The impact of COVID-19 in informal settlements in Yangon
The survey has been conducted as part of the project Enhancing community resilience to combat COVID-19 - Survey on impact and response to covid-19 in informal settlements, funded by JICA. The survey was conducted from November to December 2020.
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SUMMARY KEY FINDINGS

Livelihood security

**88.0%** of households in the survey reported at least one member of their household losing their job in the past 90 days (44.4% in April 2020)

**69.0%** of households reported only one member of the household losing their job

**46.2%** of households reported casual laboring as their main occupation

Household income and expenditure

**93.1%** of households in the survey reported a fall in income over the past 30 days

**97.3%** of all households reported no alternative source of income

Before April 2020, **2.3%** of households in the sample reported spending less than MMK 100,000 per month. In comparison, **29.0%** of households reported expenditure of less than MMK 100,000 in the past 30 days

**99.1%** of households report no savings over the past 30 days

Household debt

Before the outbreak of the pandemic, **59.6%** of households had outstanding debt, **73.7%** of households reported taking on new debt in the past 90 days

**85.3%** of all households who took on debt in the past 90 days borrowed more than once

**75.6%** have borrowed an amount of MMK 101,000 or more

**84.0%** of households in our sample reported outstanding debt
Access to healthcare

45.0% of households responded that they visited a private clinic or hospital on their last visit to a healthcare facility.

71.7% of households across townships, their nearest health care facility was under 30 minutes away.

25.2% reported that they faced some difficulty in accessing healthcare over the past 60 days.

85.6% of households reporting difficulty in accessing healthcare, the major issue was that they did not have enough money to access healthcare.

35.3% of all households in the survey reported that at least one member suffered from a major illness.

Housing and security of tenure

41.0% of type wall material used is bamboo.

74.8% live in houses that are below 200 square feet in area.

64.3% reported living in houses that they own.

88.0% reported having no document to prove the ownership of land that their dwelling is on.

70.0% of households in the overall sample reported being concerned about land tenure security.

69.3% percent of households reported that they do not feel secure from being evicted from their present dwelling.

Access to water

6.3% of households reported piped water.

30.0% of all respondents reported a tube well or borewell as the primary source of drinking water.

26.5% of households reported that they are dependent on rainwater collection to meet their drinking water needs.

1.8% of households reported a municipal source for drinking water.
Access to sanitation

89.6% of households in the sample reported having access to an own toilet.

Out of the households without access to a toilet, 55.0% reported that they used a neighbor’s toilet or a shared toilet.
11.0% reported practicing open defecation.

Access to electricity and cooking fuel

29.6% of households in the survey sample reported that they had access to electricity.

30.9% of respondents reported private generator as the major source of lighting.

48.3% of households use charcoal as the major source of fuel.

Access to waste management services

The most frequently reported waste disposal method is dumping at a community dumping site, 59.8%.

81.8% of households do not pay any money for waste disposal services.

59.5% of households pay charges to a private waste collection service.

Food security

85.6% of households does not have any stock of food that could last them even a week.

17.4% of households reported that at least one member of their household skipped at least one meal during the past 7 days.

88.8% of all households remains worried that their current stock of food will run out before earning income to buy more.
Access to transportation services

28.8% own a bicycle while 15.5% own a motorcycle, 1.3% own a trishaw.

79.6% of households reported public transport as their main mode of transport.

79.3% in the sample reported using public transportation 2 times per day.

92.1% of households reported being afraid of contracting the virus while using public transportation.

Knowledge, Awareness & Practice (KAP) related to COVID-19

The average rate of households who responded that they always wear a mask when they go outside was 88.4%.

53.3% said that they practice handwashing less than 5 times a day.

Only 43.5% of households professed awareness of social distancing.

85.5% reported that they would to their nearest clinic or health center if any household member showed symptoms of COVID-19.
1 INTRODUCTION
INTRODUCTION

Over 1 billion residents of informal settlements across the world find themselves at the forefront of the fight against COVID-19. It is now well recognized that conditions in informal settlements including deficient access to water, high density of settlements, and insecure ‘security of tenure’ with the allied risk of evictions place residents at greater risk of infection. In Yangon, UN-Habitat estimates that approximately 400,000 residents live in 423 informal settlements: taken together, residents of informal settlements account for 8 percent of the city’s population. One single township Hlaing Thar Yar hosts a third of all informal residents in the city, spread over 181 pockets of settlements. The townships of Shwe Pyi Thar, Dagon Seikkan, Insein, Dala, and Thanlyin also house a significant proportion of the residents in informal settlements (Figure 1.1 below). These communities are at the frontline of the city’s fight against the pandemic.

However, lack of data and on-ground information about the lives and impact of COVID-19 on residents of informal settlements had curtailed the ability to fight the pandemic effectively. The present survey was designed to meet this glaring gap in data so that policies and programs designed to counter COVID-19 in informal settlements are based on evidence.

This report presents the most comprehensive portrait, to date, of the lives of residents of informal settlements in Yangon. Using a sample of 1,680 households from the seven townships with the highest number of informal settlements in the city, this report presents key findings over the following indicators:

1. Demographic profile
2. Livelihood security
3. Household income and expenditure
4. Household debt

Fig. 1.1 Estimated population in informal settlements
5. Access to healthcare
6. Housing and security of tenure
7. Access to water
8. Access to sanitation
9. Access to electricity and cooking fuel
10. Access to waste management
11. Food security
12. Access to transportation services
13. Knowledge, Awareness, and Practice (KAP) related to COVID-19

The survey was conducted from November to December 2020 in seven townships of Yangon - Hlaing Thar Yar, Dagon Seikkan, Insein, Thanlyin, Dala, North Okklappa, and Shwe Pyi Thar. The survey team sampled 240 households from each of the seven townships resulting in an overall sample size of 1,680 households. The households were selected using a two-fold method: first, using mapping data from UN-Habitat’s comprehensive mapping of Yangon’s informal settlements, conducted in 2016, the survey identified settlements in seven townships that house the largest number of residents of informal settlements. Second, households in selected settlements were identified in collaboration with township authorities - General Administration Department (GAD) and Township Development Committee (TDC), ward authorities, local communities, and community institutions/organizations. Due to concerns about safety related to COVID-19 and respecting stay-at-home orders put in place by the government, the survey was conducted over phone. Respondents from the sample households included both men and women over the age of 18 years. The key household respondent was always a member of the household who could provide information on the sample household, including on other members.

