

# Multi-Purpose Cash Assistance Targeting Framework

May 2023



**Overview:** Multi-Purpose Cash Assistance (MPCA) is currently the preferred response modality to cover basic needs of affected populations across Ukraine. The multi-sectoral response seeks to use MPCA to address the basic humanitarian needs of affected people in a holistic manner, reaching 5 million people in 2022. These were predominantly displaced households under a targeting framework developed in the initial months of the response.

In November 2022 the Cash Working Group (CWG) Task Team 1 (TT1) was convened to revise the targeting framework for MPCA in Ukraine. There are two established pathways for MPCA in Ukraine: a rapid pathway tied to recent displacement from and residents of areas close to areas of active hostilities (Rapid Emergency MPCA), and a ‘stability’ pathway for those in protracted displacement or residing further away from the front line (ECA).

This revised framework outlines (1) the eligibility criteria for Rapid MPCA, (2) the scoring model for Emergency Cash Assistance (ECA), and (3) a technical summary of how the ECA scoring model was developed.

# Rapid MPCA

**Overview:** This section outlines the eligibility criteria for Rapid MPCA.

**Purpose:** Rapid MPCA is intended to enable individuals and households who have recently or are currently directly affected by the war, in areas where full vulnerability assessment is not operationally feasible, to meet their critical basic needs in the timeliest manner.

The definition below is intended to serve as guidance on which population groups could be eligible for Rapid MPCA. It is included because it can be clearly defined, is easily amendable, and should serve as a functional proxy for areas of active hostilities or active combat.

There may be individuals or households residing in locations that fall under the criteria, but with whom full vulnerability assessment is feasible. In this case it is recommended that partners undertake full vulnerability assessment, using the MPCA eligibility framework.

There may also be locations that do not fall under the criteria, but which implementing organisations assess as to be an area of active hostilities or active combat. For these cases, a short location assessment form is included to serve as a harmonised decision-making tool. Please note that this targeting framework is not intended as a guide to MPCA feasibility – this properly occurs prior to targeting, and this work is being undertaken by the dedicated CWG Task Team.

**Rapid MPCA Target Group:**

Target Group	Definition
<p>1.1 Internally displaced persons (IDP), who have been displaced within the last 30 days from areas of active hostilities or active combat, and households currently residing in areas of active hostilities or active combat.</p>	<p>An IDP in this scenario is defined as a persons or groups of persons who have been forced to flee, evacuated from by state or local authorities, or opted to leave their homes or places of habitual residence, as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border. This includes households who have fled or been evacuated from areas outside of the Ukraine government’s control to GCA. Resident households are those who either could not or chose not to flee from the designated areas.</p> <p>This category includes i) households recently and originally displaced from or residing in areas thirty kilometres or less from areas of active hostilities or active combat in Government Controlled Areas (GCA), identified using the most recent list of hromadas within a thirty-kilometre line of contact (LoC) buffer, but who cannot be accessed for full vulnerability assessment, and ii) households residing in areas outside the Ukraine government’s control, in hromadas within the thirty-kilometre line of contact (LoC) buffer.</p> <p>This includes households who have been evacuated from the same front-line areas.</p>

### **Rapid MPCA Location Assessment Form:**

**Aim:** The aim of the Location Assessment form is to strengthen the Rapid MPCA criteria by enabling harmonised, guided, but flexible operational decision-making using the best available frontline data and information. It is intended for use in locations that do not fall under the above criteria, nor are included in the Ukraine government's list of areas of active hostilities, but which implementing organisations assess as 'currently affected by the conflict'.

