



KALAW

CITY PROFILE

Kalaw City Profile

Developed by:
SKL International
and
Ministry of Construction,
Department of Urban and Housing Development,
Urban Research and Development Institute,
General Administration Department Kalaw,
Township Development Committee Kalaw of the Republic of the Union of Myanmar

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The City Profile and the primary data collection would not have been possible without the large team of contributors from GAD, TDC, Ward Authorities, EPC, Road Department, DALMS and KTO in Kalaw as well as the DUHD GIS and land use mapping team.

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CITY PROFILE



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Acronyms

ASEAN	The Association of South East Asian Nations
BEPS	Basic Education Primary School
DAO	Development Affairs Organization
DDM	Department of Disaster Management
PD	Department of Planning
DRD	Department of Rural Development
DUHD	Department of Urban and Housing Development
EPC	Electric Power Corporation
ESE	Electricity Supply Enterprise
FGD	Focus Group Discussion
GAD	General Administration Department
GDP	Gross Domestic Product
JICA	Japan International Cooperation Agency
MIMU	Myanmar Information Management Unit
MOC	Ministry of Construction
MP	Member of Parliament
SIDA	Swedish International Development Cooperation Agency
TDC	Township Development Committee
TMC	Township Management Committee
URDI	Urban Research and Development Institute

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Foreword DUHD

The political and institutional changes in Myanmar in recent years has stimulated urbanization and also created pressure on existing urban infrastructure services, housing shortages and increased informal settlements both in larger cities and smaller cities. The Department of Urban and Housing Development (DUHD) of the Ministry of Construction (MOC), the responsible government agency for urban and housing sector development in Myanmar, has been committed to the development of a number of priority programmes to enable the achievement of the New Urban Agenda's goals of a sustainable, inclusive and resilient urban development. This includes the National Urban Policy that will guide the overall urban planning strategy in Myanmar in the future. Furthermore, to assist local governments in relation to urban planning, urban development, sustainability and capacity enhancement are priority goals of DUHD. Based on the platform of Urban Research Development Institute (URDI), the SymbioCity Programme has been implemented in Myanmar since 2017 through the collaboration between SKL international and DUHD.

The Kalaw City Profile has been conducted as a component of the SymbioCity Capacity Building Programme. Kalaw was selected for the pilot constituting part of the on-going programme and having confirmed willingness and capacity of the local authorities to conduct the project. Identified as a key priority action to mainstream the National Urban Policy in Myanmar, the City Profile contributes to the fulfilling of policy goals and is a model pilot for knowledge production and capacity building. The pilot provides a new methodology for the collection of data as a basis for decision-making that will be replicated in other parts of Myanmar.

In Kalaw, the data will continue to be used for future urban planning and basic service provision to reach the vision of becoming a model city that serves as an example of how sustainable development through maintaining cultural and environmental values and peace-building can go hand in hand. The conducted City Profile developed the local capacity of survey and information management, and generated additional spatial insights on the nature of service delivery at township level and united data for urban wards on urban systems infrastructure. Additionally, results from the City Profile will be guiding the Town Plan of Kalaw which is under revision and the methodology will be used in future processes of town plan development in Myanmar.

On behalf of the DUHD of MOC, I would like to express my gratitude to the Swedish Government, Sida, SKL International, Kalaw Local Authorities, involved experts and all other stakeholders who have been involved in the Kalaw City Profile. We look forward to a continuous and future strong cooperation.



Aye Aye Myint

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The Republic of Union of Myanmar

Foreword URDI

The urban population in Myanmar will grow from 15.4 million in 2014 to about 20.4 million in 2030. The National Urban Policy (NUP) of Myanmar is being developed by the Department of Urban and Housing Development (DUHD) and the Ministry of Construction (MoC) to guide this growth and development. The development of 'City Profiles' by establishing a database of socio-economic indicators, is recommended as one policy intervention under the Socio-economic development theme in the NUP.

The city of Kalaw, Shan State, was developed as a pilot and a component jointly implemented by SKL International, URDI and DUHD. It is the first City Profile in Myanmar. The City Profile component aim to create a framework and knowledge basis for urban development and can serve as a reference for authorities in local level as well as a basis for urban planning by urban planners. The City Profile of Kalaw has also aimed to build capacity of survey and information management through a replicable methodology that can be scaled up to other towns in Myanmar.

I would like to express my sincere thanks to SKL International for providing technical assistance throughout the implementation, the development of the methodology for City Profiles as well as compiling and publishing the City Profile books. Thank also to the Swedish International Development Agency for funding of the programme. I also would like to thank the government authorities, respective government departments, ward administrators and local communities in Kalaw township for their participation and collaboration in this City Profile data collection process and data provision. Finally, I would like to thank each respondent of Kalaw who took part in the City Profile Survey.



Dr.Sabe Pyu Lwin

Deputy Director

Urban Research and Development Institute (URDI)
Department of Urban and Housing Development

Foreword GAD (Kalaw)

With the guidance of the President, the General Administration Department, Ministry of Office of the Union Government is implementing administrative transformation framework (2019) that links with Myanmar Sustainable Development Plan (MSDP). The Governance sector, economic sector and land use sector work to be in line with MSDP towards a democratic federal union. SKL International, in collaboration with the Department of Urban and Housing Development, Ministry of Construction, conducted the SymbioCity Capacity Building Program in Kalaw Township along with the Kalaw City Profile. It is the very first city profile in Myanmar. In this profile, basic information such as strengths, weaknesses and requirements of Kalaw town are included. By knowing the actual situation, each department can manage their work more systematically.

I would like to say thanks to the Member of Parliament who provides the guidance, DUHD and SKL international for their collaboration and assistance, the representatives of each department, the ward administrators, clerks and members of Kalaw Tourism Organisation (KTO) for collecting and providing required photos, maps and data for the City Profile implementation process.



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(PA/4604)

2nd Township Administrative Officer
General Administration Department, Kalaw Township

Preface

The Kalaw City Profile provides a set of town level data related to urban planning and development. Local data is a crucial component in understanding the reality of the town and making informed planning decisions based on knowledge and facts. The Kalaw City Profile provides knowledge and data as a basis for urban planning and development, specifically focusing on the experiences and perceptions of the residents.

The City Profile has been developed during July 2019 to March 2020 and jointly led by the Department of Housing and Urban Development (DUHD) and General Administration Department (GAD), Town Development Committee (TDC) and other departments related to town planning & management in Kalaw with the support of SKL International under the SymbioCity Capacity Development Programme in Myanmar, financed by the Swedish International Development Cooperation Agency (Sida).

The City Profile provides multi-dimensional perspective on the town, covering spatial and institutional aspects as well as environmental, social, economic issues and urban systems such as water, energy, waste and mobility. The data is limited to Kalaw Town itself, although it links to the township and surrounding areas are included to some extent. The Ward level comparison enables government officials to understand the intra-city dynamics of service delivery and need for infrastructure in specific areas that are deficient in provision of services. In addition, the City Profile aimed at include data from the demand side, from the citizens, while most of conventional data were from the supply-side.

The data was generated through questionnaire-based survey covering approximately 10% of all households in Kalaw, asking questions of access to services, service satisfaction, as well as perceptions and priorities. This primary data was complemented with land use mapping conducted by DUHD parallel with the data collection. Secondary sources such as the census and documents from relevant departments have provided valuable input. In order to make the system replicable without much technical support, the methodologies were designed in low cost and simple manner. The City Profile process have built capacity of survey and information management by a replicable methodology to share the knowledge to other cities in Myanmar.

The information provided on this report is based on the results from City Profile Survey which was conducted from secondary data from respective departments as well as primary data collection (from 1st to 10th of October 2019) through field-based questionnaire, focus group discussion (FGD) and mapping. The methodology and source of each primary data collection is stated in the methodology section unless specified as 'Kalaw township' or specific data source, the data introduced in this reports are based on primary data collection conducted in Kalaw town, 11 urban Wards.

Although the data from this pilot project can be a reference to identify some target areas of next planning, deeper research will be required to identify specific interventions. The nature of project scheme encouraged vertical collaboration among local residents, Ward authorities, township level administrators and town planning team in national level as well as Ministry of Construction.

This report presents an overview of the data collected during the City Profile. Original data is available and managed by GAD and TDC of Kalaw Township. The results are followed by annexes explaining methodology and questionnaires used in the survey.

The team hopes that the knowledge from this City Profile Pilot can pave the way to encourage stronger capacities in data collection and management, sensitivity, collaboration and awareness for planning and development in Myanmar.

1. Kalaw Town at a Glance

Name of Township: Kalaw Township

Name of District: Taunggyi District

Name of State: Shan State

Population

17,276

Households

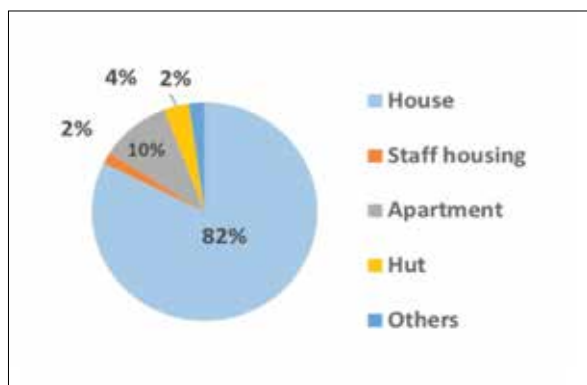
4143

Population growth

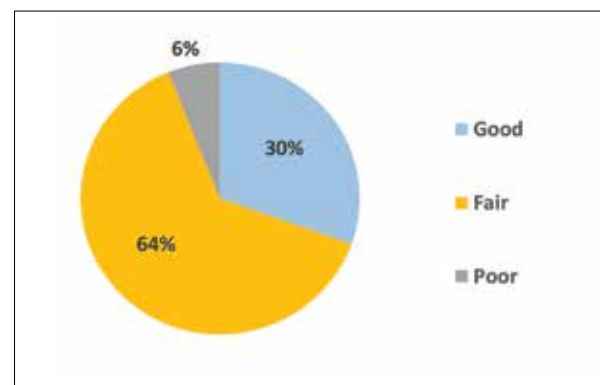
0.98 % per year (2009 – 2019)

Number of Wards: 11 **Area:** 2,777 acre

Housing types



Housing quality



Satisfaction rate (1-5)

Energy



Waste collection



Drainage



Water



Road quality

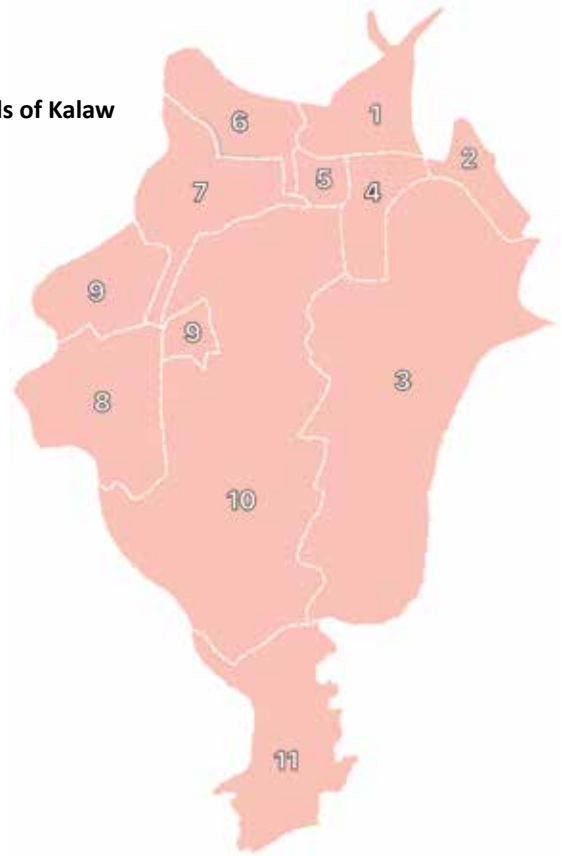


Public space

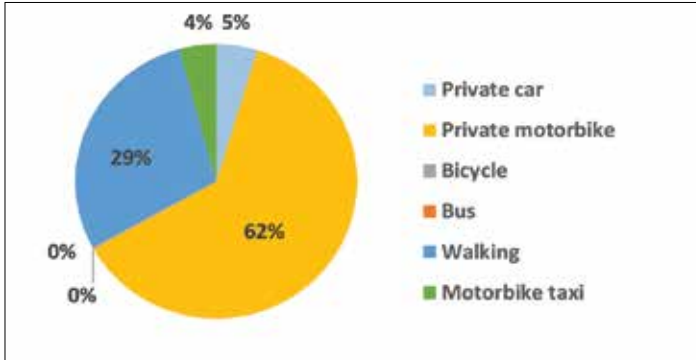


The general satisfaction rate of services in Kalaw is average, 3,2-3,9. The respondents express a higher satisfaction rate when it comes to energy and waste collection than drainage, water, road quality and public space.

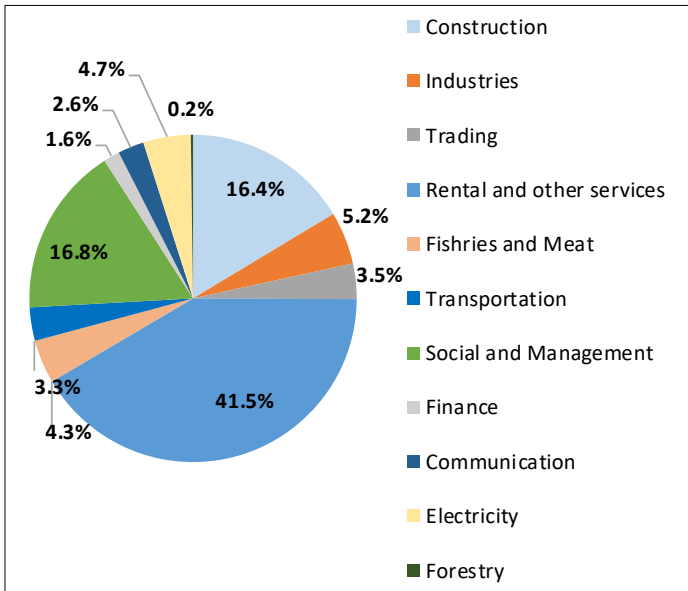
Wards of Kalaw



Modes of transport



Key Economic Sector



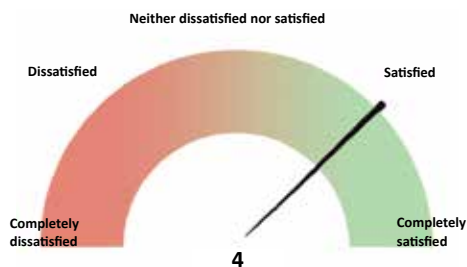
GDP per capita of Kalaw Township

1,090,812

Kyats (PD, 2018)

(national average: 2 million Kyats)

Feel of safety during daytime



Trust in neighbours



2. Spatial Factors

2.1 Kalaw Township

Kalaw town is located in Kalaw township in Taunggyi District in Shan State of Myanmar. It was founded as a hill station and used to be a popular resort destination and educational centre during the colonial period. With its impressive nature, tree lines, calm atmosphere, pleasant weather and unique architecture, the town still attracts both international and domestic visitors.

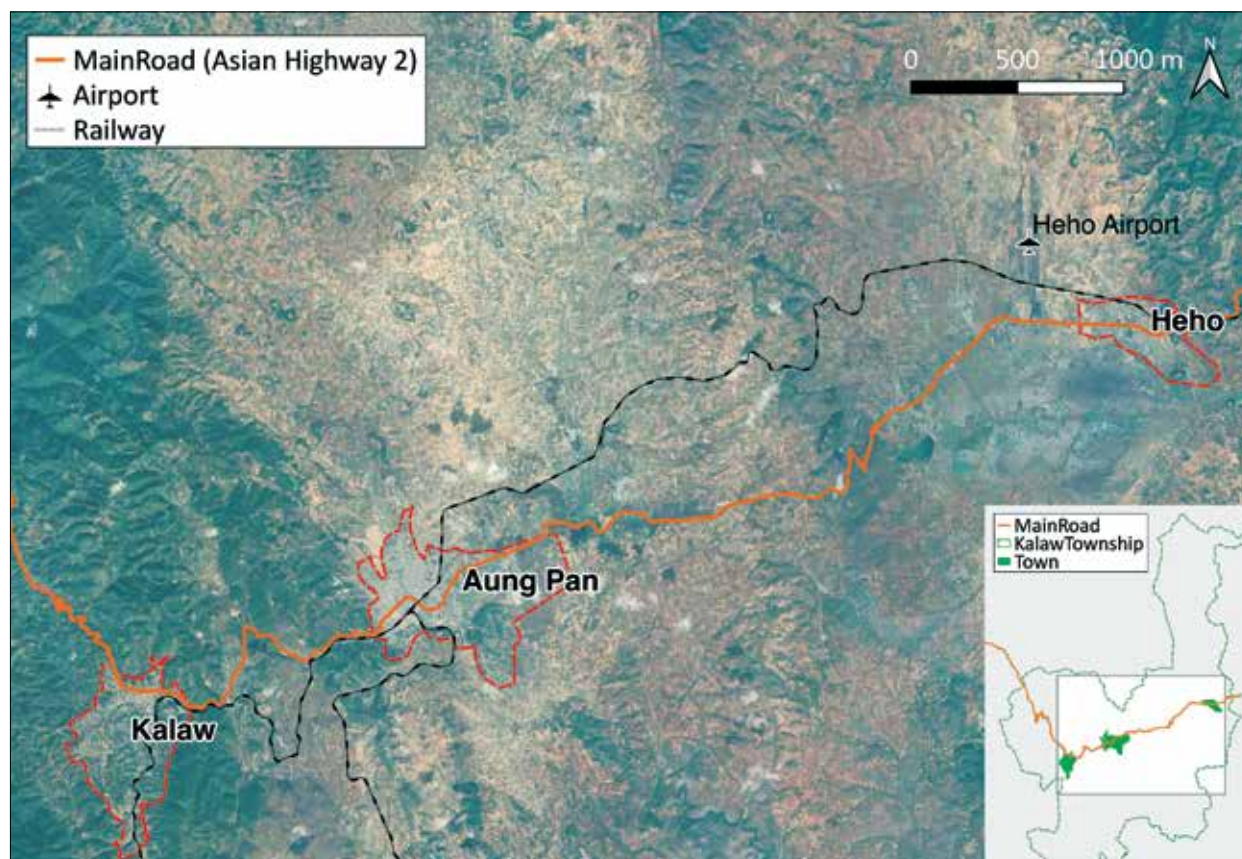


Figure 1. Map of Kalaw Township

The township consists of three towns and 29 village tracts. 36 % of the whole township population lives within the urban area, which is higher than the national average (30.6 %). The three towns – Kalaw, Aung Pan, Heho – are formed by urban Wards. Heho town was established in 2018 and its main function is closely connected to Heho Airport, which is the main transport hub for flights in the Southern part of Shan State. Aung Pan is known as a transit hub for trading local agricultural products and cargos. While most of the administrative functions have been concentrated to Kalaw, the population and density are higher in Aung Pan.