In April 2020, UN-Habitat had conducted a rapid assessment of households in informal settlements to understand the socio-economic impact of COVID-19. While the rapid assessment surveyed 100 households from three townships over a limited set of indicators, the present survey is aimed to provide a fuller picture of both the impact of COVID-19 and the conditions, particularly access to key infrastructure and services, that could exacerbate the spread of the virus in informal settlements.
The survey sampled 1,680 households from seven townships in the city of Yangon, with the highest concentration of informal settlements - Hlaing Thar Yar, Shwe Pyi Thar, Thanlyin, Dagon Seikkan, Dala, Insein, and North Okkalapa. The survey sampled 240 households from each of the seven townships. Figure 2.1 below presents the age profile of the respondents. 69.0 percent of respondents were between 21 and 50 years of age, 27.4 percent were above 50 years of age, and 3.6 percent were between 18 and 20 years of age.

In the sample, 772 respondents (46.0 percent) were women respondents. As presented in Figure 2.2 below, 62.0 percent of respondents identified themselves as the head of the household, 30.4 percent as the spouse of the household head, and 7.56 percent as a member of the household (neither head nor spouse of head of household). Total 77.5 percent of respondents were married, 12.7 percent identified themselves as widowed, 6.7 percent as single, and 3.1 percent as either divorced or separated.
3 LIVELIHOOD SECURITY
Eighty-eight percent of households in the survey reported at least one member of their household losing their job in the past 90 days (Figure 3.1 below). Across townships, the rate of reported job loss remained consistently high, from 80.0 percent in Shwe Pyi Thar to 90.0 percent in North Oklappa to 96.7 percent in Insein township. In a rapid assessment of informal settlements conducted by UN-Habitat in April 2020, 81.0 percent of households (sample size of 100 households) had reported at least one member of the household losing their job over the previous 30 days.

Figure 3.2 below reveals that in households that reported job loss, 69.1 percent of households reported only one member of the household losing their job. In 31.0 percent of households who reported job loss, at least 2 members or more have lost their job. Total 24.6 percent of households reported that two members of their household have lost their jobs in the previous 90 days.
The major reported household occupations were as follows: casual labour (46.2 percent), skilled construction work as masons and carpenters, for example (30.4 percent), work as vendors in the street, small shops, markets (26.2 percent), work in a factory (21.6 percent), work as drivers of taxi, motorbike, trishaw, or bus (17.6 percent) and others (13.4 percent). As is clear from Figure 3.3, household members are often employed in more than one occupation. As Figure 3.4 shows, the percentage of households employed in factories were highest in the townships of Hlaing Thar Yar (31.3 percent of all households) and Shwe Pyi Thar (36.3 percent). In the townships of Dala and Thanlyin, most households worked as casual labor, 52.1 percent and 54.2 percent respectively. In the townships of Dagon Seikkan and Dala, 42.5 percent and 42.1 percent of households was engaged in some form of skilled construction work. Driving, as a major household occupation, was most prominent in the townships of Insein (22.1 percent) and North Okkalapa (25 percent). Approximately 30 percent of all households reported being vendors in the townships of Hlaing Thar Yar, Dagon Seikkan, and North Okkalapa. Among occupations listed as “Other” in Figure 3.4 below, the most reported occupations were car or motorbike mechanic (2 percent), owners of small businesses such as shop, small scale tailoring, and tea shops (2.1 percent), and labor engaged in waste and garbage collection (2.2 percent).

**Fig. 3.3** Major household occupation (Overall Sample)

**Fig. 3.4** Major household occupation by township
4 HOUSEHOLD INCOME AND EXPENDITURE
93.1 percent of the households in the survey reported a fall in income over the past 30 days relative to their monthly household incomes before April 2020 (Figures 4.1 and 4.2). The magnitude of fall in income reveals the true impact of the loss in jobs, discussed in the previous section. Before the outbreak of COVID-19 (in April 2020), 57.8 percent of households reported a monthly household income of at least MMK 201,000. In the past 30 days, only 4.0 percent of households has reported incomes above MMK 201,000. Before April 2020, only 0.1 percent of households reported no monthly income. In comparison, 7.4 percent of households in the survey reported earning no income over the past 30 days. Compared to 42.2 percent of households before April 2020, 88.3 percent of households now earns between MMK 101,000 to MMK 300,000. As Figures 4.1 and 4.2 show, the fall in reported income has been consistent across all seven townships in the survey sample.

97.3 percent of all households reported no alternative source of income. This was remarkably consistent across townships in our sample, from 95.5 percent in Thanlyin to 99.2 percent of households in Insein township reported no alternate source of income. 1.3 percent of households reported financial support from family or friends as an alternate source of income.
The fall in household income has, unsurprisingly, had a severe impact of household expenditure as well. As Figures 4.3 and 4.4 present, before April 2020, 2.3 percent of households in the sample reported spending less than MMK 100,000 per month. In comparison, 29.0 percent of households reported expenditure of less than MMK 100,000 in the past 30 days. While 37.7 percent of households spent between MMK 201,000 and 300,000 before April 2020, only 13.8 percent have reported similar expenditure over the past 30 days. 8.8 percent of households in the survey spent at least MMK 301,000 before the outbreak of COVID-19 while only 1.6 percent of households reports similar expenditures over the past 30 days.