- 1) *Is the area currently considered by humanitarian actors or national or local authorities to be 'newly-accessible', or does it fall under the areas listed for 'mandatory evacuation'?*

- Yes
- No

*Suggested means of verification for 'newly accessible': official situation reports (OCHA), Humanitarian Country Team (HCT) meetings and updates, inter-cluster coordination group (ICCG) meetings and updates, clusters / working groups (4Ws), national or local authorities.*

- 2) *Has the hromada experienced more than 8 daily incidents of shelling (at least once per day, for 8 days), or the settlement at least one incident of shelling in the past 14 days?*

- Yes
- No

*Suggested means of verification: INSO Weekly Incident Reports, national or local authorities, field key informants.*

- 3) *Have there been severe disruptions to water, electricity, network (phone) coverage, and gas, defined as more than 12 hours per day, every day, for most (>50%) of the hromada population?*

- Yes
- No

*Suggested means of verification: Reach Humanitarian Situation Monitoring reports, national or local authorities, field key informants.*

**If the answer to all of the above is 'Yes', Rapid MPCA can be considered if MPCA is appropriate and feasible in the location.**

# Emergency Cash Assistance

**Overview:** This framework outlines the eligibility criteria for **Emergency Cash Assistance (ECA)**.

**Purpose:** ECA is intended to enable conflict-affected individuals and households, who do not fall under the Rapid MPCA framework, in areas where full vulnerability assessment is operationally feasible, to meet their critical basic needs in the timeliest manner through consumption support.

More specifically, ECA seeks to address the critical basic needs of households who have been displaced for more than 30 days or are residing in areas more than 40km away from the front line, and who are found to be socio-economically vulnerable following assessment<sup>1</sup>.

**Socio-economic Vulnerability:** The ECA assessment comprises a household questionnaire and a scoring model. The scoring model performs household consumption estimation based on answers given in the questionnaire, which covers several household characteristics that were found to have a strong association with monthly consumption. The characteristics include household demographics, head of household employment status, the current type of shelter, access to basic utilities, and ownership of essential civil documentation. The household score is given in Ukrainian hryvnia (UAH).

Per the model, a household is eligible for ECA when their estimated consumption is below the inflation-adjusted minimum subsistence level (MSL; currently UAH 5,865 per person per month)<sup>2</sup>. There are exemptions to scoring model eligibility<sup>3</sup>, namely:

- If the score is **below** the MSL but the household has any adult member in full time employment (including full time self-employment), they would **not** be eligible.
- If the score is **above** the MSL, but the score is not more than double the MSL and the household is headed by a minor (below 18), they **would** be eligible.
- If the score is **above** the MSL, but the score is not more than double the MSL and the head of household's primary occupation is a caregiver, they **would** be eligible.

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<sup>1</sup> The target population eligible for ECA assessment may be subject to periodic change as the context changes or based on results of further research.

<sup>2</sup> For an in-depth explanation of the scoring model, please see the accompanying Technical Overview.

<sup>3</sup> These exemptions were identified by Task Team 1 members. Other inclusion or exclusion exemptions may be introduced as the context changes or based on results of further research.

**Scoring Model:**

Household Characteristic	Estimated Effect on Monthly Consumption
Household size	Moderate increase
Owns smartphone	Increase
Head of household is married	Increase
Household uses Telegram / Viber	Increase
Female-headed household	Decrease
Female single parent in the household	Decrease
At least one member over 65	Decrease
Household shares latrine with other household(s)	Decrease
Household has inadequate garbage disposal	Decrease
Household is missing HLP documents	Decrease
Household is missing civil documents	Decrease
Head of household is unemployed	Decrease
Does not have standard shelter (e.g., collective centre)	Moderate decrease
2 or more children in household	Moderate decrease
Head of household is retired	Moderate decrease
Large household (6 or more members)	Large decrease

**Assessment Implementation:** The ECA assessment questionnaire is implemented either in-person or over the phone. In person questionnaire allows for verification of characteristics that are verifiable, however given different operational circumstances and constraints, this is not essential to implementation. The scoring model is implemented either directly into data collection platforms like Kobo or as a separate offline scoring tool.