Township	Urban/ Rural	Name	Number of Wards Or village tract	Total Population	Total No. of conventional households ¹
Kalaw	Urban	Kalaw	11	17,222	4143
		Heho	5	12,267	2865
		Aung Pan	12	30,459	6767
	Rural	Village Tract	29	105,736	23309

Figure 2. Population of Kalaw Township (GAD, 2019)

2.2 Land Use Pattern

Kalaw town consist of 11 Wards. The administrative functions are concentrated the southern part in Ward 4 which used to be a city centre. Gradually, due to Kalaw market and the development of the main road, concentrations of people and other functions such as bank and commercial functions shifted to the northern part of Ward 4 and Ward 5. According to the result from land use mapping² conducted, a quarter of Kalaw's land is residential use (25.3%) followed by green areas (23.8%) and military area (20.5%).

Land Use	Area (acre)	Ratio
Residential	702.48	25.3%
Green	662.32	23.8%
Military	569.74	20.5%
Road	439.23	15.8%
Service	151.44	5.5%
Religious	125.81	4.5%
Institutional	73.35	2.6%
Water body	16.24	0.6%
Commercial	16.18	0.6%
Utilities	15.68	0.6%
Transportation	4.54	0.2%
Poultry	0.19	0.0%
Industry	0.16	0.0%

Figure 3. List of Land Use codes

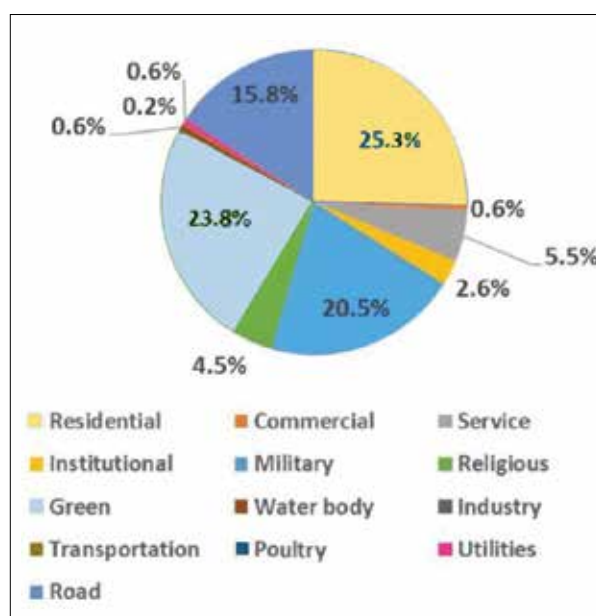


Figure 4. Land Use Ratio

¹ Conventional household includes one or more persons who share the same living quarters (single or compound) and meals (Census, 2014)

² Hotels are technically categorized under service. However, some properties were marked under residential. Please see the annex for land use mapping methodology.

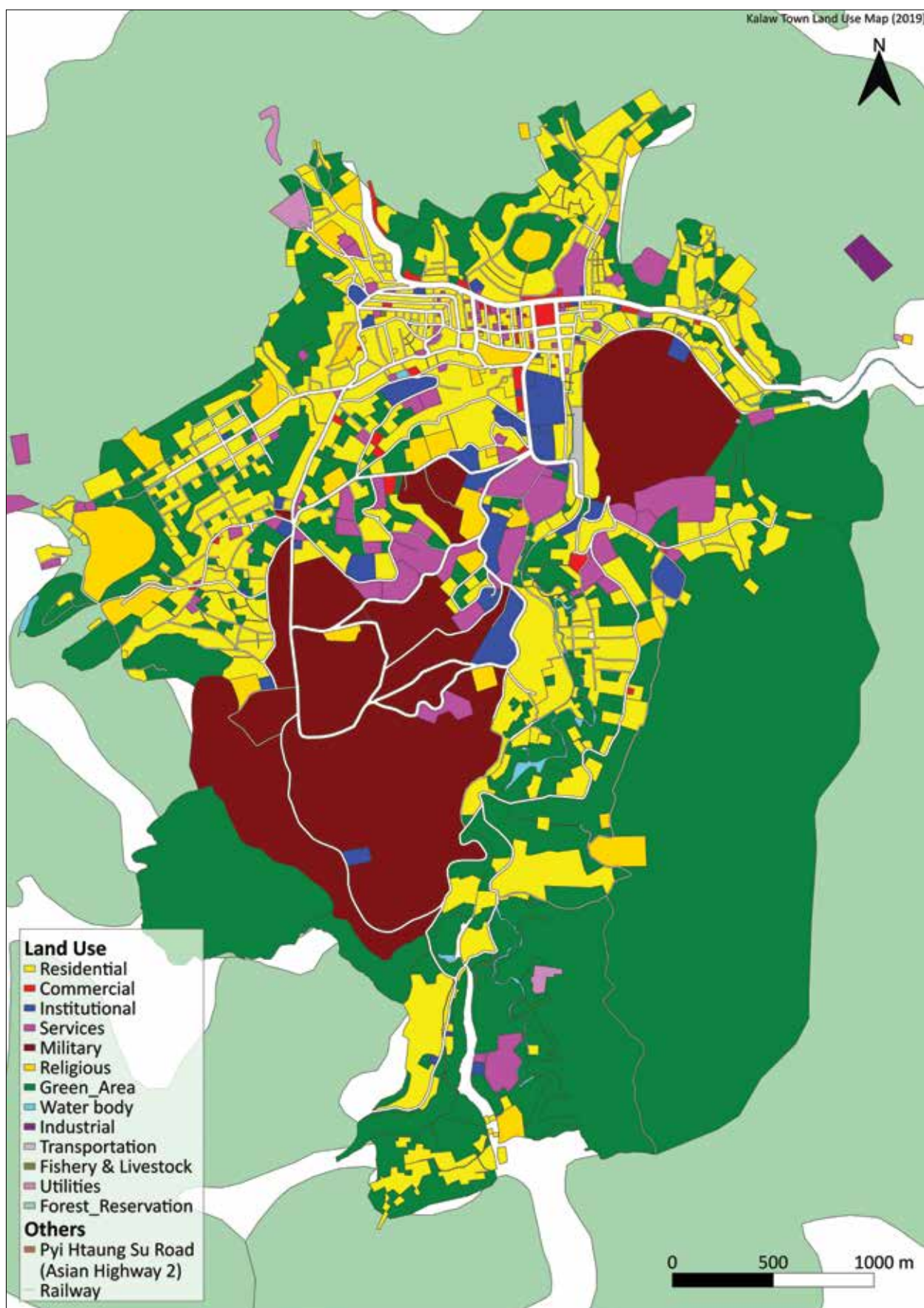


Figure 5. Land Use Map (DUHD, 2019)

2.3 Regional Connections

Road connections: Kalaw town is surrounded by small villages with small scale industrial production. Connectivity is important to facilitate the movement of goods and people. Pyi Htaung Su road (Asian Highway 2) functions as a main road of Kalaw Township. It runs east-west axis in the northern part of the town, leading to KengTung near the Chinese border in the east, and the city of Meiktila in the west. The Kalaw Ring road is frequently used for inter-connection. Although there are no public buses within Kalaw, private or communal buses are frequently used for regional connections.

Railway connections: The Kalaw railway station was established between 1914 and 1918. The architecture of the station has colonial aesthetics and is still an important landmark in the city. Travel time between Yangon and Kalaw is 17 hours and 45 minutes (369 miles). The frequency of passenger trains is once per a day, whereas every two days for cargo train on the Tharse-Loikaw route. Daily average passengers are around 20 foreigners and 60 local people (Myanmar Railways, 2019). The number of users is decreasing due to other modes of transportation such as flights and insufficient services.



Figure 6. Kalaw Railway Station

Airport connections: Heho Airport is located between Kalaw and Taunggyi, 37 km distance from Kalaw. This airport is a gateway for the Southern part of Shan State, attracting lots of tourists visiting Inle Lake, as well as a transit hub to other regions by air. From Heho, there are flights from Yangon, Mandalay, Nyaung U, Lashio, Keng Tong and Tachileik. Due to its high demand, there are over 5 flights between Heho and Yangon almost every day. There are ongoing plans to upgrade Heho airport to an international airport which will further increase the pressure on infrastructure and services in the region.

3. Institutional Factors

Governance of Kalaw Township:

Similar to most secondary cities in Myanmar, the township is administrated by the number of government departments which are mostly under a part of Union Ministries. There is no locally elected governance structure. There are number of committees at different levels which are in charge of oversight and coordination among departments.

Township level offices provide local services and report to their Union ministers or state/region department, not to their local focal point. There are four departments with cross-sectoral (sometimes overwrapped) roles which are; General Administration Department ³(GAD) and Township Development Committee ⁴ (TDC). In addition to these departments, department of planning (PD) and Department of Rural Development (DRD).

Among the number of offices, GAD has the most powerful impact and institutional significance in the township governance. It has township level mandate extends over the other department. Its significant implementation capacity may also be used when the other departments lack capacity. GAD is also in charge of population registration, land registration and various forms of tax collection. There are 79 staff in total at GAD office as of February 2020. The following table number of staffs for each position by hierarchical order. In terms of gender balance, male staff and female staff have almost the same ratio in their office. GAD Township Administrator becomes the chair of most of township level committees which consist of different sectors. Township Management Committee (TMC) oversee the town management.

³ In some cases, it is called township general administration offices (GAOs). However, the report uses GAD as it is more commonly used in the town.

⁴ TDC is also referred as Development Affairs Organisation (DAO), or Department of Municipal Affairs (DMA). This report uses TDC as it is more commonly used in the town.

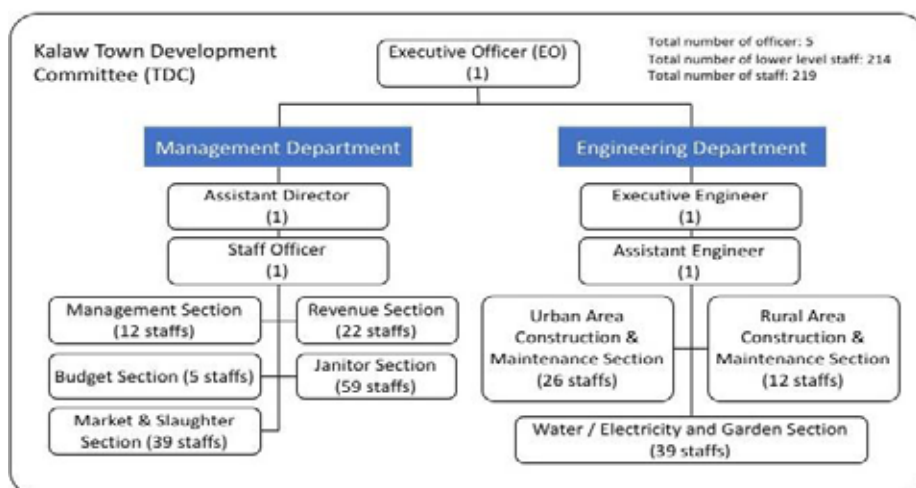


Figure 7. TDC Organogram - tentative (JICA 2017; Kyi Sein 2020, phone based interview, 20 March)

Role	Number of post	Existing staff		
		M	F	Total
Assistant Director	1	1		1
Staff Officer	1	1		1
Deputy Staff Officer	3	2	1	3
Department Clerk	1		1	1
Upper Division Clerk	4	1	3	4
Accountant (3) ⁵	1		1	1
Senior Typewriter	1		1	1
Lower Division Clerk	8	4	4	8
Lower Division Clerk (Ward Administration Office)	48	24	24	48
Accountant (4)	2		2	2
Junior Typewriter	2		2	2
Driver (5)	3	1		1
Cleaner	1		1	1
Security	1			0
Office Helper	3	3		3
Dispatch/Postman	1	1		1
	81	38	40	78

Figure 8. List of positions at Kalaw GAD office (GAD, 2020)

TDC is another important township level institution. It administers the Urban Wards of the township and is responsible for urban service management such as water supply, electricity, drainage systems, solid waste management and disaster management. Furthermore, they oversee local economic development through the grant of business licences, operation and licensing of slaughterhouses and markets, apart from collecting taxes, fees, and fines. TDC has substantial powers to collect taxes and user charges from citizens. It functions with relative autonomy and is free

5 The number shows the grade of each position. Smaller number means better skill. Accountant starts from level 4, Driver starts from level 5.

to make budgetary decisions regarding their annual expenditure. They report to the Ministry of Development Affairs at the state/regional level and function almost entirely out of the purview of the central or federal government. On the other hand, most of other departments are dependent on state/regional, or union level for funding. TDC has three levels of staffs; Senior/Upper Level, Lower Level and Contractor.

Apart from these four cross sectoral departments, there are 29 sectoral departments services and functions under Shan state departments based in Taunggyi. Following list shows the existing offices in Kalaw. Some of these offices also engage in thematic committees to work cross sectoral.

- General Administration Department (GAD)	- Township Agricultural Development Bank Myanmar Economic Bank
- Township Development Committee (TDC)	- Microfinance Office
- Department of Planning (PDs)	- Myanma Railway
- Department of Rural Development ⁶ (DRD)	- Township Hospital
- Department of Agricultural Land Management and Statistics	- Power plant (outside of the town)
- Department of Agriculture	- Exchange Office (for Land Line – MoTC)
- Livestock Breeding & Veterinary Department	- Law Office
- Forest Department	- Court
- Fire Service Department	- Township Hospital
- Electricity Power Cooperation	- Police Station
- Department of Post and Telecommunications	- Department of Cooperatives
- Revenue Department	- Audit Office
- Township Education Department	- Department of Highways
- Department of Sport and Physical Education	- Township Police Officer Office
- Department of Immigration	

Figure 9. List of Government departments and offices in Kalaw

Current projects and future plans for township development:

- One State-One Township Project: This project was announced in 2018 by the Office of the Union Government after transforming GAD to civilian sector. The project aims to encourage systematic decentralisation and increase efficiency of GAD. Kalaw has been appointed to implement this project in Shan State. The project is led by GAD township administrator. Currently, the team is working on drug elimination and waste collection as pilot projects under this scheme. Under this program, Kalaw township received 10 billion Kyats (0.69 million USD) as project budget from Union budget in 2020 (PD, 2020). Before receiving this budget, the project team managed to start implementation by receiving waste bins as donation and other tools from state government, district management committee, TDC, local villagers and hotels (GAD, 2020).
- Awareness Creation for Clean City : Selection of the cleanest Ward per month and issuing certificate, implemented by TDC (TDC, 2020).
- Waste Collection from the remaining households who have not collected their waste (11 % of household population), implemented by TDC (TDC, 2020). Shan State government supported providing 1,134 waste bins to place along the roads in Kalaw township and schools.
- Penalty Charging Notice and Topography survey for upgrading Heho Airport by Department of Civil Aviation (PD, 2020).

⁶ DRD is located in rural area, not in Kalaw town (urban area).

- From TDC, there are 26 existing and new urban-service management related projects (TDC, 2020). These are; 7 existing and 4 new projects in road and bridge, 8 existing and 1 new water distribution project, 1 other existing and 5 new other construction project.
- Village road construction made of stone between Kalaw township and Shwe Min Phone Village tract by Ethnic Affairs Department for better urban and rural linkages (PD, 2020).
- Upgradation of stone road to asphalt road from Kalaw town to the villages under Taung Lar, Taung Kwe, Nan Tine village tract by Shan State Development Office (PD, 2020).
- Four existing urban electricity related projects for stable and better capacity of electricity by Electric Power Cooperation (ESE, 2020).
- Mya Sein Yaung Project for poverty reduction in rural area and assistance of micro scale investment by providing micro finance scheme and loan with low interest rate. The project was implemented in 2 villages under 2014-2015 budget year, 15 villages in 2015-2016, 14 villages in 2016-2017, 8 villages in 2017-2018, 9 villages in 2018-2019, and 5 villages in 2019-2020. All these projects in 53 villages were implemented by Department of Rural Development and supported by the World Bank (DRD, 2020).

Planned development projects in 2020-2021 budget year (PD, 2020):

- In relation to urban service management, Kalaw TDC works for urban road and bridge (existing works- 6, new works -8), water distribution (existing works -11, new works -4), other construction works (existing works – 1, new work -1). In total 31 works are expected to be done.
- For education sector in Kalaw, basic education department plans to construct a new office building and a new one building for school.
- Construction of new surgery office and roof replacement of hospital are expected under health sector.
- For better urban rural linkage, department of ethnic affairs plans to build stone road from Kalaw township to Shwe Min Phone village tract (4 miles) and three box culverts.
- Shan State development office continue to plans to upgrade from stone road to asphalt road from Kalaw town to the villages under Taung Lar, Taung Kwe, Nan Tine village tract.
- Forest department plans to make fence for ring forest to prevent deforestation.
- For stable and enough capacity of electricity, EPC plans to continue 18 projects of urban electricity
- There are 2 planned projects for making walls and drainage around playground in Kalaw by department of Sport and Physical Education.

4. Socio-cultural factors

Population of Kalaw Town: 17,274 in total (GAD, 2019)

Population growth: 0.98 % per year (during the period of 2009-2019).

The population of Kalaw town has increased by 9.8% during the last 10 years. Ward 11 had the most rapid increase of 131%. Ward 4 and 5 have experienced population decrease.

Ward 1,2,5 have the highest population density, while Ward 3 and 10 where large parts of the land are military compound and golf course, have a lower density level.

Ethnic groups: There are diverse ethnic groups in Kalaw Township. Danu is the largest group (35.7%) followed by Pa O (25.9%), Taung Yoe (17.6%) and Bamar (14.6%).