In addition to smaller household expenditure, the basket of goods and services that households spend on appears to have shrunk. Before April 2020, the major household expenditures reported were food (87.7 percent), cooking fuel (33.4 percent), rent (31.4 percent), water and electricity (38 percent), healthcare (23.8 percent), education (11.4 percent) and debt repayment (2.8 percent). In comparison, over the past 60 days, the major reported household expenditures were food (97 percent), healthcare (30.4 percent), rent (30 percent), and water and electricity (25.3 percent). Expenditures on cooking fuel, education, and debt repayment, prominent before April 2020, seems to out of the basket of goods and services consumed. The proportion of
The proportion of households reporting food as a major household expenditure increased by approximately 10 percent while households reporting healthcare as a major expenditure also increased by 7 percent. The percentage of households reporting water and electricity and rent as major expenditures have declined over the past 60 days relative to before April 2020.

99.1 percent of households report no savings over the past 30 days.

As shown in Figure 4.7 above, before April 2020, 11.2 percent of households reported at least some household savings per month. 99.1 percent of households report no savings over the past 30 days.
5 HOUSEHOLD DEBT
In order to understand the change in composition of household debt after the outbreak of the COVID-19 pandemic, the survey asked households about outstanding debt before April 2020. Before the outbreak of the pandemic, 59.6 percent of households had outstanding debt. This varied from 52.5 percent for respondents residing in North Oklappa to 62.5 percent in Shwe Pyi Thar township (Figure 5.1 below).

In comparison to 59.6 percent of households before the pandemic, 73.7 percent of households reported taking on new debt in the past 90 days. As presented in Figure 5.2 below, households in all seven townships saw an increase in borrowing over the previous 90 days, in North Oklappa, households with debt increased from 52.5 percent to 67.9 percent while in Shwe Pyi Thar township, 67.5 percent of households borrowed money in the past 90 days (compared to 62.5 percent with outstanding debt before April 2020). In a rapid assessment of informal settlements conducted in April 2020, 69.0 percent of all respondents reporting borrowing money in the past 30 days.

**Fig. 5.1 Did you have outstanding debt before April 2020?**

**Fig. 5.2 Did your household borrow new debt in the past 90 days?**
Households have borrowed multiple times in the past 90 days, 85.3 percent of all households who took on debt in the past 90 days borrowed more than once. While 37.5 percent of households borrowed twice, 28.4 percent borrowed 3 times, and 19.4 percent borrowed 4 times or more.

Households seem to have taken on a significant amount of new debt over the past 90 days, out of the households who borrowed money, 75.6 percent have borrowed an amount of MMK 101,000 or more. 15.2 percent of households in the sample borrowed an amount exceeding MMK 301,000. Approximately a quarter of all households borrowed less than MMK 100,000 (Figure 5.4 below).

Before the outbreak of the pandemic, the top reason for borrowing money was food purchases (57.7 percent). This result has been remarkably consistent; in the rapid assessment of households in informal settlements conducted in April 2020, food purchases formed the top purpose for taking out a loan in the past 30 days, 88.0 percent of households who took out a loan used it to purchase food. Healthcare expenditure (15.4 percent), home improvement (8.9
88.0%
Percentage of households who took out a loan used it to purchase food in the past 30 days (April 2020)

73.4%
Percentage of households who borrowed money did so to purchase food (in the past 60 days)

Over the past 60 days, 73.4 percent of households who borrowed money did so to purchase food (relative to 57.7 percent before April 2020). Repayment of existing loans (25.4 percent compared to 7 percent) was the second most cited reason for borrowing indicating the vicious debt cycle that COVID-19 has left households in. Healthcare expenditure (19 percent), land purchase/rent (9.6 percent), and home improvement (6.1 percent) were the other most cited reasons for borrowing.

As Figure 5.7 below indicates, COVID-19 has left households with high amounts of outstanding debt. 84 percent of households in our sample reported outstanding debt. A plurality of households (33.4 percent) has outstanding debt of over MMK 300,000 while 37.9 percent of households owes between MMK 101,000 and MMK 300,000. Total 127 percent of households have an outstanding debt of less than MMK 100,000.
84.0%
Percentage of households in our sample reported outstanding debt.

Fig. 5.7 Outstanding household debt by township.
ACCESS TO HEALTH CARE
36.6 percent of households (615 households) in our sample had at least one member who visited a healthcare facility in the past 90 days. Out of these, 45.0 percent of households responded that they visited a private clinic or hospital on their last visit to a healthcare facility. This was the most common type of healthcare facility accessed by households in the survey. 29.0 percent of households visited a public hospital or facility, 23.0 percent visited a dispensary or pharmacy, and 3.0 percent chose other types of healthcare facilities (including mobile health clinics, traditional medicine, or treatment at home). Public hospitals were most visited by respondents in Dagon Seikkan (40.5 percent), Dala (38.0 percent), and Insein (41.0 percent). In all the other townships private hospitals or clinics were the most common type of health facility visited, Hlaing Thar Yar (50.5 percent), Shwe Pyi Thar (36.6 percent), Thanlyin (40.2 percent), and North Okkalapa (48.8 percent). Visiting pharmacies or dispensaries were most common in Shwe Pyi Thar (37.6 percent), Thanlyin (26.8 percent), Hlaing Thar Yar (23.8 percent), and Dala (23.9 percent).

Fig. 6.1 Type of health facility last accessed

Fig. 6.2 Time to access nearest health facility
For 46.1 percent of households, their nearest health facility was between 15 and 30 minutes away from their place of residence. 25.6 percent of households reported that their nearest health facility was under 15 minutes away, 14.9 percent reported health facilities being 30 to 45 minutes away, and 11.3 percent of households reported that their nearest health facility was 45 minutes to an hour away. For a majority of households (71.7 percent) across townships, their nearest health care facility was under 30 minutes away.