# Technical Overview: Emergency Cash Assistance Scoring Model

## Overview

This technical note provides an overview of the rationale and development of the Emergency Cash Assistance (ECA) scoring model, used as part of the assessment for multi-purpose cash assistance (MPCA) eligibility. As noted above, there are two established pathways for MPCA: a rapid pathway tied to recent displacement from and residents of areas close to areas of active hostilities (Rapid Emergency MPCA), and a 'stability' pathway for those in protracted displacement or residing further away from the front line (ECA).

While the Rapid MPCA pathway has clear eligibility criteria linked to new displacement or proximity to areas of active hostilities, ECA previously utilised a categorical model combined with a self-reported income question. TT1 concluded targeting for ECA should be strengthened by moving to a multi-variable, data-driven model. To ensure more targeted approach that is contextually appropriate, operationally feasible, and derived using the best available data, UNHCR and IOM economists, with the support of the TT1 members, Protection colleagues, and CBI experts, undertook a quantitative analysis of the recent multi-sector needs assessment (MSNA).

## Socio-economic Vulnerability

In the new ECA scoring model, monthly household consumption is the 'proxy' for socio-economic vulnerability. Here we use 'model' to mean a conceptual representation of the inputs, processes, and relationships which together describe something else – in this case, the specific household characteristics, and relationships between them, that together describe household consumption patterns. Consumption was chosen because of its conceptual alignment with MPCA, the delivery of which assumes consumption support is an appropriate modality for recipients to cover multiple critical basic needs. Consumption estimation or prediction is then a good indicator of whether a household can currently spend enough to cover their critical basic needs.

Consumption estimation alone does not define 'vulnerability', however, which is properly conceived of as a risk, i.e., there is a risk of significant harm to individual or household welfare, but in the Ukrainian context unambiguously due to the on-going conflict (i.e., not pre-existing poverty). So, while the scoring model can measure potential impact on welfare, it is used alongside targeting policy covering the specific macro regions or oblasts and the broad population groups eligible for assessment, which combined provides the linkage to the conflict.

## Vulnerability Analysis

The analysis that led to the ECA scoring model used data collected as part of the Multi-Sector Needs Assessment (MSNA), undertaken by Reach Initiatives and the World Food Programme. The MSNA is a thematically broad, in-depth household-level survey used to map humanitarian needs and gaps. As such, it contains rich, representative data about household needs and welfare that serves as a good basis for targeting analysis. The dataset contained 13,449 household surveys collected in 23 oblasts.



## Aims of the Analysis

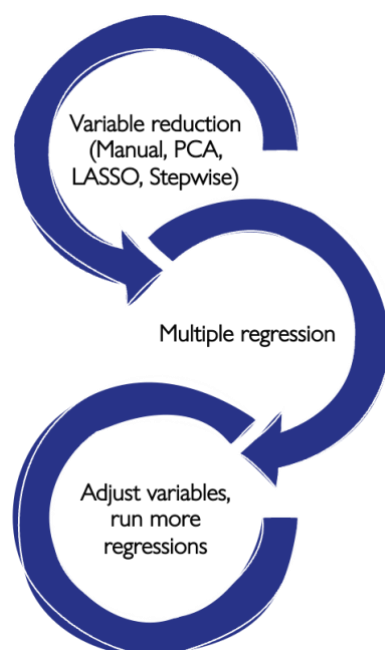
The aims of the analysis were to 1) understand the MSNA data using descriptive statistics, 2) understand, at the household level, whether different demographic, physical, infrastructural, and economic characteristics *predict* proxies for vulnerability such as household consumption, or a lack of ability to spend enough to cover essential needs, and 3) build a reliable model that can be used as part of the ECA assessment.

A reliable model was seen as one that would be accurate in its explanatory power (measured by its  $R^2$ ), concise in the number of variables in the model, and logical in terms of the effect of the variables on the outcome.