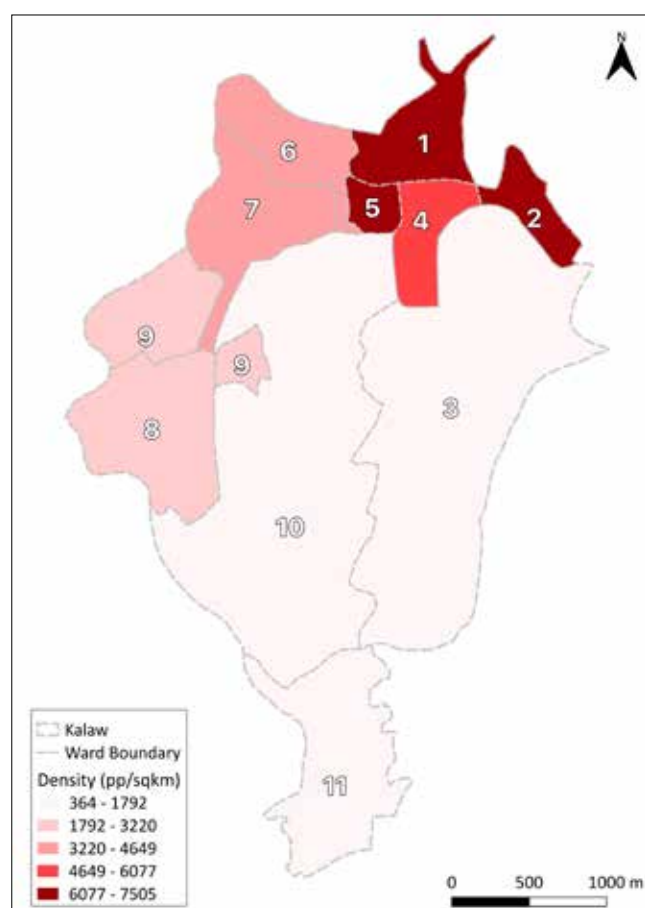


Figure 10. Ward number and population density

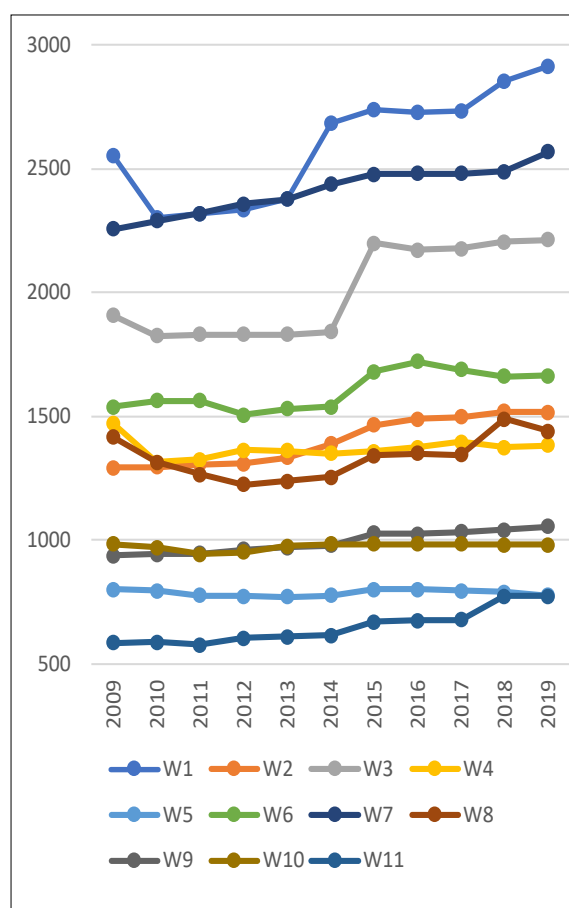


Figure 11. Population increase by Ward, 2009-2019

4.1 Safety

Although most respondents described their neighbourhood as safe, 14% of the respondents pointed out some particular places where they feel unsafe. These places are: Kalaw Garden, Paloung Informal Settlements, Main Market, Railroad, Cow Slaughter Place in Ward 6, Outside of Tharyargone quarter and the Basic Education Primary School BEPS (5).

Darkness, activities such as drug trafficking, drunk people, absence of people were raised as reasons for feeling unsafe.

According to FGD, many women and girls avoid going to the Maw Myay Oo Park as they felt unsafe in the evening and night because of people drinking alcohol and in a drunk state sleep in the park. Some narcotic drugs are easily available even in small shops and some users sometimes use the Maw Myay Oo Park. These narcotic drugs are mostly linked with crimes.

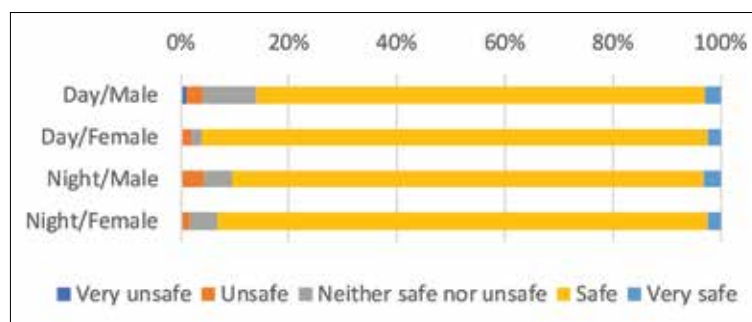


Figure 12. Feeling of safety during day and night time by gender

4.2 Trust & Collective activities

The result of the survey shows that the respondents trust their neighbours to a large extent and that there are several occasions during the week when people do collective activities. These activities are for example religious ceremonies and collective road upgradation.



Figure 13. Feeling of safety



Figure 14. Satisfaction rate of the trust in people

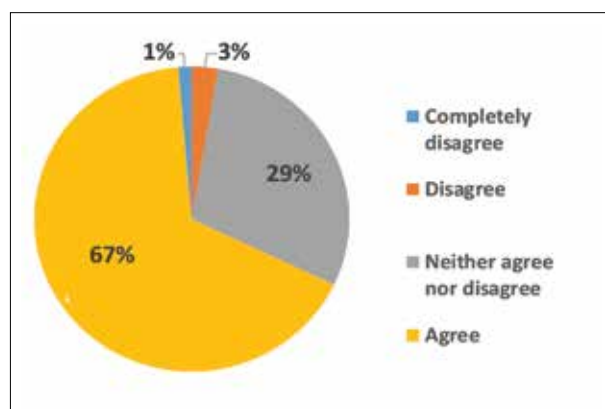


Figure 15. Degree of agreement to 'I can trust most people in the city in general'.

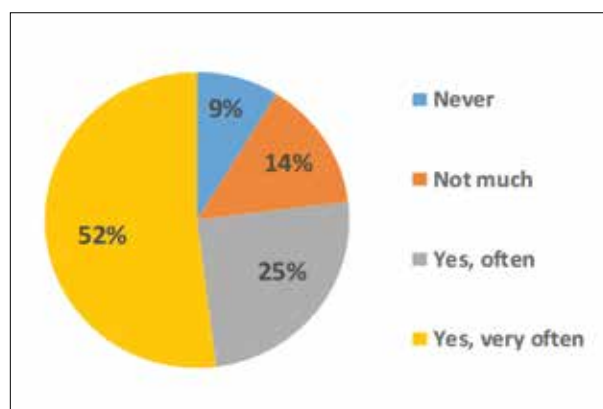


Figure 16. Frequency of collective activities among

4.3 People's perceptions and priorities

Regarding key priorities for development in Kalaw, the respondents selected the following answers.

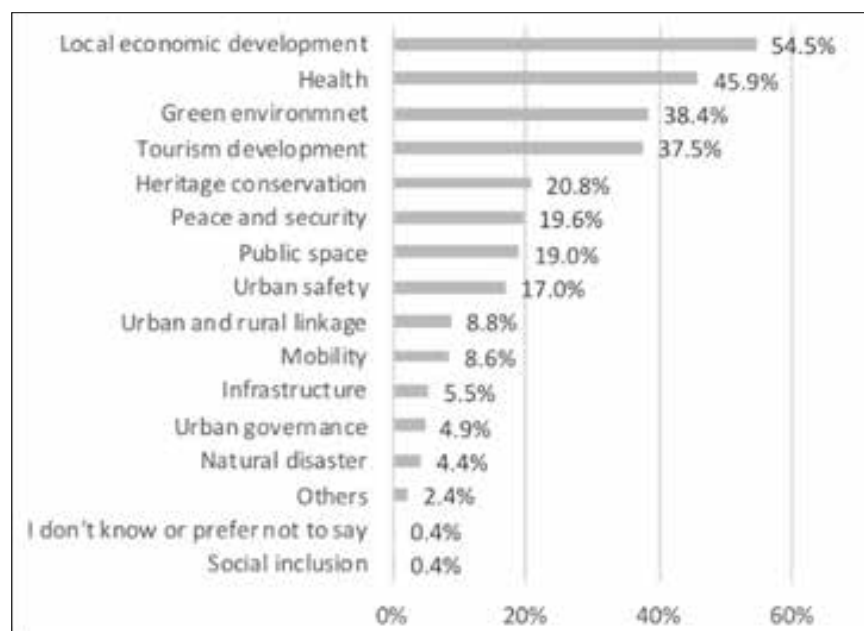


Figure 17. Key priorities related to development of Kalaw



Figure 18. Kalaw Myoma Market

- Local Economic Development was the most popular priority (57%), followed by health and sanitation (48%) Green environment (40 %), Tourism (39%).
- Female respondents showed a stronger concern about health and sanitation.
- Apart from choices prepared for question, water supply, road improvement, education, unity, transportation was raised as key priorities by some respondents.
- In terms of key challenges in Kalaw, the respondents replied environment, public space, water, sanitation and traffic as the main concerns. From FGD deforestation, heritage conservation, water management, drainage system and narcotic drugs were additionally raised as key challenges.

5. Economic factors

5.1 Key economic sectors

PD collects and calculates Gross Output Value (GOV) of each industry every year in township level⁷. From its data of 2019, PD in Kalaw township estimated town level GOV of each industry. According to this, the largest key economic sector is Rental and other services (41.5%). Tourism related business is included in this category. This is followed by Social and Management (16.8%), Construction (16.4%) and Industries (5.2%). When look at township level data, construction is the highest (21.3%) followed by industry⁸ (21.0%) and trading (13.0%).

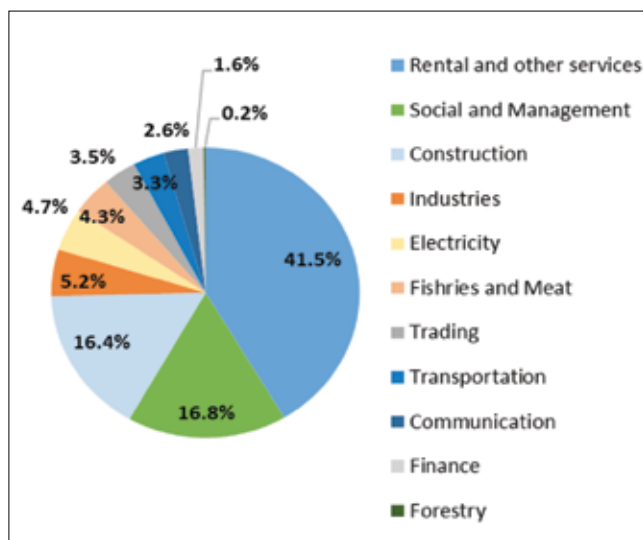


Figure 19. Key economic sectors in Kalaw town (PD, 2020)

5.2 Per Capita GDP

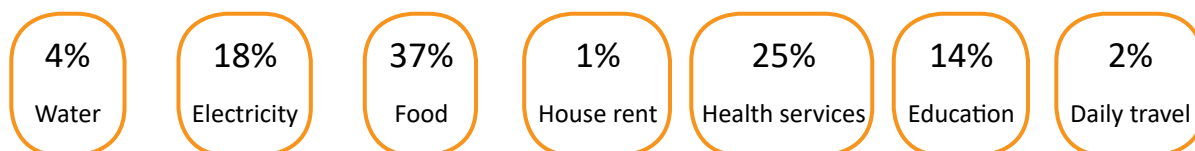
The GDP per capita of Kalaw Township in 2018 is 1,090,812, which is almost a half of national average GDP per capita. This number is possibly caused by the main economic focus on agriculture along with a high rural population (63.8%) of the total population. Per capital GDP of Kalaw town is estimated as 1,999,976 kyat. (PD 2020)

Per capita GDP(Kyat)				
2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
607,991	660,951	877,665	957,557	1,090,812

Figure 20. Per capita GDP in Kalaw Township (PD, 2020)

5.3 Affordability

This question asked what kind of categories they felt difficult to afford in the last 12 months (multiple choice). On average, food was the most popular category for this topic (38%), followed by health (25%). 22% of whole samples answered that they do not have anything they felt unaffordable. In Ward 6, more than half Respondents answered 'nothing', whereas most people mentioned some kind of difficulty in Ward 5 and 11.



⁷ Normally, PD needs to submit township level figures, but not town level. The figures in this City Profile was estimated by PD staff in Kalaw township. GDPs are calculated by production method, Income method and consumption method. Some small scale economy such as snack shop – is difficult to get exact data from these places. For example, there are 10 shops – they just use 1 sample and multiply. Because it is difficult to get all the data. By checking tax, license – depending on these status, they can estimate approximate number of shops, incomes.

⁸ Here, industry means manufacturing industry which process raw materials and manufacture goods in factories.

5.4 Tourism and Heritage Value

In town level, tourism forms the keystone of Kalaw's economy. As of 2018, there was around 12,561 tourists a year (Pyone Kathy Naing, 2018). The residents of Kalaw are positive to tourists in general, although 6% expressed concern about negative impact such as lack of respect to local culture, risk of damaging the peaceful life, hesitation to show their life as a product. One of the most popular activities in Kalaw among tourists is trekking. Trekking started 1994-95 and international tourists often combined with a visit in Paloung village for traditional architecture and lifestyle.

The occupancy rate of hotels in Kalaw is very low. There are currently 755 hotel rooms in the town. However, there are only 33 days of full occupancy each year.

The average stay in Kalaw is less than two days.

According to the respondents of the questionnaire, 85% was the most frequent answer on the key values of Kalaw, followed by Natural landscape (70.6%), Colonial buildings (38.1%), Religious buildings (32.7%) and pleasant weather (27.4%).

Local participants from FGD expressed the places that they would like to show when visitors come to their town. These specific places are the railway station, the 100-year church, the Post Office, the View Point, the Cave (Myin Ma Hti and Shwe U Min), the Hnee Pagoda, the General Technological College (in Military Compound), the Old Hospital, Station Guest House (Bo Tae) and the Paloung Mountain. Tazaungdine lighting festival in November is one of the most popular festivals in Kalaw.

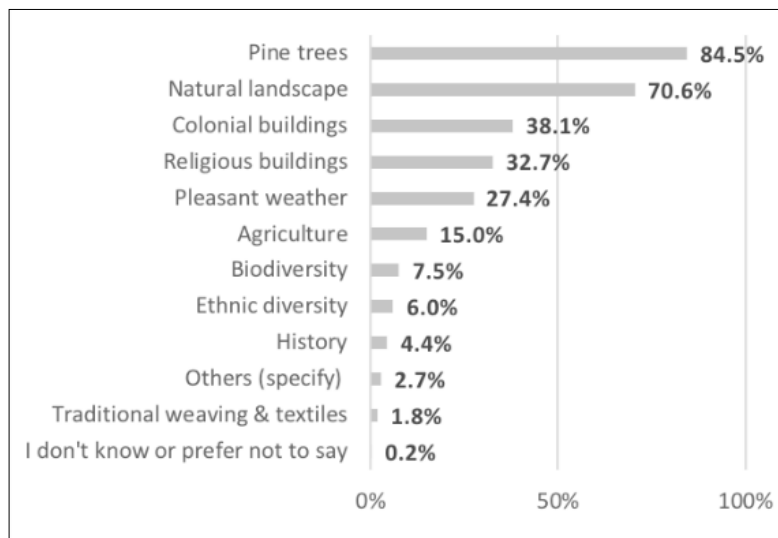


Figure 21. Unique values of Kalaw

6. Environmental factors

6.1 Key environmental assets

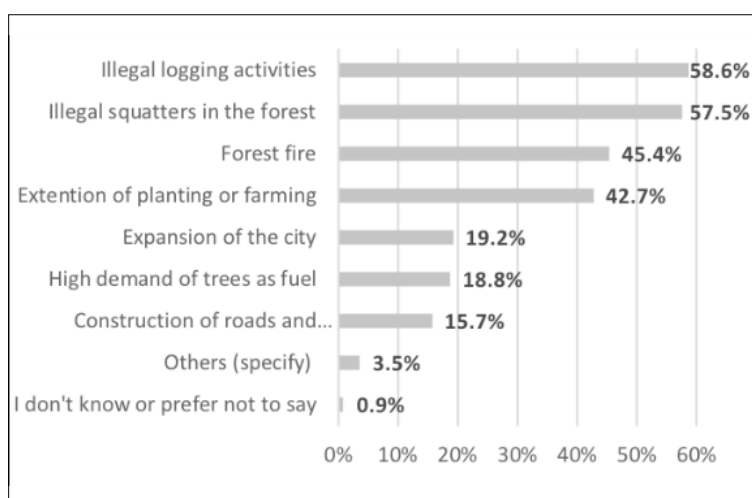


Figure 22. Main reasons for decline of pine trees in Kalaw

The town is located at the sea level of 1,310 meters and surrounded by hilly forests. This enables to keep the weather cool and calm. The average temperature in the summer is below 30 degrees Celsius which is much lower than other parts of Myanmar. The area is also well-known for its bio-diversity. There are over 237 bird species in Kalaw, some says over 400 including species which are rare to be found in other parts of the world. The rich green nature around Kalaw and its topography have been a great asset for long time in Kalaw, used to attract British rulers and now both national and international tourists. Viewpoints in the town provides panoramic views of the Inle plains and the surrounding Shan hills.

6.2 Pine Trees

Pine trees has been recognized as one of the main features of Kalaw. There are two types of pine trees, indigenous species and species which was introduced and planted during British Rule.

