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Introduction

This MIMU Analytical Brief provides a unique perspective on household conditions in Myanmar by comparing the household amenities data from four sources between 2014 and 2019. The four census/surveys used are:

- 2014 Population and Housing Census (**Data Source:** Redatam software (offline version),
- 2015-16 Myanmar Demographic and Health Survey (**Data Source:** Myanmar DHS, 2015-16 Report),
- 2017 Myanmar Living Conditions Survey (**Data Source:** Key Indicators Report of 2017 MLCS Report) and
- 2019 Intercensal Survey (**Data Source:** <https://dop.gov.mm/en/data-and-maps-category/main-report-1>).

All results presented are from the four national level surveys/census exercises conducted between 2014 and 2019. Because of the difference in methodologies between these sources, they were calibrated to that of the 2019 Intercensal survey to facilitate data comparison.

I. Summary of available categories

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Annual Average Household Income				✓
Housing Unit	✓			✓
External walls	✓		✓	✓
Roof	✓		✓	✓
Floors	✓	✓	✓	✓
Housing Ownership	✓			✓
Information and Communication Devices	✓	✓		✓
Transportation Amenities	✓	✓	✓	✓
Source of Lighting	✓	✓	✓	✓
Type of Cooking Fuel	✓	✓		✓
Location of Cooking Facilities		✓		✓
Drinking Water	✓	✓	✓	✓
Type of Toilet	✓	✓	✓	✓

The software used for this Analytical Brief are:

- Excel for the Data Analysis and
- Tableau for the Data Visualisations.

Note:

- *All values presented are based on the enumerated population and may not fully reflect non-enumerated groups or certain areas, particularly Rakhine State.*
- *“CS 2014” means “2014 Population and Housing Census”.*
- *“MDHS 2015-16” means “2015-16 Myanmar Demographic and Health Survey”.*
- *“MLCS 2017” means “2017 Myanmar Living Conditions Survey” and*
- *“ICS 2019” means “2019 Intercensal Survey”.*

I. Categories of household amenities

I.A. Annual Average Household Income

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014												
MDHS 2015-16												
MLCS 2017												
ICS 2019	✓	✓	✓	✓								

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Annual Average Household Income	#N/A	#N/A	#N/A	500,000 and below
				Between 500,000 and 1,500,000
				Between 1,500,000 and 3,000,000
				Between 3,000,000 and 6,000,000
				More than 6,000,000

I.B. Housing Unit

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16												
MLCS 2017												
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Housing Unit	Apartment/ Condominium	#N/A	#N/A	Apartment/Condominium
	Bungalow/Brick house			Bungalow/ Brick house
	Semi-pacca house			Semi-pucca house
	Wooden house			Wooden house
	Bamboo			Bamboo house
	Hut 2 - 3 years			Hut (2-3 years)
	Hut 1 year			Hut (1 year)
	Other			Other

I.C. External walls

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16												
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
External Walls	Dhani/Theke/ In leaf	#N/A	Dhani/Theke/ Palm/In leaf	Dhani/Theke/ Palm/In leaf
	Earth		Earth	
	Bamboo		Bamboo	
	Corrugated sheet		Corrugated sheet	
	Tile/Brick/ Concrete		Tile/Brick/ Concrete	
	Wood		Wood	
	Other		Other	

I.D. Roof

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16												
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Roof	Dhani/Theke/ In leaf	#N/A	Dhani/theke /in leaf	Dhani/Theke/ Palm/In leaf
	Bamboo		Bamboo	Bamboo
	#N/A		Earth	Earth
	Wood		Wood	Wood
	Corrugated sheet		Corrugated sheet	Corrugated sheet
	Tile/Brick/ Concrete		Tile/brick/ Concrete	Tile/brick/ Concrete
	Other		Other	Other

I.E. Floors

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓									
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019	
Floors	Bamboo	Palm/bamboo	Bamboo	Bamboo	
	Earth	Earth/sand	Earth	Earth	
	Wood	Wood planks	Wood	Wood	Wood
		Parquet or polished wood			
	Tile/Brick/ Concrete	Ceramic tiles	Tile/ Brick/ Concrete	Tile/ Brick/ Concrete	
		Cement			
	Other	Other	Other	Other	
		Dung			
Vinyl or asphalt strips					
Carpet					