## Building the Model



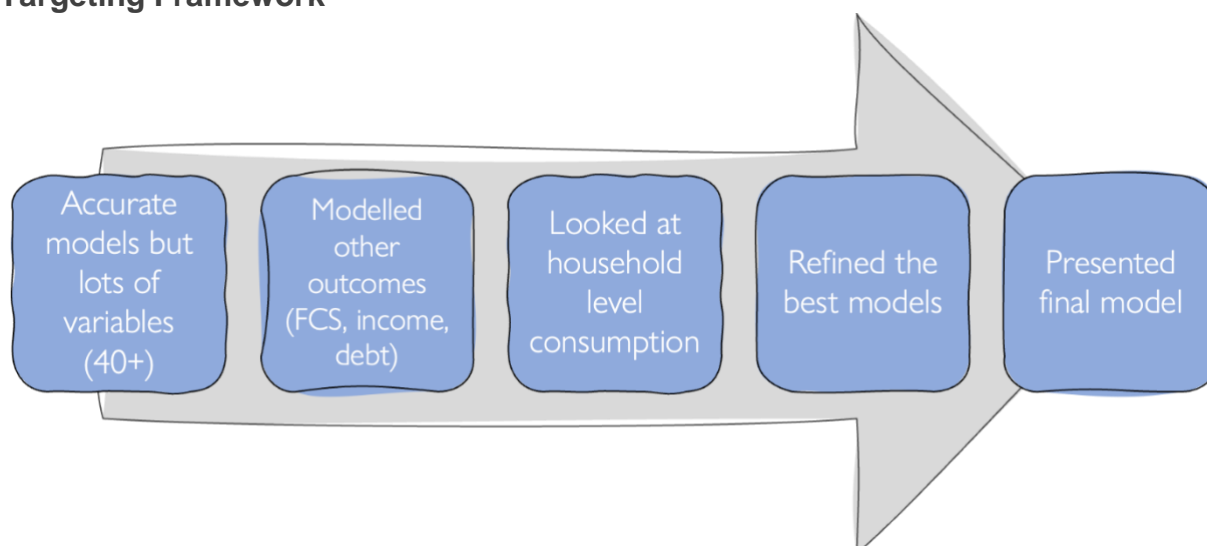
Building the model followed three main phases: 1) preparing the MSNA data for analysis, 2) the modelling process itself, and 3) error testing. During dataset preparation the team created or calculated 103 variables for modelling, which are noted in [Annex 1](#), and ran key descriptive statistics to better understand the make-up of the dataset. These included the geographic spread of the data, the ratio of female- to male-headed households, the rates of specific characteristics such as having disabilities or severe illnesses, and other data of interest such as the most common types of shelter and forms of employment. Descriptive analysis of all MSNA indicators, as well as the cleaned dataset, methodology note, and questionnaire are available at the [Reach Resource Centre](#).



The modelling process started with variable reduction. This involves different approaches to reducing the number of variables in the end models. The team used Principal Components Analysis (PCA), manual variable selection, Stepwise selection, and Least Absolute Shrinkage and Selection Operator (LASSO) approaches.

While PCA did not prove especially useful to variable reduction, and the manual selection models tended to lose too much explanatory power as non-significant variables were removed, both Stepwise and LASSO selection led to several 'good' models in terms of explanatory power, concision, and variable effect.

