



Voices of Land from Southern Myanmar:

Ein Da Rar Zar – A Karen Village in Yebyu Township about Land Use Change and Wellbeing



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Cover photo: Competing claims for land uses in Ein Da Rar Zar, Myanmar (composed by Lara M. Lundsgaard-Hansen; satellite image from North of Ein Da Rar Zar village centre, Google Earth 2018; oil palm plantation, by Lara M. Lundsgaard-Hansen; rubber plantation, by Lara M. Lundsgaard-Hansen; betel nut plantation, by Lara M. Lundsgaard-Hansen; cashew nut, by Katharina Nydegger; mobile motorbike shop for packed food, by Katharina Nydegger)

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**Swiss Programme for Research
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The Swiss Programme for Research on Global Issues for Development (r4d programme) is a joint funding initiative by the Swiss Agency for Development and Cooperation (SDC) and the Swiss National Science Foundation (SNSF). The r4d programme supports research aimed at solving global problems with a focus on least developed as well as low- and middle-income countries. The r4d programme consists of five thematic modules and a thematically open module.

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Please note: This report is fully grounded on the villagers' perspective only. It does not include the voices of companies, civil society organisations, government representatives or other stakeholders. Also does it not necessarily represent the perspective of the authors and the project team. It solely represents the voice of the villagers of Ein Da Rar Zar.

Preface – The research project

The Swiss Programme for Research on Global Issues for Development (**r4d programme**) is a joint funding initiative by the Swiss Agency for Development and Cooperation (SDC) and the Swiss National Science Foundation (SNSF). The r4d programme supports research aimed at solving global problems with focus on least developed as well as low- and middle-income countries.

Within the r4d programme of SDC and SNSF, we run the six years project with the name “*Managing telecoupled landscapes for the sustainable provision of ecosystem services and poverty alleviation*”, in short “**Telecoupled Landscapes**”.

This project builds on research partnerships in Laos, Myanmar, and Madagascar. The overall goal is to come up with innovative strategies for people and regulations in order to secure ecosystems and the wellbeing of people. The research includes ecosystem services assessments, land governance analysis, land use mapping of the past and the present, landscape modelling of the future, and social learning among land stakeholders. The project officially started on January 1st 2015, and is expected to last for six years.

The overall project is coordinated by the Centre for Development and Environment (CDE) of the University of Bern, Switzerland, under the lead of Prof. Dr. Peter Messerli. The research team in Myanmar is coordinated by the Environmental and Economic Research Institute (EERi), represented by Dr. Win Myint.

Throughout the duration of the project, we will produce various publications and databases together with our partners. We will also upload stories, pictures and videos on our website and social media channels.

Website: www.telecoupling.unibe.ch

Facebook: www.facebook.com/R4DTelecoupling

1. Aim of the research project and working papers

1.1. Aim of the research project “Telecoupled Landscapes”

The debate about Sustainable Development Goals following the United Nations “Rio+20” reveals the difficulty of simultaneously addressing social and economic development challenges and the degradation of Earth’s life support systems. Land systems in the humid tropics illustrate these challenges prominently. Local people’s land use strategies are facing competition from large-scale land acquisition, logging etc., but also biodiversity conservation. Remote decision-makers can reshape flows of ecosystem services to their benefit, whereas the consequences hardly reach them. Land change scientists have recently conceptualized this phenomenon under the term “telecoupling”. Our research project within the Swiss Programme for Research on Global Issues for Development (r4d programme) pursues the overall goal of devising and testing innovative strategies and institutional arrangements for securing ecosystem service flows and human well-being in and between telecoupled landscapes at study sites in Laos, Myanmar, and Madagascar.

1.1.1. Main research objectives of the international research project

The project is guided by the following four objectives:

- 1) Social-ecological systems (SES) at different stages of telecoupling are assessed and understood in terms of their capacity to provide ecosystem services for human well-being.
- 2) Recurrent processes of telecoupling are identified and generalized from case study research as a basis for predicting pathways of land use transitions and for strategy planning at different spatial and temporal scales.
- 3) Multiple stakeholders learn and adapt their land use decisions based on knowledge sharing, joint model development, and future scenarios.
- 4) Adaptations of actors’ decision-making on SES are systematically monitored, understood, and shared.

1.1.2. Specific research questions for this series about land in Myanmar

Within the international project *Telecoupled Landscapes*, one research package focuses on **land governance in Myanmar**. The case study area is located in Yebyu Township, Tanintharyi Region, Southern Myanmar. From various land uses and land use changes, we draw a network of included and excluded stakeholders in land use decision-making. We analyse these stakeholders based on their strategies, activities, and resources, and combine this information with the flows of money, products, information, and people between the organisational stakeholders, as well as the formal and informal institutions that they adhere to. For this research package, we collaborate with various stakeholders in land governance, what forms the basis for this series of working papers.

The overall **research question** for this specific research package is: *How can a transformation towards sustainable land governance in Dawei area, Southern Myanmar, be supported?*

When analysing the case study sites in Southern Myanmar, the research package is guided by these three research questions:

- 1) What near and distant actors are connected to the land governance in the case study area, and how are they interlinked in terms of flows and institutions?
- 2) What and who are the key forces in this land governance network?
- 3) What factors facilitate and hinder multi-stakeholder social learning processes for a transformation towards sustainable land governance?

Throughout the duration of the research, we speak to various stakeholders. Each of them is connected to land, land use, or land use changes and has its own perspective on land use and land governance.

1.2. Aim of the series and working papers

With the publication of this series, we pursue the objective of knowledge dissemination for the public. The results of our research project will also be published in academic journals. However, these journals are usually limited in accessibility for the public. Therefore, the project team decided to launch this informal series of working papers, which focus on the prevailing situations on the ground.

The **series** aims at capturing different voices and opinions about land issues, land governance, and land use changes, with a focus on Yebyu Township in Tanintharyi Region, Myanmar. It is therefore very likely that different working papers will present different or even contradicting information.