A quarter of all respondents in our survey (25.2 percent) reported that they faced some difficulty in accessing healthcare over the past 60 days. As presented in Figure 6.3 above, for 85.6 percent of households reporting difficulty in accessing healthcare, the major issue was that they did not have enough money to access healthcare. 42.6 percent of households also reported the stigma of being perceived to have COVID-19 as a strong deterrent in accessing healthcare facilities. 26.5 percent reported that healthcare personnel were absent in the healthcare facility that they visited.

35.3 percent of all households in the survey reported that at least one member suffered from a major illness. Out of these, the most common reported illnesses were ischemic heart disease (23.1 percent), illnesses related to the eye, nerve system, and body pain (17.7 percent), diabetes (17.0 percent), stroke (11.3 percent), asthma (7.9 percent), and hypertension (7.6 percent). In the light of this, the high number of respondents (one out of four) facing difficulties in accessing healthcare including lack of financial resources, stigma of COVID-19, and absence of healthcare personnel raises significant questions for public health in informal settlements in Yangon.
7 HOUSING AND SECURITY OF TENURE
Figures 7.1 and 7.2 below present the most common types of house wall material in the survey sample. In the overall sample, the most common type of wall material used is bamboo (41.0 percent of all households) followed by corrugated sheets (17.0 percent), dhani, thatch or large leaves (13.0 percent), tiles, brick, or concrete (12.0 percent) and waterproof canvas, tarpaulin, or plastic (10 percent). Bamboo was the most commonly used wall material in Shwe Pyi Thar (47.5 percent), Thanlyin (69.6 percent), Dagon Seikkan (46.7 percent), and Insein townships (41.3 percent). In Dala townships, 35.8 percent of households used dhani, thatch, or large leaves for wall material. In Hlaing Thar Yar and North Okklappa, tiles, brick, or concrete (30.0 percent of households); and corrugated sheets (45.0 percent of households) were the most frequently used type of wall material respectively.

**41.0%**
Type of wall material used is bamboo

**57.7%**
Percentage of households reported using wood as their house floor material, followed by bamboo

**84.4%**
Corrugated sheets are the most commonly used type of roof material
Figures 7.3 and 7.4 below present the most frequently used type of floor material for the house by township and in the overall sample respectively. In the overall sample, 57.7 percent of households reported using wood as their house floor material, followed by bamboo (34 percent), and tiles, brick, or concrete (6.8 percent of households). Wood is the most frequently used floor material in Hlaing Thar Yar (50.4 percent), Shwe Pyi Thar (54.6 percent), Dagon Seikkan (74.2 percent), Insein (65.8 percent), and North Okklappa (77.9 percent). In Thanlyin, Dala, and Shwe Pyi Thar, bamboo flooring was used by 52.9 percent, 58.8 percent, and 42.9 percent of all households, respectively. The use of tiles, concrete, or brick was most common in Hlaing Thar Yar (19.6 percent), North Okklappa (9.2 percent) and Insein townships (7.9 percent).

![Fig. 7.3 Type of house floor (by township)](image1)

![Fig. 7.4 Type of house floor (overall sample)](image2)

Figures 7.5 and 7.6 below show the type of roof material that is used in each of the townships and in the overall sample, respectively. In the overall sample, corrugated sheets are the most commonly used type of roof material (80.4 percent of all households) followed by dhani, thatch, or large leaves (16.2 percent of all households). Across townships, corrugated sheets remained the most common type of roof material, ranging from 69.6 percent in Thanlyin to 93.8 percent in North Okklappa. The use of dhani, thatch, or large leaves as roof
material was most prevalent in Thanlyin (29.2 percent), Dala (24.2 percent), and Insein (22.1 percent) townships.

40.0%
Percentage of households in our sample reported having a drainage system outside their house

80.0%
The township where households have lowest access to a drainage system outside their house is Dala

Only 40 percent of households in our sample reported having a drainage system outside their house. In 2016, UN-Habitat’s comprehensive mapping of informal settlements estimated that close
These settlements, housing an estimated 124,270 people or 34 percent of all estimated informal residents of the city, are under severe risk of flooding and water logging, on a near daily basis. UN-Habitat estimates that almost all informal settlements in Yangon (397 out of 423) are at risk of or are currently experience flooding, water logging or both.

The present survey finds that a majority of households in all townships with the exception of Hlaing Thar Yar do not have access to a proper drainage system. The townships where households have lowest access to a drainage system outside their house are Dala (80.0 percent of households do not have access), Dagon Seikkan (68.8 percent), North Okklappa (65.8 percent), and Thanlyin (59.2 percent). In Hlain Thar Yar, Insein, and Shwe Pyi Thar, 55.8 percent, 49.6 percent and 48.8 percent of households reported having access to a proper drainage system outside their house.

![Fig. 7.8 Area of the house (by township)](image)

In our overall sample, only 8.5 percent of households lives in houses that are above 300 square feet in area. 26.1 percent of households live in houses that are between 50 and 100 square feet while 47.7 percent of households live in houses that are between 100 and 200 square feet in area. 16.7 percent of households lives in houses that range from 200 to 300 square feet in area while 1.0 percent of the sample resides in houses that are below 50 square feet in area. Most households live in homes that are 50 to 100 square feet in area in Shwe Pyi Thar (33.8 percent), Thanlyin (26.7 percent), and Insein townships (34.6 percent). In comparison, most households live in houses that are 100 to 150 square feet in the townships of Hlaing Thar Yar (27.5 percent), Dagon Seikkan (32.5 percent), Dala (36.7 percent), and North Okklappa (26.3 percent). The vast majority of households (74.8 percent) live in houses that are below 200 square feet in area, ranging from 64.6 percent in North Okklappa to 79.2 percent in Dala township.
As shown in Figure 7.9 above, most households in our sample (64.3 percent) reported living in houses that they own. 31.3 percent reported living in a house on rent while the rest lived with their family, relatives, or acquaintances. Across townships, most households reported living in houses that they owned, ranging from 58.3 percent in Insein to 84.6 percent of households in Dala township. The only township where more people lived in houses on rent than self-owned houses was Hlaing Thar Yar, 55.8 percent of respondents reported living in a rented house.

