POVERTY ANALYSIS
on 2021 Libyan population MSNA & JMMI data

July 2022
Libya

CONTEXT

In Libya, most of the year 2021 was characterised by continuous peacebuilding and unification efforts, built on the ceasefire agreement reached in October 2020.[1] However, the protracted nature of the Libya conflict (set in a complex socio-political landscape) has resulted in significant economic challenges, such as losses in national income, productivity, and consumption.[2] Some positive developments related to liquidity took place at the beginning of 2021, like the devaluation of the Libyan dinar (LYD),[3] which increased the availability of cash. Yet, liquidity issues remained, especially in the South and East of the country.[4]

RELEVANCE

Overall, the 2021 Multi-Sector Needs Assessment's (MSNA)[5] findings suggest that many of the sectoral needs found in Libya are driven by financial barriers. Indeed, 53% of the surveyed households reported having been unable to afford all of their basic needs.[6] In particular, more than one quarter of households reported having been unable to meet health (28%) and food needs (26%), followed by education needs (19%). The South and East emerged as the regions with the highest proportions of households being unable to cover at least one basic need.

Also, 61% of households across the assessed baladiyas[7] reported having faced issues in accessing sufficient cash[8], most commonly due to liquidity issues in banks (28%) and delays in the payment of salaries (25%). Moreover, 42% of households mentioned access to cash as a priority need.

Finally, findings indicate that the use of crisis and emergency coping strategies - measured through the Livelihoods Coping Strategies Index (LCSI)[9] - is widespread in Libya, as 63% of households overall reported having used or exhausted at least one of these strategies over the 30 days prior to data collection, in order to cope with meeting their basic needs. The most commonly reported crisis or emergency coping mechanisms were taking on an additional job (44%), reducing expenses on health (32%) and selling productive assets (21%).

DATA SOURCES

This factsheet presents the findings of the secondary analysis on the 2021 Libyan population MSNA's income and expenditure data, combined with the averaged cost of the Minimum Expenditure Basket (MEB) from the June, July and August (2021) Joint Market Monitoring Initiative (JMMI)[10].

For the MSNA survey, a total of 8,871 household-level interviews were conducted remotely (by phone), assessing the three Libyan population sub-groups (non-displaced, returnee, and internally displaced persons) across 45 selected baladiyas. Sampling was primarily purposive with quotas for each population group in each baladiya. Findings should therefore be considered indicative of (and not generalisable to) each population group's experiences and situation in the selected baladiyas.

The cost of the MEB was calculated on a monthly basis through the JMMI, where at least four prices of basic food and non-food items (NFIs) were recorded from different local shops and markets of key urban areas in Libya. The MEB includes the minimum group of items required to support a five-person Libyan household for one month. The cost of the MEB can be used as a proxy for the financial burdens on households.

For the 22 baladiyas that were not covered by the JMMI, the cost of the MEB for the nearest neighbouring baladiya, or the averaged cost of the MEB for the two nearest baladiyas (always within the same mantika[11]) were used. The map on the next page of this factsheet displays what method is applied for what baladiya.

You can find all publications related to the 2021 Libyan population MSNA here, and to the JMMI here.

Assessment samples, timings and key figures

Number of baladiyas assessed in MSNA:	**45 (out of 101)**
# MSNA surveys for income analysis:	**7,474**
# MSNA surveys for expenditure analysis:	**8,495**
Data collection MSNA:	**14 June - 2 August, 2021**
Number of (relevant) baladiyas covered by JMMI:	**22 (out of 45)**
Data collection JMMI:	**1-11 June, 1-11 July, 1-13 August, 2021**
Overall median cost of MEB (June, July, August):	**697 LYD, 711 LYD, 770 LYD**

