or to re-establish their livelihoods when forcibly relocated.⁸⁴ The forest has been a place to withdraw to, as well as a source of food and other resource both in times of emergency and when life was peaceful and good. For centuries, this resilience has allowed them not just to maintain secure livelihoods, but rich culture and traditions.⁸⁵

Carving out space in a reserved forest

As this report shows, the challenges posed by the powerful lowland state become greater during British time, when the colonial government sought to extend its control over the remote and forested uplands in order to gain access to one of the main sources of wealth of the colonial state: teak. With the passing of restrictive forest laws passed by the British, the establishment of Reserved Forests and the introduction of the taungya forestry system, maintaining their independent life in the hills became more difficult for the Karen. Yet, with the declaration of Karen areas in which traditional land use was permitted (and despite the ongoing though not always successful stricter enforcement of the law in other areas) the Karen communities were able to continue with their traditional way of life.

After independence, this changed drastically. Under military rule the state's grip over the forested uplands of the Bago Yoma was consolidated, communities forcefully resettled,

logging and, more recently, teak plantation concessions were given to companies and attempts were made to convince the Karen to stop shifting cultivation. In the past, ignoring orders of the authorities and withdrawal to remote areas had been successful ways of coping with the state and outsiders entering their ancestral lands. However, today, this strategy alone is not sufficient anymore and in recent years, the Karen of Shwe Taung Ngwe Taung have adopted new ways of dealing with threats by outsiders.



Fig. 19. Signboards erected by the Forest Department near a view point overlooking the 76,648 acres large Kha Paung Reserved Forest.

Confronting the companies

In 2008, Nine Horse, Lar Yeik Sho, Kun Lone Aung, Haw Say and International Yadana companies were given concession on 1405 acres of land for teak plantation in forest management plot number 50 and 51, which area in in the territory of Shwe Taung Ngwe Taung, Kha Paung and Border villages without conducting proper consultation with the communities. Nine Horse company and Lar Yeik Sho companies started planting teak. Nine Horse company is implementing the project on 450 acres, although it has so far been successful only on 100 acres. The other, 955 of the 1405 acres had to be returned to the Forest Department.

Since Nine Horse company got a concession close to the settlement area, Saw Aye Saung, Shwe Taung Ngwe Taung's village chief, met with the responsible persons of the company and the Forest Department in Pauk Khaung town and demanded to create a one-mile wide buffer zone between the plantation and the village land. But the buffer zone made by the company is only about half a mile wide. And in Kha Paung and Border village the

company cleared the forest and planted teak trees right up to the settlement areas. As the chief of Shwe Taung Ngwe Taung explained, “At that time, other villages were not part of the village tract, and their chiefs were afraid to speak out.” The villagers from Kha Paung explained that “even if we complain to the company, they will not listen to villagers and they will carry on according to their plan. They are power holders.”

In 2010, people from three neighbouring villages came to the chief of Shwe Taung Ngwe Taung village-tract and complained that they were not paid wages for their work for Nine Horse teak plantation. The village chief met with the manager of the plantation but the owners of companies did not reply. Then the villagers sent a petition letter to the Labour Department in Nay Pyi Taw. The authorities decided to hear the complaint of the villagers and finally a meeting took place in the Okktwin township administration office. The committee members to investigate and handle the problem included the Labour Department, Cooperative Department, Food Security Department, and Administration Department. The committee decided that the company had to pay 2.8 million kyat (US\$1,800) to the villagers.

In 2014, the government granted Pacific company a teak plantation concession of about 188 acres on land owned by Shwe Taung Ngwe Taung village (forest management plot number 50). The village-tract chief and a few other villagers went to the company and Forestry Department and complained about the encroachment on their land. They also told the Forest Department that they wanted to apply for a Community Forestry Certificate for some of their land. The Forest Department decided that 50 acres of land on which the company had already planted trees should be left to the company, but that the remaining 138 acres should be returned. The villagers were not compensated for the 50 acres now used by the company.

Another problem that the villagers have with the companies is grazing cattle. When their cattle or goats enter a plantation, the company demands compensation. In one case the Nine Horse company planned to raise goats in the teak plantation area and grew fodder there to feed the goats. Unfortunately, village cattle ate some of the fodder grown by the company and the villagers had to pay 100,000 kyat (ca. 65 US\$) compensation.

Asserting their land rights: A joint petition

The people of Shwe Taung Ngwe Taung and Kha Paung have done shifting cultivation in their territories since before the British came. They used to own and use the land communally. As elaborated above, when teak extraction began under the British, restrictions were imposed. In order to reduce and confine shifting cultivation on the one hand, and to keep the Karen villages as a source of labour for the taungya forestry system on the other, the British excluded the Karen areas from the Reserved Forest where they were allowed to continue their traditional land use.

According to oral history of the villagers, the British let the Karen demarcate the boundary of their land by carrying an officer along the perimeter of their territories. Allegedly, when the communities that are now Shwe Taung Ngwe Taung village finished carrying the British officer they had covered a fairly large area, totalling 29 forest management plots. The territory of Kha Paung is much smaller since, allegedly, the people carrying the officer got thirsty and stopped for a while, but the officer thought they had reached the farthest point of the territory already.

The Karen communities that were recognized by the British as forest villages were not only a source of labour for teak plantation, but the Karen allegedly also helped the British protect the forests and serve as informants on illegal logging. The British ensured the security of the people working as informants.

The boundaries of the land designated by the British as Karen areas are still considered by the communities as their territorial boundaries. They know exactly which reserved forest management plots are inside their village territories. These have also been recorded by the Myanmar-Japanese research team that studied various aspects of land and forest use in this area since the 1990s.⁸⁶ In 2017 and 2018, POINT staff facilitated a community mapping process in Kha Paung and Shwe Taung Ngwe Taung, which started with identifying the boundaries of the village territories by the villagers. Then POINT produced geo-referenced maps based on Google Earth satellite images (see Fig. 24).

There is a certain informal recognition of the communities' rights over their land by the forest department, but the relocation in 2005 and the initial plan to resettle the communities to a place far away from their land clearly shows that the communities do not have any legal right over their land.

Furthermore, the attitude toward shifting cultivation has not changed among Forest Department officers. In 2010, officers of the Forestry Department from Pauk Khaung township and Taungoo township visited the villages twice to tell them that according to the law shifting cultivation is not allowed and should be stopped. However, so far, no legal action has been taken and the people in the two communities carry on shifting cultivation as they have done for many generations.

Ever since British colonial times when their customary land was declared part of a Reserved Forest the two villages have been facing insecurity of land tenure and the exploitation of their labour by succeeding regimes. Like elsewhere, the Karen communities of Phak Kaung have adapted largely by trying to avoid or ignoring the authorities, where and whenever possible, and continue with their customary way of life. In recent decades, this strategy has become increasingly difficult to apply and new ways have to be found to enable villagers to maintain control over their land, resources and livelihoods. The creation of "Karen areas" by the British colonial forest administration, although probably mainly motivated by their interest to keep the Karen out of the teak forests but close enough to tap their labour for reforestation, also signified a certain recognition of prior occupation of these forests by Karen communities and thus their rights to their land.

Some communities still own old sketch maps made by the British and others as proof of this recognition of their community territory. This has encouraged them to assert their rights now that the threat of losing control is greater than ever before. Under military rule, the people working as informants on illegal logging for the government were at risk because the government did not provide any protection for the people. The recent granting of logging and teak plantation concessions, clearly shows that there is no longer recognition of the customary tenure rights of the Karen villagers.



Fig. 20. Vinyl poster of the map made by Shinya Takeda showing the shifting cultivation plots used by Shwe Taung Ngwe Taung village between 2002 and 2008. Most plots lie within its customary territory.

Therefore, in 2017, with the support of the Independent Labour Union, Kha Paung, Shwe Taung Ngwe Taung, Kyein Kyaung and Kyaung Pyar village sent a joint petition letter to President Htin Kyaw, State Counsellor Aung San Su Kyi, General Min Aung Hlaing, the Vice-president Henry Van Thio, and to the president of the Reinvestigation Committee on Confiscated Farm Land and Other Land, requesting the recognition of their customary land. The petition letter refers to Part 8 of the new National Land Use Policy, concerning the Land Use Rights of the Ethnic Nationalities, as well as to other related instructions on land, such as:

1. Instruction No 12/La Ya16 (002/2015) issued on 16 January 2015 by the Central Land Management Committee, which states that the regional and state Land Management Committees have to provide legal permission for farmers who are doing agriculture on forest land, grazing land and vacant, fallow and virgin land.
2. Instruction No 107/ (11/8/president office) issued by the president office on 28 February 2014. The instruction provides that confiscated land has to be given back to the original land owners and farmers by the respective departments.

The petition letter was signed by all the members of these four villages.