Figure 7.10 presents, by township, the percentage of respondents who have difficulty paying expenses related to housing. 72.3 percent of households in the sample, ranging from 56.3 percent in Dala to 81.7 percent in Thanlyin, reported facing difficulties related to housing expenses.

Figure 7.11 below shows the type of difficulties faced by households related to housing expenses. The most common difficulty expressed by households was meeting payment on loans related to housing credit (42.0 percent). In the townships of Shwe Pyi Thar, Thanlyin, Dala, Insein, and North Okklappa, loans related to housing credit was the most frequently reported difficulty related to housing expenditure. Out of households reporting difficulty, 30.0 percent of households expressed difficulty in meeting house rent payments. This was highest
Thar Yar (55.8 percent of households facing any type of difficulty related to housing expenditure), Dagon Seikkan (33.0 percent), and North Okklappa (35 percent). In Dagon Seikkan, North Okklappa, and Thanlyin townships, 36.0 percent, 20.0 percent, and 19.0 percent of households reporting difficulty respectively reported difficulty in meeting water and electric utility payments.

Although 64.3 percent of households (1,080 households) reported living in a house that they own, 88.0 percent of households (1,483 households) reported having no document to prove the ownership of land that their dwelling is on. 11.0 percent of households in the overall sample reported possessing an original land grant, copy of a land grant, or a land use certificate or slip as proof of land ownership. 79.8 percent of all households reported not buying nor acquiring the land that their dwelling is on. 10.0 percent of households reported buying or acquiring the land from a business while 8.6 percent of households bought or acquired land from a friend or relative.

Land tenure security is a major issue for households in our survey sample. As presented in Figure 7.13 below, 70.0 percent of households in the overall sample reported being concerned about land
This figure ranged from 57.9 percent in Insein and North Okklappa townships to 86.7 percent in Dala township.

The concern about land tenure security, expressed in Figure 7.14 below, is borne out by the fact that 69.3 percent of households reported that they do not feel secure from being evicted from their present dwelling. Respondents in Dala expressed the highest rate of insecurity with regard to evictions (77.9 percent) while 58.3 percent of households in Hlaing Thar Yar reported feeling insecure from being evicted. In the rapid assessment of informal settlements conducted by UN-Habitat in April 2020, 53.0 percent of households (100 households, overall) in informal settlements do not feel secure from eviction.

80 households or 5.0 percent of households reported being evicted from their homes in the past 90 days. In Thanlyin township, 1 out of 10 households (24 households) were evicted in the past 90 days. In 16 instances (out of 24) in Thanlyin township, households reported that the eviction was done by the government. In the 80 reported instances of evictions in our sample, over half (51.3 percent) of the evictions were done by the house owner, followed by the government (27.5 percent of cases).
As Figure 7.15 presents most households reported that their major concern with regard to evictions was that they had no alternative place to go to (48.2 percent). 28.2 percent of households reported that they did not possess the financial means to build a new house in an alternate location while 11.2 percent of households expressed that evictions increase the risk of contracting COVID-19.

45.1 percent of households in the overall sample reported the smart card as a form of recognition in a government register. The percentage of households reporting smart cards as the primary form of recognition in a government register ranged from 23.8 percent in Thanlyin township to 64.6 percent in Dala township. 40.6 percent of households reported being included in a ward list prepared by the local authority, this varied from 28.3 percent in Dagon Seikkan to 61.3 percent in Insein township. 11.5 percent of households reported not being part of any government recognized register (193 households), this was highest in Shwe Pyi Thar where 32.9 percent of households reported not being included in a register of any form to 4.6 percent in Thanlyin (Figure 7.16 above).
8 ACCESS TO WATER
There exists considerable variation in the source of drinking water among the seven townships. In the overall sample, only 6.3 percent of households reported piped water, either inside house or outside, as the main source of drinking water. 25.0 percent of respondents in North Okklappa reported piped water as the main source of drinking water. In comparison, no respondents in Dagon Seikkan reported piped water as the main source of drinking water. Close to 30.0 percent of all respondents reported a tube well or borewell (either within the house compound or nearby) as the primary source of drinking water. This varied from 92.1 percent in Thanlyin township to 60.4 percent in Insein township to 44.6 percent in Shwe Pyi Thar. No household in Dagon Seikkan, 0.8 percent in Dala, and 5 percent in North Okklappa reported a tube well or borewell as the primary source of drinking water. 26.5 percent of households reported that they are dependent on rainwater collection to meet their drinking water needs. 47.2 percent of households reported relying on bottled water for drinking water- this was the most predominant source in Hlaing Thar Yar (67.9 percent), Shwe Pyi Thar (62.1 percent), Dagon Seikkan (71.7 percent), Insein (39.2 percent) and North Okklappa (46.3 percent). 25.5 percent of all households relied on private water trucks for drinking water. Respondents in Hlaing Thar Yar (57.1 percent), Dagon Seikkan (51.3 percent), and North Okklappa (40.0 percent) reported comparatively higher reliance on water trucks. In the township of Dala, 65.8 percent of all households relied on ponds or lakes as their major drinking water source.