1. "Keeping a Libya Settlement on Track," International Crisis Group, January 29, 2021.
2. United Nations Economic and Social Commission for Western Asia (UNESCWA), "The economic cost of the Libyan conflict," September 13, 2021.
3. Reuters, "Libyan liquidity crisis eases after exchange rate shift," February 3, 2021.
4. Reuters, "Libyan central bank reunification process begins this month, says governor," December 13, 2021.
5. REACH has been conducting the Libyan population MSNA in Libya since 2016, to fill crucial humanitarian information gaps for Libyans. Data collected through this MSNA fed into the 2022 Humanitarian Needs Overview (HNO). The 2021 Libyan population MSNA was funded by the Directorate General for European Civil Protection and Humanitarian Aid Operations (ECHO), the United States Agency for International Development (USAID) and United Nations Office for the Coordination of Humanitarian Affairs (OCHA).
6. In the 30 days prior to data collection.
7. Baladiyas are akin to munipalities in Libya. There are 100 baladiyas widely recognised.
8. In the 30 days prior to data collection.
9. The LCSI is a composite indicator that is based on households reporting to have used, or exhausted, a stratified list of coping strategies in the 30 days prior to data collection. In the MSNA survey, the LCSI was asked for basic needs, meaning that it was asked if households used the strategies in order to meet their basic needs.
10. The JMMI was created by the Libya Cash & Markets Working Group (CMWG) in June 2017, to inform cash-based interventions and better understand market dynamics in Libya. The initiative is led by REACH and supported by the CMWG members. It is funded by the Office of U.S. Bureau of Humanitarian Assistance (BHA) and the United Nations High Commissioner for Refugees (UNHCR).
11. Mantikas are akin to provinces, governorates, or departments in Libya. There are 22 mantikas widely recognised.

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METHODOLOGY

Several manipulations on the income and expenditure data of the MSNA and the median cost of the MEB from the JMMI took place, to be able to compare all data and perform the analysis. As the MSNA data applies to households of different sizes, while the median cost of the MEB is calculated for a standard five-person household, an appropriate equivalence scale had to be selected to adjust all data to one-person households. After comparing the suitability of three different equivalence scales,[12] the square root equivalence scale was chosen for this. To minimise the removal of absolute outliers, two separate dataframes (one related to income data and one related to expenditure data) were created. Additionally, coherence checks against several key socio-economic variables were executed to identify and remove illogical outliers.

The analysis resulted in a median income and expenditure per baladiya, to which the according median cost of the MEB was compared. The final result is an overview of proportions of households with an income and/or expenditure below the median cost of the MEB for their baladiya, per baladiya, found by comparing normalized figures (one-person households).

An overview of all steps this analysis consists of, can be found in the **methodology annex**.

ASSUMPTION

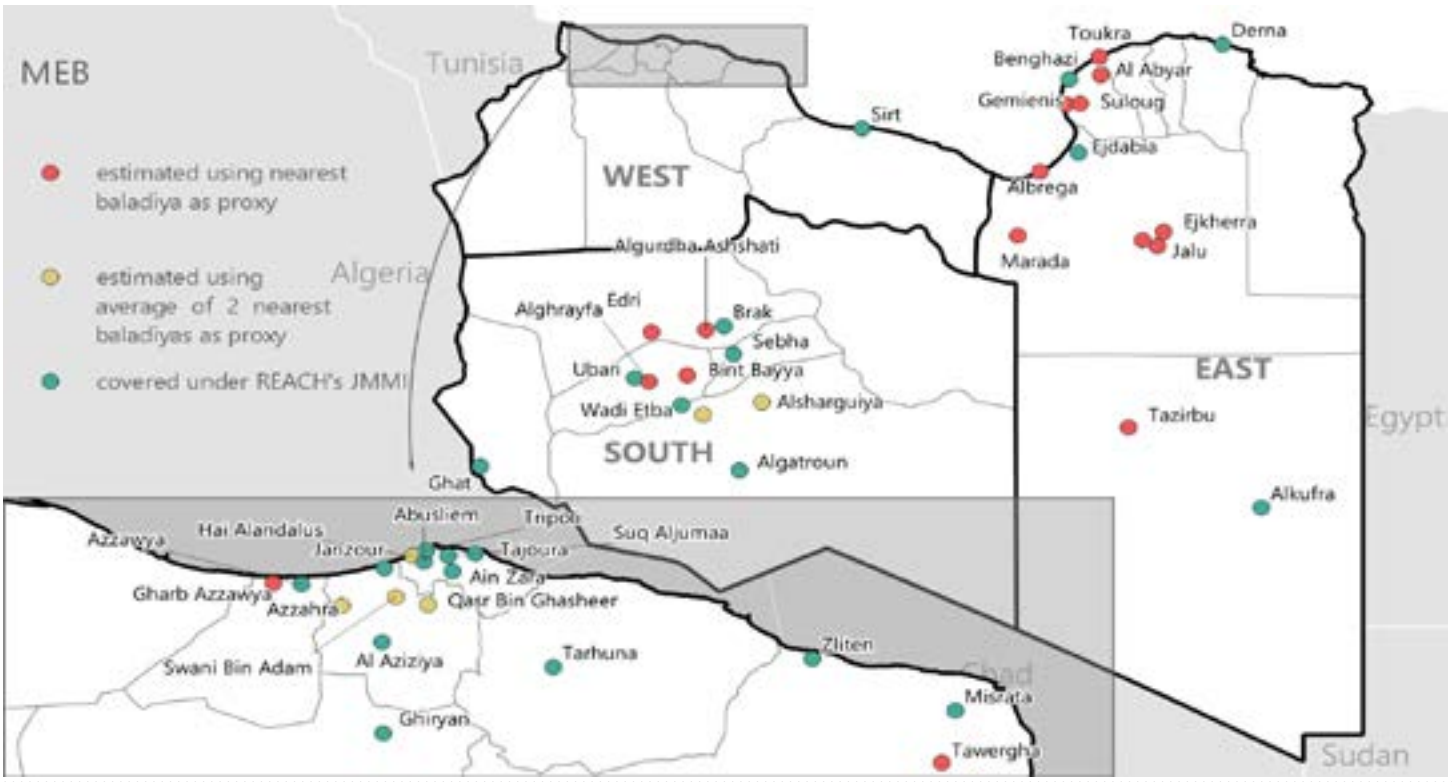
Per baladiya, relatively high proportions of households with an income as well as an expenditure below the median cost of the MEB for their baladiya, are indicating poverty for these baladiyas.