This **working paper** at hand describes the context of land use and human wellbeing in the village Ein Da Rar Zar in Yebyu Township, Tanintharyi Region, told from the perspective of the villagers themselves. It does not include the voices of companies, civil society organisations, or government representatives. Also does it not necessarily represent the perspective of the authors and the project team. It solely represents the voice of Ein Da Rar Zar villagers.

2. Methodology

This working paper bases on participatory research encompassing a series of workshops and interviews with villagers of Ein Da Rar Zar in 2017.

After having received the research permission from the General Administration Department of Yebyu Township in early March 2017, we immediately started to conduct workshops and interviews in Ein Da Rar Zar village. On 13 and 14 March, we held in total three workshop sessions:

- One open workshop (open participation) for identifying the most important land use changes over the past 20 years from the point of view of the villagers (see chapter 4). For identifying these most important land use changes, we followed a structured procedure:
 - o First, we collected the current land uses and wrote them on a board.
 - o Second, the participants placed green stickers to those land uses that are the most relevant for their livelihoods, and red stickers for land uses that have the largest areal extent (have the biggest size or can be found in very many places) in and around the village.
 - o We continued with the now identified five most important land uses. The question was asked: "What had been on the land before?". The answers were collected in a chronological order. From there, we could identify which land use changes happened within the past 20 years. Out of the five most important land uses, three had changed within the last 20 years.
- Three parallel focus group workshops to further analyse the previously identified three most important land use changes over the past 20 years (see chapter 4). Topics of investigation were:
 - o Actors related to the land uses and land use change,
 - o Rules and regulations attached to the land uses and land use change,
 - o Flows of money, people, products, and information resulting directly or indirectly from the land uses
 - o Impacts from the land use change on people
 - o Impacts from the land use change on nature
- Two parallel focus group workshops with a men's and a women's group about the human wellbeing in the village (see chapter 5). There were two goals for the focus group workshops:
 - o To understand what constitutes wellbeing for the villagers and the needs to accomplish wellbeing,
 - o To find out how and why wellbeing has changed over time

After the workshops, we continued with several qualitative and standardised interviews with many different villagers. These interviews were held in March, May, and November 2017:

- For further investigating on land uses and land use changes, we conducted in total over 18 surveys and interviews with villagers, mostly with farmers, but also with

village leaders, community forest members, people we lost their land due to land acquisitions by non-residents, and others.

- To learn more about the human wellbeing, we conducted 36 semi-structured qualitative interviews, all of them with different lifestyles, livelihoods, ages, gender etc.
- On many other informal occasions, we also we sat down and discussed with village elders, village leaders, and other knowledgeable residents of Ein Da Rar Zar to receive more contextual information about the village and its history.

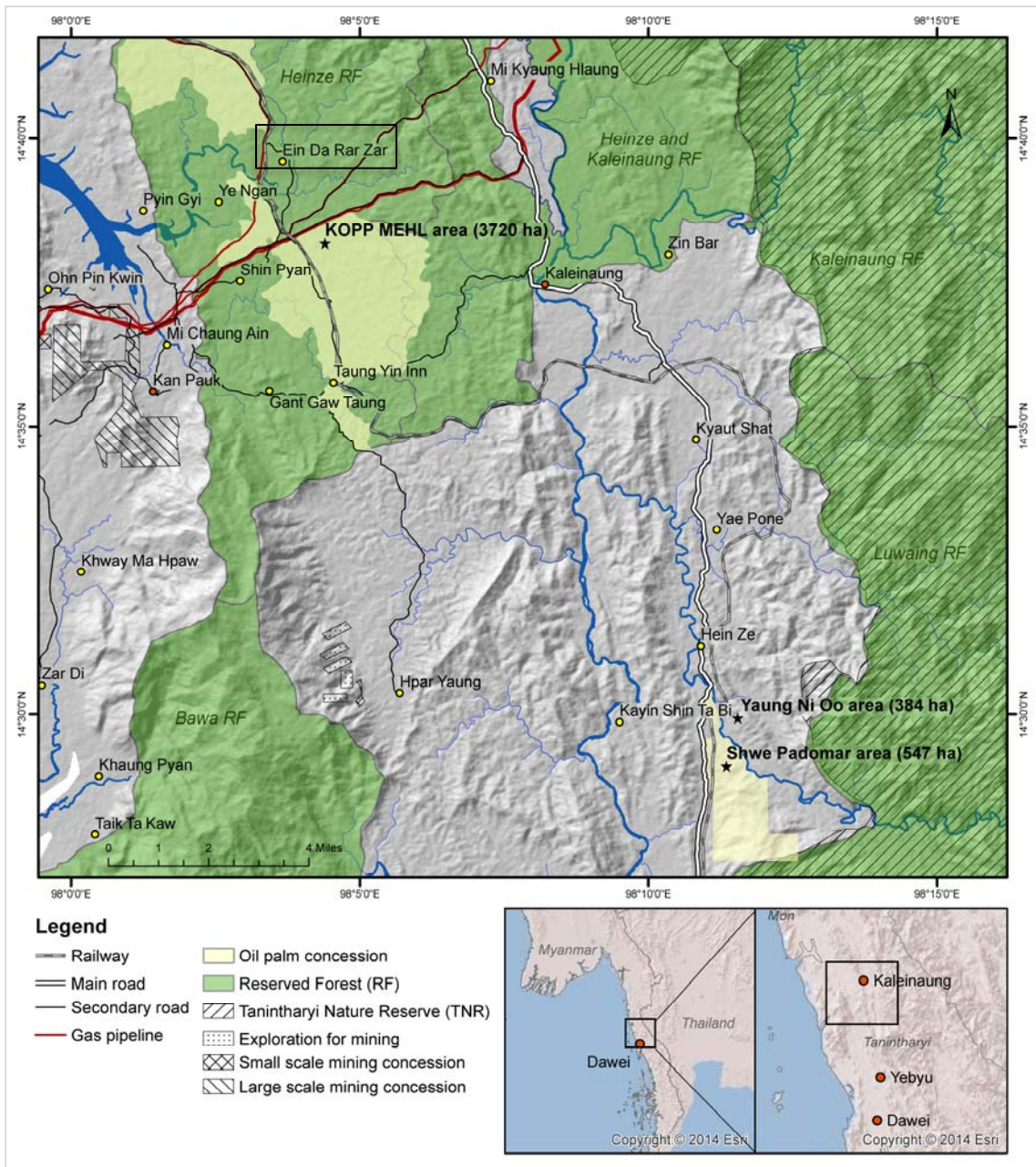
The main language of the workshops, interviews, and discussions was Myanmar. During most workshops and interviews, we were able to record the discussions and take extended notes. Translation from Myanmar to English was usually provided simultaneously or in team discussions immediately after the data collection.