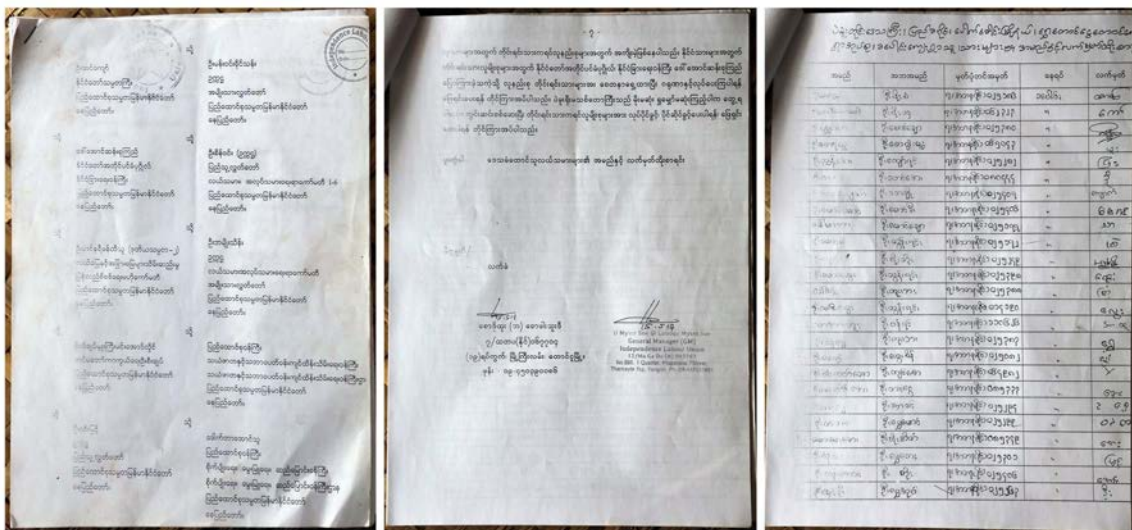


Fig. 21. Pages from the petition letter submitted by Kha Paung, Shwe Taung Ngwe Taung, Kyein Kyaung and Kyaung Pyar villages

Coping with climate change

In recent years, the adaptive capacity of the Karen communities of Phak Kaung township has been further challenged by changes in their natural environment brought about by global warming. They have observed that significant changes are happening, above all an increase in temperature and a change of rainfall patterns which are impacting gravely

on the livelihoods of villagers. An indicator is the absence of mist in winter, when it used to be very cold. Now, it has become much warmer in winter and there is no more mist.

Irregular rainfall rarely happened in the past, but since 2008 the villagers observed significant changes. According to the villagers, normally the rain comes around mid-May, and the villagers start planting their shifting cultivation fields at the end of May. But in recent years, late arrival and early withdrawal of monsoon can be seen. When the rain is late and there is drought, the plants are not strong enough, resulting in decreased yields. If there is heavy rain when the paddy is flowering or during harvest time, the yield of paddy is also reduced. If the rainy season is lasting too long, like until December, sesame, cotton and chili, three of the most important cash crops, become rotten. These changes in the weather resulted in loss of crops and thus income from shifting cultivation, and some families in the villages face increased food insecurity.

There has also been an increase of death of domestic animals, especially chicken, pigs and dogs which villagers attribute to temperature increase. They observed that while in the past chicken used to die in larger numbers only about once in four years. Now this happens more frequently. They also found that in the past pigs and dogs rarely died a premature death, which since the past decade this happens every year (but, luckily, no pigs died in Kha Paung village in 2018). They believe that this is caused by higher temperatures that make the animals sick. Chicken are used to barter goods for domestic uses such as salt, oil and fish paste from traders, and pigs are sold to meet the needs for larger cash income. Thus, the loss of animals is affecting the livelihood of families.

Climate change is further exacerbated by forest degradation. After 2004, when the logging companies started timber extraction and made logging roads in the forest for hauling out timber, streams and ponds became dry since almost all teak trees, other hard wood trees and poles were extracted over the last decades and the forest is now heavily degraded. One of the villagers from Kha Paung village described that “there is a stream, in which logs were pulled down when the government (Myanmar Timber Enterprise) extracted timber. Later the stream dried up completely.” They also feel that the climate has been changing after the cyclone Nargis devastated large areas in the South of Myanmar in 2008. Some villagers said they have heard of many diseases that they never used to have before.

In interviews and focus group discussion held in the two communities, people expressed their fear that climate change will become worse and have more detrimental impacts on crops in the future.

Even though people believe that climate change will impact more on their livelihood, most of the interviewees are of the opinion that shifting cultivation can still provide sufficient food for them if they invest enough labour. Some of them suggest to develop paddy fields in suitable areas. They also feel that agriculture should be diversified and more permanent crops should be grown, such as banana, lime, mango or elephant foot yam along with shifting cultivation.

Introducing new cash crops suitable to their area and better market access for their products are considered important for adapting to the impacts of climate change and for livelihood and food security in the future. Some villagers have already started growing turmeric but do not know where to sell it. A few families planted mango and banana. While banana can be sold to traders, they were not able to sell mango because of a lack of market demand for them in 2018. Other challenges related to the introduction of new crops and development of agroforestry include the lack of capital and technical knowledge. Villagers also face a challenge to invest the necessary labour to establish such cash crops when they are busy in their shifting cultivation fields to meet their present needs.

The people of Shwe Taung Ngwe Taung and Kha Paung also believe that they can withstand the impacts of climate change because they still have forest. But in order to be able to preserve their forest the encroachment of outsiders on their land has to be stopped. For them, the most important thing to do is to stop illegal logging and the granting of concessions to companies on their territory.

Climate change adds additional challenges to the difficulties imposed on these communities by the current state policies. As we have seen, merely 'bouncing back' after disturbances is not sufficient anymore, and the communities have adopted pro-active measures not just by trying to change their forms of land and forest use, but also by trying to influence decision makers to create the conditions for them to continue being able to adapt and transform themselves: the recognition of their customary rights to land and forests.

Community Forestry - Adaptive benefits and limitations

Like other Karen communities, Kha Paung and Shwe Taung Nge Taung villages have protected some forest areas as part of their customary land management system. When the British recognised their customary territory as Karen areas, the elders of the Kha Paung community proposed that they protect some of the forest there. So it was decided to keep forest management plot 49 and 50 in Kha Paung reserved forest as protected forest. They have conserved this forest for decades and there were big teak trees growing there.

In 2012, part of the village territory was included in Pauk Khaung township, the rest remained within Okktwin township. Of 22 forest management plots five became part of Pauk Khaung, among them plots 49 and 50 with Kha Paung's protected community forest (along with 51, 52 and 53). However, part of both plots were given as a logging concession to companies. The villagers complained, arguing that these areas had been conserved by them since their forefathers' time, but the authorities and companies ignored them, pointing out that it was Reserved Forest. Concessions were also given for teak plantations and for extracting poles and bamboo in the territory of the two villages, among them the teak plantation concession to Pacific company which included plot 50.

In 2013, the Forest Department organised agroforestry and Community Forestry training in Let Pan Kone village in Okktwin township. The village-tract administrator attended the training and after the training, he organised village meetings to share what he learned about Community Forestry. It was around that time that the Forest Department had given concessions on their community land to companies, and the villagers decided to apply for a Community Forestry Certificate at Pauk Khaung township Forest Department office in order to be able to protect some of their land from external encroachment. However, during the application process, the responsible officers were replaced and it was difficult to get the CFC.

The villagers from Kha Paung and Shwe Taung Ngwe Taung applied for a Community Forestry Certificate (CFC) since these villages are located along the Pyay-Taungngoo road and therefore more vulnerable to illegal and legal logging by outsiders. Shwe Taung Ngwe Taung villagers applied for CF on plot number 49, 50 and 53 of Phyu Kwin reserved forest. At the time of applying the Forest Department was collecting data on shifting cultivation in Reserved Forest by the villagers. In 2013, a CFC was granted to both villages by Pauk Khaung township Forest Department for shifting cultivation plots in Phyu Kwin Reserved Forest and Kha Paung Reserved Forest. Seven forest user groups in Shwe Taung Ngwe Taung village comprising 43 households were given a CFC, covering a total of 47 acres. The average acres of land given to the villagers is 1.09 acres per household. However, the application for a CFC submitted to Okktwin Forest Department was not granted.

Eight households of Kha Paung village applied for a CFC on land in forest management plot number 49 of Kha Paung reserved forest and they were granted 21 acres. At the time of the applications for these community forests, many people in the two villages did not know much about CF and the application process and were not interested in joining. As a result, only eight households in Kha Paung and 43 households in Shwe Taung Ngwe Taung were part of it.

Shwe Taung Ngwe Taung actually had applied for a CFC for about 2700 acres of land. However, Forest Department staff told them that if they could not properly implement conservation and reforestation on all the land, it will be taken back. Finally the village received a CFC for merely 47 acres of forest land.