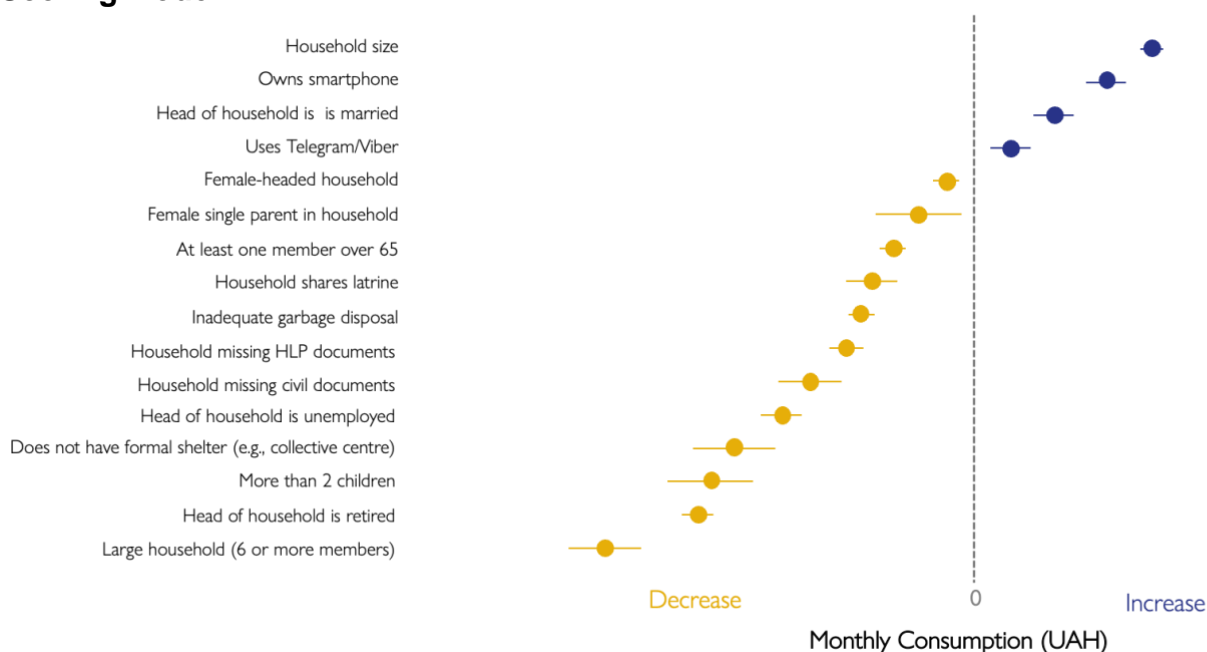
All approaches were used as part of weighted least squares (WLS) regression analysis, except for PCA which is a separate procedure. The data was weighted at the raion level, by the Reach MSNA team.



The initial models used per capita monthly consumption as the outcome variable, and generally had good explanatory power but a large number of variables, which would mean a lengthy questionnaire. Other outcome variables, such as food consumption scores, debt levels, and income, were also tested but had lower explanatory power.

The team then focused on household-level consumption as the outcome variable, as many costs are incurred at the household level, leading to better models in terms of explanatory power, concision, and variable effect. Geographic data were included as fixed effects in both the per capita and household-level consumption models, meaning the oblasts were included as variables in the model<sup>4</sup>. After several feedback sessions with partners, protection and CBI experts, the final model endorsed by the TT1 used WLS regression with LASSO variable selection, using household monthly consumption as the outcome variable. The final endorsed model, shown below, has an R square of 50% and identified 16 household characteristics that are likely to affect household consumption patterns.

### Scoring Model



<sup>4</sup> Using LASSO, fixed effect variables are 'pegged' to a designated datapoint. In this analysis, the team pegged the oblasts to the Cherkaska oblast, as households in Cherkaska were closest to the dataset averages across the highest number of variables.

The ECA scoring model, above, shows the variables in the model and the associated effect of each variable with monthly household consumption. The table below lists the variables in the model and a brief explanation of why the variable is in the model, based on individual descriptive statistics and analysis of correlation.