After preparing the first draft of this village report, the village leaders and all other interested villagers were invited to proofread this paper in Myanmar language. Their feedback was incorporated. In November 2017, we held an open voting in Ein Da Rar Zar village, whether this working paper should be published or not. All villagers agreed that we publish and distribute this present working paper.

Further results of the land use changes, land use decision-making, and human wellbeing will be published in other papers and academic articles.

3. Background of Ein Da Rar Zar village

Ein Da Rar Zar is a mainly Karen village in Yebyu Township, Tanintharyi Region, Myanmar. The villagers' main source of income is agriculture. Ein Da Rar Zar is officially located in the zone "Forest Land", administrated by the Forest Department (FD) of Yebyu Township, because the Government under colonial rule declared this area as Hein Ze Reserved Forest many decades ago.



Map 1: Overview of the area in Yebyu Township where Ein Da Rar Zar is located

Ein Da Rar Zar is on the one hand a village name and on the other hand the name of the village tract. Ein Da Rar Zar village tract encompasses six villages: Ein Da Rar Zar as the largest village, Shin Pyan, Ye Ngan, Sin Gue, Malain Swae, and Pyin Gyi. Kan Pauk / Mi Chaung Ain¹ is the nearest small town to Ein Da Rar Zar, where many people access the market.



Picture 1: Ein Da Rar Zar village centre with a sports ground, the primary school to the left, and a small clinic in the back; picture taken from the church tower (by Katharina Nydegger)

3.1. Names written in Myanmar and English language

Myanmar names written with the Roman alphabet are usually interpreted in different ways, as there is no official spelling rule in place yet. This challenge concerns most names of companies, villages, towns, persons etc. For our project, we agreed on adopting the spelling suggestions provided by the Myanmar Information Management Unit (MIMU) for those villages that are available, such as “Ein Da Rar Zar” or “Kan Pauk”. However, other documents might spell the same villages differently, such as e.g. Google Earth suggests “Eindayaza” or “Kanbauk”.

3.2. Recent history of Ein Da Rar Zar village

3.2.1. Timeline of important events

Ein Da Rar Zar is a rather remote village in Yebyu Township. However, major events took place in and around the village over the past 30 years:

1995 / 1996: The French oil and gas company TOTAL arrived in nearby Ohn Pin Kwin and started drilling offshore and constructing the pipelines traversing Ein Da Rar Zar and other villages on its way to Thailand. For security reasons for TOTAL during the civil war, a Myanmar Army’s base was installed near Ein Da Rar Zar.

1997: Myanmar Skylink Agro-Forestry Company Limited (short: Skylink) arrived and started to plant oil palm trees on their acquired land.

2000: Skylink was stopped again. The land became government property, but the already planted oil palm trees were maintained by the Myanmar Government.

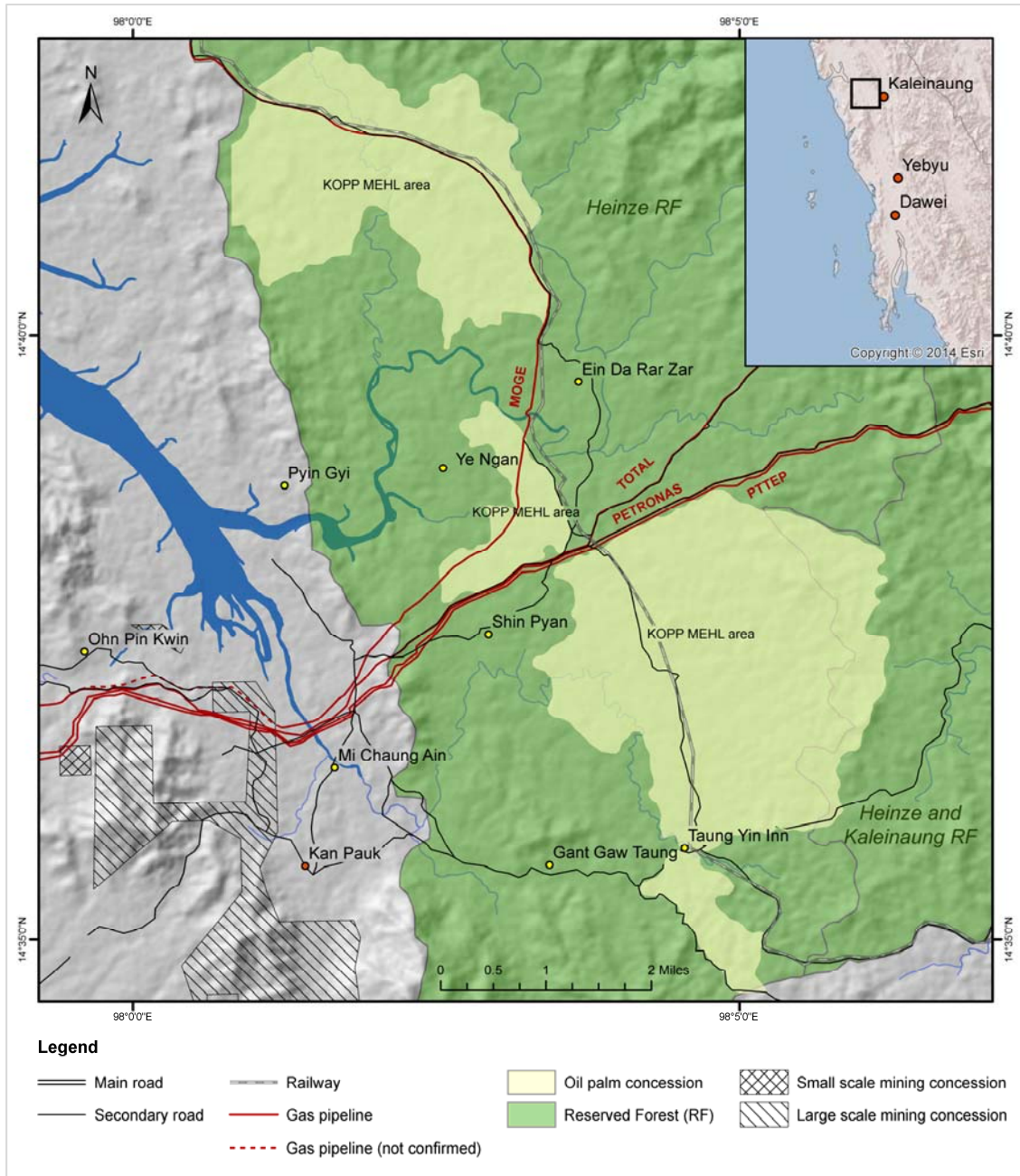
2001 / 2002: TOTAL pipelines were finished, the Myanmar Army’s base was removed.