■ **Outside support: The RECOFTC project**

In 2014, the regional NGO Center for People and Forests (RECOFTC) and the Forest Department launched a project on “Scaling Up Community Forestry in Myanmar” in Shwe Taung Ngwe Taung village tract, among others. Before the implementation of the project, the villagers were informed and consulted. The staff from RECOFTC organized three meetings to discuss the project and in the third meeting, the villagers agreed to be part of the project. However, while possible benefits were discussed, there was not discussion on whether the project might have any negative impacts such as decrease

of shifting cultivation area, loss of traditional livelihood or the challenges of addressing encroachment on community forestry areas by outsiders, and the conflicts that may result from that. The villagers agreed with RECOFTC to expand the existing FC area and apply for a CFC for those new areas.

RECOFTC provided several trainings for the villagers, three times in each village and four times in Pauk Kaung city. The trainings in the villages focused on community forestry, covering topics like training on the concept of community forestry, and amendment of the management plan, capacity building for user groups on organizational development, and participatory monitoring and evaluation. About 20 participants attended the villages meetings, and it was mainly those who attended the first training who also joined the subsequent two trainings. Representatives from the two communities attended the trainings at the township level together with participants from other villages. The topics covered were the same as those already mentioned, but in addition included training on conflict management, financial management, forest management and participatory action research.

RECOFTC helped the communities with the application for CFC, which were granted in 2017. Shwe Taung Ngwe Taung applied for a CFC in forest management plots number 49 and 50 of Phyu Kwin reserved forest. In plot number 49, for a CF area of about 409 acres in total. Out of these, 281 acres were designated for reforestation and 228 acres of land for natural forest conservation. The CF area in plot number 50 is 379 acres in total. The villagers decided that of these, 109 acres of land were for reforestation and 270 for natural forest conservation. Therefore, Shwe Taung Ngwe Taung villagers are currently managing a total of 835 acres of community forest, 47 acres granted in 2013 and 788 acres granted in 2017.

There are two user groups in Shwe Taung Ngwe Taung. The first CFUG is doing reforestation. It has a total membership of 75 households. 45 households have CF plots for reforestation in forest management plot number 49, and 30 households in plot number 50. 85 households are user group members in CF for natural forest conservation. Of all the household of the village ten households are not participating in community forestry. Households with a married couple were given five to ten acres of CF to look after, widows or widowers got one to five acres. Ten of the 75 members of the reforestation CFUG started planting trees in 2018. The user groups also made an inventory of dead and living trees in the CF areas.

In Kha Paung village, there are two CFUGs. One group has been formed for the application granted in 2013, the other is the group supported by RECOFTC. Three members of the old CFUG joined the new CFUG that is supported by RECOFTC. RECOFTC has facilitated the second CF application and given trainings. There are 41 households, those who are doing reforestation and all CFUG members are involved in natural forest conservation. The villagers were granted 219 acres for reforestation in plot number 50, and 485 acres

for natural forest conservation in plot number 47 and 49 of Phak Kaung reserved forest. The villagers also asked the Forest Department to come to visit the village, and in 2017 FD officers came and taught how to make a tree nursery. The new FUG received the CFC in February 2017. Now, Kha Paung villagers have 740 acres (40 acres in 2013 and 700 in 2017) of forest in total as registered community forestry.

Kha Paung villagers applied only for 700 acres of CF areas because they were not aware that they could apply for more. Like in Shwe Taung Ngwe Taung, FD official told them the land will be taken back if the community cannot implement CF management successfully. The villagers learned in trainings given by RECOFTC that the CFC can be inherited by their children and they can do permanent agriculture on CF land. The villagers in Kha Paung want to continue doing shifting cultivation outside of CF area and establish teak plantations in the CF area. However, they are aware that they do not have any legally recognized rights to their shifting cultivation land.

There has been good participation of the communities in planning and project implementation. The selection of the CF area was done by the villagers themselves and RECOFTC helped in delineating the area. About 30 people were involved in trainings organized by RECOFTC, but women's participation has been low. Only around 10% of all participants in the trainings and of the members of the forest user group committees are women. Most of the registrations for membership in the CFUGs in Kha Paung and Shwe Taung Ngwe Taung are done in the name of the husband. Only few families put the names of both husband and wife. However, even though it is mostly women who do the planting in the community forest, they generally do not understand the purpose and process of community forestry as well as the men, and even though allegedly all members' opinions are sought whenever a decision has to be made, women are less actively involved in decision making in the CFUGs.

Only a few people, mainly those who attended the trainings, know about community forestry and related topics covered by the project. A few people heard and have a vague idea about REDD+ because it was also covered in the trainings conducted under this project. But REDD+ was not a main topic; the training mostly focused on the establishment of tree nurseries, forest conservation and community participation.



Fig. 22. Saw Aye Saung, chief of Shwe Taung Ngwe village-tract standing in front of signboards erected under the Community Forestry Project by RECOFTC and the Forest Department. The board on the right shows a map of the plots given to members of a Forest User Group.

Expectations, hopes and concerns

The immediate benefit of obtaining a CFC is that the villagers can now protect their forest from illegal loggers and other encroachment by outsiders, at least in the CF area. Since the CFC has only recently been approved, and planting activities have barely started, the CF has so far not had any tangible livelihood benefits. However, the villagers hope that in the long term the increase of forest cover and forest quality will allow them to earn cash from selling poles, and that future generations will benefit from inheriting and teak in the CF area they cannot cultivate other crops because, according to the villagers other crops do not grow well with teak.

As part of the CF project, RECOFTC provided 6.1 million kyat (4,520 US\$) to each village for community development and making nurseries for of teak and other trees. The villagers in Shwe Taung Ngwe Taung spent 500,000 kyat (370 US\$) for the nursery, 4.6 million kyat (3,410 US\$) for a revolving fund and one million kyat (740 US\$) were deposited in a Bank. Kha Paung villagers also received 6.1 million kyat from RECOFTC. Of this, 1.9 million kyat (US\$1,410) was used for the nursery, the rest is used for the revolving fund.

The most important benefit that the people of Shwe Taung Ngwe Taung and Kha Paung expect is increased tenure security for their land. They are happy that in the future they can pass on the CFC to their children. However, they are aware that tenure security under the CF is only limited. The CFC is valid for 30 years and even though it is theoretically

renewable, there is no guarantee that this will happen after the first 30 years are over. Furthermore, as FD officials have pointed out, there is the provision that if the villagers are not implementing their activities in accordance with the CF management plan, the CFC can be cancelled. The villagers also worry about political instability and the changes of government policies and laws.



Fig. 23. Member of one of the Forest User Groups of Shwe Taung Ngwe Taung village in the Community Forestry plot given to him.

The people of Shwe Taung Ngwe Taung and Kha Paung were very clear in their assessment: in order to be able to successfully adapt to the impact of climate change, they need a healthy forest and above all agricultural diversification through the adoption of agroforestry. Since the issuance of the new CF instructions in 2017, strengthening of livelihood security of communities has become a main focus of the initiative along with the traditional purpose of forest conservation. One of the important changes in the new CF instructions is the possibility for the commercial sale of timber and other forest products by the FUGs. They are now allowed to form legal associations “for extraction of timber and timber products and for the commercialisation and marketing of their products”.⁸⁷ This represents a considerable potential to help communities in diversifying their livelihoods.

FUG, as new community-based institutions, can contribute to strengthening a community’s social capital. While primarily concerned with managing the CF, they have the potential to help address other issues related to resource management, livelihood and other matters. It can therefore strengthen a community’s adaptive capacity. However, this is the case only when FUG function well and coordinate and cooperate with each other.

Very important particularly for indigenous communities is that the revised instructions allow FUGs to practice agroforestry which is “suited for the region in implementation of CF”⁸⁸, and the explicit reference to shifting cultivation as a prohibited activity inside a CF has been dropped. Although the formulation is rather vague, it still opens up for the possibility that communities can continue with and develop their traditional forms of land use, including shifting cultivation, which is increasingly recognized for what it really is: a form of agroforestry.⁸⁹

Thus, CF does indeed have the potential to support communities in climate change adaptation. Some of the suggestions made by community members of Shwe Taung Ngwe Taung and Kha Paung regarding the use of forest products and the diversification of land use would be possible under the new CFI. However, the way it has so far been implemented in these two communities, does not fully allow member to exploit its potential. The areas given to the FUG members (one to ten acres for married couples and one to five acres for single person households), are too small to generate sufficient income from forest products, or to allow them to continue practicing long-fallow shifting cultivation and to develop other forms of agroforestry. FUG members also lack the capital, technical knowledge and market access for new forms of agroforestry, which they are interested to adopt and develop further.

Most important, despite the important improvements in the revised CF instructions of 2016, CF in Myanmar still has severe inherent limitations that prevent it from being a strong tool in supporting community-based adaptation to climate change. Above all, it does not provide for an explicit recognition of customary tenure and long-term tenure security.

The revised CFI does refer to “customs” and thereby, but only implicitly, to customary tenure. In paragraph 4 regarding areas permitted for the establishment of CF, “Forest lands traditionally managed by the local community according to the culture or customs” are included⁹⁰. And according to paragraph 11, the allotment of forest land to a FUG shall be situation-specific, and it states that, among several factors, the “Boundary which is decided according to local customs and norms” should be taken into consideration.⁹¹

This means that according to the revised CFI, it would be possible to demarcate and provide a CFC for the whole customary territory communities. As we have seen, in Shwe Taung Ngwe Taung and Kha Paung this has not happened and the CFCs granted cover only a small part of their customary lands.