LIMITATIONS

It is important to note that the 45 baladiyas assessed under the 2021 MSNA and on which this analysis was performed, were selected based on several criteria.[13] This means that those baladiyas more likely to suffer deprivation due to displacement (among other factors) had been chosen. Hence, findings cannot be generalised to the Libyan population across the whole country. Moreover, data on income and expenditure is known to be delicate to inquire about and susceptible to underreporting.

Therefore, it should be noted that the absolute results of this analysis may overestimate the prevalence of poverty. Although the most obvious outliers as well as illogicalities have been excluded from the analysis, its outcomes demonstrate that working with income and expenditure data remains precarious. Internal consistency checks (at the national level, however) on the MSNA's income and expenditure data revealed that among those households whose reported income or expenditure fell into the bottom 30% quantile, only 35% had both their income and expenditure in the bottom 30% quantile. Furthermore, an overall 22% of households were found to have their reported income below their expenditure. Consequently, this analysis should be considered an input for further discussion on measuring poverty in Libya rather than a final result.

Map of assessment scope (45 baladiyas) with methods applied to cover the JMMI data:



12. These three equivalence scales are defined by the Organisation for Economic Co-operation and Development. They are the "OECD equivalence scale", the "OECD-modified scale" and the "square root scale". The method of the latter is dividing a value by the square root of the household size, meaning that a four-person household is considered to spend twice as much for its consumption as a one-person household.
13. Selection criteria included: severity according to the 2021 Humanitarian Needs Overview (HNO), size of IDP and returnee population, proportion of households with 2 or more LSGs according to the 2020 MSNA, prioritization provided by the Refugee & Migrant MSNA team, and security priority based on ACLED incident data.

INCOME BELOW MEB

% of assessed households whose reported income was found to be lower than the median cost of the MEB for their baladiya: **27%**