Variable	Effect on Consumption	Why?
Household size	Moderate increase	Household size increases consumption when more adults are working (more members and needs)
Owens smartphone	Increase	1) Ability to afford a smartphone, 2) have access to internet (news, opportunities, online work)
Head of household is married	Increase	Greater likelihood of multiple incomes in the household
Household uses Telegram/Viber	Increase	Likely a proxy for being better connected, informed of news, opportunities re. work
Female-headed household	Decrease	Female-headed households had below average consumption across most of the distribution
Female single parent in the household	Decrease	Likely a displacement effect – correlated with being displaced (0.20)
At least one member over 65	Decrease	Certain age groups relate to decreases in consumption, esp. dependents (elderly members, children)
Household shares latrine	Decrease	Likely a proxy for both more rural households with sub-standard infrastructure, and IDPs
Inadequate garbage disposal	Decrease	Rural / living conditions proxy: correlated with no flushing toilet (0.37) and no central heating (0.38)
Household is missing HLP documents	Decrease	Positively correlated (0.41) with being displaced, or – IDP more likely to lack HLP documents
Household is missing civil documents	Decrease	Lack of civil ID can make accessing different services and formal employment more difficult
Head of household is unemployed	Decrease	Unemployed HHs had below average consumption
Does not have standard shelter (e.g., collective centre)	Moderate decrease	Primarily IDPs; correlated with sharing latrines (0.28) and missing documents (0.15)
2 or more children in household	Moderate decrease	Certain age groups relate to decreases in consumption, esp. dependents (elderly members, children)
Head of household is retired	Moderate decrease	Unemployed HHs had below average consumption
Large household (6 or more members)	Large decrease	Most likely a proxy for having a large dependency ratio

To summarise, the final ECA scoring model performs household consumption estimation based on answers given in the questionnaire, which covers several household characteristics that were found to have a strong association with monthly consumption. The characteristics include different household demographics, head of household employment status, the current type of shelter, access to basic utilities, and ownership of essential civil documentation.

## Model Testing

Each of the models presented to the TT1 were tested to evaluate their accuracy. To measure accuracy and score the models, the team used the MSL as the inclusion threshold, calculated by WFP during dataset preparation, valued at UAH 5,865. The first calculation was the percentage of the dataset that would be eligible based on estimated consumption. This was compared with actual reported consumption, to determine how frequently the model estimates correctly. If the model predicts consumption above the MSL, but the actual consumption is below it, it is an exclusion error. Conversely, if the model predicts consumption below the MSL, but the actual consumption is above it, it is an inclusion error.

By assessing these errors, we can determine the model's reliability. The test results for the final ECA scoring model are below. In addition to testing the overall accuracy of the model, the team tested overall eligibility and inclusion and exclusion errors for different social groups not specifically included as variables in the model, but who had below average consumption or high rates of negative coping strategy use in the MSNA dataset.

	Eligibility %	Inclusion Error	Exclusion Error
Overall	88%	21%	6%
Disabilities	94%	21%	2%
Single female households	84%	22%	9%
All members unemployed	90%	21%	7%
Head of household unemployed	95%	18%	3%

## Eligibility and Example Scorecard

Per the model, a household is eligible for ECA when their estimated consumption is below the inflation-adjusted MSL. This threshold can be adjusted, going forwards, based on analysis of the minimum cost of the different goods and services MPCA should cover.

## Score Exemptions

As noted above, there are exemptions to scoring model eligibility. These cover groups we would want to ensure we are including in MPCA programming but do not feature in the model. There is also one exclusion criteria. The exemptions were identified through profiling analysis and by TT1 members, and narrowed down through eligibility testing where it was possible in the dataset. For example, while the model does not include having a disability as a scored variable, testing showed that 94% of households with disabled members would be eligible for MPCA and so would likely not be needed as an exemption.

- If the score is **below** the MSL but the household has any adult member in full time employment (including full time self-employment, but not infrequent or informal labour), they would **not** be eligible.
- If the score is **above** the MSL, but the score is not more than double the MSL and the household is headed by a minor (below 18), they **would** be eligible.
- If the score is **above** the MSL, but the score is not more than double the MSL and the head of household's primary occupation is a caregiver of a family member with a disability or severe illness, they **would** be eligible.

## Impact of the new targeting approach - Advantages

- The model is relatively concise, and almost all the included variables are observable – making assessments easy to implement.
- The model has a good explanatory power. The inability to meet basic needs is proxied by household consumption predicted by various household characteristics and circumstances (the more vulnerable households are, the lower their spending power). It also includes a very high proportion (84%+) of social groups typically classified as vulnerable who aren't specifically present in the model (people with disabilities, single female households, etc).
- It allows using the existing MSL, which provides an oven-ready eligibility threshold, without the need to set up "parallel" scoring criteria. However, should the CWG decide to establish a new eligibility threshold, this could be easily implemented.
- Unlike the current targeting criteria, the model is more holistic and takes into consideration not only some observable criteria but a broad range of circumstances of the household.