I.F. Housing Ownership

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16												
MLCS 2017												
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Housing Ownership	Owner	#N/A	#N/A	Owned
	Renter			Rented (Government)
	Provided free (individually)			Rented (Private)
	Government Quarters			Provided free (Individual)
	Private Company Quarters			Provided (Government quarter)
	Other			Provided (Private company quarter)
				Other

I.G. Information and Communication Devices

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓									
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Information and Communication Devices	Radio	Radio	#N/A	Radio
	Television	Television	TV	Television set
	Land line phone	Non-mobile telephone	#N/A	Landline/ Fixed-line telephone
	Mobile phone	Mobile telephone	Smart phone Keypad phone	Mobile phone
	Computer	Computer	#N/A	Computer
	Internet at home	#N/A		Internet access at home (through landline or mobile connection)

I.H. Transportation Amenities

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓									
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Transportation Amenities	Car/Truck/ Van	Car/truck	Car	Car/Pickup/ Truck/Van
	Motorcycle/ Moped	Motorcycle/scooter	Motor cycle/ Moped	Motor cycle/ Moped/ Tuk tuk
	Bicycle	Bicycle	Bicycle	Bicycle
	4-Wheel tractor	Tuk Tuk/htawlargyi (trailer)	#N/A	Four-wheel tractor
	Canoe/ Boat	Boat without a motor		Canoe/ Boat
	Motor boat	Boat with a motor		Motor boat
	Cart (bullock)	Animal drawn cart		Cart(bullock)

I.I. Source of Lighting

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓									
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Source of lighting	Electricity	Electricity	Public grid Border grid Community grid	Grid electricity (Government grid/ border country grid/community based grid)
	Generator (private)	#N/A	Generator	Generator (Private)
	Solar system/energy		Solar Latern Solar System	Solar system energy
	Kerosene		Kerosene	Kerosene
	Candle		Candle	Candle
	Battery		Battery	Rechargeable battery
	Other		Other	Other
	Water mill (private)		Other	Wind and water mill

I.J. Type of Cooking Fuel

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓									
MLCS 2017												
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Type of Cooking Fuel	Electricity	Electricity	#N/A	Grid electricity (Government grid/ border country grid/ community based grid)
	Kerosene	#N/A		Kerosene
	LPG	LPG/natural gas/biogas		LPG
	BioGas			Bio gas
	Firewood	Wood		Firewood
	Charcoal	Charcoal		Charcoal
	Coal	Coal/lignite		
	Straw/Grass	Straw/shrubs/grass		#N/A
	#N/A	#N/A		Generator (Private)
	Other	Agricultural crop Animal dung		Solar system energy Wind and water mill Other

I.K. Location of Cooking Facilities

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014												
MDHS 2015-16	✓	✓	✓									
MLCS 2017												
ICS 2019	✓	✓	✓	✓			✓					

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019
Location of Cooking Facilities	#N/A	In the house	#N/A	In the house
		In a separate building		Separate building
		Outdoors		Outdoors
		No food cooked in household		Other

I.L. Drinking Water

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓	✓	✓	✓						
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓	✓	✓	✓	✓	✓			

Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019	
Improved	Tap water/ Piped	Piped into dwelling/yard plot	Water piped into dwelling	Piped into dwelling	
		#N/A	Water pipe inside compound	Piped into compound, yard or plot	
		Public tap/standpipe	Water pipe outside compound	Piped to neighbour	
	Tube well, borehole	Tubewell/borehole	#N/A	Public tap / standpipe	
	Protected well/ Spring	Protected dug well	Tubewell/borehole	Tubewell/borehole	Borehole or tubewell
			Protected spring	Protected well/ Spring	Protected well
Waterfall/ Rain water	Rain water	Protected spring	Protected spring		
Bottled water/ Water purifier	Bottled water	Rainwater collection/ tank	Rainwater collection		
Unimproved	Unprotected well/Spring	Bottled water	Bottled water	Home water purifier/ filter/Package water	
		Unprotected dug well	Unprotected well/Spring	Unprotected well	
	Tanker/ Truck	Unprotected spring	Unprotected well/Spring	Unprotected spring	
	#N/A	Tanker truck	Tanker/truck	Tanker truck	
Other	Cart with small tank/ drum	#N/A	Cart with small tank/ drum		
Other	Other	Other	Other		
Surface	Pool/Pond/ Lake	Surface water (river/dam/lake/pond/stream/canal/irrigation channel)	Pool/pound/lake/dam/stagnant water	Surface water (river, stream, dam, lake, pond, canal, irrigation channel)	
	River/stream/ canal		River/stream/canal		

Note: Unimproved indicator is different from drinking water from unimproved sources. This latter contains both:

- Drinking water from unimproved sources (well/spring) and
- Surface.

I.M. Type of Toilet

Available Levels:

Data Source	Countrywide			State/Region			District			Township		
	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural	Union	Urban	Rural
CS 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHS 2015-16	✓	✓	✓									
MLCS 2017	✓	✓	✓	✓								
ICS 2019	✓	✓	✓	✓	✓	✓						

 Not Available

Available Indicators:

Household Amenities	CS 2014	MDHS 2015-16	MLCS 2017	ICS 2019	
Open Defecation	No Toilet	No facility/bush/field	No facilities (open defecation in bush field)	Open defecation (no facility, bush, field)	
Improved	Flush	Flush/pour flush to piped sewer	Flush to piped sewer system	Flush to piped sewer system	
		Flush/pour flush to septic tank	Flush to septic tank	Flush to septic tank	
		Flush/pour flush to pit latrine	Flush to pit latrine	Flush to pit latrine	
	#N/A	Composting toilet	Composting toilet	#N/A	
	Water seal (Improved pit latrine)	#N/A	#N/A	#N/A	
Unimproved	#N/A	Ventilated improved pit (VIP) latrine	Ventilated improved pit latrine	Ventilated improved pit latrine	
	Pit (Traditional pit latrine)	Pit latrine with slab	Pit latrine with slab	Pit latrine with slab	
	Bucket (Surface latrine)	#N/A	#N/A	Flush to open drain	
	#N/A	Flush/pour flush not to sewer/septic	Pit latrine without slab/open pit	Open Pit latrine	Pit latrine without slab/ Open pit
		Pit latrine without slab/open pit	Bucket	#N/A	Container based sanitation
		Hanging toilet/hanging latrine	Hanging toilet/hanging latrine	Hanging Toilet	Hanging toilet/ hanging latrine
		#N/A	#N/A	Flush to else where	Flush to dont know where
Other	Other	Other	Other		

Note: Basic and limitation sanitation services were only available in the 2019 Intercensal Survey

II. Calculation of Estimated number of Households and Estimated population

II.A. Calculation of Estimated number of households' use of amenities

The 2019 Intercensal provided the *Percentage of households' use of amenities*. The *Estimated number of households* was calculated by multiplying the *Number of households in the geographical area* with *Percentage of households' use of amenities*.

$$\text{Estimated number of households' use of amenities} = \text{Number of households in the geographical area} \times \text{Percentage of households' use of amenities}$$

II.B. Calculation of Estimated population' use of amenities

First, it is important to calculate the *Number of people per Households*. To obtain it, for each geographical area (state/region, district and township levels), the *Population* was divided to the *Number of Households*.

$$\text{Number of people per Households} = \frac{\text{Population}}{\text{Number of Households}}$$

MIMU used:

- 2014 Population and Housing Census for the years 2014, 2015-16 and 2017,
- 2019 Intercensal Survey for the year 2019.

Finally, the *Estimated population's use of amenities* was calculated by multiplying the *Estimated number of households' use of amenities* with *Number of people per Households*.

$$\text{Estimated population's use of amenities} = \text{Estimated number of households' use of amenities} \times \text{Number of people per Households}$$