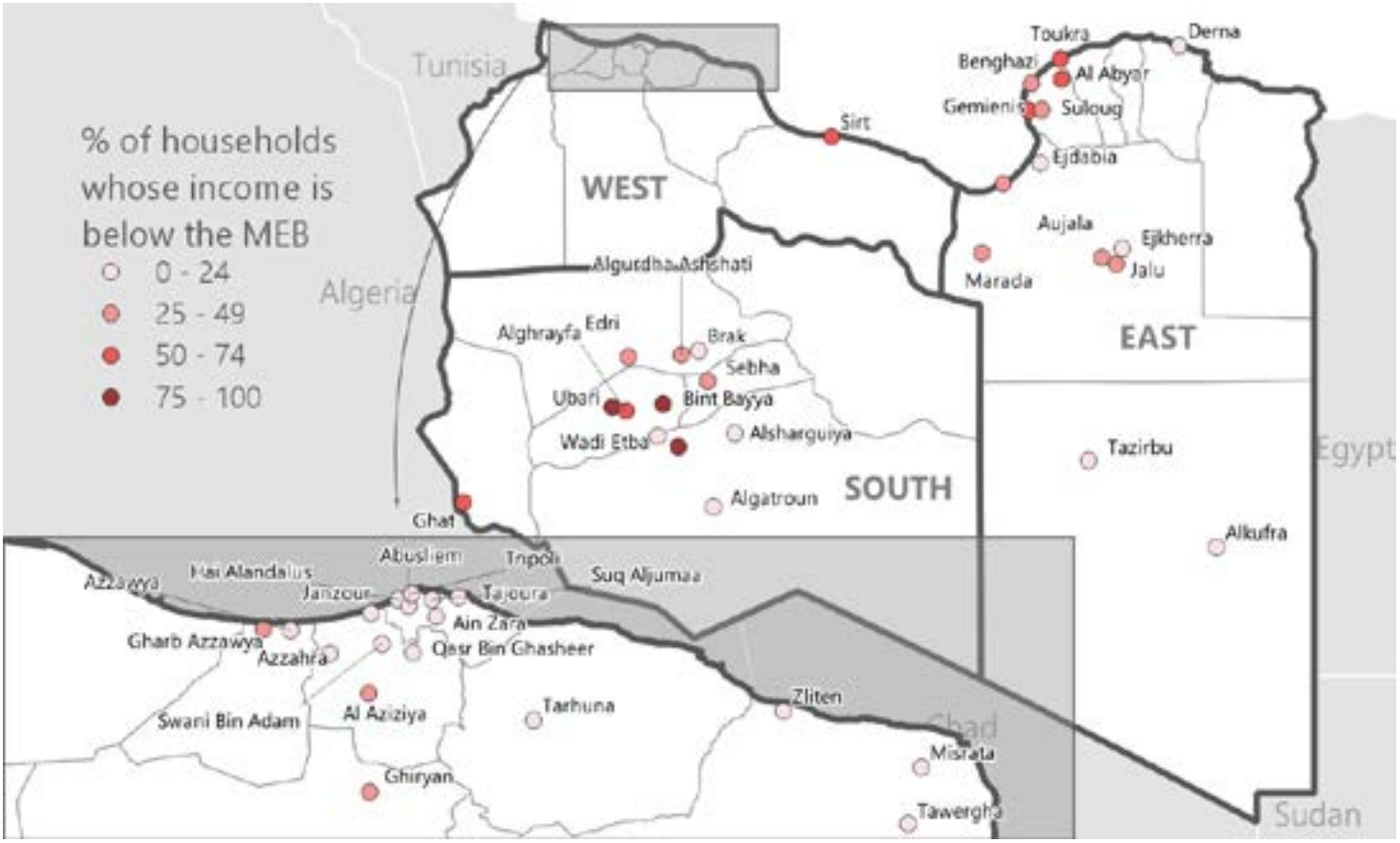
Top 5 baladiyas per % of households whose reported income was found to be lower than the median cost of the MEB for their baladiya:

Murzuq (Murzuq, South)	85%
Bint Bayya (Ubari, South)	81%
Ubari (Ubari, South)	75%
Alghrayfa (Ubari, South)	71%
Gemienis (Benghazi, East)	69%

Bottom 5 baladiyas per % of households whose reported income was found to be lower than the median cost of the MEB for their baladiya:

Tawergha (Misrata, West)	3%
Ain Zara (Tripoli, West)	6%
Qasr Bin Ghasheer (Aljfara, West)	7%
Abusliem (Tripoli, West)	9%
Algatroun (Murzuq, South)	9%

Baladiyas per proportion of households whose reported income was found to be lower than the median cost of the MEB for their baladiya:



EXPENDITURE BELOW MEB

% of assessed households whose reported expenditure was found to be lower than the median cost of the MEB for their baladiya: 42%