However, the number of pine trees are decreasing. According to the survey almost 60% answered illegal logging activity as the main reason for deforestation. This was followed by illegal squatters in the forest (57.6%), forest fires (45.8%), extension of planting or farming (43.2%). Compared to other questions, many respondents were more expressive about this topic, which implied larger concerns about the natural environments and the symbolic pine trees.

Extracting of oil makes the pine trees thinner and weak. The weakened trees cannot survive against strong winds or hard weather conditions. Still, this is considered as one of main business. Some people claim the oil production as a necessity for economic development to provide more business opportunities (FGD). To conserve, pine trees are replanted in the empty patch every year. In 2018-2019, 196 acres were planted (GAD 2019).

6.3 Natural Disasters

Compared to other parts of Myanmar, perceived risks and experiences of natural disaster is much lower in Kalaw town. This situation also results in lower awareness for disaster risk (FGD). The lower parts of the town around Kalaw Creek has higher risk and experiences of flooding. In a township level, strong winds caused an immense damage for the last 10 years.

- According to the questionnaire⁹, 87% of respondents had not experienced any natural disasters in the last 12 months. Still, flooding is the common disaster in some parts of Ward 2, 3, 4, particularly around the northern part of Kalaw creek. The water usually comes up to 1.5 feet. Heavy flooding which cause over 6 feet water rise can happen every 10 years.

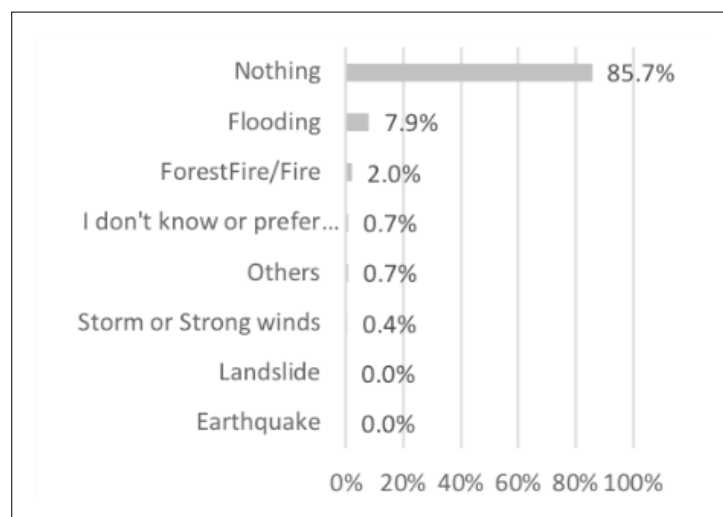


Figure 23. Experience of natural disasters in Kalaw

⁹ The map shows some respondents in the central area had experienced forestfire and storm which are unlikely to happen. These were answers to the question 'Have you experienced any kinds of natural disaster in the last 12 months in your neighbourhood?'. Perhaps these respondents might have reffered their neighbourhood in larger scale, or might have refered an experience which they had in other places.



Figure 24. Experienced natural disasters during the last 12 month

- In terms of awareness, more than half of the respondents do not have particular idea how to respond to a natural disaster. Evacuation to the monastery is the most common answer. Other answers were: evacuate to school, higher area, rescue centre, use emergency bag.
- According to FGD, the participants know about the natural disasters and climate change in other parts of the country, however, they think these are unlikely to occur in their neighbourhood.
- Forest fires occur in the edge and outskirts of Kalaw, nearby the forests. Ward 10 experienced some landslides in the past.
- In the whole Kalaw township, fire is the most frequent natural disaster. Strong winds happen less frequently, however, they cause large amount of casualties and financial damages. The table below shows recorded natural disasters in Kalaw Township from 2009 to 2019 and number of casualties, damaged physical structures, and total loss and damagecost from each type of natural disaster.

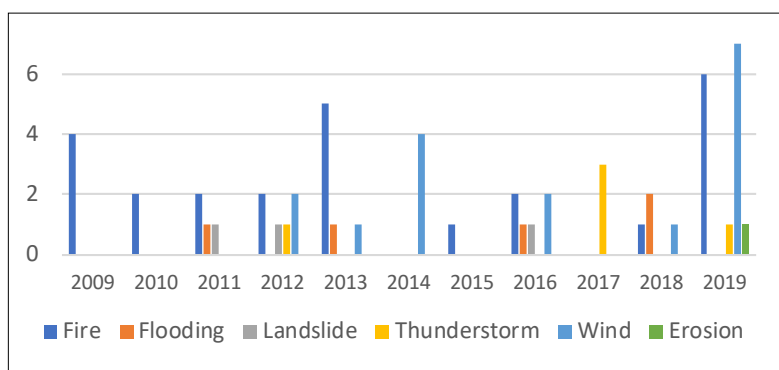


Figure 25. Number of natural disasters in Kalaw Township (DDM, 2019)

Type of disaster	Number of cases	Number of casualties		Damaged physical structures					Cost (million Ks)
		Injured	Deaths	House	School	Monastery	Street	Others	
Fire	19	21	11	30		2		8	32.39
Flood	5							1	0.2
Landslide	3		1				2		
Wind	20	366	1	350	3	7		5	289.79
Thunder	4		4	1					4.01
Sand Tank	1		1						

Figure 26. Total loss and damage cost from each type of natural disaster in Kalaw Township (DDM, 2019)

7. Urban Functions

This chapter overviews the key findings mainly from the questionnaire about each topic. National census (2014) and Kalaw Twownship Report by GAD have more detailed data in township level.

7.1. Housing

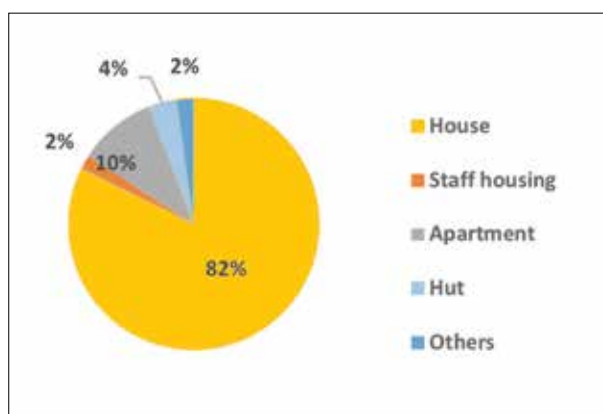


Figure 27. Type of housing among the respondents

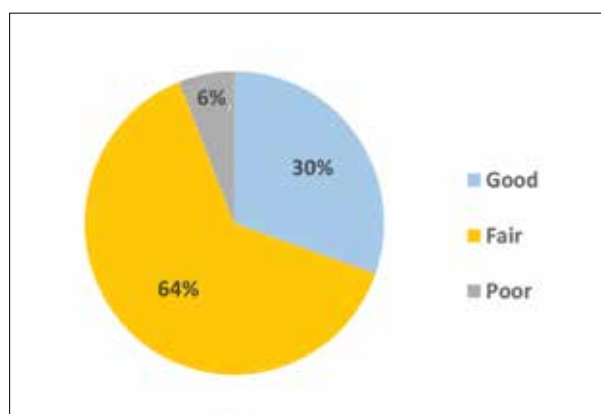
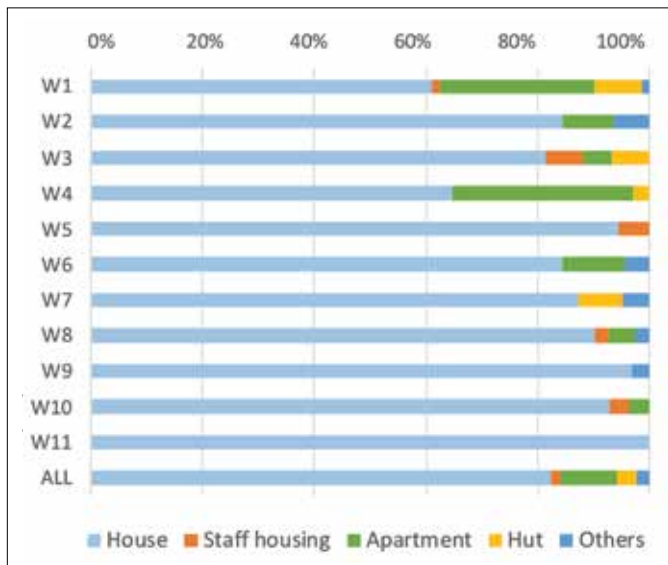


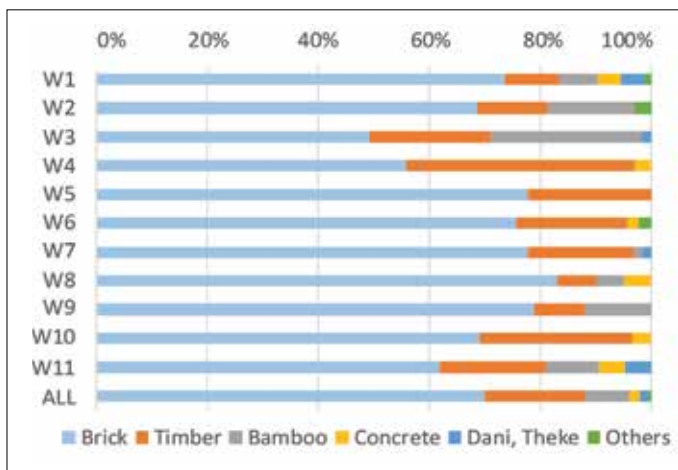
Figure 28. Quality of housing among the respondents

Housing by Ward



- Single family houses is the most popular type of accommodation in Kalaw (82%).
- In Ward 1 and 4, where the density is higher, there are more than 20% respondents who stay in apartments. Whereas all the respondents in Ward 11 are living in a single family house.
- According to the land use mapping, mixed use type of housing and staff housing are observed in the central parts of the city.

Figure 29. Type of housing among the respondents by Ward



- Brick is the most common material (71.7%).
- Timber is more popular in Ward 4, whereas bamboo is used frequently in Ward 3.
- Although the number was less, dani and theke are used in non-central part of the town such as Ward 1, 3, 11.

Figure 30. Main material used for housing among the respondents by Ward

Ownership Status, Stability

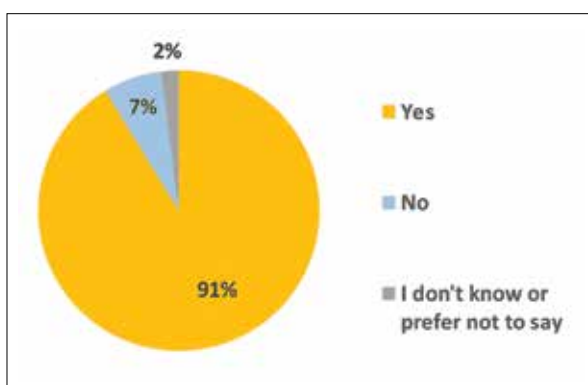


Figure 31. Ownership or rental status of housing

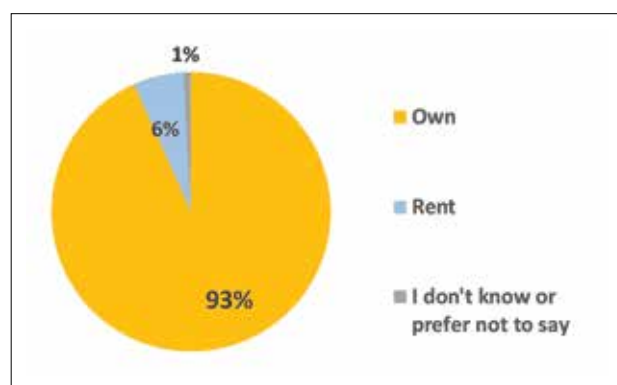


Figure 32. Number of years that the respondents have lived in the same house

- 91% answered that they are free to stay as long as they wish. Comparatively, Ward 3, 5 and 10 shows a higher number of respondents who do not feel free to stay.
- Only government staffs and temporally staff or staff from other duty stations who visit temporarily are provided houses and rental houses. In and out migration is not significant in the town.

Length of stay

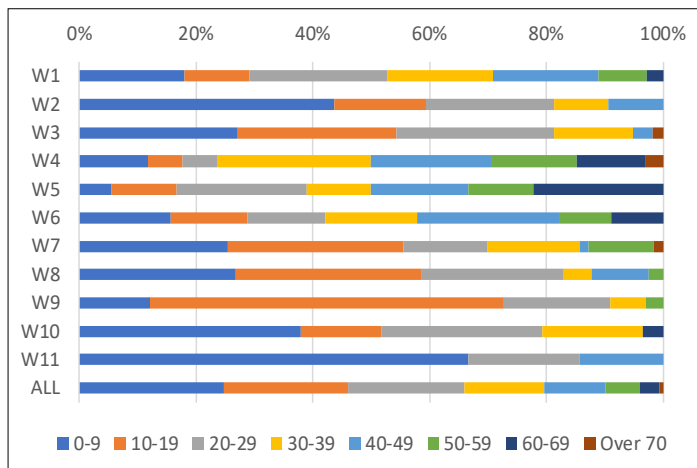


Figure 33. Number of years that the respondents have lived in the same house

- On average, respondents have lived in Kalaw for 36 years. The general number of years in the same building is 23 years. The longest period of stay in the same house was 83 years.
- According to the questionnaire, older residents were more concentrated to the northern (central) part of the city, such as Ward 4,5 and 6.

Informal Settlements in Kalaw

The primary data collection of this City Profile did not include this population. Although informal settlements were not raised as a big issue in Kalaw, it was pointed out in relation to deforestation.

Apart from forest squatters, there are informal settlements along the railway and mountain area. Some stay over 3 years, using municipal services. Most of them are recognized as Myanmar citizens and have a national registration card. They can speak Burmese language and they have access to public facilities (school, hospital, public space, transportation). However, some are not able to get access to municipal services. Electricity or water are often taken through informal connections to the existing infrastructure and grid (FGD, 2019).

7.2 Energy

The provision of electrify to the township is managed by the Electric Power Cooperation (EPC). Most of respondents are connected to public energy grid. The degree of satisfaction differs among Wards.

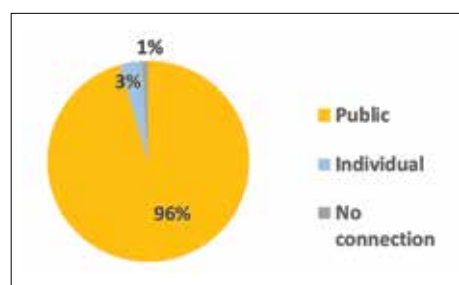


Figure 34. Distribution of respondents connected to public or private energy grid



Figure 35. Satisfaction of access to energy

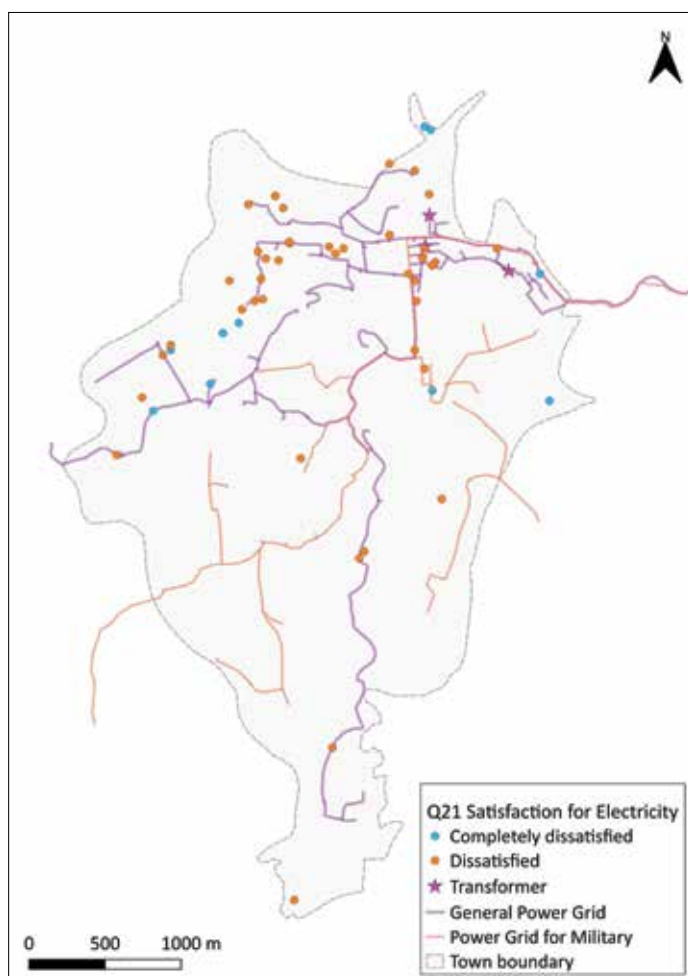


Figure 36. Existing electricity infrastructure and dissatisfied samples

Existing Infrastructure

The Electric Power Corporation (EPC) in Kalaw distributes electricity to 11 Wards, 28 villages in the township. Kalaw power station (33/11 KV, 5 MVA) receives electricity by three power lines. Then this transmits to distribute to each Ward (11/0.4 KV) by 135 transformers with 11/0.4KV and other 11 transformers (33/0.4 KV). There is a separate grid to the military compound.

According to EPC, there are 7419 meter boxes in the town. These 7419 meter boxes are shared by 9933 household. Based on the total household number, the coverage ratio is 80%.

Total voltage capacity is 22,585 KVA. Usage voltage is 5 megawatt (minimum) to 1.32 megawatt (maximum).

There are 9 village tracts under the coverage area of Kalaw EPC which are; Mong, Nang Naing, Loi An, Myin Ma Hti, Taung Lar, Taung Kwe, Wet Hpyu Yae, Shwe Min Hpone and Nang Taing.

Particular	Total Household	Household in Use	Gap	Total usage (%)
Users in the List	12,408	7419	4989	60%
Actual Users	12,408	9933	2475	80%

Figure 37. The total usage of electricity in Kalaw township (EPC, 2020)

Usage

According to the questionnaire, 96% of the respondents are connected to the public energy grid. However, in Ward 4, almost 40% of the respondents are getting electricity from other source.

On average, most people in Kalaw are satisfied with access to electricity (3.9), while Ward 4 has lower satisfaction rate (3.0). Price, low voltage and low stability are the common reasons for dissatisfaction.