62.3 percent of all households in the sample reported relying on a private source as their main provider of drinking water. As shown in Figure 8.2 below, this ranged from 29.6 percent in Thanlyin to 92.9 percent in Hlaing Thar Yar. The second most frequently reported provider of drinking water was a source in the community, 22.9 percent of households reported relying on a community source for drinking water. Only 1.8 percent of households reported a municipal source for drinking water.
drinking water, lower than both communal pond (6.5 percent) and own tube well or borewell (4.8 percent). 6.7 percent of households in the sample reported a municipal source for drinking water, the highest among all townships.

The most frequently cited difficulty in accessing drinking water was the lack of an own source for water, reported by 66.0 percent of households in the sample. Close to 25.0 percent of households reported financial constraints as the major difficulty in accessing drinking water. As Figure 8.3 shows, the results were consistent across the townships in our survey.
62.3% Households in the sample reported relying on a private source as their main provider of drinking water

1.8% Households reported a municipal source for drinking water

71.4% Households reported monthly expenditure to access drinking water

percent of households reported a minimum of 30 minutes to access drinking water.

41.1 percent of households reported that their source of drinking water and water for domestic use was the same. Overall, 71.4 percent of households reported monthly expenditure to access drinking water. 37.1 percent of households spent between MMK 5,000 to 10,000 per month on drinking water while 19.1 percent spent less than MMK 5,000. 15.2 percent of households spent in excess of MMK 10,000 per month on drinking water.

Fig. 8.4 Time taken to access drinking water

Fig. 8.5 Monthly expenditure on drinking water
ACCESS TO SANITATION
Access to sanitation was high across all townships in our survey—overall, 89.6 percent of households in the sample reported having access to an own toilet. This figure ranged from 84.6 percent in Insein township to 93.8 percent in Dagon Seikkan township. 76.0 percent of households with a toilet used a pit latrine (flush) toilet. 11.0 percent of households used a bucket type toilet.

As shown in Figure 9.1 below, out of the households without access to a toilet, 55.0 percent reported that they used a neighbor’s toilet or a shared toilet. 33.0 percent reported having access to a public toilet. 11.0 percent reported practicing open defecation (20 households, 1.1 percent of the sample).

As shown in Figure 9.2 below, out of the households without access to a toilet, 55.0 percent reported that they used a neighbor’s toilet or a shared toilet. 33.0 percent reported having access to a public toilet. 11.0 percent reported practicing open defecation (20 households, 1.1 percent of the sample).
ACCESS TO ELECTRICITY AND COOKING FUEL
ACCESS TO ELECTRICITY AND COOKING FUEL

Only 29.6 percent of households in the survey sample reported that they had access to electricity. As presented in Figure 10.1 below, this varied from 13.3 percent in Hlaing Thar Yar to 54.2 percent in Insein and 68.3 percent in North Okklappa. 17.1 percent (46.7 percent in North Okklappa and 39.2 percent in Insein townships) of respondents share meter boxes with others. As shown in Figure 10.2 below, the major source of lighting for respondents are private generator (30.9 percent) and rechargeable batteries (28.3 percent). Candles (4.7 percent) and solar power (5.8 percent) were the other major sources of lighting for households.

There exists significant variation in the major source of lighting for households across townships. The use of private generators varied from 0.8 percent in North Okklappa to 63.8 percent in Dagon Seikkan. Similarly, the use of rechargeable batteries ranged from 15.8 percent in Dagon Seikkan to 44.6 percent in Thanlyin. Solar power was most prevalent in Thanlyin (12.5 percent) and Shwe Pyi Thar (10.4 percent). Figure 10.2 provides detailed description of the major source of lighting across the seven townships.

Figure 10.3 presents the main source of cooking fuel across townships and for the overall sample. Overall, 48.3 percent of households use charcoal as the major source of fuel, followed by firewood (27.3 percent), electricity (18.3 percent), and LPG (5.5 percent). The use of charcoal as the main source of cooking fuel varied from 19.6 percent in North Okklappa to 73.3 percent in Hlaing Thar Yar, the highest in any township. The use of firewood ranged from 15 percent in Hlaing Thar Yar and North Okklappa to 43.8 percent in Thanlyin. The use of LPG as the main source of cooking fuel was highest in Dagon Seikkan (12.5 percent), Thanlyin (8.3 percent), and Hlaing Thar Yar (7.9 percent). The use of electricity for cooking was most frequently
48.3% Households use charcoal as the major source of fuel

27.3% Households use firewood as the second most used source of fuel

48.3% of households use charcoal as the major source of fuel.

27.3% of households use firewood as the second most used source of fuel.

Fig. 10.2 Major source of lighting

Fig. 10.3 Major source of cooking fuel
ACCESS TO WASTE MANAGEMENT SERVICES
ACCESS TO WASTE MANAGEMENT SERVICES

Figure 11.1 above shows the most commonly reported waste disposal methods followed by households in our sample. The most frequently reported waste disposal method is dumping at a community dumping site (59.8 percent), disposal at a YCDC designated dumping site (23.6 percent), throwing into a drainage, river, stream, or creek (16.5 percent), disposing with a waste collection service (12.9 percent) and throw at an undesignated site (11.1 percent). Households in Shwe Pyi Thar (30 percent), Dagon Seikkan (24.2 percent), Insein (39.2 percent), and North Okklappa (30.4 percent) were most likely to dispose waste at a YCDC disposal site. The use of community dumping sites ranged from 25.4 percent in Hlaing Thar Yar to 80.8 percent in Dala township. Households in Hlaing Thar Yar were most likely to dispose the waste through a waste collection service, 52.5 percent of households reported using a waste collection service. Throwing waste into a drainage, river, stream, or creek was most prevalent in Hlaing Thar Yar (20.8 percent), Thanlyin (24.2 percent), North Okklappa (23.3 percent) and Insein (17.9 percent).