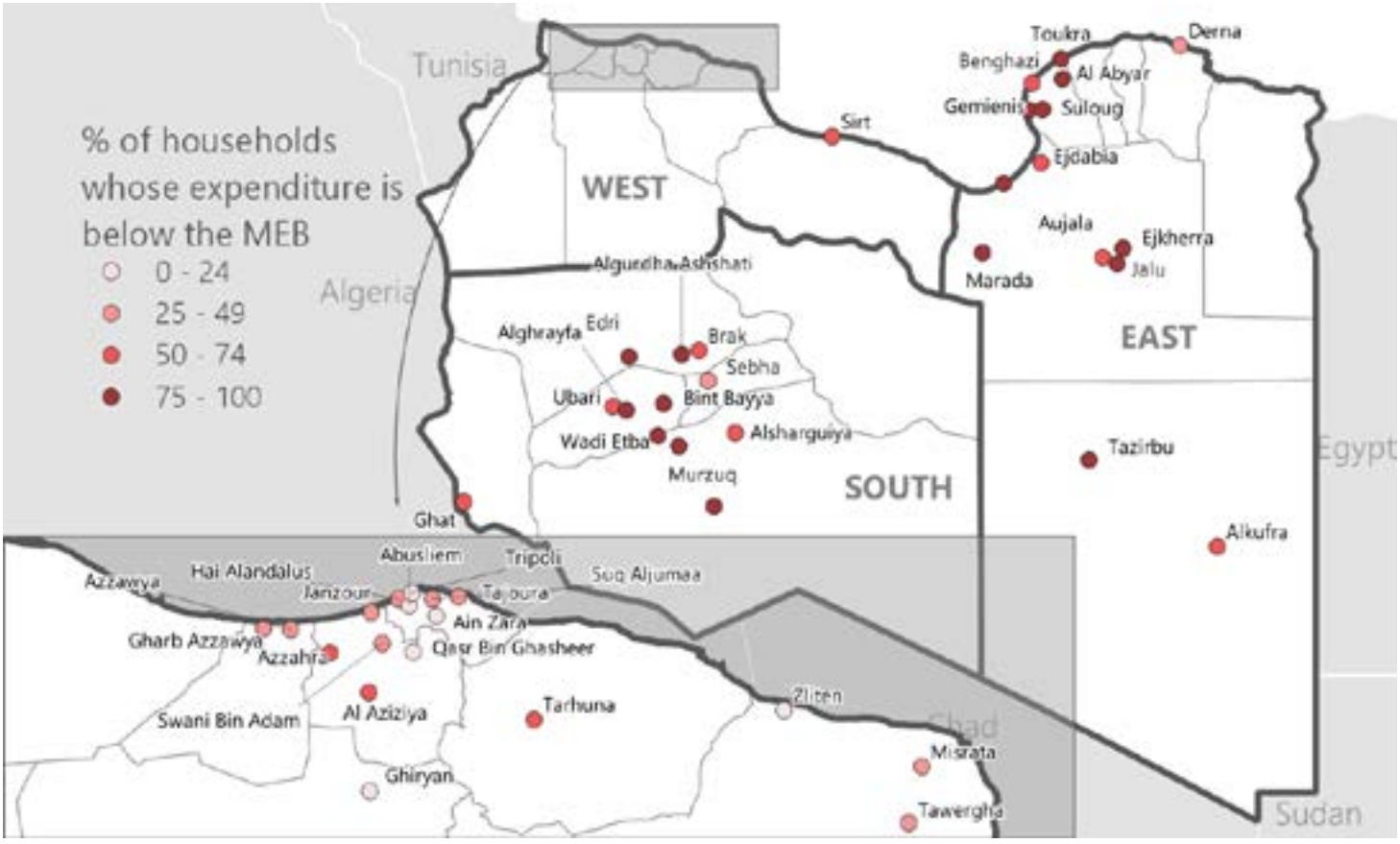
Top 5 baladiyas per % of households whose reported expenditure was found to be lower than the median cost of the MEB for their baladiya:

Murzuq (Murzuq, South)	95%
Tazirbu (Alkufra, East)	95%
Marada (Ejdabia, East)	94%
Gemienis (Benghazi, East)	93%
Alabyar (Benghazi, East)	92%

Bottom 5 baladiyas per % of households whose reported expenditure was found to be lower than the median cost of the MEB for their baladiya:

Ain Zara (Tripoli, West)	10%
Abusliem (Tripoli, West)	15%
Zliten (Misrata, West)	17%
Tripoli (Tripoli, West)	18%
Qasr Bin Ghasheer (Aljfara, West)	21%

Baladiyas per proportion of households whose reported expenditure was found to be lower than the median cost of the MEB for their baladiya:



ANNEX 1: METHODOLOGY

STEP 1: Adding required composites

As a first step, the composites used throughout the analysis were added to the overall dataframe. The composites added per household were (1) total income, (2) total expenditure, (3) FCS,[14] (4) LCSI,[15] (5, 6 and 7) household size, income and expenditure for all potential equivalence scales, and (8 and 9) total income and total expenditure per capita.