¹ Kan Pauk and Mi Chaung Ain are two prosperous villages that are very closely intertwined and can therefore be seen as a small town.

2003: Kanpauk Oil Palm Estate and Palm Oil Mill Project (short: KOPP) took over the Skylink oil palm plantations from the Myanmar Government and continued the palm oil business (until today).

3.2.2. The story of the villagers

According to the stories of the elderlies in the village, Ein Da Rar Zar is one of the villages in Yebyu Township that was more involved in violent conflicts over the past 30 years compared to other villages in this area.



Map 2: Ein Da Rar Zar is located in the forest land zone (Reserved Forest), near gas pipelines and oil palm plantations

Natural gas related events

In 1995 or 1996, TOTAL settled in Ohn Pin Kwin and started constructing the pipelines, also traversing Ein Da Rar Zar. TOTAL provided compensation to the farmers whose land was affected. These farmers accepted the compensations and did not cause any troubles. But with the arrival of TOTAL, the conflict between the Karen National Union (KNU) and the Myanmar Army intensified. The Myanmar Army set up several check-points around Ein Da Rar Zar and installed a main base outside of Ein Da Rar Zar. Over the next few years, the villagers were very closely controlled and limited in mobility.

It was around 2001 or 2002, when TOTAL had finished its gas pipeline construction and the Army's base got removed. The years between 1996 and 2001 were perceived as being the worst years of Ein Da Rar Zar's history. Due to the ongoing conflict between the Myanmar Army and the KNU, the villagers were caught up between two fronts. Villagers who had been accused of being a member of the KNU were arrested and tortured, some were even murdered. Robbing food and other materials and raping women was also often occurring. Other villages nearby were also affected, but it was worst in Ein Da Rar Zar.

At some point in time (years not confirmed), the Myanmar Navy occupied a large land strip along the coast. The Navy moved its main base to this area, assumedly to provide protection to the oil and gas companies, and constructed compounds, training sites, their own plantations etc. Ein Da Rar Zar village tract is also affected of this large scale land acquisition.

The exploration and production of natural gas is still ongoing today.²

Palm oil related events

In 1997, Skylink arrived to the village. Skylink was a powerful and Military-friendly company. The owner personally went to the then village head, informing that the company would take over the land of the villagers in order to plant oil palm trees. It was more of an order than a negotiation. No landuser ever received compensation for the acquired land. Villagers opposing to it would be arrested. Skylink started clearing the land, beginning from the east side of the village. None of the villagers dared to oppose, and the affected villagers moved to another place in the village. They could also not leave the village because it was civil war time and the Myanmar Army didn't allow them to move away.

Before Skylink took over, the land was partly covered with villagers' plantations of cashew nut and few betel nut trees and partly with forest and shifting cultivation (with upland rice).

Along with Skylink came Nawarat Company, a construction company, to clear the land and make all kinds of constructions. Later, a security force named 409 came along to provide security for the workers of Nawarat Company.

Around 1999 or 2000, Skylink was stopped again due to tensions between the management of the company and government representatives. Consequently, the land formerly owned by Skylink became government property. From 2000 to 2003, the oil palm plantations were still maintained by the Myanmar

² After TOTAL, also other oil and gas companies settled in this region and even more of them were involved in the drilling of the natural gas offshore (Yadana and Yetagun gas fields) and transporting it to Thailand through pipelines. These companies are: Petronas (Malaysia), PTTEP (Thailand), Unocal of Chevron (USA), and Nippon Oil Exploration Myanmar (Japan), all of them coordinated by the Myanmar Oil & Gas Enterprise (MOGE) and the Myanmar Ministry of Energy and Electricity (MoEE). [Asia Steel Construction 2012]

Government, but the plantation was not expanded. Some acres of the unplanted previous Skylink land was handed over to the Myanmar Army.

When KOPP took over the oil palm plantations in 2003 (see working paper no. 3), KOPP came to the village head, proving that it had the right to continue the business on the designated amount of land indicated on a map. KOPP continued extending the planted area, and they as well did not give compensation to the previous landusers. In some cases, KOPP staff killed the cattle of the villagers as they repeatedly trespassed the company's land and damaged oil palm trees.