As shown in Figure 11.2 below, 81.8 percent of households do not pay any money for waste disposal services. There is, however, wide variation between townships in Dala and Hlaing Thar Yar, 99.2 percent and 48.3 percent of households do not pay for waste collection. In comparison, households in Hlaing Thar Yar (51.7 percent) and Dagon Seikkan (49.2 percent) pay for waste disposal services.

Out of the households that pay for waste disposal and management (306 households, 18.2 percent of the overall sample), 59.5 percent of households pay charges to a private waste collection service, 27.1 percent pay YCDC, and 13.4 percent reported paying the community for waste disposal and management. The use of community services to
Dispose waste was most prevalent in Dagon Seikkan (24 percent) as was payment to YCDC (48.3 percent).

As noted earlier, only 18.2 percent of households makes a monthly expenditure for waste disposal and management. 12.6 percent of households in the overall sample pay between MMK 1,000 and 3,000 towards waste management and disposal while 3.5 percent pay less than MMK 1,000 per month.

81.8%
Households do not pay any money for waste disposal services

59.5%
Households pay charges to a private waste collection service

27.1%
Households pay charges to YCDC
The results of this section point to an alarming situation with respect to food security among residents of informal settlements in Yangon. As Figure 12.1 below reveals, 85.6 percent of households does not have any stock of food that could last them even a week. This result is consistent across all seven townships in the sample, ranging from 77.9 percent in Dala to 93.8 percent in Insein township do not have sufficient or any food stock stored. 9.2 percent of households reported that they have food stock to last a week while 4.0 percent of households reported food stocks that could last them two weeks. As mentioned earlier, food insecurity has pushed even more households to borrow money for purchasing food.

Food insecurity has pushed even more households to borrow money for purchasing food.

17.4 percent of households reported that at least one member of their household skipped at least one meal during the past 7 days. This figure varied from 13.3 percent in Insein and North Okklappa to 22.5 percent in Thanlyin township (Figure 12.2 below).

Fig. 12.1 How long will your food stocks last?

Fig. 12.2 Have any member of your household skipped a meal during the past 7 days?
A third of all households in the survey sample reported that at least one member of their household had reduced meal or food portions in the past 30 days. The figure was highest in Thanlyin township (43.8 percent) followed by Insein township (37.5 percent), and Shwe Pyi Thar (33.3 percent).

88.8 percent of all households remains worried that their current stock of food will run out before earning income to buy more. Insecurity about food running out was highest in Thanlyin and Insein townships (96.3 percent), and Shwe Pyi Thar (93.3 percent). Households living in townships across the city are facing a severe crisis of food security. UN-Habitat’s rapid assessment of informal settlements, conducted in April 2020, had shown that food insecurity remained high during the beginning of the pandemic. All households (100 percent) in the sample had reported that they are worried their stock of food would run out before having money to buy food. The present results show that the situation remains widespread and pervasive.
ACCESS TO TRANSPORTATION SERVICES
ACCESS TO TRANSPORTATION SERVICES

55.2 percent of households in the sample do not own any transport vehicles. 28.8 percent own a bicycle while 15.5 percent own a motorcycle, 1.3 percent own a trishaw while 0.2 percent own a car. The rate of bicycle ownership varies from 11.7 percent in Thanlyin township to 42.1 percent in Shwe Pyi Thar. Motorcycle ownership varies from 12.1 percent in Dagon Seikkan to 18.8 percent in Dala township. In Hlaing Thar Yar township, 60.4 percent of households owns no vehicle (highest among all townships) while in Shwe Pyi Thar 42.2 percent of household own no vehicle for transportation.

Fig. 13.1 Does your household own any transport vehicle?

Across townships, the major mode of transportation remained public transport ranging from 68.8 percent in Dala to 87.9 percent in Dagon Seikkan. Overall, 79.6 percent of households reported public transport as their main mode of transport. Respondents in Shwe Pyi Thar (11.3 percent) and North Okklappa (12.1 percent) reported the highest rate of use of own transportation as the main mode. 23.3 percent of households in Dala reported walking as their main mode of transport.

Fig. 13.2 What is your major mode of transport?
79.6%
Households reported public transport as their main mode of transport

88.0%
Households reported bus as the main mode of public transport

79.3%
Households in the sample reported using public transportation 2 times per day

As shown in Figure 13.3 above, 88.0 percent of households reported bus as the main mode of public transport. 36.4 percent reported use of motorcycles while 12.8 percent of households reported using the boat. The rate of bus use ranged from 59.6 percent in Dala to 97.5 percent in Dagon Seikkan. 81.7 percent of households in Dala used boat as the main mode of public transport. Cars or buses organized by the company was the main mode of transport for 15.0 percent of households in Hlaing Thar Yar and 21.3 percent in Shwe Pyi Thar. Overall, 8.6 percent of households relied on this mode of transport.
97.3%
Households reported that they were hesitant to use public transportation. The most cited reason for hesitancy of use of public transportation was the risk of being infected with COVID-19.

92.1%
Households reported being afraid of contracting the virus while using public transportation.

As shown in Figure 13.5 above, 97.3 percent of households reported that they were hesitant to use public transportation. The most cited reason for hesitancy of use of public transportation was the risk of being infected with COVID-19, overall, 92.1 percent of households reported being afraid of contracting the virus while using public transportation. 4.2 percent of households reported that public transportation was too crowded, and that overcrowding was their major reason for hesitating to use public transportation (Figure 13.6 below).

As asked about the major problems they faced while using public transportation, 35.4 percent of households reported that it was too crowded. 22.9 percent of households reported that the long wait times and lack of buses following a defined schedule was the major problem faced by them. 18.0 percent of households reported traffic congestion while 10.6 percent of households said that reckless driving on public buses was the major problem with public transportation they faced.