STEP 2: Creating separate dataframes & removing outliers

To ensure that the analysis of income was not limited by the removal of expenditure outliers (and vice versa), two different variations of the dataframe were created. Hence, each dataframe only had the outliers (values below 100) removed that pertain to the variable(s) for which the dataframe is created.

STEP 3: Selecting the most suitable equivalence scale

Three equivalence scales were compared against each other: the OECD equivalence scale, the OECD-modified scale, and the square root scale. The latter appeared to best maintain the patterns of the unadjusted and per capita data, and caused least distortion to both the income and expenditure variables. This was due to the following reasons: (1) it was the only scale that did not massively inflate the number of outliers, (2) the distribution of the data (according to the boxplots and histograms) when using this scale most closely resembled the distribution of the adjusted and per capita data for both income and expenditure, (3) the plots and regression line between income and expenditure using this scale most closely matched those of adjusted and per capita data, and (4) it was the only scale that can also be applied to the cost of MEB.

STEP 4: Removing statistical outliers through coherence checks

Outliers were only removed if a high income or expenditure value conflicted with other key socio-economic variables – e.g. high income and poor FCS are not logical together, hence this value would be removed, unless the coherence checks against all other indicators were met. The indicators used to identify illogical outliers were: working household members, FCS, low income as reason for cash withdrawal issues, inability to pay rent, expenditure below the median, LCSI (for income only). The final number of surveys per baladiya that built the income and expenditure dataframes, are shown in the table at the right.

STEP 5: Calculating median income & median expenditure

This first output for the results table per baladiya was calculated: the median income and median expenditures of households, per baladiya.

STEP 6: Importing and averaging the cost of the MEB per baladiya

The average of the June, July and August median cost of the MEB per baladiya was imported to the dataframes. As only 23 of the MSNA's 45 baladiyas were covered under the JMMI, for the other baladiyas the median cost of the MEB of the nearest neighbouring baladiya, or the averaged median cost of the MEB of the two nearest baladiyas - always within the same mantika - was used as a proxy. The table at the right displays from what baladiya(s) the median cost of the MEB was taken.

STEP 7: Adjusting the median cost of MEB to one-person households

As the square root scale was selected for the income and expenditure variable, this same approach was applied to the median cost of the MEB.

STEP 8: Comparing median cost of MEB to median income & median expenditure

The next part of the analysis entailed deducting the median income and median expenditure from the (averaged) median cost of the MEB, per baladiya. This outcome is shown in the results table, for all baladiyas.

STEP 9: Calculating proportion of households found to have their income or expenditure below the median cost of the MEB

As final step of the analysis, the proportion of households found to have their income and expenditure below their baladiya's median cost of MEB was calculated per baladiya. Relatively high proportions (highlighted according to size in the results table) for both of these calculations for a baladiya, can be considered as an indication of poverty for that baladiya.

Sample sizes of MSNA household-level interviews on which income and expenditure data were calculated, and JMMI's median cost of MEB for what baladiyas were used:

Baladiya	MSNA sample income data	MSNA sample expenditure data	Baladiyas used for JMMI's median cost of MEB
Abusliem	226	227	Abusliem
Ain Zara	222	231	Ain Zara
Al Aziziya	212	221	Al Aziziya
Alabyar	137	164	Benghazi
Albrayga	110	119	Ejdabia
Algatroun	173	178	Algatroun
Alghrayfa	177	186	Ubari
Algurdha Ashshati	83	112	Brak
Alkufra	272	280	Alkufra
Alsharguiya	168	177	Algatroun & Wadi Etba
Aujala	106	121	Ejdabia
Azzahra	247	336	Al Aziziya & Janzour
Azzawya	143	149	Azzawya
Benghazi	284	359	Benghazi
Bint Bayya	114	120	Ubari
Brak	116	132	Brak
Derna	184	185	Derna
Edri	107	145	Brak
Ejdabia	246	313	Ejdabia
Ejkherra	89	108	Ejdabia
Gemienis	104	145	Benghazi
Gharb Azzawya	106	115	Azzawya
Ghat	199	201	Ghat
Ghiryan	132	108	Ghiryan
Hai Alandalus	244	260	Abusliem & Tripoli
Jalu	134	178	Ejdabia
Janzour	229	296	Janzour
Marada	51	63	Ejdabia
Misrata	178	184	Misrata
Murzuq	192	208	Algatroun & Wadi Etba
Qasr Bin Ghasheer	213	246	Al Aziziya & Janzour
Sebha	264	289	Sebha
Sirt	182	270	Sirt
Suloug	63	123	Benghazi
Suq Aljumaa	215	219	Suq Aljumaa
Swani Bin Adam	227	256	Al Aziziya & Janzour
Tajoura	181	205	Tajoura
Tarhuna	133	159	Tarhuna
Tawergha	70	71	Misrata
Tazirbu	60	68	Alkufra
Toukra	70	132	Benghazi
Tripoli	215	227	Tripoli
Ubari	242	252	Ubari
Wadi Etba	137	138	Wadi Etba
Zliten	217	219	Zliten