3.3. Ein Da Rar Zar in numbers

Ein Da Rar Zar was named after a powerful king from India who came to the village more than 200 years ago. There are 925 Karen and 5 Burmese people living in the village in 173 households (with 107 families). The 925 Karen people are Christians whilst the 5 Burmese people are Buddhists. [Yebyu GAD 2017]

Currently, there are 2 active parties in the village: the National League for Democracy (NLD) and the Union of Solidarity and Development Party (USDP). The village has a railway track coming from Gant Gaw Mountain to Ein Da Rar Zar (5 miles long), and from Ein Da Rar Zar to Sin Kuu village (7 miles long). The middle school, a branch of Kan Pauk middle school, is composed of 11 teachers and 234 students, making the ratio of teacher to student, 1:21. The kindergarten has 3 teachers and 25 students, resulting in the ratio of teacher to student, 1:8. There is a 100% school admission for five-year-old children, and the literacy rate is 75 percent. The village clinic is provided by Yadanar organization (a corporate social responsibility programme of the oil and gas companies). There is also a football field and a church in Ein Da Rar Zar. [Yebyu GAD 2017]

Nowadays, many villagers serve as migrant workers in Thailand. Depending on the source of information, the number of migrant workers in Thailand from Ein Da Rar Zar vary from approx. 50 to 150 young adults. In earlier years, there were only a few migrant workers going abroad. [Villagers EDRZ 2017]

4. Main land uses and land use changes in Ein Da Rar Zar over the past 20 years

4.1. Overview of land use changes

In two workshop sessions, we identified and analysed current and past land uses and land use changes in and around Ein Da Rar Zar over the past 20 years (see chapter methodology).

The workshops revealed the following results:

Land use changes in Ein Da Rar Zar over the past 20 years	
Current land uses (2017)	
Forest; mangosteam; nipa palm; durian; mango; cashew nut; pineapple; upland rice; betel nut; pomelo; sesame; black pepper; jackfruit; banana; rubber; elephant foot yam (amorphophallus campanulatus); papaya; coconut palm; lime; melon; chili; oil palm.	
Most important current land uses	Most important land use changes within the past 20 years
Cashew nut (for livelihood and areal extent) Betel nut (for livelihood) Black pepper (for livelihood and areal extent) Rubber (for livelihood and areal extent) Oil palm (for areal extent)	1) From shifting cultivation on forest land to rubber plantations 2) From shifting cultivation on forest land to betel nut plantations 3) From cashew nut plantations, forest land, and shifting cultivation on forest land to oil palm plantations



Picture 2: Rating of land uses in Ein Da Rar Zar village (by Win Myint)

Cashew nut cultivations are a main land use in Ein Da Rar Zar. However, it is not a change that happened within the last 20 years. The following chapters describe the three most important and most recent land use changes in Ein Da Rar Zar.

4.2. From shifting cultivation on forest land to rubber plantations

Before the land was cultivated with rubber plantations, villagers mostly used the forested land for rotational shifting cultivation planting upland rice for their own consumption. Some villagers also used to go hunting for boars and deers. A few villagers also converted their cashew nut plantations and mango tree cultivations into rubber plantations. Although the land technically belonged to the Myanmar Government as it was and still is classified as “Forest Land” (land category Reserved Forest), the villagers acted like owners according to their customary rules and traditions in the village. Due to the prevailing mixed control of KNU and the Myanmar Government at the time, the KNU partly controlled the land as well and collected taxes.



Pictures 3 and 4: Rubber plantations near Ein Da Rar Zar (these pictures were taken outside of Ein Da Rar Zar; a lot of rubber in the village cannot yet be harvested; by Lara M. Lundsgaard-Hansen)

The land use change started to happen from the early 2000s onwards and increased after 2006 when the Myanmar Government expanded the rubber market. Although the villagers were not aware of this motive, they started practicing slash and burn in order to grow rubber due to its popularity. Gradually, the village attracted some outside investors; non-residential land buyers who also planted rubber on a small to medium scale. These outsiders are usually residents of nearby small towns such as Kan Pauk, only in very few cases they come from more distant places such as Yangon or other large towns in Myanmar. The rubber trees are in many cases still too young to be scratched. Some villagers and outsiders started to harvest the latex very recently, but most of the villagers can only start harvesting in the coming 1 to 3 years.

Nowadays, mostly rubber plantation workers (some of whom are migrant workers from other areas in Myanmar, some are local residents), as well as the plantation owners and their family members work on the land, there are no shifting cultivators or rice growers on these lands anymore. Both type of land users – local villagers and outsiders – have rubber plantations around the village. However, most of the land still technically belongs to Forest Department and in most cases, the land users don't have any user or owner certificate, which makes their investment vulnerable.

From shifting cultivation on forest land to rubber plantations	
People with advantages	<ul style="list-style-type: none"> villagers and outsiders who converted the land into rubber plantations, local and immigrated plantation workers and casual labourers for clearing the ground on the plantations, those who were already in the rubber business and could sell seeds, nursery plants, tools, chemicals etc., mostly from Kan Pauk and Mi Chaung Ain (small town nearby)
People with disadvantages	<ul style="list-style-type: none"> those villagers who do not have any rubber scratching skills (most of the villagers) land users without land use or land ownership certificate
Conflicts	None mentioned in this focus group.
Impacts on nature	Due to the water absorption characteristics of rubber trees, the streams carry less water now. The heat became extreme due to reduced water availability, reduced vegetation cover and reduced biomass after cutting the forest. Also because of the decreased extent of forested area, there are now fewer wild animals and medicinal plants. Overall, the ecosystem seems to have deteriorated.

Table 1: Impacts of the land use change to rubber plantations on people and nature (villagers' opinion)

4.3. From shifting cultivation on forest land to betel nut plantations

Before it was betel nut plantation, the land was fallow land either with or without shifting cultivation on degraded forest land, and some parts were used as hillside cultivation for rice crops. Farmers had cleared some forest area to cultivate cash crops as well. The land was uncultivated for animal pasture such as cows and buffalos. The villagers depended on the forest products including – but not limited to – fruits, medicinal plants, bamboo, animals, and timbers. During that time, they always had to be afraid of armed groups such as the KNU Army, the Myanmar Army, and the Mon soldiers.³



Picture 5: Betel nut plantation in Ein Da Rar Zar (by Lara M. Lundsgaard-Hansen)

Although betel nut palm trees had been planted for a long time already, it was only during the 1990s that their prices went up, leading many farmers to grow betel nuts for commercial purpose. Around

³ We assume that the villagers meant the Karen National Liberation Army, when they mentioned the “KNU Army”, and the Mon National Liberation Army, when they said “Mon soldiers”.