Although Community Forestry was being merely departmental instructions in the past (until October 2018), CF is added in a new forest law enacted in September 2018. According to the new forest law’s article 7 (d), customary land tenure is partially recognized, i.e. it provides that “customary protected forest and mangrove can be recognized.” However, the CFI does not provide for genuine legal recognition of customary tenure. As other studies have also concluded⁹², Community Forestry in Myanmar provides some tenure security to communities, but since it recognizes only temporary use rights, which can

be withdrawn by the FD if it considers the communities incapable of “proper” forest management, it is a rather weak legal instrument for communities to protect their rights to land and resources from other, more powerful interests.

■ Slaves no more? The importance of land rights

According to all the people interviewed and the participants in focal group discussions, tenure security is the most pressing issue they are confronted with. Companies were given concession for teak extraction and plantations over parts of their territories, which restricted their access to resources like shifting cultivation land, pastures and various non-timber forest products, thereby leading to conflicts between the community and the companies.

The granting of concessions to companies has led to a decrease of land available for cultivation. Even some of the few areas of paddy fields in the communities have been lost because they became part of a concession.

The situation of the communities is captured well in the words of Saw Thar Kay from Shwe Taung Ngwe Taung village:

Our forefathers have been here for a long time, leading a simple life. We do not want to have problem with outsiders. When we have a problem with outsiders, we do not know how to solve it, we just want to avoid the problem. We do not have documents or other evidence for our right to our land. We need a kind of recognition for our land rights from the government so that we will be able work on our land peacefully.

It is not just in order to have sufficient land for farming or to be able to protect their forests that Shwe Taung Ngwe Taung and Kha Paung communities need secure land rights. Women expressed their concern over the loss of land and resources because of outsider encroachment. However, as they explained in focus group discussions in the two villages, these outsiders also pose a direct threat to their security. After they have heard of cases of rape committed by illegal loggers and other outsiders in other villages, they are afraid to enter the forest and work in their fields when outsiders are around.

The people of Shwe Taung Ngwe Taung and Kha Paung engaged in Community Forestry above all because they were hoping to obtain some protection of their customary rights to their land so that they can work on their land peacefully, without any threat to their people, land, and forest. Having received their CFC is seen as a big improvement. The sentiments – and hopes – of the people is probably well expressed in a statement made by village tract leader Saw Aye Saung, during one of the discussions: “Now that we have the CF, we are not slaves anymore”.

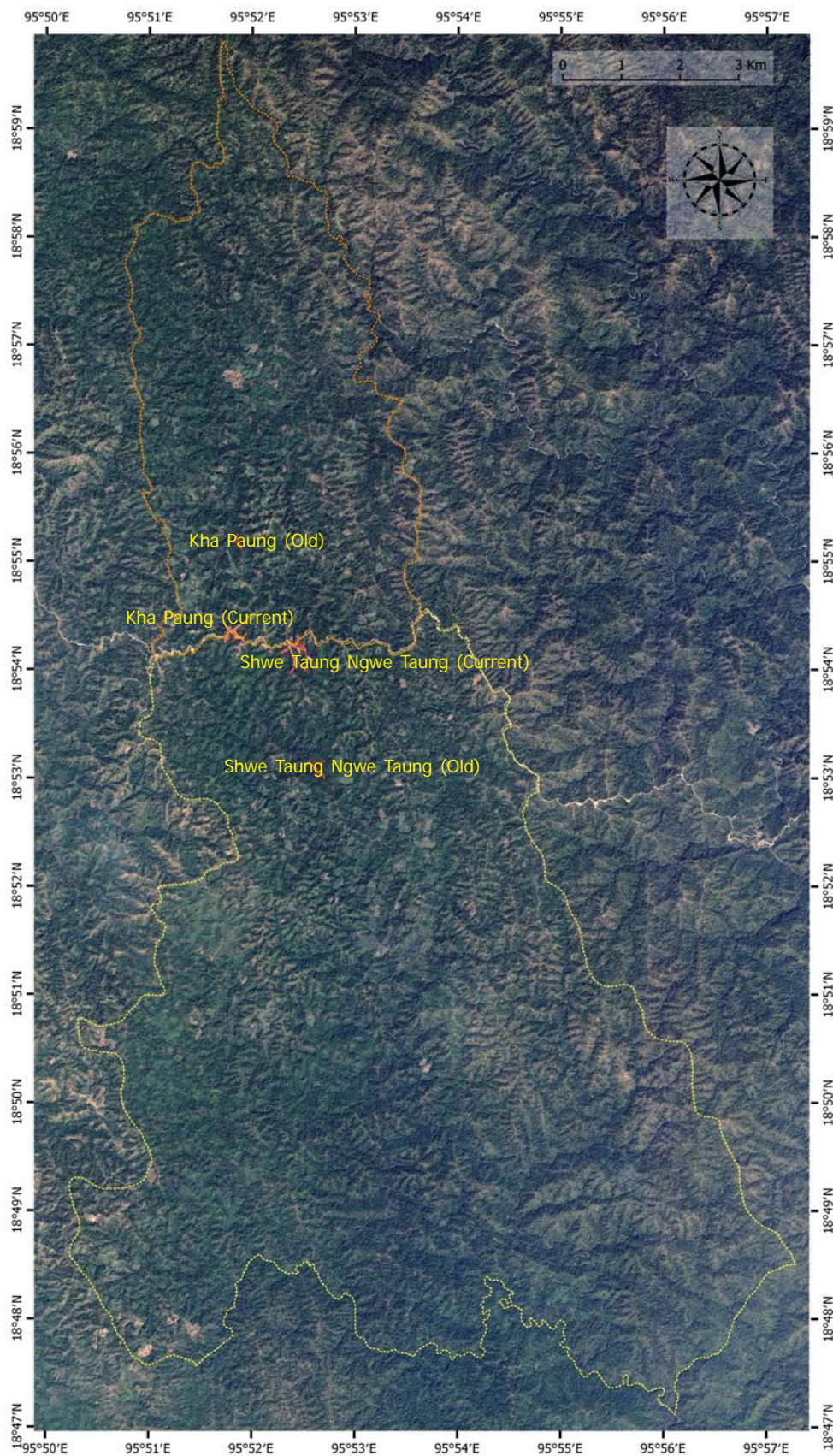


Fig. 24. Satellite image showing the boundaries of the village territories of Kha Paung and Shwe Taung Ngwe Taung. These are the territories that were recognized by the British colonial Forest Department.

However, the people of Shwe Taung Ngwe Taung and Kha Paung, and especially their leaders are very much aware of the limitations Community Forestry has for the recognition and protection of their rights over their customary territories. Therefore, when U Than Shwe, who is one of the leaders from Kha Paung village, learned about community mapping in other villages in Bago Yoma and read an article about customary land tenure of indigenous peoples in a newsletter published by POINT, they contacted POINT and requested them to help them conduct community mapping of their territory. The purpose of the mapping is to show the territory which they have owned since British colonial times in order to have more evidence for claiming their right to their customary land. As described earlier, four villages in this area have also sent a petition letter to the Union Government in Nay Pyi Taw requesting the recognition of their customary land. In 2017, POINT started facilitating mapping of their village territories of Shwe Taung Ngwe Taung and Kha Paung. Mapping is currently still ongoing.

LESSONS LEARNED FOR REDD+ IN MYANMAR

Nowhere in the world has REDD+ reached yet the stage of full implementation, i.e. the third, so called “accounting phase”⁹³, when a country is paid for the carbon emission reduction and carbon sequestration resulting from implementing REDD+. However, pilot projects have been conducted or are currently ongoing, which, among others, may also help in assessing to what extent REDD+ can contribute to climate change adaptation of communities. A few studies have so far been done on REDD+ in Asian countries that also look at the adaptation benefits for communities. Due to the short duration of these pilot projects and the incomplete implementation, above all the lack of carbon benefit payments for communities, a comprehensive assessment of the benefits for communities, including adaptation benefits, is difficult and the conclusions drawn in these studies remain rather tentative or speculative.

For example, a study conducted in Central Kalimantan in Indonesia⁹⁴, concludes

Results show REDD+ benefits will most likely lead to adaptation improvements implicitly. However, to maximize adaptation benefits, REDD+ should incorporate key elements into its design, which include adding an adaptation component in its key objectives, enabling appropriate safeguard mechanisms and securing local support for adaptation outcomes. A key additional finding is that interviewees were in agreement that adaptation goals often provide more useful benefits to local communities compared to short-term development initiatives.

A study done in the nearby province of North Kalimantan⁹⁵ found,

Synergistic benefits could be pursued from the joint implementation of REDD+ and adaptation strategies to optimise the overall positive impact. For example, REDD+ networks and finance could be used to deliver timely climate information of relevance for the adaptation both of agrarian communities and of forests.