14. FCS refers to Food Consumption Score. More information about this indicator can be found on page 24 of the 2021 Libyan population MSNA Methodology Overview.
15. LCSI refers to Livelihoods Coping Strategies Index. More information about this indicator can be found on page 33 of the 2021 Libyan population MSNA Methodology Overview.

ANNEX 2: RESULTS TABLE

Region	Mantika	Baladiya	Median income (LYD)	Median expenditure (LYD)	MEB (LYD)	MEB minus median income (LYD)	MEB minus median expenditure (LYD)	% of HHs with income below MEB	% of HHs with expenditure below MEB
East	Alkufra	Alkufra	423	240	319	-104	80	24%	72%
		Tazirbu	481	103	323	-158	220	9%	95%
	Benghazi	Alabyar	367	163	367	0	204	57%	92%
		Benghazi	334	185	363	29	178	47%	50%
		Gemienis	264	165	367	103	202	69%	93%
		Suloug	264	217	367	103	150	46%	91%
		Toukra	321	210	367	46	157	58%	91%
	Derna	Derna	481	266	265	-216	0	9%	46%
	Ejdabia	Albrayga	384	230	362	-22	132	40%	76%
		Aujala	569	281	362	-207	81	29%	72%
		Ejdabia	407	201	346	-61	145	18%	67%
		Ejkherra	427	156	362	-65	206	14%	83%
		Jalu	405	251	362	-43	111	42%	82%
		Marada	604	263	362	-242	99	35%	94%
South	Ghat	Ghat	394	344	452	58	108	65%	68%
	Murzuq	Algatroun	732	346	470	-262	124	9%	86%
		Alsharguiya	711	403	428	-283	25	17%	57%
		Murzuq	273	188	428	155	240	85%	95%
		Wadi Etba	476	286	385	-90	99	17%	90%
	Sebha	Sebha	447	273	325	-121	52	31%	45%
	Ubari	Alghrayfa	323	290	438	115	148	71%	82%
		Bint Bayya	267	319	438	172	119	81%	88%
		Ubari	326	341	438	112	97	75%	72%
	Wadi Ashshati	Algurdha Ashshati	378	250	320	-58	70	36%	77%
		Brak	438	198	317	-122	118	18%	64%
		Edri	288	221	320	32	98	37%	78%
West	Al Jabal Al Gharbi	Ghiryan	379	425	353	-26	-71	36%	21%
	Aljfara	Al Aziziya	349	305	339	-9	34	39%	56%
		Azzahra	495	233	296	-199	63	18%	51%
		Janzour	534	184	253	-280	69	19%	38%
		Qasr Bin Ghasheer	528	313	296	-231	-16	7%	21%
		Swani Bin Adam	667	339	296	-371	-43	21%	27%
	Almargeb	Tarhuna	580	196	292	-289	96	15%	73%
	Azzawya	Azzawya	707	428	336	-371	-91	10%	33%
		Gharb Azzawya	770	617	375	-396	-242	29%	37%
	Misrata	Misrata	688	316	299	-388	-17	17%	36%
		Tawergha	707	404	368	-339	-36	3%	35%
		Zliten	832	381	315	-517	-66	19%	17%
	Sirt	Sirt	222	228	312	90	85	67%	62%
	Tripoli	Abusliem	657	441	331	-326	-111	9%	15%
		Ain Zara	756	566	281	-475	-285	6%	10%
		Hai Alandalus	733	522	321	-412	-200	22%	33%
		Suq Aljumaa	662	447	323	-339	-125	18%	26%
		Tajoura	461	306	324	-137	18	24%	37%
		Tripoli	753	379	312	-441	-67	16%	18%