1996, the worst civil war between the Myanmar Army and the KNU Army took place in the village, which consequently forced many villagers to flee to other places and countries. During the war, most of their cultivated lands were destroyed. Only a few years later, the village became more peaceful again and the villagers gradually came back to continue their cultivations once more. In addition to the good price, betel nut trees are rather easy to cultivate compared to other cash crops. For instance, betel nut plantations do not need a lot of financial investment. After a few years only, the revenues are equal to the prior investment. Furthermore, betel nut trees, unlike rubber, can be grown together with other cash crops. Nowadays, half of the village area is covered by betel nut plantations. The best betel nut plants can offer three to five viss per year, at a price per viss of more than 4000 MMK (1 viss = 1.6kg = 3.6lb).

Officially, the Myanmar Government still owns the land, managed by Forest Department. The villagers don't have any land ownership or usership certificate. However, on the ground, the villagers recognise each other as the owners. Some betel nut plantation holders have later lost their plantations to the oil palm companies.

From shifting cultivation on forest land to betel nut plantations	
People with advantages	<ul style="list-style-type: none"> land owners who converted to betel nut plantations, and their associates, families, employees (casual labourers) etc., buyers of betel nuts and transportation providers (middle(wo)men, traders, depots, consumers), the indirect beneficiaries of this land use change are religious organization which receive more donations due to the improved economic situation of the farmers
People with disadvantages	<ul style="list-style-type: none"> those villagers whose livelihoods depend on forest products such as wild animals, bamboo, firewood, timber, or traditional medicinal plants
Conflicts	There were conflicts especially between the villagers and the oil palm companies (first Skylink, later KOPP) who took a lot of land. There were also problems among the villagers because they – up to now – do not have official land certificates to prove their tenure, which led them to rob each other's lands or fight over the remaining lands.
Impacts on nature	Similar to the land use change from shifting cultivation on forest land to rubber plantations, also this land use change led to a deterioration of the natural environment. Many forest products are harder to find nowadays. Villagers also noticed that the stream is drying out more often, and that fish became scarcer.

Table 2: Impacts of the land use change to betel nut plantations on people and nature (villagers' opinion)

4.4. From cashew nut plantations, forest land, and shifting cultivation on forest land to oil palm plantations

Before the land was officially handed over from Forest Department at union level to the first oil palm company Skylink⁴ in the late 1990s, there was fallow land with and without shifting cultivation, forest land, pasture land, and cashew nut plantations. Under the British era, the British “gave” the forest to the villagers as village forest, which was even demarcated. Villagers, animal breeders, farmers, hunters, wood and bamboo cutters, fishermen, and collectors of bamboo, herbal plants, and charcoal makers used to work on the land. At that time, villagers, farmers, animal breeders and alike owned and commonly used the land. Although the Forest Department and the Department for Agricultural Land Management and Statistics (previously known as Settlement and Land Records Department, SLRD)

⁴ The full name of Skylink is: Myanmar Skylink Agro- Forestry Company Limited

were influential, for the most part, the villagers were able to control and influence the land without much disturbance from outsiders.

Starting from 1997, some people, unspecified by the villagers, started clearing the land for two years. After the land had been cleared, the Myanmar Army occupied the land. Very high military officials and their relatives came to the village to declare the land as their own. Cashew nut cultivations of almost 800 acres⁵ were taken over without compensation. This land was handed over to the company Skylink which then grew oil palms until 2002. In 2002, there were some political issues between Skylink and the Myanmar Government and Skylink was stopped. One or two years later, Myanmar Economic Holdings Limited (MEHL; Myanmar name is U Paing) received the cultivation permissions from Forest Department and took over the previously planted land from Skylink. Despite this change, the people involved were apparently the same. It is noteworthy that while Ein Da Rar Zar has been affected the most, nearby villages such as Ye Ngan, Shin Pyan, Maline Swae, and Sin Kuu villages were affected by such land occupation as well.



Picture 6: Oil palm plantation around Ein Da Rar Zar (by Lara M. Lundsgaard-Hansen)

From cashew nut plantations, forest land, and shifting cultivation on forest land to oil palm plantations	
People with advantages	<ul style="list-style-type: none"> • KOPP, MEHL (U Paing) company and their staff, • MEHL's soap factory, which receives the oil from the oil palm estate, • providers of agro-chemicals (fertilizer, pesticide etc.) and oil-palm-related tools and machines, • transportation providers
People with disadvantages	<p>Basically, all the villagers experienced disadvantages in one way or another:</p> <ul style="list-style-type: none"> • Farmers lost some of their plantations (mostly cashew nut plantations) • Hunters and fishermen got limited in their access to the forest and water ways • Most villagers depend on the provision of forest products, however, the forested area has gradually been reduced • Animal breeders lost some of their pasture land

⁵ 800 acres are equivalent to 324 hectares.

Conflicts	There were rarely any violent conflicts between the palm oil companies (first Skylink, later KOPP) and the villagers as the villagers did not dare to fight. However, villagers report that the staff of the oil palm companies repeatedly killed their cattle when they entered the oil palm plantations. Some villagers even mentioned that the staff of the companies drove the villagers' cattle into the plantations on purpose so that they could shoot and eat them.
Impacts on nature	According to the villagers, the natural environment has suffered from this land use change. Forest has been cleared on a large scale. Heat and wind became more extreme due to the lack of trees. Water quantity has been reduced due to the lack of forest, and the fish became scarcer. The pasture land has been damaged or decreased. The agro-chemicals used on the plantations have decreased the soil fertility. Because of the overall climate change, harvests are fewer. In the past, many bees pollinated in the forest, but with the forest being cut, the villagers rarely see bees anymore.

Table 3: Impacts of the land use change to oil palm plantations on people and nature (villagers' opinion)

5. Human wellbeing in Ein Da Rar Zar

In one session with two parallel focus group workshops, we tried to understand what human wellbeing means from the perspective of Ein Da Rar Zar villagers (see chapter methodology). The following two chapters explain the opinion of a women’s group and a men’s group.