And a case study in three provinces in Vietnam⁹⁶ showed,

While there were some implicit and coincidental adaptation benefits of some REDD+ activities, most studied projects and policies did not explicitly target their activities to focus on adaptation or resilience, and in at least one case, negative livelihood impacts that have increased household vulnerability to climate change were documented.

In Myanmar, a number of projects on REDD+ involving indigenous communities have been conducted over the past few years. Some of them, like UNDP’s project on “Improvement of the quality of life of ethnic minorities in the Naga area in Myanmar through youth

participation in REDD+ readiness process” with Naga communities in Khamti, Layshi and Lahe Township in Sagaing Region, or RECOFTC’s “Grassroot capacity building for REDD+ project” in Sagaing, Bago and Ayeyarwaddy (both implemented from 2013 to 2015) are basically capacity building projects for participation in the REDD readiness phase. Other projects have been designated as “REDD+ pilot projects”. What exactly is being “piloted” differs between the projects.

One of these REDD+ pilot projects has been implemented since 2016 by the regional NGO International Centre for Integrated Mountain Development (ICIMOD) in collaboration with the Forest Department in three villages of Pintaya township, Taunggyi district, Shan state. Shar Pyar village is one of those villages. The village has only a small forest area, which is also very degraded.

ICIMOD organized training on basic natural resource assessment, carbon measurement and basic environmental conservation (how to plant and take care of trees) in Bwe La village from April 26 to 30, 2017. The villagers also received training on handicrafts and on community forestry, including how to apply for a CFC. Exchange visits to communities having a CFC and doing agroforestry, such as coffee plantation were organized.

Community forestry was adopted by the community under the REDD+ pilot project. The villagers started planting trees, especially pine trees, on degraded land. The villagers received the CF certificate for 46.17 acres of land in 2017. Most of the villagers participated in tree plantation, but only a few know much about the REDD+ pilot project and what REDD+ is all about.

In Shar Pyar village, the REDD+ pilot project is above all a reforestation project, helping communities to regenerate forest land and protect, manage and make use of a community forest. At present, there is a scarcity of water, firewood, bamboo and timber. Regenerating and protecting forest land will help alleviate these problems. Therefore, through the introduction of community forestry the REDD+ pilot project in Shar Pyar village will have tangible benefits for the community in the future. Since most of their village land is permanent crop land for which most households have official land use certificates, and since the small community forest area is now covered by the CFC, this community – unlike Shwe Taung Ngwe Taung, Kha Paung and many other indigenous communities – does not have any problem with tenure security.

However, ICIMOD’s REDD+ pilot project does not differ much from RECOFTC’s Community Forestry project in Pauk Khaung township, i.e. it is de facto mainly a community forestry project that helped communities obtain a CFC and diversify and strengthen their livelihood.

Except for the Korea-Myanmar REDD+ Pilot Project, none of the so-called REDD+ pilot projects have done any carbon accounting nor piloted benefit distribution from carbon payments to communities. The Korea-Myanmar REDD+ Pilot Project, implemented from 2016 to 2018, aims to register in VCS (Verified Carbon Standard, now changed

into Verra) and CCBA (Climate, Community & Biodiversity Alliance), the two leading organizations certifying carbon emission reductions (in the case of the latter along with other environmental and social benefits), which makes them eligible for carbon credit trading on the voluntary carbon market. Prior to the start of the project, in 2014, a forest carbon inventory was conducted. Since obtaining financial compensation for carbon emission reduction is still the core component of REDD+, and since these financial benefits are also supposed to be shared with communities, this pilot project may generate valuable experiences on how REDD+ might operate in its implementation phase. So far no results of the project have been made public yet. Few such pilot projects have so far been implemented in Asia, one of them being the Pilot Forest Carbon Trust Fund by ICIMOD, which tried to explore mechanisms for just carbon payments for communities.⁹⁷

Experiences made by communities that were involved in the project showed that for communities with comparably small forest areas per household non-carbon benefits from the use and above all the sale of forest products are economically more important than carbon payments. However, the contribution of carbon payments are still much appreciated.⁹⁸ Therefore, experiences with CF, whose goals are similar to those of REDD+, allow us to identify some lessons learned which can be useful for designing and implementing REDD+ in Myanmar so that adaptation benefits for communities can be ensured.

Adaptation to the natural environment and adaptation to the social environment are closely interlinked

According to the findings in the study, for the people in Kha Paung and Shwe Taung Ngwe Taung adaptation to the social environment – interference and threats by outsiders like conflicts, relocations, establishment of reserved forest and teak plantations – have posed considerable adaptive challenges in themselves, and have impacted on their ability to adapt to the natural environment, and thus also to climate change.

Shwe Taung Ngwe Taung and Kha Paung communities have considerable adaptive resilience

For centuries, the Karen communities of today's Pauk Khaung township have successfully adapted to their natural and social environment, and have been able to recover from disturbances and maintain and adapt the structures of their social and livelihood systems.

Shifting cultivation is a resilient form of land use providing secure livelihood

With shifting cultivation, a centuries' old form of agroforestry practiced by the Karen and other indigenous communities of Myanmar, the communities have derived an in-depth knowledge of soils, natural fallow plant communities and agricultural practices. They have maintained a great diversity of agricultural crops, all of which are aspects of a resilient land use system that can help to ensure livelihood security.

Forests strengthen climate change resilience and adaptive capacity of communities

Forests are a natural resource that improves the adaptive capacity of the community since it provides a broad range of resources which people can use to make a living. Under conditions of increased risks due to climate change, the ability to rely on these forest resources strengthens the communities' resilience, i.e. their ability to recover from stress or shock such as a failed harvest. However, as discussed in the introduction to this report, climate change does not only require resilience, i.e. the ability to "bounce back", but also the capacity to adapt and make long-term changes. For the communities of Shwe Taung Ngwe Taung, forests are the foundation of their adaptive capacity. People have started using new kinds of resources for cash income, started experimenting with agroforestry and are keen to further develop these new forms of forest use and management.

Alienation of land and forest and forest degradation increases the communities' vulnerability

However, the testimonies of the people show that the coming of teak plantations, as well as legal and illegal loggers has resulted in a dramatic degradation of their forests and forest resources, as well as overall decreasing the physical amount of land available for farming. This has impacted negatively on both their resilience and adaptive capacity, and thus increases their vulnerability in general, particularly to climate change.

Communities are exploring alternatives of land and forest use in order to adapt to market opportunities and changing climate

Autonomous adaptation to climatic uncertainties and risks as well as new market opportunities can be documented in both forest use and agriculture. Forest resources that have hitherto been hardly used, like elephant foot yam, among others, are now gathered and processed for sale. Some shifting cultivation land is transformed into new kinds of

agroforests and on CF land, teak plantations are established. However, households are facing constraints in terms of capital and knowledge in agroforestry, unstable prices and difficulties in gaining market access.

Community forestry is providing some temporary rights to use and manage forest land but these are insufficient to allow for long-term livelihood security, adaptation to climate change and forest conservation

The communities appreciate the tenure security they have through the CF over limited parts of their customary lands. The CF is primarily for forest use and management, including reforestation, tree (teak) plantations and agroforestry. Strategically located along the highway, the CF plots provide some protection from outsiders' encroachment, but the lack of rights over most of their customary land makes it difficult if not impossible to enforce forest conservation by communities. Generally, the land covered by the CFC is much too small for people to derive long-term sustainable livelihoods. Furthermore, villagers are aware and are worried that these rights are not permanent. Above all, they do not have recognised rights over their shifting cultivation lands, some of which has already been occupied by companies. People fear that more of their land will be alienated in the future. Insecure and limited land rights is the most critical factor undermining the communities' long-term adaptive capacity and livelihood security.

RECOMMENDATIONS: HOW REDD+ CAN MAKE A DIFFERENCE

REDD+ has evolved from an instrument to create incentives for avoiding deforestation, forest degradation and thereby carbon emissions to a comprehensive approach to forest conservation that includes non-carbon benefits such as biodiversity conservation, improved livelihood security for communities and, more recently, climate change adaptation.

Myanmar is currently working on its National REDD+ strategy. The decision taken at the 16th COP of the UNFCCC in 2010 in Cancun, Mexico, “requests developing country Parties” when developing and implementing their national REDD+ strategy action plans, to address, among others, not just drivers of deforestation and forest degradation, but also “land tenure issues, forest governance issues, gender considerations and the safeguards” that were identified in paragraph 2 of appendix I of the decision document, while “ensuring the full and effective participation of relevant stakeholders, inter alia indigenous peoples and local communities”.⁹⁹ Three of the five safeguards directly address particular concerns of indigenous peoples: Respect for the knowledge and rights of indigenous peoples and members of local communities, full and effective participation, and the conservation of natural forests and biological diversity and enhancement of other social and environmental benefits.

In late 2014, draft national REDD+ safeguards were developed by the Forest Department of Myanmar’s Ministry of Environmental Conservation and Forestry, which underwent broad public consultation. The draft safeguards for REDD+ are very comprehensive, follow the safeguards of the Cancun agreements and, in the English version, repeatedly refer to “Indigenous Peoples (ethnic groups)”. A draft national clarification of the Cancun safeguards has been produced, is presently undergoing public consultation and a draft design of Myanmar’s Safeguards Information System is targeted by the end of 2018.