In terms of energy source for cooking, electricity is the most common source, followed by coal, firewood and gas. Many people use multiple sources depending on types of cooking, or in case of emergency.

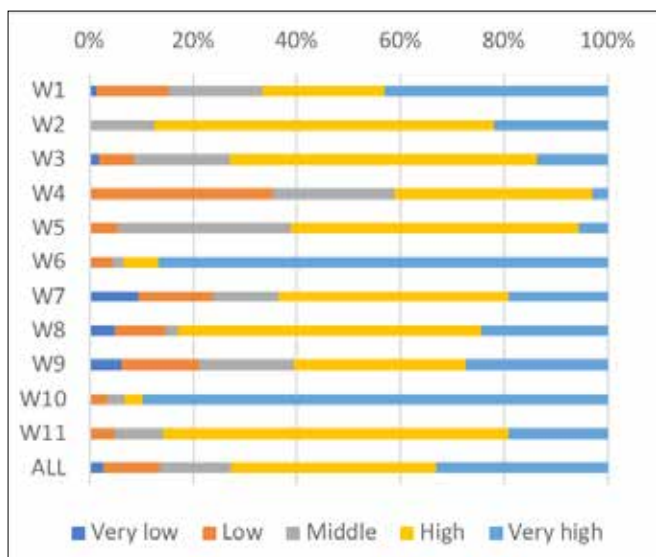


Figure 38. Satisfaction of the access to electricity among the respondents

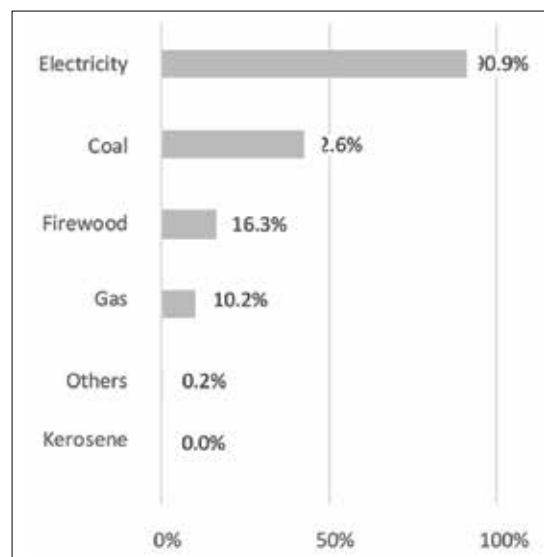


Figure 39. Energy source used for cooking among the respondents

7.3 Waste

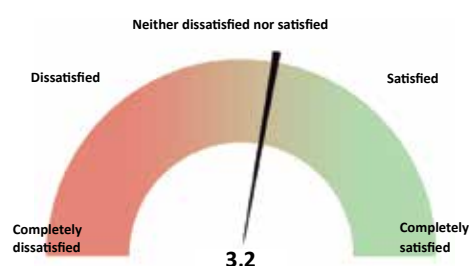


Figure 40. Satisfaction of waste collection services among respondents

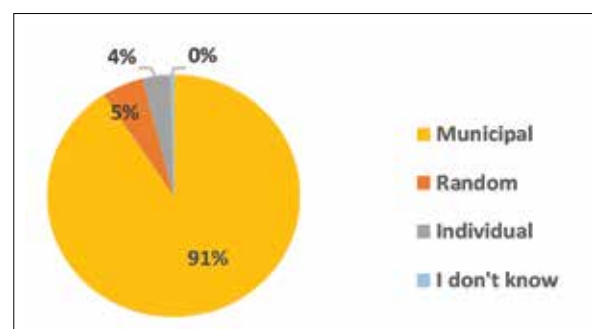


Figure 41. Disposal of domestic waste

Kalaw has put a lot of emphasis to make the town cleaner during the last years. The township has received the ASEAN Clean Tourism City Standard in 2018 for the way the town is managed and kept clean. This ward provided waste collection trucks to the township which contributed to reducing the amount of burnt waste at individual household level. The township also implemented a random disposal free zone as part of One State-One Township Project (see page 21).

Waste collection is managed by only municipal service without any private sector's involvement. There are three waste collection trucks in the department and they collect every day. Each Ward can get trash collected every two days. According to township development committee data, 89% of the total generated waste in the city is collected. After collection, these trucks bring the waste to the final landfill site in Ward 6 which comprehends 5 acres.



Figure 42. Land Fill Site in Ward 6

Vehicle	Area (Ward)	Number of Household	Amount (tons)	Remarks
First Day				
Vehicle (1)	3	505	3.3	10 tons per day in total
Vehicle (2)	8,5	449	3.6	
Vehicle (3)	11,7	661	3.1	
Second Day				
Vehicle (1)	2,4	581	2.97	8.97 tons per day in total
Vehicle (2)	9,10	548	3.2	
Vehicle (3)	1,6	287	2.8	
Total	11	2642	18.97	

Figure 43. Tons of Waste collected by TDC daily (TDC, 2020)

Waste collection practices by Ward

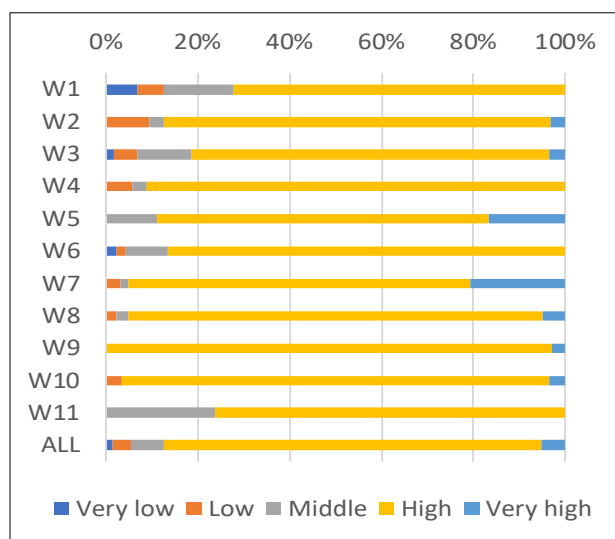


Figure 44. Satisfaction of current waste collection system by Ward

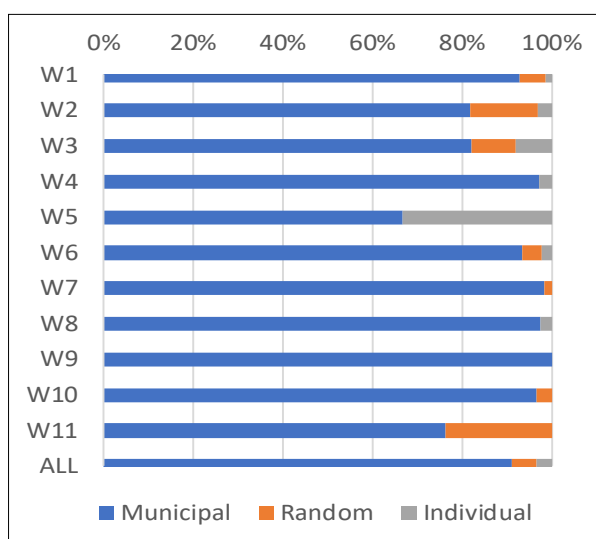
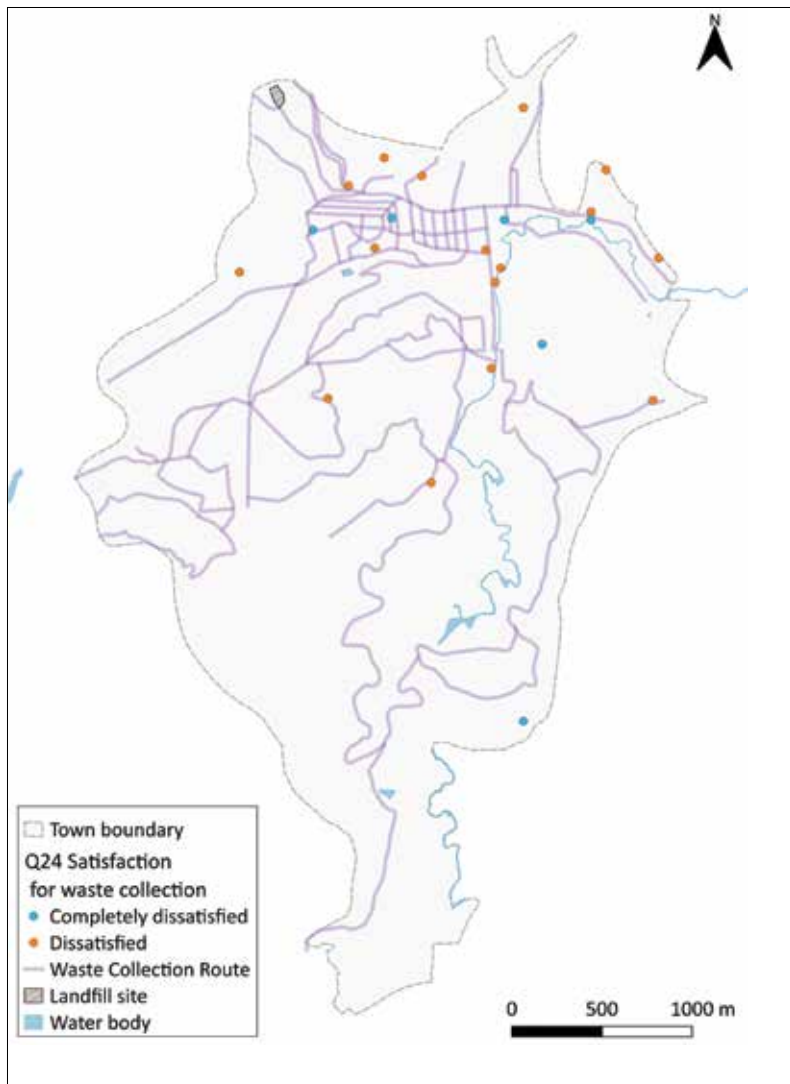


Figure 45. Distribution of waste disposal method by Ward



- According to the questionnaire, 87% are satisfied with the current municipal collection system.
- Ward 1 showed lower satisfaction rate (3.5 whereas 4.0 on average).
- Reasons for dissatisfaction are; frequency, distance to the collection point, price, unclear system, impoliteness.
- 91% dispose waste through municipal collection system. Random disposal is higher in Ward 2 and 11. There is a high ratio of private waste collection system in Ward 5.
- The reasons for random dumping are; irregularity of the collection car, mismatch of collection system by municipality.
- Dissatisfactions were seen although they were already close to the collection route and point.

Figure 46. Satisfaction of current waste collection system by Ward

7.4 Urban transport

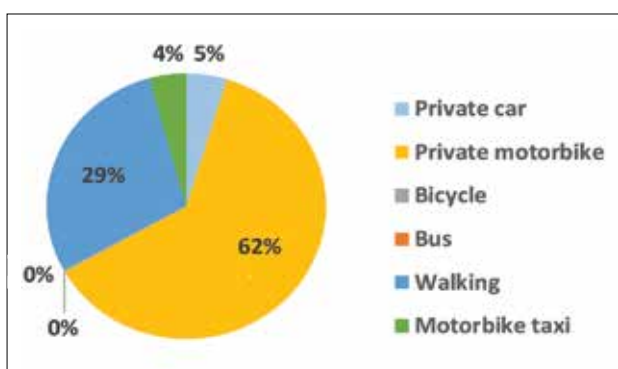


Figure 47. Mode of transport

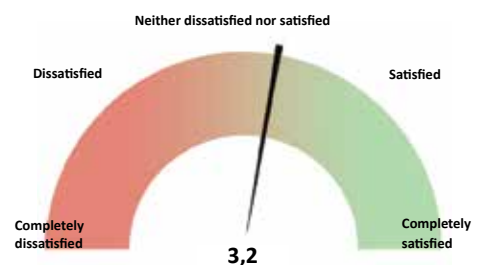


Figure 48. Satisfaction of road quality

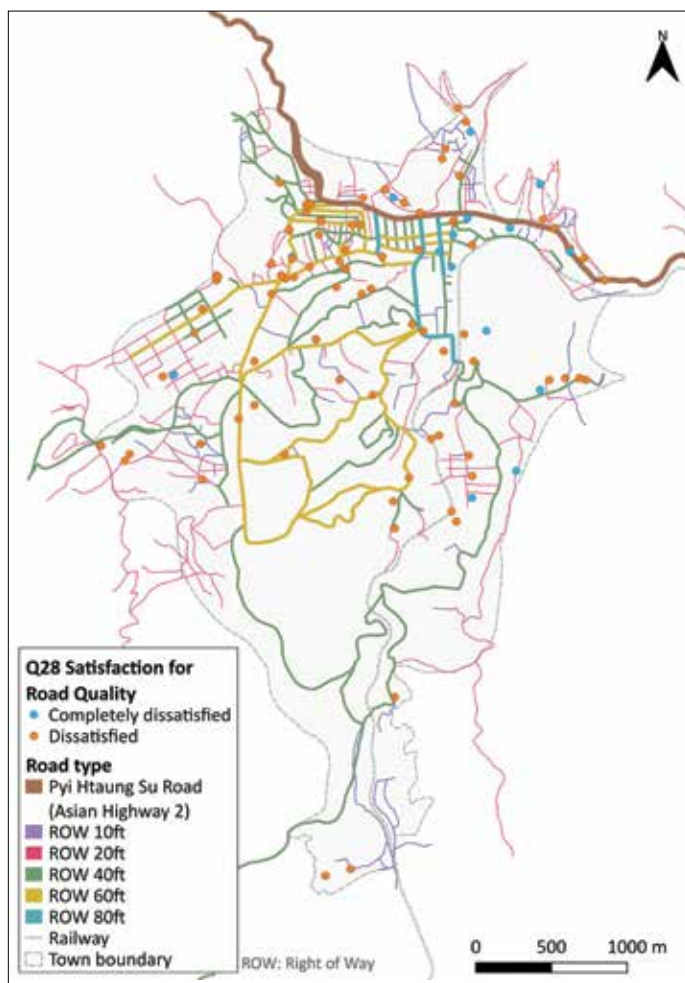


Figure 49. Existing road types and dissatisfied samples

Road infrastructure

- There are two main roads in Kalaw. Pyi Htaung Hsu Road runs from the east to the west and continues outside of Shan State and the Kalaw Ring Road, which has a circular access inside the town.
- Many narrow streets do not allow car access.
- In some of the hilly parts of Kalaw, the roads constitute informal pedestrianized paths, mostly too small to access by motorbike.
- The large military compounds in Ward 2,3 10 block access and cause longer distances.
- On average, 26 % of the respondents shared dissatisfaction of the existing road condition. Ward 3,7 have the lowest satisfaction rate 2.8 and 2.7 respectively.
- Poor condition, width, lack of parking space, disorganized usage, lack of support by public are main reasons for dissatisfaction.

Mode of transport

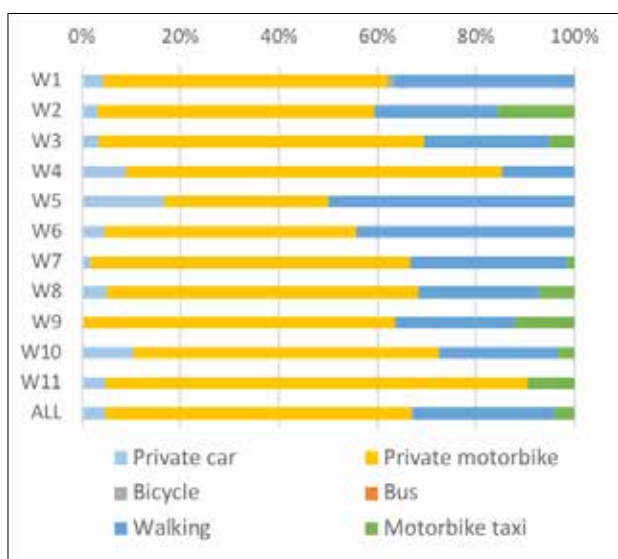


Figure 50. Main mode of transport by Ward

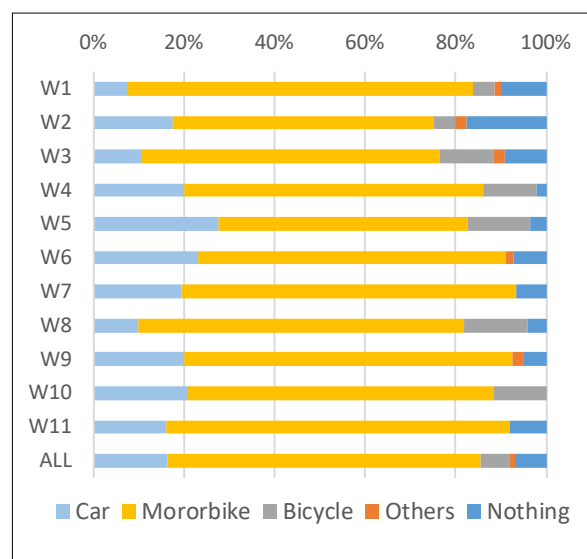


Figure 51. Ownership of vehicle by Ward

Motorbike is the easiest way to go around in Kalaw due to its hilly landscape and narrow roads in some parts of the city. Motorbike is the most popular mode of transport (62%) followed by walking (29%) and private car (5%). In Ward 5, Walking is the most popular mode of transport while no respondent answered walking in Ward 11.

70 % of the respondents own a motorbike. This ratio is lower in Ward 4 and 5. From FGDs, it was suggested to introduce road safety measures in areas of heavy traffic such as Min Road, Pyi Htaung Su Road and Ring Road. Small shops and vendors on the roadside and walkway were raised as main concerns and reasons for traffic accidents.

7.5 Drainage

Drainage system is maintained by TDC. Currently, it is provided along the main road in Kalaw. Some hilly parts do not have drainage. Instead, natural terrain conditions are used to divert the water.

25% of the respondent's express dissatisfaction of the drainage system. Respondents in Ward 4, 5 and 7 express lower satisfaction rates, whereas the satisfaction was higher in Ward 11.

The main reasons for lack of satisfaction are: malfunction, blockage by waste/physical structure, absence of drainage system. In Ward 7, a higher number of respondents raised the absence of drainage system as main reason for dissatisfaction.