Picture 7:

A woman weaving in Ein Da Rar Zar, one of the very few economic opportunities besides agriculture; she learned it in the refugee camp in Thailand
(by Katharina Nydegger)

5.1. The perspective of women on human wellbeing in the village

In the human wellbeing workshop, we asked the participants what they need to have a good life. The women mentioned agriculture, animal breeding, food security and quality, income, education, health, electricity, family living together, job opportunities in the village, religion and its festivities, a nice comfortable house, women involvement, village peace, human rights, nature, forest and clean fresh air, transportation and communication (especially between Kan Pauk and Ein Da Rar Zar), and sports. After discussing all those aspects⁶ in more detail, the participants were given three red stickers to select the three most challenging wellbeing aspects to achieve in the village, and three green stickers for the most satisfying wellbeing aspects. In this report, we focus on the three most challenging aspects.

The three most challenging wellbeing aspects from the perspective of women			
Most challenging wellbeing aspects	What is necessary to accomplish them	Changes over past 20 years	Explanation of change
Electricity	Infratructure, government support	Situation improved	PTTEP (oil and gas company) donated a generator to the village in 2014.
Food and food security	Money to buy food, regular and sufficient electricity for using a fridge, village market, knowledge to choose fresh food	Situation improved very little thanks to increased availability of food quantity	Family members who went abroad educate the villagers about food security.
Transportation and communication	Foreign countries' technological support, government support, to have cars and motorbikes	Situation improved	The road was changed from bullock cart road to car road (but still dust road only) in 2010 with the support of TOTAL oil and gas company. More cars and motorbikes for transportation are accessible, phones can be used (even though connection is bad), and ambulance can be called in case of emergencies.

Table 4: Most challenging human wellbeing aspects from women’s perspective

⁶ As wellbeing aspects, we understand what is needed to have a good live.

Electricity is a challenging aspect to accomplish⁷ because the villagers do not have the infrastructure for electricity in the first place. Without PTTEP, they would not even have a village generator that produces some hours of electricity per day. In addition, TOTAL provided solar panels for the school and church.

Food supply (food security) is also still difficult to attain because the villagers do not have a village market. The villagers have to travel to Kan Pauk in order to buy groceries. Furthermore, the opportunity to learn about food security and quality has been a challenge since most villagers learn about food issues through their family members who live and work abroad, but who rarely come home.

Due to TOTAL's donations and Myanmar Government's efforts, the roads to Ein Da Rar Zar became more suitable for cars. Despite this positive development in transportation and therewith communication, the road built by the Myanmar Government (worth 80,000,000 MMK) is still very dusty and bumpy.



Picture 8: Shop in Ein Da Rar Zar; the villagers can only buy very few groceries, usually merely packed dry food and drinks. (by Katharina Nydegger)

⁷ The workshop took place in March 2017. In November 2017, we encountered that an electricity grid had been put up, coming from Kan Pauk to Ein Da Rar Zar, however still without electricity flow. We assume that the electricity situation might improved soon in the village.



Pictures 9 and 10: The dust road in Ein Da Rar Zar (left; by Lara M. Lundsgaard-Hansen) and to Ein Da Rar Zar from Kan Pauk (right; by Katharina Nydegger)

5.2. The perspective of men on human wellbeing in the village

When we asked the men's group about what they consider as a good life in their village, they mentioned health, fresh food and awareness of food, water, clean air, forest (forest products, timber), religion, education and knowledge, electricity, telephone, transportation, money (for their children and business), occupation, house and land property, village security and peace, law enforcement, participation in decision and free speech, handicraft, happiness and expression of emotions, family, gender equality, sports, and culture. After discussing all those aspects in more detail, the participants were also given three red stickers to select the three most challenging wellbeing aspects to achieve in the village, and three green stickers for the most satisfying wellbeing aspects. In this report, we focus on the three most challenging aspects.

The three most challenging wellbeing aspects from the perspective of men			
Most challenging wellbeing aspects	What is necessary to accomplish them	Changes over past 20 years	Explanation of change
Transportation	Good roads that improve access to education and make the transportation of materials possible	Situation improved	TOTAL oil and gas company supported the construction of a better, but still bumpy road.
House and land property	Law enforcement, ownership certificate (that nobody has yet)	Situation didn't change	The land users have not yet been granted a land ownership or land use certificate.
Religion	Religious leaders (pastors), religious knowledge, church, facilities for Sunday School	Situation improved	The Government now grants permissions to build religious buildings.

Table 5: Most challenging human wellbeing aspects from men's perspective

The men's group considers good roads and transportation as needed, as it provides access to education and the ability to transport needed material. They assume that support from the Myanmar Government, as well as from companies are necessary to further improve the roads (in the past, TOTAL company had given some support to improve the road).

According to the participants, the situation of "house and land property" has been constantly challenging over the last 20 years because the land owners have not yet received a certificate of land ownership or usership.



Picture 11: A typical house in Ein Da Rar Zar; nobody has any land ownership or land usership certificate yet (by Lara M. Lundsgaard-Hansen)

The participants considered religion as improved because the Myanmar Government does not interfere with their faith anymore as it did 20 years ago. For instance, the Government will now easily grant the permission to build a church. Despite these positive changes, it is interesting to see men voted religion to be a challenging wellbeing aspect, the reason for which is unclear and would need further clarification.