Land rights

If Myanmar’s National REDD+ Strategy follows the Cancun decisions and comes up with strong national safeguards, REDD+ will have the policy framework which allows it to address many of the concerns of indigenous communities, among them land rights.¹⁰⁰

Furthermore, the new National Land Use Policy of 2016 contains part Part 8 on “Land-Use Rights of Ethnic Nationalities”. This section refers to the traditional land-use system of ethnic nationalities, traditional land-use rights and “land tenure rights” and the establishment of a process for recognising the rights of communities (not just individuals).

It provides, among others, for the preparation and revision of customary land-use maps and records; the formal recognition and protection of the customary land tenure, land use and rights of ethnic groups, whether or not existing land use is registered, recorded or mapped; reclassification of the customary lands of ethnic groups in accordance with the expected new National Land Law, and for the temporary suspension of any allocation of land until existing ethnic land users have registered these customary lands; the recognition of land-use rights relating to rotating and shifting cultivation in farmland or forestland. And in part X, paragraph 77 the NLUP states that, “A new National Land Law shall be drafted and enacted, using the National Land-Use Policy as a guide for the harmonization of all existing laws relating to land in the country.” As briefly mentioned above, the new Forest Law in article 7 (g) mentions that customary protected forests and mangroves can be recognized, but this does not amount to a full recognition of customary land rights, since other types of land, like agricultural land, fallow land and pastures are not included.

However, if a new national land law is enacted that follows the National Land Use Policy and recognizes and protects the customary land of “ethnic nationalities”, it will also partly fulfil Myanmar’s obligations under international law. In particular, it would signify the harmonisation of national law with one of the key provisions of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which was supported by Myanmar when the UN General Assembly voted on it in 1997. In article 26 the UNDRIP states that “Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired,” and it directs states to give legal recognition to these territories.

As the study in Shwe Taung Ngew Taung and Kha Paung shows, secure land rights are a precondition for the communities not just to protect their forests, but to successfully adapt to climate change and ensure long-term livelihood security and thereby the preservation of their distinct culture and traditions. The study also shows that tenure security as provided under Community Forestry in these two communities is insufficient to ensure all that.

Therefore, it is recommended that under REDD+ in Myanmar

- The customary land rights of indigenous communities are recognized and fully protected following the provisions of the National Land Use Policy of 2016 and in fulfillment of the obligations of states and UN agencies (such as UN REDD) to adhere to the UNDRIP. This means that all of the customary land of indigenous communities, not just small parts of it as currently done under Community Forestry, should be recognized and protected.

Land use

While the revised CFI allow the practice of agroforestry and therefore could be interpreted as implying the right to practice shifting cultivation, the absence of a clear recognition of shifting cultivation as a customary agroforestry practice and the generally still widespread prejudices against shifting cultivation particularly among foresters make it unlikely that communities will be allowed to do shifting cultivation on CF land. In any case, the lack of clear recognition implies a high degree of arbitrariness.

The re-drafted National REDD+ Strategy written by UN-REDD programme and the Ministry of Natural Resources and Environmental Conservation (MONREC) mentions shifting cultivation as one of the direct drivers of deforestation, with an estimated impact on 6 to 7 million hectares in upland areas.¹⁰¹

Calling shifting cultivation a driver of deforestation is not correct if we follow the commonly used FAO definition of "forest", since it includes forest areas "which are temporarily unstocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest".¹⁰² Most forms of shifting cultivation practiced in Myanmar are rotational, i.e. the cleared areas revert to forest after a short time of cultivation.

A positive aspect of the strategy is that it does not propose any direct action to limit shifting cultivation, but encourages the promotion and support of other forms of land use and farmers' associations, providing credit and, most important, improved tenure security through implementation of the Land-use Policy of 2016.¹⁰³

As this research has shown, the lack of recognition of the right to shifting cultivation and exclusion of shifting cultivation land in the area for which a CFC has been granted causes a lot of insecurity among the villagers of Shwe Taung Nge Taung and Kha Paung. They depend on it for their livelihood and as a basis for adapting their land use system to the impacts of climate change. Therefore, it is recommended that under REDD+ in Myanmar

- Shifting cultivation is not treated as a driver of deforestation but recognized as a form of agroforestry.
- Support is provided to shifting cultivators as proposed in the draft National REDD+ Strategy in order to help them further develop and diversify their land use system and thereby strengthen autonomous adaptation of communities to climate change.

Community-based forest conservation

As experiences over the past 40 years have shown, community-based forestry has been very successful in conserving forest. It is now widely recognized that community-based conservation has the potential to contribute to biodiversity conservation and ensuring other environmental services of forests, including carbon sequestration. ¹⁰⁴

The safeguards agreed on in the Cancun decisions mandate REDD+ to ensure the conservation of natural forests and biological diversity and enhancement of other social and environmental benefits. As this research shows, the Karen communities have in the past successfully taken efforts to conserve forests, and they want to continue doing so in the future. Community members have explicitly stated that they will be able to adapt to climate change as long as they have forest. To them, forests are key to ensuring climate change resilience. However, the forest areas handed over to the communities under Community Forestry are very small and without the formally recognized rights over all of their customary forests they are not able to manage and protect them.

Therefore, it is recommended that under REDD+ in Myanmar

- Community-based forest conservation is promoted and supported as a way to strengthen forest-based livelihoods and climate change resilience of communities.
- The potential of the establishing Indigenous Community Conserved Areas (ICCA) should be explored, and if found feasible, their implementation supported as a way of strengthening biodiversity conservation by indigenous communities.

Climate change adaptation: Give the youth a chance

Even though some of the youth of Kha Paung and Shwe Taung Ngwe Taung left for jobs in towns, cities or even abroad, most of them stay in their villages and make a living from shifting cultivation and agroforestry. Unlike in many other indigenous communities in Myanmar and neighbouring countries, most of them don't want to leave. They want to stay and continue living off the land, just like their ancestors have done since hundreds of years. They are ready to work hard in their fields and forests, practicing shifting cultivation, but also trying out and develop further new kinds of agroforestry, which they learned and heard about.

With such a strong attachment to their communities these youth are ready to take the responsibility to care for their land and their forests. And they, together with their elders are ready to meet the challenges of a changing climate. But to be able to meet these challenges, they need the security and support of an enabling legal and policy framework that above all recognizes their communities' rights to their land and resources. This will give the youth the chance to meet the challenges of an uncertain future, to adapt to a rapidly changing world while honouring and caring for the legacy of their ancestors that is so dear to them.



Fig. 25. Youth from Shwe Taung Ngwe Taung taking a rest during planting of a shifting cultivation field.

- 1__ IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland
- 2__ Department of Economic and Social Affairs 2016. World Economic and Social Survey 2016. United Nations, Geneva, Switzerland, p. vi
- 3__ Ibid.
- 4__ Ibid., p. 54
- 5__ According to the 5th Assessment Report of the IPCC, "Until mid-century, projected climate change will impact human health mainly by exacerbating health problems that already exist ([] Throughout the 21st century, climate change is expected to lead to increases in ill-health in many regions and especially in developing countries with low income, as compared to a baseline without climate change" (op.cit., p.15).
- 6__ See also Woodward, Alistair, Simon Hales and Philip Weinstein, 1998. Climate change and human health in the Asia Pacific region: who will be most vulnerable? *Climate Research*, Vol. 11, No. 1, SPECIAL ISSUE: Regional Assessments of Climate Change and Policy Implications (December 17 1998), pp. 31-38 Baird, Rachel 2008. The Impact of Climate Change on Minorities and Indigenous Peoples. Briefing, April 2008. London, Minority Rights Group International, p. 4
- 7__ Tauli-Corpuz, Victoria and Aqqaluk Lynge 2008. Impact of climate change mitigation measures on indigenous peoples and on their territories and lands. Report submitted to the UN Permanent Forum on Indigenous Issues (UNPFII) at its seventh session, New York, 21 April - 2 May 2008, para. 41
- 8__ Now generally (although not officially by the UNFCCC) referred to as REDD+ to reflect the extended scope beyond merely the reduction of carbon emissions. The World Bank's Forest Carbon Partnership Facility describes REDD+ as "countries' efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks" (<https://www.forestcarbonpartnership.org/what-redd>).
- 9__ <https://theredddesk.org/markets-standards/redd-under-unfccc>
- 10__ <https://www.unenvironment.org/resources/emissions-gap-report>
- 11__ <http://www.un-redd.org/single-post/2018/06/27/Forests-provide-a-critical-short-term-solution-to-climate-change>
- 12__ Galloway McLean, Kirsty 2009. Advance Guard: Climate Change Impacts, Adaptation, Mitigation and Indigenous Peoples – A of Case Studies. United Nations University – Traditional Knowledge Initiative, Darwin, Australia, p. 20
- 13__ In a more recent study by Rights and Resources and Initiatives (RRI) on the implementation of 20 REDD+ projects in the Democratic Republic of the Congo, it was found that "that projects already underway are not respecting the rights of local peoples or delivering on their goal of protecting forests" (<https://rightsandresources.org/en/blog/mai-ndombe-press-release/#.W1gwhltzY2z>) 13 The COP is the supreme decision-making body of the United Nations Framework Convention on Climate Change. All States that are Parties to the Convention are represented at the COP
- 14__ <http://redd.unfccc.int/fact-sheets/safeguards.html>
- 15__ United Nations 1992. United Nations Framework Convention on Climate Change; article 2, p. 4. <https://unfccc.int/resource/docs/convkp/conveng.pdf> At its 16th COP in 2010 it was agreed that global warming should be limited to below 2 C relative to the pre-industrial level. In the Paris agreement of 2015, this was confirmed, but at the same time a commitment made to the more ambitious target of 1.5 . https://en.wikipedia.org/wiki/Climate_change_mitigation