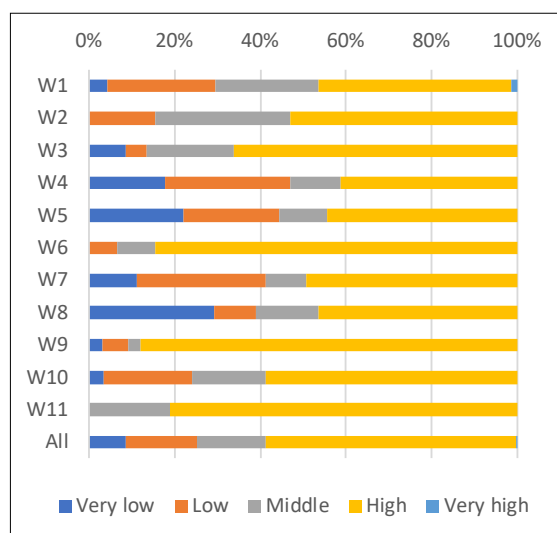


Figure 52. Satisfaction of drainage system by Ward

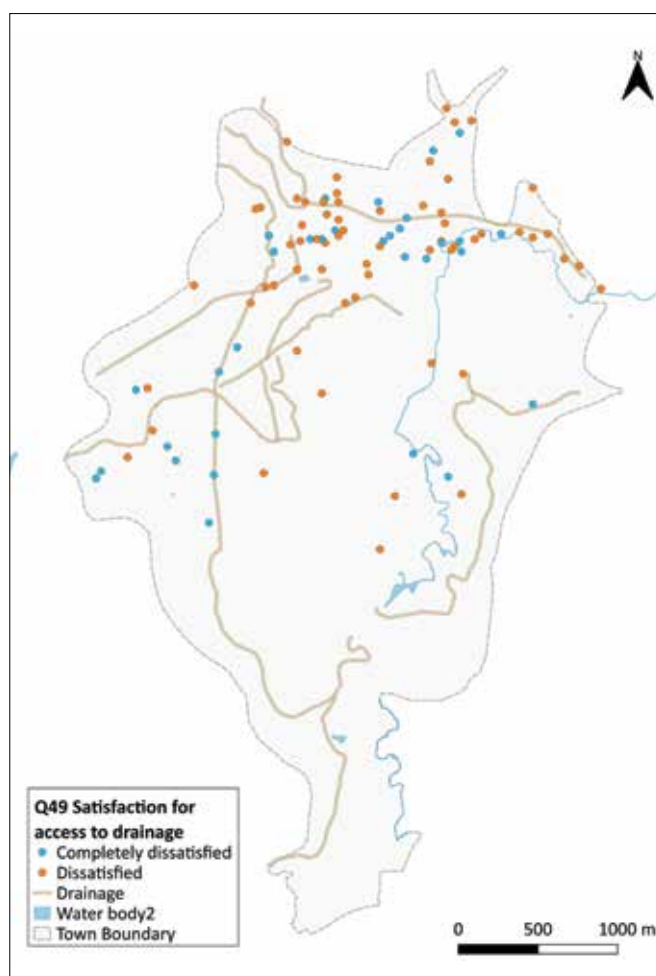


Figure 53. Drainage and dissatisfied samples



Figure 54. Level of satisfaction of drainage system

7.6 Water Supply

Water distribution is managed by TDC. Surrounded by water ponds and facilities, the town rarely has experienced critical water shortage issues compare to other villages and cities in the Southern region of Shan State. The residents use multiple water sources. The major type of water source differs among Wards

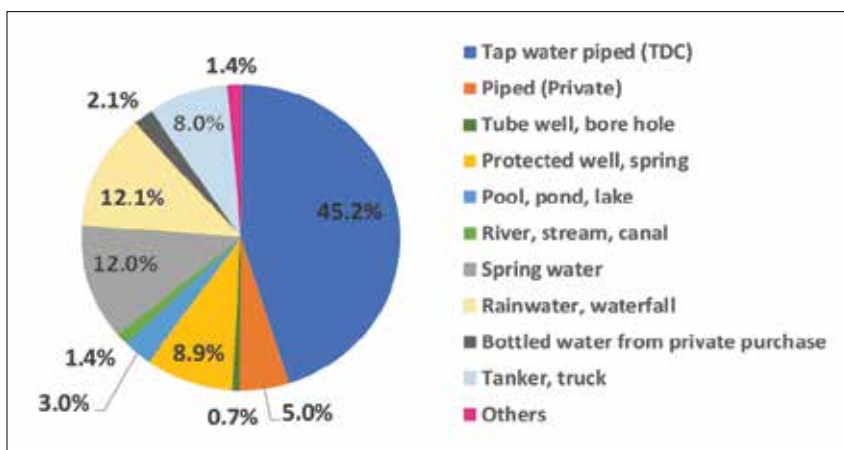


Figure 55. Water source for domestic use among respondents



Figure 56. Satisfaction rate of water supply

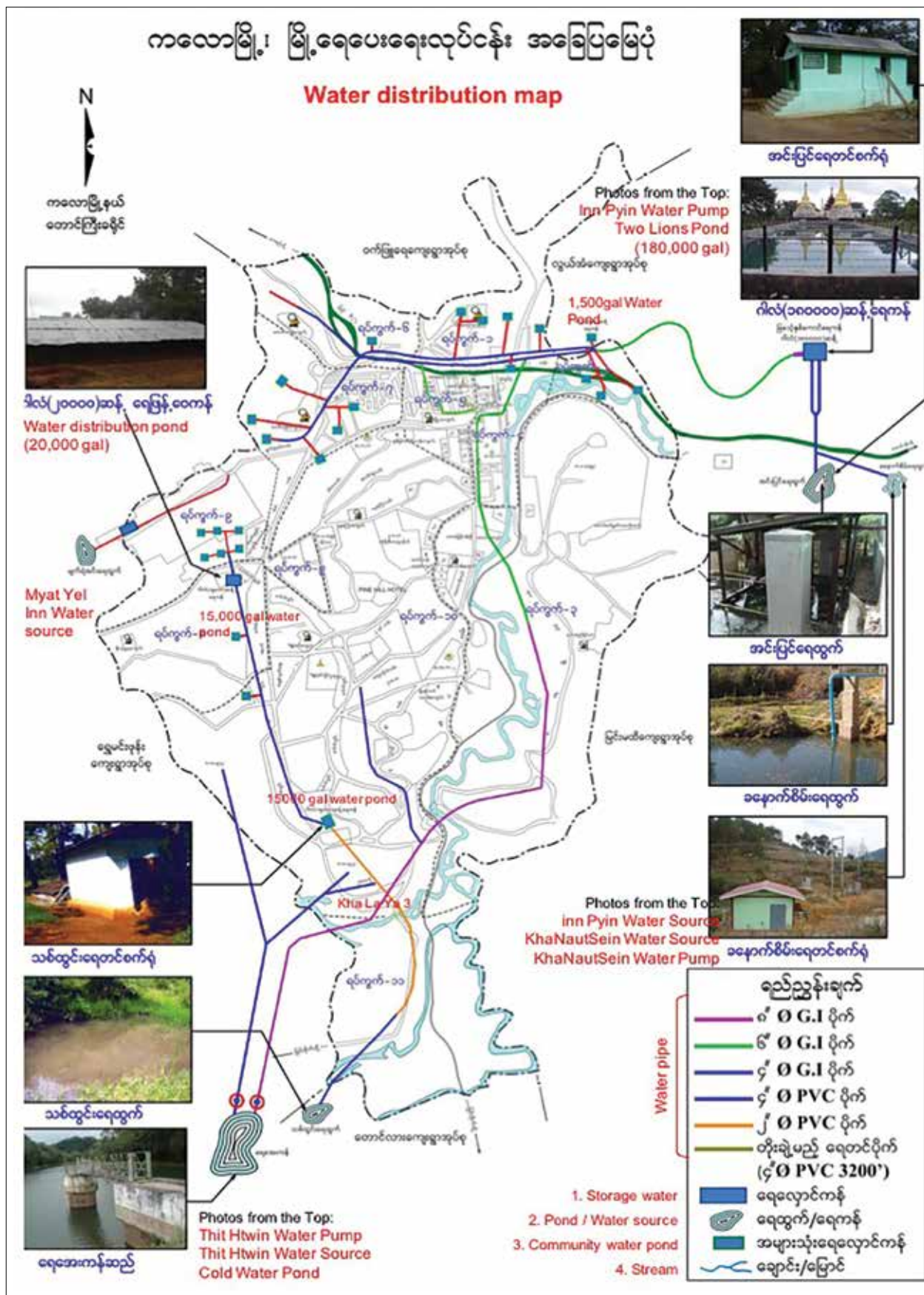


Figure 57. Public water facilities in Kalaw town (TDC, 2019)

Water infrastructure

- Kalaw township has 1 public dam and 8 private dams. There are some plans for supplying water to 8 villages under state funding of 2019-2020 budget. Another 9 villages will be supplied water under union budget of 2019-2020.
- For Kalaw town, there are mainly four water sources being used (fig. 58). These are; a) YeAyeKan (Cold Water Pond) , b) InnPyin, c) KhaNauntSein and d) ThitHtwi. The cold water pond on the south west of the town is the primary source. This reservoir was originally built by the British.
- The public dam nearby this reservoir was damaged in 2007. There was a proposal of dam upgradation led by local MP, however, due to difficulty to identify specific department or organization to manage the project, the process has been slow (TDC interview).
- The capacity of water provision has been improved since they installed new pumping system at the main reservoir in 2015 with the support of JICA. Currently, JICA supports survey of Kalaw Creek as a part of their large project about inspection of water quality of creeks inflowing into the Inle lake.
- As of 2020, TDC provides water to 1772 households for 480,000 gallon in total in the town (TDC , 2020). This means its coverage is 42.7% of urban population. TDC estimates that the current water source have enough capacity even if the population increase in 2025¹⁰ .
- At the moment, they charge 200 kyats per unit. However, the TDC cannot make profit from this price setting because of the increase of electricity price, maintenance cost and salaries of staff. TDC is planning to increase this to 400 kyats per unit from 2019-2020 budget year according to their meeting with the State department (Meeting Ref No. 31/2019).

Name of water source	Daily Water Supply (gal)	Ward	Households
Cold Water Pond	200,000	3,4,5,8,9,10,11	820
Inn Pyin	180,000	1,2,3,4,5,6,7	906
Kha Naut Sein	50,000		
Thit Htwi	50,000	8,9	46
Total	480,000	11 Wards	1772

Figure 58. List of main water sources for Kalaw town (TDC, 2020)

Water sources by Ward

According to the questionnaire about water source for domestic use (fig.52), 44.7% are using tap water from TDC, followed by rainwater (12.4%), spring water (12.2%). However, in Ward 11, there were no respondents who use tap water from TDC. Instead, piped water from private sources are the most common source in the ward.

For drinking water (fig60), 48 % uses bottled water from private purchase. Ward 6 and 11 show very different results. Piped tap water from TDC and protected well are the popular sources in Ward 6, whereas piped tap water from private and spring water are used more in Ward 11.

¹⁰ Suppose it increases 1% per year. In 2025, the population will be 21,114. If the each person needs 20 gallon/day, the water requirement in 2025 will be 422,280 which is still 57,720 gallon less than current capacity.

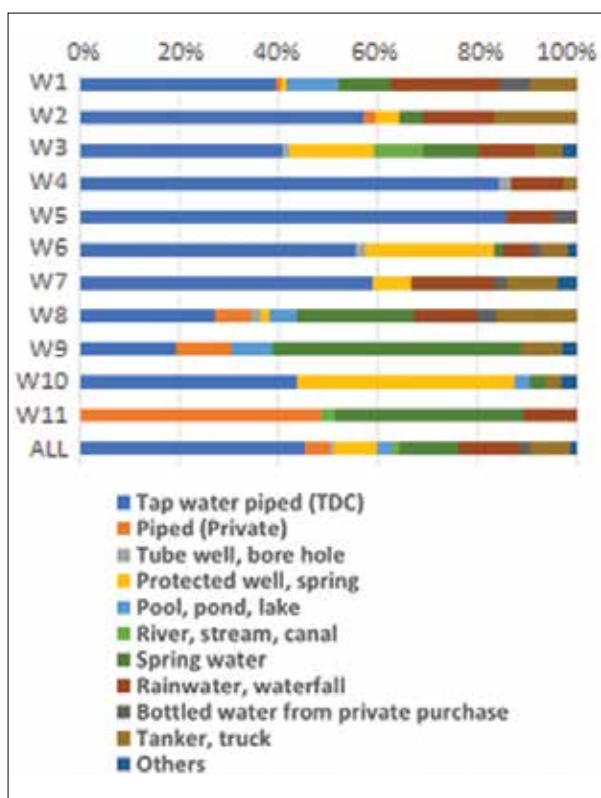


Figure 59. Water source for domestic water by Ward

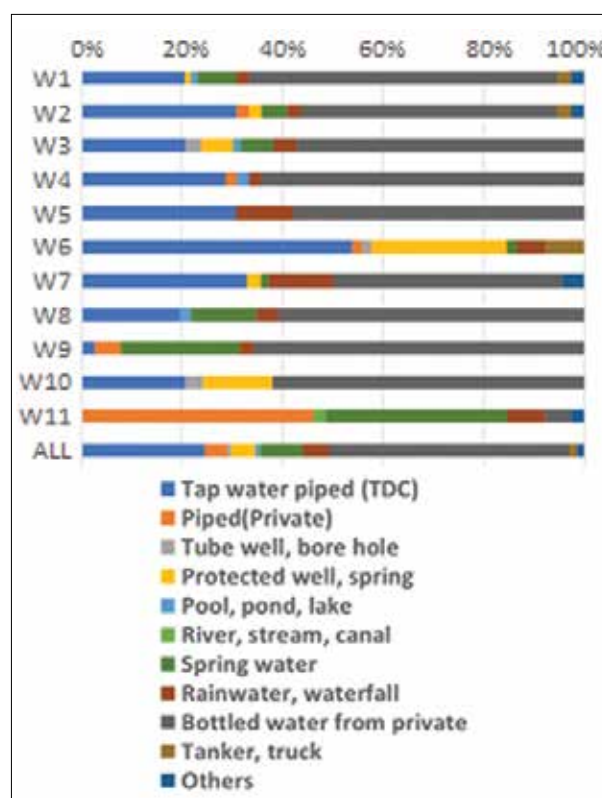


Figure 60. Water source for drinking use by Ward

Satisfaction for clean water by Ward

According to the questionnaire, on average, 28% of respondents showed some kind of dissatisfaction. Among all, Ward 1 showed comparatively lower dissatisfaction rate. This might be caused by its high density and less availability of natural water sources compared to other Wards. Some respondents mentioned the reasons for dissatisfaction. The most popular reason was quantity followed by price and quality.

No respondent from Ward 11 showed any dissatisfaction. This might be caused by its proximity to natural water sources. Since the quality of water is good and easy to get in this area, they rely on these sources by using individual pumps rather than connect to the public network.

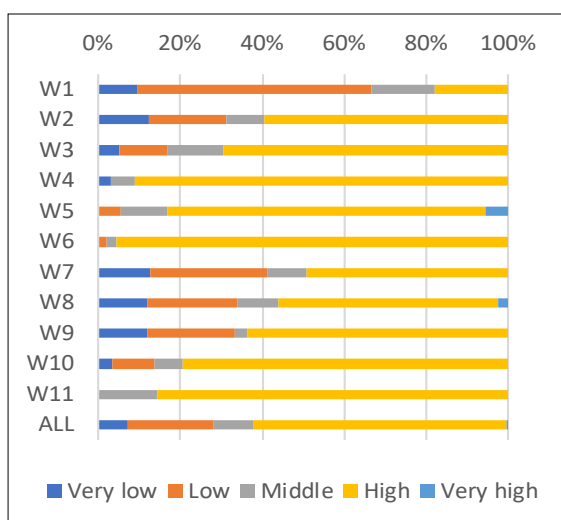


Figure 61. Satisfaction for access to clean water by Ward

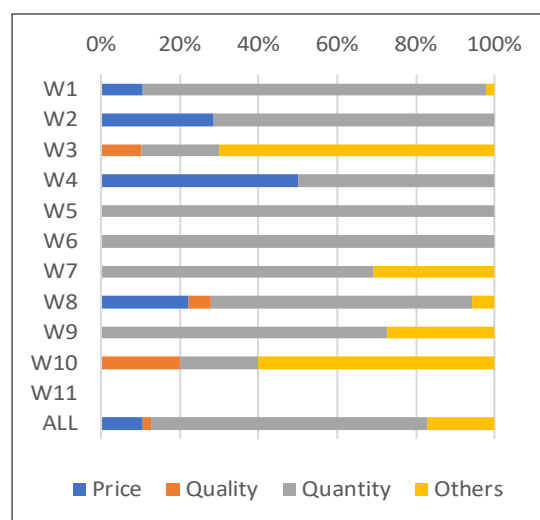


Figure 62. Reason for dissatisfaction of water provision

7.7 Sanitation

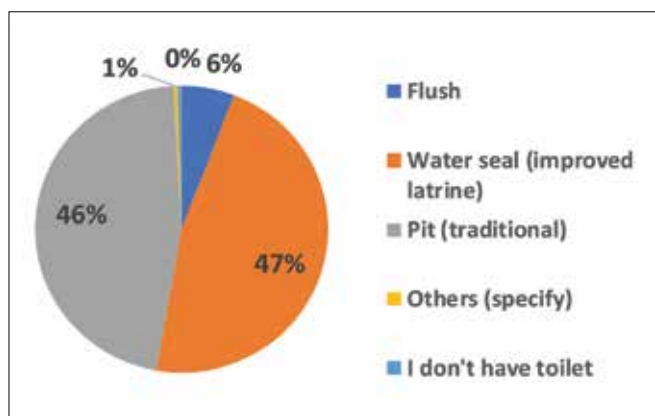


Figure 63. Type of toilet used



Figure 64. Level of satisfaction of sanitation system

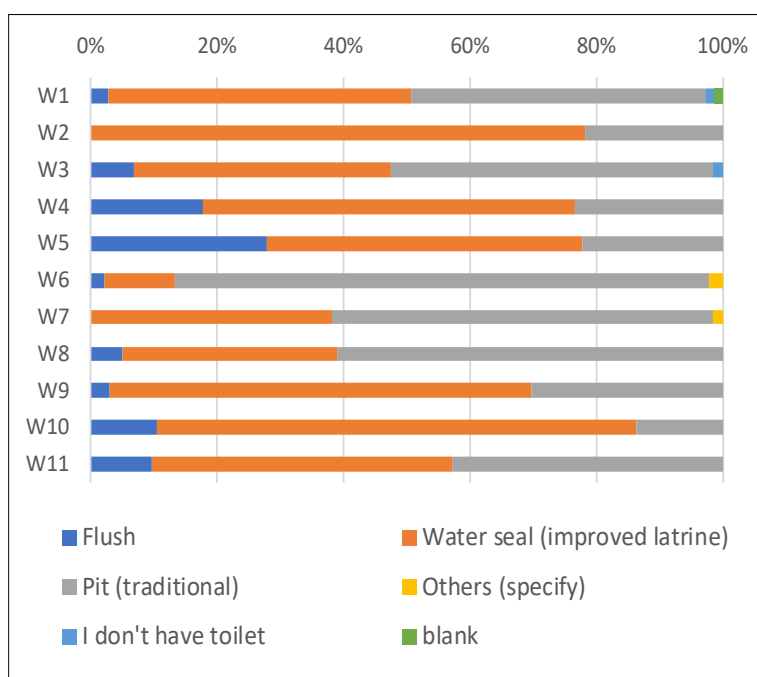


Figure 65. Type of toilet used by Ward

Water seal and traditional latrine are the most common type of toilet in among the respondents in Kalaw. Ward 4 and 5 have more advanced types of toilet such as flush and water seal. Large amounts of respondents in Ward 6, 7 and 8 are using traditional Latrine.