Picture 12: The new (left, in blue) and the old church (right, behind the tree) in Ein Da Rar Zar (by Katharina Nydegger)

5.3. Reflection on human wellbeing in Ein Da Rar Zar

For Ein Da Rar Zar, it can be concluded from the workshops that aspects regarding education and health have improved compared to around 20 years ago. This is mainly due to the end of the civil war, the support by the companies (such as Total and PTTEP) which have provided assistance for the school, school items and a clinic, and also due to the accessibility for vehicles. This seems to be a conclusion which is shared by the women's as well as the men's group. Further topics which were discussed in both groups are transportation and electricity. But these aspects are considered as being still challenging today. Even though electricity has improved over time, there is still a lack of infrastructure, and government support is considered as needed, as so far there is no electricity except the one from the generators which were provided by PTTEP and some solar panels by TOTAL (and

personal purchases by individual villagers). The fees for the electricity from the generator are rather high. For transportation, the condition of the road is still a challenge, it has improved over time, but nowadays it is still a dust road. Food (security and quality) was discussed by both groups but higher rated as being a challenge by the women's group. For the women, it was more the question on the knowledge regarding access to knowledge on food quality, while the men were discussing how access to nutrition has changed as nowadays people collect less plants from the forest for nutrition purposes. For the men's group, the topic of house and land property was stated as challenging, the women's group did not have this as one of the wellbeing aspects, but under a different topic they mentioned, that in Ein Da Rar Zar, if you don't have any land, it is hard to work on anything else. In the meantime, the men were discussing the challenges regarding the missing land certificates from the Myanmar Government.

6. Impacts of land use changes on human wellbeing

There are some connections visible between the land use changes and the human wellbeing in Ein Da Rar Zar. The land use changes from shifting cultivation to rubber and betel nut cultivations seem to have generally increased the income of many villagers. The increase in income could, for example, be used for improved education, re-investments in agriculture, purchase of electricity from the village generator etc. However, the land use change to oil palm plantations seems to have deteriorated the wellbeing of people in the village, except for the more improved roads to the village (even though they are still dissatisfying). Losing the land, cattle, and agricultural plants endangers the livelihood of villagers. This situation worsened over the years as the expanding oil palm plantations by KOPP and the rubber plantations by outside owners turned land into a more scarce resource.

The decreased access to forest due to all these land use changes also has an impact on people's livelihood, as they are now less able to collect relevant non-timber forest products, a previously vital basis for nutrition and everyday life. Many villagers regret this state of forest unavailability.

There have also been land use changes when the gas pipelines were built on Ein Da Rar Zar grounds. These areas had to be cleared from plants and land use. The farmers who used these land plots before were compensated with money. However, this land use change and compensations alone did not lead to a proved change in wellbeing, but the fact that the pipelines were watched by security soldiers had a huge impact on the wellbeing at that time (see below).

Officially, the Myanmar Government owns the land in Ein Da Rar Zar, administered by the Forest Department as it is classified as "Forest Land" (land category Reserved Forest). However, on the ground, the villagers recognise each other as the owners. They've been living together in this area for generations and had developed their customary system of land tenure and land use, which had usually worked very well. After experiencing the series of land acquisitions by powerful outsiders, they feel insecure and vulnerable. For their children it is not attractive to stay in Ein Da Rar Zar. Many young adults migrate to Thailand for working.

7. Influential external stakeholders and their impacts

Besides these impacts of land use changes on the wellbeing of people (see chapter 6), there are also several links between the governance of land and the wellbeing. These links are especially related to the involvement of powerful players such the Myanmar Government, the oil and gas companies (PTTEP, Petronas, Nippon, Unocal, and especially TOTAL, also MOGE of Myanmar) with the Military Army and Navy in the back, and the KNU. Here are two examples collected from our research, which illustrate the influence of powerful actors in land governance on the wellbeing of people in Ein Da Rar Zar:

- The Myanmar Government conducts many activities for rural development such as the construction of roads, provision of school teachers etc. which are very important for the human wellbeing. However, it was also the previous Government who made contracts with the palm oil companies and gas companies (see below), which also resulted in a partial improvement and partial deterioration of wellbeing. It is as well the Government who cannot yet acknowledge land ownership of farmers, leaving them vulnerable to land appropriations from outsiders, which in turn has a negative impact on the wellbeing, even though this might not be the intention of the Government.
- Because of the oil and gas companies, and among them especially because of TOTAL as the first arriver, the wellbeing has changed as well. At first, the appearance of TOTAL and the therewith related construction of gas pipelines on Ein Da Rar Zar grounds led to a strong deterioration of wellbeing due to escalating violent conflicts and strong human rights violations, involving the KNU, the Myanmar Military (including security soldiers), TOTAL in the background, and the villagers in between the lines. Later, the two Corporate Social Responsibility (CSR) Programmes of the oil and gas companies – with the Yadana project and the Yetagun project – also resulted in the improvement of many villagers' livelihoods and still today continues to improve the wellbeing in many surrounding villages.

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Most information in this report bases on personal communication received from villagers (anonymous) in Ein Da Rar Zar through interviews and focus group workshops [2 and 3].

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References for the maps:

The maps were created in February 2018 by Lara M. Lundsgaard-Hansen (r4d) and Florian von Fischer (OneMap Myanmar Project), in Yangon, Myanmar. The sources of data include:

Dataset:	Source:
Villages	Myanmar Information Management Unit MIMU (2015), edited by OneMap Myanmar (2018)
Roads	OneMap Myanmar (2017), digitized based on aerial imagery
Railway	Myanmar Information Management Unit MIMU (2015)
Administrative boundaries	Myanmar Information Management Unit MIMU (2015)
Reserved Forest / Protected Public Forest	Wildlife Conservation Society Myanmar WCS (2015)
Mining concessions	No. 2 Mining Enterprise (ME2) Tanintharyi Region: Tanintharyi Tin and Tungsten Exploration and Production concession list 2016 (2017)
Oilpalm concessions	OneMap Myanmar (2017) source data: concession contracts, Forest Department Tanintharyi Region (2015)
Gas pipelines	OneMap Myanmar (2018), digitized based on aerial imagery
Rivers	OneMap Myanmar (2018)
Hillshade	Based on SRTM 30m NASA
World shaded relief	ESRI (2014)

Your Notes

With the publication of this series, we pursue the objective of knowledge dissemination for the public about land-related situations on the ground in Southern Myanmar. The series aims at capturing different voices and opinions about land use, land use change, and land governance, with a focus on Yebyu Township in Tanintharyi Region, Myanmar. It is therefore likely that different working papers will present different or even opposing information.

Please note that these working papers are grounded on the perspectives of the particular stakeholders only. They do not necessarily represent the perspective of the authors and the project team.

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