- 16__ weAdapt. Mitigation and Adaptation in the UNFCCC Debates, published on April 28, 2015. <https://www.weadapt.org/knowledge-base/adaptation-decision-making/mitigation-and-adaptation-in-the-unfccc-debates>
- 17__ Adamo, Susana B. 2015. About mitigation, adaptation and the UNFCCC's 21st Conference of the Parties. *Revista Brasileira de Estudos de População*, vol.32 no.3 São Paulo Sept./Dec. 2015, p. 611
- 18__ <http://www.wri.org/blog/2015/12/what-does-paris-agreement-mean-climate-resilience-and-adaptation>
- 19__ Nairobi work programme on impacts, vulnerability and adaptation to climate change. UNFCCC website: <https://unfccc.int/nwp>, accessed on 26-6-18
- 20__ Climate Change Adaptation: Options and Mechanisms under the UNFCCC. Climate change info hub web-site. <https://climatepolicyinfohub.eu/climate-change-adaptation-options-and-mechanisms-under-unfccc>, accessed on 26-6-18
- 21__ Yousefpour, Rasoul, Jette Bredahl Jacobsen, Bo Jellesmark Thorsen, Henrik Meilby, Marc Hanewinkel and Karoline Oehler 2012. A review of decision-making approaches to handle uncertainty and risk in adaptive forest management under climate change. *Annals of Forest Science* (2012) 69:1–15, p. 1f
- 22__ The National Environmental Conservation Committee of the Ministry of Environmental Conservation and Forestry was the National Coordinating Body of the Department of Meteorology and Hydrology of the Ministry of Transport the Executing Agency and the United Nations Environment Programme the implementing agency
- 23__ Myanmar National Environmental Conservation Committee 2012. Myanmar's National Adaptation Programme of Action (NAPA) to Climate Change. <https://unfccc.int/resource/docs/napa/mmr01.pdf>, p. 26
- 24__ *Ibid.*, p.28ff
- 25__ *Ibid.*, p. 30
- 26__ *Ibid.*
- 27__ This is not surprising since the Myanmar government still does not officially recognize indigenous peoples. It refers to them as Ethnic Nationalities. However, the term is occasionally used in English versions of government policy documents, like the draft safeguards for REDD+. For a brief discussion on the official term used see POINT 2018. *Community Forestry: What Benefits for Forests and Indigenous Peoples?* Yangon; p. 12
- 28__ *Ibid.*, p. 8
- 29__ *Ibid.*, p.8f
- 30__ *Ibid.*, p. 43
- 31__ *Ibid.*, p. 44
- 32__ 32 *Ibid.*, p. 9
- 33__ There is a difference wording of the first priority in Agriculture in the executive summary (quoted here) and the main text on page 36, where it reads as follows: "First priority: Enhanced rice production through farm mechanisation and breeding new rice varieties to ensure food security in areas most vulnerable to climate change."
- 34__ *Op.cit.*, p. 45
- 35__ *Ibid.*, p. 122. It is most likely a priority mainly identified by representatives of hill communities of Nyaungshwe Township in Shan State (see. p. 118).
- 36__ UNFCCC website, <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs>

- 37__ The Republic of the Union of Myanmar 2015. Myanmar's Intended Nationally Determined Contribution-IND C. 25-8-2015. UNFCCC web-site <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Myanmar/1/Myanmar's%20INDC.pdf>, p. 3
- 38__ The other is the European Union's Forest Law Enforcement Governance Trade (FLEGT) programme; *ibid.*
- 39__ The Economist 2010. Better REDD than dead. Tropical forests' best hope; in: Seeing the wood. A special report on forests. September 25th, 2010, p. 6-8
- 40__ See e.g. "Acre Letter - against REDD and the commodification of nature" of 3 November 2011. Carbon Trade Watch website, <http://www.carbontradewatch.org/articles/acre-letter-against-redd-and-the-commodification-of-nature.html>
- 41__ Norman, Marigold and Smita Nakhoda. 2014. "The State of REDD+ Finance." CGD Working Paper 378 . Washington, DC: Center for Global Development. <http://www.cgdev.org/publication/state-redd-finance-working-paper-378>, p. 2
- 42__ 42 Lujan, Breanna and Gustavo Silva-Chávez 2018. Mapping Forest Finance A Landscape of Available Sources of Finance for REDD+ and Climate Action in Forests. Environmental Defense Fund. <https://www.edf.org/sites/default/files/documents/EDF101-REDD%2BFinance.pdf>, p. 31. It has been estimated that it will cover around a quarter of REDD+ financing by 2020; see Streck, Charlotte and Charlie Parker 2012. Financing REDD+; in: Angelsen, A., Brockhaus, M., Sunderlin, W.D. and Verchot, L.V. (eds) 2012. Analysing REDD+: Challenges and choices. CIFOR, Bogor, Indonesia, p. 120
- 43__ Insecurity over how REDD+ will be funded in the long run has become evident at the recent meeting of the Board of the UNFCCC's Green Climate Fund in South Korea, where a consensus on the first formal replenishment process of the GCF could not be reached (<http://www.twn.my/title2/climate/info.service/2018/cc180702.htm>)
- 44__ UNFCCC 2011. Decision 1/CMP.6 The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its fifteenth session. United Nations Framework Convention on Climate Change. <https://unfccc.int/resource/docs/2010/cmp6/eng/12a01.pdf>; Annex I, paragraph 2
- 45__ Conservation International, Environmental Defense Fund, National Wildlife Federation, Rainforest Alliance, The Nature Conservancy, and Union of Concerned Scientists 2014. Clarifying the Role of Non-Carbon Benefits in REDD+. <https://unfccc.int/sites/default/files/405.pdf>, p. 2
- 46__ Munroe, Robert and Rebecca Mant 2014. REDD+ and adaptation: Identifying complementary responses to climate change. Info brief. UN REDD Programme, December 2014, p. 7
- 47__ IPCC 4th Assessment Report, Annex II. Glossary. https://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf, p. 89
- 48__ *Ibid.*, p.76
- 49__ *Ibid.*, p. 86
- 50__ Graham, Kristy 2011. REDD+ and adaptation: will REDD+ contribute to adaptive capacity at the local level? REDDnet. <http://redd-net.org/files/REDD%20ADAPTION%20LONG%20-%20MASTER%20final.pdf>, p. 2
- 51__ Forsyth, Tim and Nathalie Evans 2013. What is Autonomous Adaption? Resource Scarcity and Smallholder Agency in Thailand. World Development Vol. 43, p. 57
- 52__ The realization that this knowledge has great potential to help address the impacts of climate change has led to the creation of the Local Communities and Indigenous Peoples Platform within the UNFCCC. Its purpose is "to strengthen the knowledge, technologies, practices, and efforts of local communities and indigenous peoples related to addressing and responding to climate change, to facilitate the exchange of experience and the sharing of best practices and lessons learned on mitigation and adaptation in a holistic and integrated manner and to enhance the engagement of local communities and indigenous peoples in the UNFCCC process." (UNFCCC website. Introduction to the Local Communities and Indigenous Peoples Platform (LCIPP). <https://unfccc.int/10475#eq-1>)