There are some public toilets in the town, near public facilities such as the railway station and Kalaw Myoma Market. However, the access to the public toilets are limited in some cases. For example, the toilet at Kalaw Myoma Market is used only by market staffs. Some visitors experienced being charged to use that toilet.

7.8 Public Space

Number of visits to public space in the last 7 days:

0.63



Figure 66. Satisfaction of access to public space

Existing situation

There is only one large park in Kalaw, the Kalaw Garden in Ward 4. Since the town is surrounded by a rich natural landscape, forest and mountains, people often use the nature around Kalaw for recreation. Religious places are also used for recreation and social activities. According to conducted FGDs, the frequency of use of public spaces is dependent on the proximity, traffic situation and the physical structure of the place itself. Sports equipment and playground for children was raised as desired elements in public spaces. In some parts of the town, kids play in spaces which are supposed to be for other purposes such as roads. According to the residents, there used to be more spaces to play like this in the past.

Accessibility & satisfaction by Ward

On average, the respondents visited a public space 0.63 times per week. Respondents living in Ward 6 gave a much higher number than the average, 2.33. The average of male respondents was 0.74, which was slightly higher than that of female 0.57. The satisfaction level for access to public space was 3.5, whereas Ward 2 and 4 had shown much lower rate, 2.9. Female respondents shared higher satisfaction on average (3.34) compared to that of male (3.26).

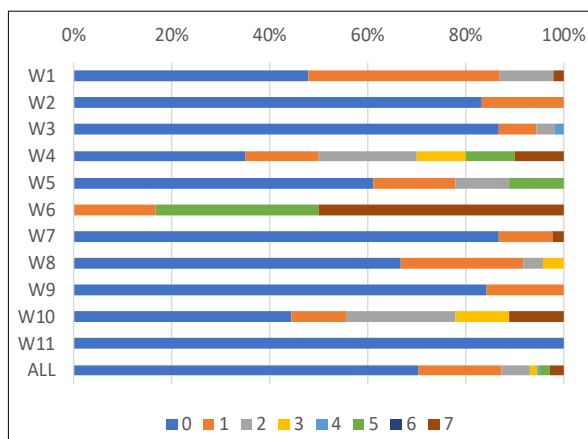


Figure 67. Number of visit to a public space during the last week by ward

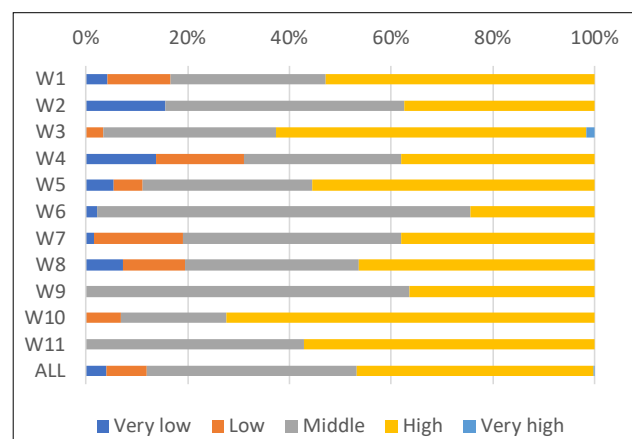


Figure 68. Satisfaction of access to public spaces divided by Ward

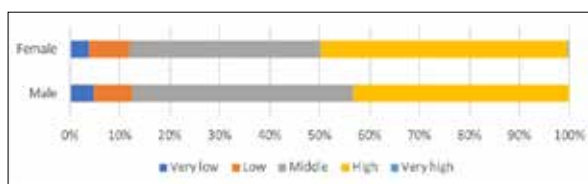


Figure 69. Number of visit to a public space during the last week by gender

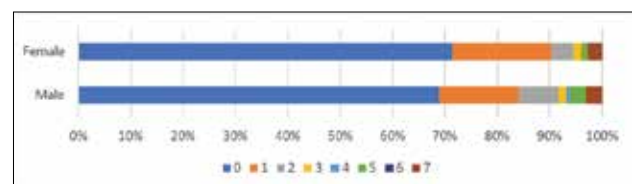


Figure 70. Satisfaction of access to public spaces by gender

Conclusion

The City Profile of Kalaw has been a first pilot to produce a set of data of the town as a basis for better urban service management and planning. The ward level data and the perspective of usage in the conducted primary data collection provides new insights for development priorities in Kalaw. The result is based on existing data as well as collected primary data including spatial and institutional aspects at ward level, covering approximately 10% of all households in Kalaw. For a more comprehensive analysis, a larger set of data would need to be collected and more in depth studies conducted. By integrating with other data, the result can be used as reference for upgrading ongoing urban service management and planning. There are a number of key findings that can be pointed out:

- Energy and waste collection have the highest overall satisfaction rate in Kalaw whereas drainage, water, road quality and public space has a slightly lower rate among the respondents. This links to the primary key challenges defined during the primary data collection of environment, public space, water, sanitation and traffic.
- Ward 11 has low density and a rapid population growth in the past 10 years. The ward has a relatively low car ownership, proximity to nature-based water sources and has a self-sufficient system to a larger extent. The condition might change if the population continues to grow in the future.
- Ward 1 has a high population density and high population growth rate. Satisfaction for access to domestic water was comparatively low. In the ward, a high number rely on rainwater and pond for water for domestic use, less for water from TDC. The number of public tanks and pipe line is limited. This implies about a higher need for water access in the area.
- Waste management and clean environment is one of the key priorities for both authorities and residents. This was also shown from the efforts in ongoing One State One Township Project. Still, in the area with higher population density such as Ward 1, the satisfaction of the municipal waste collection service was lower. This implies the necessity for more intense interventions in the area.
- The northern side of Kalaw Creek are prone to flooding. Dissatisfaction of the drainage system was also higher caused by malfunction, smells and waste clogging. In addition to the low land level, informally dumped waste clog the water to flow. This shows a necessity of further technical assessment and cleaning of Kalaw Creek to improve the situation of flooding and negative impact on the environment.
- The primary data result shows that the most frequent mode of transport is walking or use of motorbike even in the cases where the ownership of a car higher. Based on the result on road connections and safety, the limited road connections as well as road standard might be a reason for that. It might also imply an existing and increasing wealth in Kalaw.
- Female respondents showed a stronger concern about health and sanitation than male respondents. In addition, there was a difference in number when it came to public space use where women expressed a lower number of visits than male.

The value of the City Profile is not only on the data itself, but also the process. The pilot showed some important perspectives to highlight in the development of the process in the future and when scaling up the methodology to other towns and cities in Myanmar.

- **Questionnaire development**
The development of the questionnaire should be developed through consultations with experts and local officials to avoid misunderstandings and nuanced differences. To further reach ethnic populations, translation to other languages than English and Myanmar might be necessary.
- **Fact-based questions for stronger evidence**
For stronger evidence and a more comprehensive data collection, the questionnaire could include more of

fact-based data such as monthly expenses for the water, monthly income, amount of waste disposed per day. Questions related to perception, personal aspirations or challenges would in some cases need follow up interviews to get a broader understanding of the reason behind the reply as well as a joint understanding of the criterias.

- **Local team should be involved from the methodology development phase.**

In this pilot, the process was mainly managed by SKL International as a result of lack of human resources on local level. Increased responsibility and ownership of local authorities throughout the process, from early phase, implementation and analysis of data will further improve capacity and future interventions.

- **Data base collection**

During the pilot, the primary data collection was conducted mainly by government staff to improve knowledge and ownership of data on local level. The consequence might have been some biased responses. The intention of data collection needs to be clearly defined and explained in advance and during the training session to minimise potential biases. Available time for surveyors to properly familiarise with digital devices and methodology is needed before implementation of data collection.

- **Inclusion of marginalized population**

For a comprehensive data collection and accurate result on perception and access to services, the inclusion of marginalized populations and vulnerable groups such as informal settlers should be prioritised.

- **Gender segregated data**

The primary data collection should be targeting the same number of men and women and have segregated data collection by gender. This improves the understanding of needs and activities and minimise the risk of presumptions of conditions.

As a next step, the learnings from this pilot project can be shared with other towns and cities in Myanmar. By integrating with other good examples, the methodology can be further developed and refined to fit the local needs. In order to scale up to other cities, it is crucial to clarify institutional arrangement, standard methodology, risk & quality management system, use of data and data protection policy. In Kalaw, the collected data can be used as reference for further analysis and effective urban planning. The team can also upgrade the methodology and conduct further in-depth studies or surveys to analyse specific issues more in depth. In addition, a more comprehensive data collection would give the opportunity to include part of the population who was not covered this time. Furthermore, the collected data provides important insights for future decision-making as well as the strategic development of Kalaw steered in the Town Plan.

References

- The Asia Foundation. (2018). The 2018 City Life Survey Summary Report.
- Department of Rural Development. (2019). Mya Sein Yaung Project List under 2018-2019 Budget Year.
- Department of Population. (2015). The 2014 Population and Housing Census- the Union Report.
- Directorate of Hotels and Tourism, Taunggyi Township. (2019). List of Hotels and Occupancy Rate in Kalaw.
- Department of Rural Development. (2019). Mya Sein Yaung Project List under 2018-2019 Budget Year.
- Electric Power Cooperation. (2019). Electricity Service Provision in Kalaw Township.
- Japan International Cooperation Agency. (2017). Preparatory Survey for Regional Development for Poverty Reduction Phase II Final Report.
- Kalaw Township Development Committee. (2019). Presentation about Waste Collection Status and Way Forward in Kalaw Town.
- Kalaw Township Development Committee. (2019). Presentation about Water Supply Status in Kalaw Town by JICA ODA Loan.
- Kalaw Township Development Committee. (2018). Water Supply in Kalaw Town Presentation.
- Kalaw Township General Administration Department. (2019). Kalaw Township Report.
- Kalaw Township General Administration Department. (2019). One State-One Township Project Document.
- Kalaw Township General Administration Department. (2019). Population List in Ward/Village Tract under Kalaw Township.
- Myanmar Information Management Unit. (2020). MIMU Official website. <https://themimu.info/>. [Accessed April 2020].
- Myanma Railway. (2018). Information of Kalaw Station.
- Myanmar Typical Exploration Tours. (n.d.). Train Schedule. <https://www.myanmarmtetours.com/train-schedule.html>. [Accessed April 2020].
- Planning Department. (2020). Kalaw District Investment Master Plan under State Budget (2019-2020).
- Planning Department. (2020). Kalaw District Investment Master Plan under Union Budget (2019-2020).
- Planning Department. (2020). Total Gross Output Value in each sector (2018-2019).
- Planning Department. (2019). Per Capital GDP in Kalaw Township (2018-2019).
- Shoon Le Win. (2019). KBZ Group to upgrade Heho Airport into fourth international airport. Eleven Media Group Co.,Ltd. <https://elevenmyanmar.com/news/>
- kbz-group-to-upgrade-heho-airport-into-fourth-international-airport. [Accessed April 2020].
- Snoad, C. (2017). Off-Season Vegetable Farming Water Access Analysis, Shan State, Myanmar. Mercy Crops.
- Travel Fish. (n.d.). Kalaw travel guide. https://www.travelfish.org/location/burma_myanmar/central_burma_myanmar/shan_state/kalaw. [Accessed April 2020].
- Zaw Zaw Htwe. (2018). Over 2000 households need water in Shan State. *The Myanmar Times*. <https://www.mmmtimes.com/news/over-2000-households-needwater-shan-state.html>. [Accessed April 2020].

Annex 1. Methodology

This annex outlines the methodology and process used for the City Profile in Kalaw 2019-2020.

The City Profile was compiled through several sources and methods, including:

- Secondary Data Collection
- Questionnaire-based survey
- Land Use Mapping
- FGD

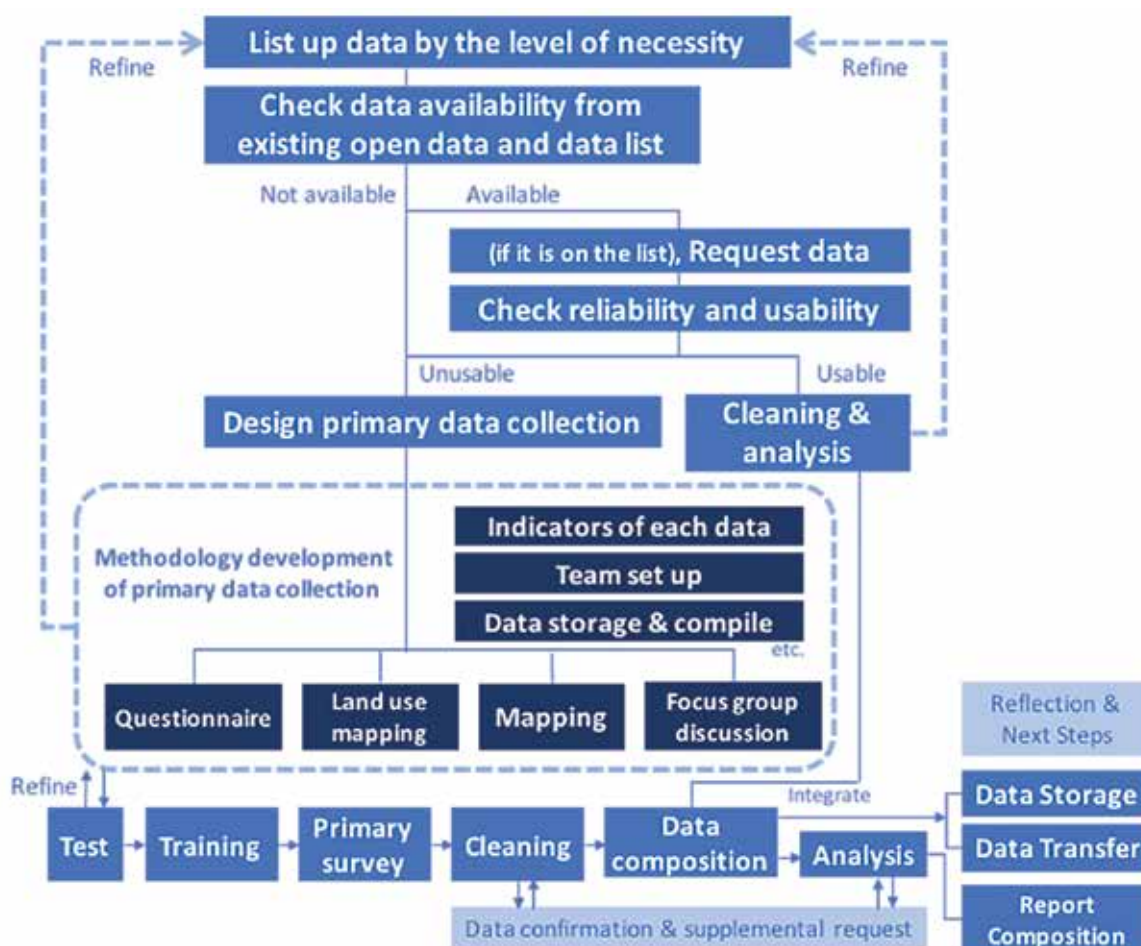


Figure 71 . Process of Kalaw City Profile

The organization:

Team	Roles
GAD in Kalaw	Coordination in Kalaw Side, Data Collection
Ward Administrators in Kalaw	Team mobilisation, Data Collection
Other Departments in Kalaw (TDC, PD, EPC etc.)	Secondary data provision
Town Planning Team in DUHD	Land use mapping
GIS team in DUHD	GIS map composition
URDI in DUHD	Coordination between Yangon and Kalaw, supervision
SKL International	Technical Assistance, Project Coordination, Methodology Development

Figure 72 . Main organisations involved in Kalaw City Profile

a) Secondary Data Collection

Secondary data was collected during the preparation phase in order to verify the knowledge scope and gaps. The data was collected from GAD and TDC and other departments for specific thematic reports.

The team also collected secondary data from open sources. The Kalaw Township Report, based on national census 2014 and GAD's Kalaw township report (2017), from Myanmar Information Management Unit (MIMU) showed comprehensive overview of the existing data in Kalaw.

b) Questionnaire-based survey

This survey was aimed to further understand people's experience of the state of municipal infrastructure and service delivery with the aim of generating additional spatial insights by asking set of questions on Ward level. A Ward level comparison enables city planners and government officials to understand the intra-city dynamics of service delivery and infrastructure provision and better plan to service those parts of the city that are deficient in provision of services.

The survey used *Kobo Toolbox*, a free open survey software which have been used for many other humanitarian assistance & development programs. Hands-on training was conducted. Manual and informed consent form were prepared for surveyors. The training also included confirmation and validation of the questionnaire. The survey was conducted between 2nd, 3rd (AM & PM) and 4th (AM) of October 2019. Out of the 21 surveyors, 14 were female and 7 male. The data was collected in couples with one female and one male representative. After data collection the data was validated, cleaned and digitalized.