Fig. 13.6 Major reasons for hesitancy to use public transport

Fig. 13.7 Major problems with using public transport
KNOWLEDGE, AWARENESS AND PRACTICES RELATED TO COVID-19
Mask wearing remained high among households across townships in the survey. The average rate of households who responded that they always wear a mask when they go outside was 88.4 percent. In addition, 11.5 percent reported that they wear the mask sometimes. Shwe Pyi Thar had the lowest rate of mask wearing in the survey with only 80.0 percent of households saying that they always wear masks while they go out in public. In Insein township, 97.1 percent of households said that they always wore a mask in public (Figure 14.1).

195 households reported that they do not either always wear a mask or use a mask at all, in public. This was 11.6 percent of the total sample. 95.4 percent of these households responded that they did not always wear a mask because it was either too hot making it uncomfortable to wear or that they could not breathe well while wearing a mask. 6 households or 3.1 percent of those not always wearing masks in public said that they are unable to afford masks.
As shown in Figure 14.3 below, a majority of households (53.3 percent) said that they practice handwashing less than 5 times a day, 44.3 percent reported that they wash their hands 6 to 7 times a day while 2.4 percent reported hand washing at least 8 times a day. These figures remained largely consistent among households across townships in the city.

![Frequency of handwashing](image1)

**Fig. 14.3 Frequency of handwashing**

- More than 10 times/day: 0.3%
- 8 to 9 times/day: 2.1%
- 6 to 7 times/day: 44.3%
- Less than 5 times/day: 53.3%

97.8 percent of households in the sample reported that they were aware of handwashing as a key action to prevent contracting COVID-19; this ranged from 94.6 percent in Shwe Pyi Thar to 99.6 percent in North Okklappa. Similarly, 96.7 percent of households said that they were aware of the need to use masks while out in public, this ranged from 95 percent in Thanlyin to 97.9 percent in Hlaing Thar Yar and Dala townships. Fewer households were aware of social distancing as a key preventive action. In the overall sample, only 43.5 percent of households professed awareness of social distancing. Only 39.2 percent of households in Insein said that they were aware of the need for social distancing, the lowest among townships. In Shwe Pyi Thar, 47.5 percent of households said that they were aware of the need for social distancing, the highest rate of awareness of this preventive action among townships surveyed. Fewer households were aware of right sneezing etiquette and social isolation, 19.3 percent, and 3.5 percent respectively.

![Awareness of COVID-19 prevention actions](image2)

**Fig. 14.4 Awareness of COVID-19 prevention actions**

- Sneezing etiquette: 19.3%
- Use of mask: 96.7%
- Handwashing: 97.8%
- Social isolation: 3.5%
- Social distancing: 43.4%
In order to understand whether awareness translated into practice, the survey asked households what key COVID-19 preventive actions they practiced on a daily basis. 98.5 percent of households said that they practiced handwashing while 95.2 percent reported using masks as a key preventive action. The rates of handwashing practice and mask wearing remained high across townships in the survey. Fewer households responded that they practiced social distancing, only 14.9 percent of households. This ranged from 10.4 percent in Hlaing Thar Yar township to 22.1 percent in Insein township. The other major practices reported by households are shown in Figure x above.

As presented in Figure 14.6 below, 65 percent of households reported that they encountered no barriers in practicing handwashing on an everyday basis. 12.2 percent reported that they could not afford the soap or water required to wash hands while 11.4 percent said that they do not have a soap at home, preventing them from practicing handwashing more frequently. 10.7 percent of households reported that they either did not have water at home or that the water source was too far away from them. 11.7 percent said that they do not consider it necessary to wash their hands at all times.

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**65.0%**
Households reported that they encountered no barriers in practicing handwashing on an everyday basis

**65.0%**
Households reported that they could not afford the soap or water required to wash hands

**11.4%**
Households said that they do not have a soap at home

**10.7%**
Households reported that they either did not have water at home or that the water source was too far away from them
An overwhelming majority of households (85.5 percent) reported that they would go to their nearest clinic or health center if any household member showed symptoms of COVID-19. This ranged from 77.5 percent in Dala township to 91.7 percent in North Okklappa. 13.0 percent reported that they would call the government hotline if they suspected that any household member contracted COVID-19. In Dala township, 20.0 percent of households preferred to call the government hotline while in North Okklappa, 7.9 percent said they would ring the hotline. Overall, only 1.4 percent of households said that they would take actions other than going to the nearest clinic or hospital or ringing the government hotline. These actions included meeting a practitioner of traditional medicine, self-medication at home, or simply, staying at home more (Figure 14.7).

39.9 percent of households reported television as a main source of information on COVID-19.

38.7 percent of households reported Facebook as the main source of information on COVID-19.

As Figure 14.8 above shows, 67.9 percent of households said that they relied on friends, relatives, or acquaintances as the main source of information on COVID-19. This ranged from 63.3 percent in North Okklappa to 71.7 percent in Thanlyin township. Across townships, most households reported friends, relatives, or acquaintances as their main source of information on COVID-19. The second most frequently cited source of information about COVID-19 was government notices and announcements, 50.1 percent of households said that they relied...
on these. There was some variation across townships, in North Okklappa, 36.3 percent of households reported relying on the government as a source of information, the lowest in the survey. In contrast, 59.2 percent of households in Dala reported the government as a major source of information on COVID-19. Overall, 38.9 percent reported television as a main source of information while 38.7 percent reported Facebook as the main source of information.

In a rapid assessment of households conducted by UN-Habitat in April 2020, a majority of households said that they rely on television (82.0 percent) and/or government notices and announcements (79.0 percent) for information on COVID-19. 50.0 percent had reported friends and family, the third most frequently cited source of information while 48.0 percent said they used Facebook to gain information on COVID-19. The present results seem to indicate that word of mouth has become more prominent as a source of information over the course of the pandemic.