- 53__ Kais ,Shaikh Mohammad and Md Saidul Islam 2016. Community Capitals as Community Resilience to Climate Change: Conceptual Connections. *International Journal of Environmental Research and Public Health*, 13, 1211; doi:10.3390/ijerph13121211, p. 10
- 54__ Ibid.; Key term: Community Capital, Sustainable Measures website: <http://www.sustainablemeasures.com/node/32>
- 55__ A similar approach to assessing the adaptive capacity of a community is the local adaptive capacity framework (LAC) developed by the African Climate Change Resilience Alliance. "It identifies five distinct yet interrelated characteristics that strongly influence adaptive capacity at the local level []. These are; the asset base, institutions and entitlements, knowledge and information, innovation, and flexible forward-looking decision making and governance."
- 56__ Pramova et.al., op.cit., p.15
- 57__ Xu, Jianchu and R. Edward Grumbine 2014. Building ecosystem resilience for climate change adaptation in the Asian highlands. *WIREs Climate Change* 2014, 5:709–718. doi: 10.1002/wcc.302, p. 711
- 58__ Ibid.
- 59__ Ibid.
- 60__ Ibid., p. 712
- 61__ Ibid.
- 62__ See e.g. Scott, James C. 2009 *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*. New Haven and London: Yale University Press; Benjamin, Geoffrey 2002. "On Being Tribal in the Malay World", in: Geoffrey Benjamin and Cynthia Chou ed., *Tribal Communities in the Malay World. Historical, Cultural and Social Perspectives*, pp. 7-76. Singapore: Institute of Southeast Asian Studies; Li, Tania Murray 1999 *Transforming the Indonesian Uplands: Marginality, Power, and Production*. Reading UK: Hardwood Academic Publishers
- 63__ Erni, Christian 2014. *Tribes, States and Colonialism in Asia: The Evolution of the Concept of Indigenous Peoples and its Application in Asia*. Copenhagen: IWGIA. https://www.iwgia.org/images/publications//0680_IP_CONCEPT_2014NE.pdf
- 64__ <http://www.channelnewsasia.com/news/asiapacific/new-government--powerless--to-overhaul-rampant-land-grabbing-in--7642870>
- 65__ Bryant, Raymond L. 1996. *The Political Ecology of Forestry in Burma: 1824 – 1994*. Honolulu: University of Hawai'i Press, p. 67
- 66__ Renard, Ronald D. 2003. Studying peoples often called Karen; in: Claudio O Delang (ed.). *Living at the Edge of Thai Society. The Karen in the highlands of northern Thailand*. London: Routledge Curzon, p. 8
- 67__ Ibid., p.1
- 68__ Bryant op.cit., p. 67
- 69__ Suzuki, Reiji, Shinya Takeda and Saw Kelvin Keh. 2004. The impact of forest fires on the long-term sustainability of taungya teak reforestation in Bago Yoma, Myanmar. *TROPICS* Vol. 14 (1), p. 90
- 70__ Renard op.cit., p. 2 and 3
- 71__ Scott, James C. 2009 *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*. New Haven and London: Yale University Press
- 72__ Bryant op.cit., p. 68
- 73__ Seekings, Donald M. 2017. *Historical Dictionary of Burma (Myanmar)*, second edition. Lanham: Rowman & Littlefield, p. 432

- 74__ 74 Myanmar's Ethnic Divide: The Parallel Struggle; <http://www.ipcs.org/special-report/myanmar/myanmars-ethnic-divide-the-parallel-struggle-131.html>
- 75__ <http://www.atimes.com/article/four-cuts-strategy-deepens-myanmars-war-wounds/>
- 76__ Forest Department, Ministry of Forestry, Myanmar n.d. Management of natural teak forest in Myanmar - Forest Department. <http://www.fao.org/3/a-ac773e/ac773e0g.htm>
- 77__ Lang, Chris 2003. Burma/Thailand/Laos: Colonial forestry - then and now. World Rainforest Movement Bulletin, Issue Number 68 - March 2003
- 78__ Bryant, Raymond L. 1994. Shifting the Cultivator: The Politics of Teak Regeneration in Colonial Burma. *Modern Asian Studies* 28, 2, p. 232
- 79__ Ibid., p. 234
- 80__ Win, Rosy Ne, Reiji Suzuki, Shinya Takeda Remote sensing analysis of forest damage by selection logging in the Kabaung Reserved Forest, Bago Mountains, Myanmar. *Journal of Forestry Research* (2012) 17, p. 122
- 81__ Suzuki et.al. op.cit., p. 90
- 82__ Tani, Y. 1993. Sanchimin to Ringyo Seisaku: Myanmar Rempo Bago Sanchi ni okeru Karen Jin no Yakihata ni Taisuru "Shinrin Mura" Seido no Eikyo *Forest People and Forest Policy: The Effect of Forest Village Policy on the Karen of Pegu Yoma, Burma]. *Tonan Ajia Kenkyu [Southeast Asian Studies]* 35 (4), p. 830
- 83__ Under the forest management system introduced by the British the Reserved Forests were divided into forest management plots, all of which were given a number. These are still in use today.
- 84__ See also Scott op.cit. on the flexibility that shifting cultivation provides.
- 85__ In this study, we were able to document other important outside interventions which had an impact on the communities' ability for self-organising, like the replacement of traditional political and spiritual leaders through the imposition of the state administrative structure (village tracts, village administration) and religious conversion.
- 86__ See e.g. Tani op.cit., Suzuki et.al. op. cit., Fukushima, Maki; Mamoru Kanzaki, Hla Maung Thein; Yazar Minn 2007. Recovery Process of Fallow Vegetation in the Traditional Karen Swidden Cultivation System in the Bago Mountain Range, Myanmar. *Southeast Asian Studies*, Vol. 45, No. 3, December 2007. Special Issue "Ecological Resource Use and Social Change in the Minority Regions of Myanmar"
- 87__ Ministry of Natural Resources and Environmental Conservation 2016. Community Forestry Instructions, para. 24 (h)
- 88__ Ibid., para. 24 (f)
- 89__ Springate-Baginski, Oliver 2018. Decriminalise Agro-forestry. A primer on shifting cultivation. Transnational Institute. https://www.tni.org/files/publication-downloads/tni_p_shifting_cultivation_220518_online.pdf
- 90__ Ministry of Natural Resources and Environmental Conservation 2016. Community Forestry Instructions, para. 4 (f)
- 91__ Ibid., para 11 (b)
- 92__ Erni, Christian and Ling Houg 2017. What Benefits for Forests and Indigenous Peoples? Yangon: POINT (Promotion of Indigenous and Nature Together), p. 66
- 93__ Erni, Christian and Helen Tugendhat 2012. What is REDD+? A Guide for Indigenous Communities. 3rd edition. Asia Indigenous Peoples Pact (AIPP), Forest Peoples Programme (FPP), International Work Group for Indigenous Affairs (IWGIA), Tebtebba Foundation. Chiang Mai: AIPP Printing Press, p. 62

- 94__ Paris, Tom 2016. A study of how REDD+ can be used to improve the adaptation of local communities to climate change – a case study of Central Kalimantan Indonesia. PhD Thesis, the University of Queensland, School of Geography, Planning and Environmental Management, p. iii
- 95__ Pramova, E., Locatelli, B., Mench, A., Marbyanto, E., Kartika, K. and Prihatmaja, H. 2013. Integrating adaptation into REDD+: Potential impacts and social return on investment in Setulang, Malinau District, Indonesia. Working Paper 112. Bogor, Indonesia: CIFOR, p. ix
- 96__ McElwee, Pamela, Van Hai Thi Nguyen, Dung Viet Nguyen, Nghi Huu Tran, Hue Van Thi Le, Tuyen Phuong Nghiem and Huong Dieu Thi Vu 2017. Using REDD+ Policy to Facilitate Climate Adaptation at the Local Level: Synergies and Challenges in Vietnam. *Forests* 2017, 8, 11; doi:10.3390/f8010011, p. 1
- 97__ Under this project, the Federation of Community Forestry Users, Nepal (FECOFUN) and the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) created a Forest Carbon Trust Fund which was “designed to provide a performance-based financial incentive to local communities for their efforts to conserve forest and prevent deforestation” (ICIMOD 2011. Pilot Forest Carbon Trust Fund. Rewarding local communities for forest conservation. Kathmandu: ICIMOD, p. 1).
- 98__ Discussions with Bhiteripakha Community Forestry User Group in Dolakha district in Nepal in 2013, during a study trip under the project Climate Change Partnership with Indigenous Peoples – promoting right based, equitable and pro-poor REDD strategies in South and South East Asia, implemented by AIPP and IWGIA. The community was part of ICIMOD’s Pilot Forest Carbon Trust Fund project in Nepal.
- 99__ Paragraph 72 of the Cancun decisions. The safeguards are mentioned in appendix 1, paragraph 2 of the report on the decisions taken (UNFCCC 2010. Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010. Addendum Part Two: Action taken by the Conference of the Parties at its sixteenth session. Contents: Decisions adopted by the Conference of the Parties. FCCC/CP/2010/7/Add.1)
- 100__ The Republic of the Union of Myanmar 2016. National Land-Use Policy. January, 2016
- 101__ REDD+ Myanmar (2018) National REDD+ Strategy Myanmar (draft). Naypyidaw: Ministry of Natural Resources and Environmental Conservation, p. 18. <http://www.myanmar-redd.org/national-redd-strategy-myanmar-document-for-public-comment>
- 102__ Van Noordwijk Meine, Elok Mulyoutami, Niken Sakuntaladewi, Fahmuddin Agus 2008. Swiddens in transition: shifted perceptions on shifting cultivators in Indonesia. Occasional Paper no.9. Bogor, Indonesia: World Agroforestry Centre, p. 18
- 103__ Ibid., p. 72
- 104__ See the comprehensive review of experiences in: Gilmour, Don 2016. Forty years of community-based forestry. A review of its extent and effectiveness. Rome: FAO