Sample size and selection of households

The target samples were more than 10 % of total household numbers in Kalaw. Based on target sample numbers of each Ward, the Ward leader prepared possible respondents by marking on existing household map based on balance of gender, location, socio economic status and age. If the respondent was not available, another household was chosen. The questionnaire was designed for a 30 minutes interview with around 80 questions.

The actual data collection took 2.5 days, conducted by 22 surveyors who completed 455 samples. Within that, 438 samples were valid. Each interview was conducted by 1 or 2 surveyors. Surveyors were either junior GAD staffs or Ward officers. Each surveyor conducted 5-7 interviews per day. In the end of the day, the data was submitted to management account and followed up.

Profile of respondents

The gender distribution and age distribution of respondents are shown on the charts below. As the survey was conducted during working hours, the ratio of aged respondents, home-based business operators or workers was higher.

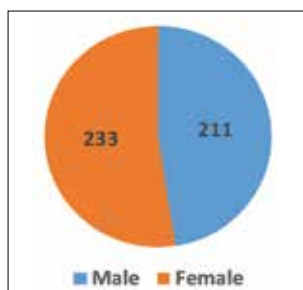


Figure 73. Gender distribution of respondents

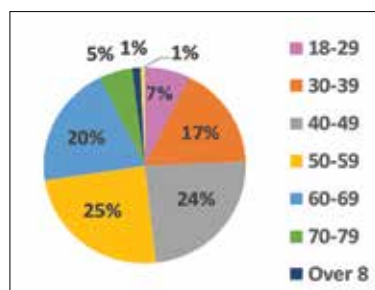


Figure 74. Age distribution of respondents



Figure 75. Conducting questionnaire based survey

c) Mapping

Mapping was done as a complement to improve the data collection. The categories were limited to the following six types; Municipal Waste Collection Point, Informal Dumping Place, Informal Playground, Informal Market / Shops, Drainage Issues, and Public Toilets. The surveyors were split into 7 teams. Each team consisted of 3 surveyors with specific tasks; GPS recorder, Paper-map recorder & navigator, note & photo taker. GPS devices were used for digitalization. The survey was conducted of the period of 2 days including a half day training.

d) Focus Group Discussions

FGDs were used as a complement to the primary data collection. Based on the results from the questionnaire and identified inadequate information of specific themes, the team focused on three key themes: public space & safety, heritage & identity, disaster risk reduction. In addition, for clarification of some parts from the questionnaire, some additional questions were discussed. Each FGD was conducted during one hour with 4-5 participants, facilitated by 1-2 organizers at the 4th of October. The results were used as a reference and supportive material for some thematic aspects.

e) Land Use Mapping

The land use mapping was conducted by the town planning team from DUHD in Nay Pyi Taw. This team already had a basic numbering system depending on land use type. Using GPS devices, each land use area was marked in Kalaw and Aung Pan with the assistance of the Ward authorities. New layer codes were added based on the findings. The land use mapping team also marked all the road and categorized by the width. In the hilly town of Kalaw where many roads were still not shown on existing open-source map and paper-based locally produced map, the data is important for preparation of the base map of the town and to get a better overview of the existing connectivity.

Annex 2. List of Questionnaire

No.	Question	Answer
<i>These first three questions were recorded by the surveyor before the interview.</i>		
1	Record the location.	(Wait until Kobo app detect location or manually add)
2	Ward you're doing survey.	(Manually add Ward number)
3	Record the time	(Kobo app automatically show the time)
4	What is your age?	
5	What is your gender?	Male / Female / Others
6	How many persons are living in this house/apartment?	
7	How many of these are children below 18?	
8	What is your status of occupation? ¹¹	Employee (government) / Employee private organisation / Business owner / Self-employed (Own account worker) / Contributing family worker/ General Casual Worker / No job. seek for work / No job. do not seek for work / Fulltime student / Household work / Pensioner, retired, elderly person/ Others (___)/I don't know or prefer not to answer
9	(If working) In a typical day, how many hours would you spend for work?	___ hours
10	If working: What kind of industry/job are you working on?	Government / Education / Health / Mining / Farming & Agriculture / Manufacturing / Construction / Food & Beverage / Tourism (hotel) / Daily Product & Services / Construction / Trading / Health / Transportation / Civil Society (NGO, CSO etc.) / Others (___)/I don't know or prefer not to say
11	From following category (basic consumptions), have you had any difficulty to afford because of lack of finance (or expensive price) in the last 12 months? (Multiple Choices)	House rent/ Home loan/Health / Education / Food / Daily travel / Water / Electricity / Others (___) / Nothing / I don't know or prefer not to say
12	What type of house/ apartment are you living in?	Staff housing/ Other types of public housing/ Condominium / Apartment/House/Hut/Hostel/ Others (___)/I don't know or prefer not to say
13	What is the main material of your house?	Bamboo/ Dani, Theke/ Timber/ Concrete/ Brick /Others/ I don't know or prefer not to say
14	How would you describe the quality of your house?	Good / Fair / Poor/ I don't know or prefer not to say
15	Do you or your family rent or own your home?	Rent / Own / I don't know or prefer not to say
16	How long have you been living in Kalaw?	
17	How long have you been living in the same house?	

¹¹ Some respondents answered industry for this question. These respondents did not answer to the question 10.

18	Are you free to stay in your home for as long as you want?	Yes/No/ I don't know or prefer not to say
19	Is your house connected to the public energy grid or private energy grid? ¹²	Public / Private / No connection / I don't know or prefer not to say
20	How are you satisfied with the access to electricity in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
21	If you are not satisfied with current electricity system, why?	Price/Stability/Low Voltage/ Physical danger/ No accessibility/ Others (____)
22	What energy source do you use for cooking? (multiple choices)	gas/ kerosene/ firewood/ coal/ electricity/ others (____) / I don't know or prefer not to say
23	How are you satisfied with municipal waste collection system in your neighbourhood?	1. Completely dissatisfied / 2. dissatisfied / 3. neither satisfied nor dissatisfied/ 4. satisfied / 5. Completely satisfied
24	If you are not satisfied with current waste collection system, why? (multiple choices)	Price/Frequency/Unclarity/Location/Smell/Others (____) / I don't know or prefer not to say
25	How do you usually dispose domestic waste? (multiple choice)	Municipal waste collection point/ Informal dumping site (randomly, including river, drainage, vacant land) / Private collector/ I don't know or prefer not to say
26	If the answer includes randomly, why? (multiple choices)	Collection point is too far/ Collection car doesn't come to the scheduled place / Collection box often gets full with other wastes/ Collection schedule does not much to my daily schedule/ Other people are doing the same / Others (specify)/ I don't know or prefer not to say
27	How are you satisfied with the road quality in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
28	If you are not satisfied with current road quality, why? (multiple choices)	Connection/ Width/ Unorganized usage/ Difficulty to walk/ Lack of parking space/ Occupation by parking/ Bad road condition/ Others (____)
29	How are you satisfied with pedestrian walkways in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
30	What is your main mode of transport? Please choose one which you use the most.	Private car/Private motorbike/Bicycle/Bus/Ferry/Taxi (car)/Motorbike taxi/ walking/ others
31	Which types of vehicle do you or your family own?	Car/Motorbike/Bicycle/Others/Nothing
32	How are you satisfied with access to public spaces (such as park, garden or places with nature for leisure) ?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied

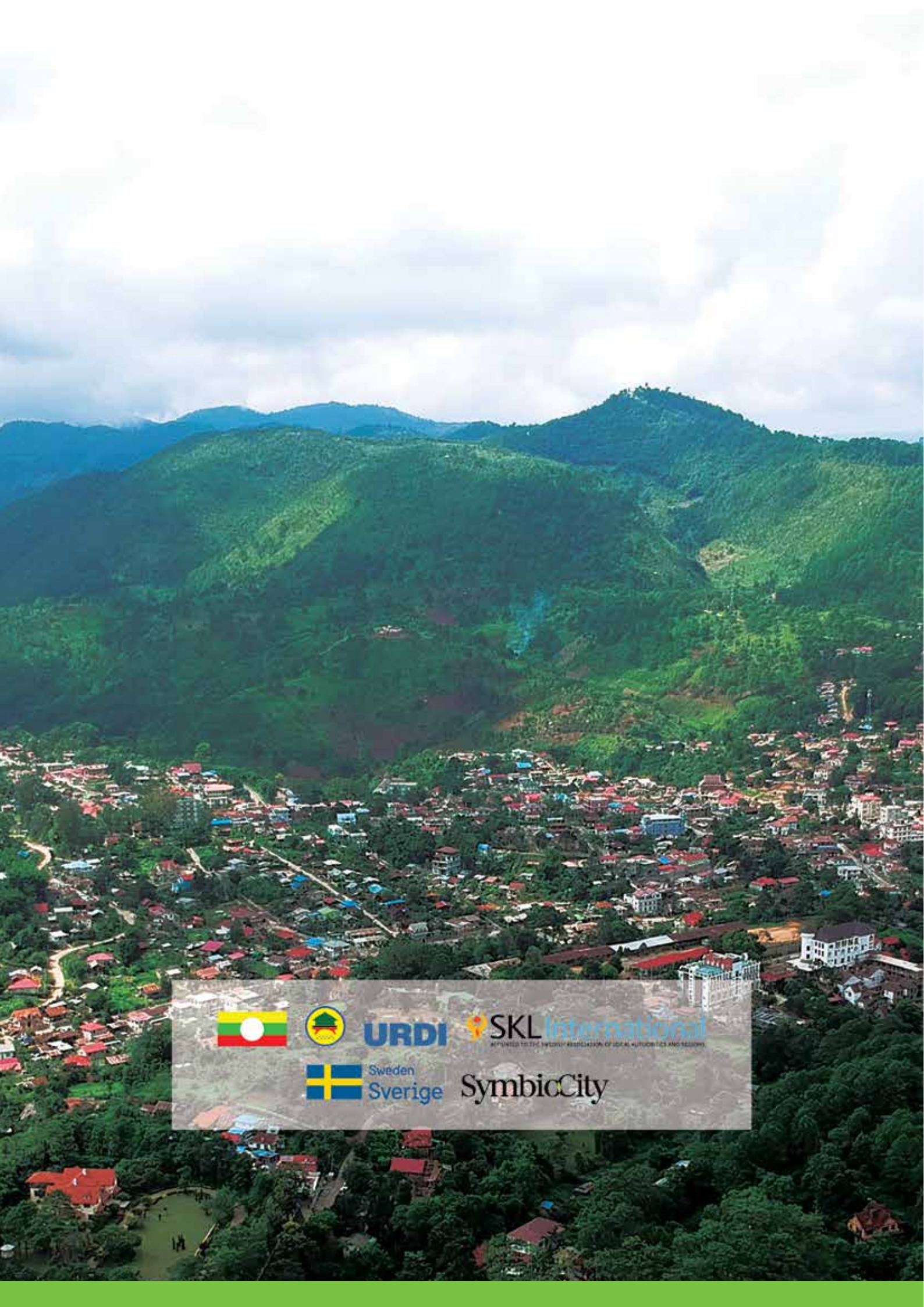
¹² There was no private company who provide electricity in Kalaw. The respondents who answered 'private' meant that they get electricity individually such as using their own generator or connecting from other power line.

33	If you are not satisfied with public spaces, why ? (multiple choices)	Lack of spaces/ Distance/ Quality/ Safety/ Others (____)
34	How many times in the last 7 days have you visited a public space?	
35	How are you satisfied with the access to sports facilities in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
36	How are you satisfied with the access to cultural facilities in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
37	How are you satisfied with the access to shopping/ cultural facilities in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
38	How are you satisfied with the access to medical facilities (clinic, hospitals) in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
39	How are you satisfied with the access to schools in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
40	How are you satisfied with the access to good sanitation system in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
41	If you are not satisfied with sanitation system, why? (multiple choices)	Price/Unclear service/ Malfunction of the system/Unhealthy condition/ Others (____)
42	What type of toilet are you using at your home?	Flush / Water Seal (improved Pit Latrine)/ Pit (traditional) / Bucket (surface latrine) / Other/ No toilet
43	How are you satisfied with the access to water for domestic use?	1. Completely dissatisfied / 2. Dissatisfied / 3. Neither satisfied nor dissatisfied / 4. Satisfied / 5. Completely satisfied
44	If you are not satisfied with access to water, why? (multiple choices)	Price/Quality/Quantity/Others (____)/I don't know or prefer not to say
45	What source of water are you using for drinking water? (multiple choices)	Tap Water, piped (TDC)/Piped (Private)/ Tube well, borehole/ Protected well, spring/ Pool, pond, lake/ River, stream canal / Spring water/ Waterfall, rainwater / Bottled water from private purchase / Tanker, truck/Others
46	What source of water are you using for domestic use? (multiple choices)	Tap Water, piped/ Tube well, borehole/ Protected well, spring/ Pool, pond, lake/ River, stream canal / Waterfall, rainwater / Bottled water from private purchase / Tanker, truck/Others

47	How are you satisfied with current drainage system in your neighbourhood?	1. Completely dissatisfied / 2. Dissatisfied / 3. Normal / 4. Satisfied / 5. Very satisfied
48	If you are not satisfied with current drainage system, why? (multiple choices)	Blockage by waste/ Open drainage/ Smell/ Lack of function / Others (____) / I don't know(or)prefer not to say
49	In the last 12 months, what kind of natural disaster have you experienced in your neighbourhood? (multiple choices)	Flooding/Earth quake / Land slide/ Forest fire/ Storm or strong winds / Others (____) /Nothing/ I don't know (or)prefer not to say
50	How do you survive/response in case of natural disaster? (multiple choices)	Evacuate to monastery / School / Other open space / Rescue centre / Emergency Bag / Others (____) / No idea
51	How would you rate the air quality in your neighbourhood	1. Very poor / 2. Poor /3. Normal / 4. Good / 5. Very good
52	How would you rate the water quality in your neighbourhood	1. Very poor / 2. Poor /3. Normal / 4. Good / 5. Very good
53	How would you rate the noise level in your neighbourhood (loudness - quietness)	1.Very loud, disturbing/ 2. Loud/ 3. Normal / 4. Good / 5. Very good, peaceful
54	Do you feel safe in your neighbourhood during daytime?	1. Very poor / 2. Poor /3. Normal / 4. Good / 5. Very good
55	Do you feel safe in your neighbourhood during night-time?	1. Very poor / 2. Poor /3. Normal / 4. Good / 5. Very good
56	To what extent do you agree with the following statement: my neighbourhood is a good place for children	1. Completely disagree / 2. Disagree / 3. Neither agree nor disagree / 4. Agree / 5. Completely agree
57	If you think your neighbourhood is unsafe for children, why? (multiple choices)	Traffic/Negative influence from other people including children/Air quality/Physical structure/risk of crimes/others (____)
58	Have you been a victim of crime in the last 12 months?	Yes/ No / I don't know or prefer not to say
59	If yes, what kind of crime?	Domestic violence/Non-domestic violence/Theft/Burglary/Others (____)/ Prefer not to say
60	To what extent do you agree with the following statement: I can trust most people in the city in general.	1. Completely disagree / 2. Disagree / 3. Neither agree nor disagree / 4. Agree / 5. Completely agree

61	Do you do any collective activity with your neighbours/ community to improve your neighbourhood ?	Yes, very often/Yes, usually/Not much/Never/I don't know or prefer not to say
62	In the last 12 months, have you ever felt any disadvantage because of your gender?	Yes / No / I don't know or prefer not to say
63	If the answer is yes, can you share what kind of situation was it?	
64	How often do you experience sexual harassment when you are in public area ? (such as public space, commercial space, street, school etc.)	Every time/More than once a week/More than once per month/ More than once per 6 months/ Occasional/ Never / Prefer not to say
65	In the last 12 months, have you ever felt any disadvantage or discrimination in your normal life because of your ethnicity?	Yes / No / I don't know or prefer not to say
66	If the answer is yes, can you share what kind of situation was it?	
67	In the last 12 months, have you ever felt any disadvantage in following situation because of your disability?	Yes / No / I don't know or prefer not to say
68	If the answer is yes, can you share what kind of situation was it?	
69	Is there any particular place you feel unsafe in this city?	Yes / No / I don't know or prefer not to say
70	If the answer is yes, where is it and why?	
71	One of the main industry of Kalaw is tourism. Do you agree with welcoming more tourist?	1. Completely disagree / 2. Disagree / 3. Neither agree nor disagree / 4. Agree / 5. Completely agree
72	If the answer is no, why you do not want to welcome tourists?	Tourists make a mess / Tourist do not respect local culture / Tourism cannot make good business / I just want to stay in peace / I feel uncomfortable about showing my lifestyle to visitors as a product/ Tourism will change the city more for the visitors, not for us/ Others (____) / I don't know or prefer not to say

73	From your viewpoint, what types of assets should be promoted/conserved as a unique value of Kalaw? Please choose three which you think most important.	Natural Landscape / Biodiversity (birds, animals)/ Pine Trees / Agriculture / Traditional weaving & textiles / Colonial buildings / Religious buildings/ Ethnic Diversity/ Pleasant Weather/ Others (____) / I don't know or prefer not to say
74	Number of pine trees are decreasing in Kalaw. What is the main three reasons for this do you think? Please choose no more than three.	Illegal squatters in the forest/ Construction of roads and buildings / Extension of planting or farming/Illegal Logging activity/ Forest fire/ Expansion of the city / High demand for trees as fuel / others (specify) / I don't know or prefer not to say
75	What, in your perspective, should be the top three priorities for the development of Kalaw?	Local economic development / Disaster resilience / Peace and Security/ Heritage conservation / Public space / Urban Safety / Mobility / Green environment / Tourism Development / Urban Rural Linkages / Social Inclusion (gender, social class, disability, ethnicity etc.) / Infrastructure / Urban Governance /Others (____) / I don't know or prefer not to say
76	What, in your perspective, are the top three problems/ challenges in your neighbourhood?	Traffic/ Public Space /Noise Pollution/Air Quality/ Sanitation/Clean Water/Environment /Deforestation / Infrastructure system / Risk of Crime/ People/ Lack of Social cohesion / Others (____) / I don't know or don't want to say



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