### **Impact of the new targeting approach - Limitations**

- While the model has good explanatory power, it is only as good as the data it was used to build. As such, if the situation on the ground changes dramatically since data collection, the model will need to be updated to reflect the changes in circumstances. Some vulnerable groups were not present in the data, but they are taken into consideration through “score-waving” criteria.
- As with all predictive models, there are inclusion errors (households who *should not* be included for assistance but are by the model) and exclusion errors (households who *should* be included for assistance but are not). The model deliberately tries to minimise the exclusions errors, at the cost of having a higher inclusion error.
- This approach is difficult to explain to beneficiaries in any satisfactory detail.

**Annex: Full Variable List**

Variable Name	Description
<b>General</b>	
uuid	Household ID
raion weights	Sample weights
<b>Demographics</b>	
hh_gender	Head of Household gender
bha	BHA family composition
large_hh	Large household (above 6 members)
elderly_hh	Elderly-headed household (head of household above 60)
hh_living_alone	Head of household is unmarried
hh_married	Head of household is married
num_infants	Number of infants in the household (<13 months)
num_less7	Number of individuals less than 7yrs old
num_7_25	Number of individuals ages 7 to 25yrs old
num_over65	Number of individuals older than 65yrs old
elderly_member	At least one family member over 65yrs old
peak_earners_ratio	Proportion of adults 26 to 65 years of age to the total number of household numbers
dependency	Dependency ratio
single_female_parent	Family headed by or has a single female parent living in the household
hh_disability	Head of household with disability
hh_chronic	Head of household with chronic illness
mem_disability	Household hosting at least one person with disability
mem_chronic	Household hosting at least one person with chronic disease
num_children	Number of children (<18)
employment_ratio	Number of employed household members over all members in household (all forms of employment)
displaced_escalation	Household was displaced
hh_disability_registered	Head of household with registered disability
hh_disability_unregistered	Head of household with unregistered disability
hh_minority	Any household member is part of a minority group
hh_more2children	Household has more than 2 children
hh_more3children	Household has more than 3 children
<b>School</b>	
school_enrol	At least one child enrolled in school
school_attend	At least one child attending school
school_drop_out	At least one child dropped out of school

<b>Food Security</b>	
food_share	Share of food expenditure over total expenditures
food_50	Share of food expenditure more than 50% of total expenditures
food_65	Share of food expenditure more than 65% of total expenditures
food_75	Share of food expenditure more than 75% of total expenditures
fcs_score	Food Consumption Score
fcs_poor_borderline	FCS is poor or borderline
fcs_acceptable	FCS is acceptable
hhs_score	Household hunger scale
hhs_cat	Household hunger scale categories
<b>Shelter</b>	
own_accomodation	Household owns accommodation/rent/hosted
acc_doc	Household has accommodation ownership documents/rental agreement
no_acc_doc	Household is missing accommodation ownership documents/rental agreement
acc_damaged	Shelter damaged by conflict
rent_able_pay	Household is able to pay rent with no delays
shelter_not_formal	Household lives in non-formal shelter (collective centre)
shelter_formal	Household lives in formal shelter
shelter_issues_significant	Shelter has significant issues (lack of insulation, lack of ventilation, unsafe, total collapse)
shelter_damage_significant	Shelter has significant damage (major damage to roof, windows, doors, walls, or has partial collapse or is unrepairable)
<b>Heating</b>	
winter_nfi	Winter NFI (every member has all items)
no_heating	Household does not have access to serviced heating
heating	Household has access to serviced heating
<b>Utility services/Comms access</b>	
utility_disruption	Household experienced disruptions in the provision of any utility service
utility_disruption_qol	Household experienced disruptions in the provision of quality of life utility services (gas, hot water, cold water, electricity)
smartphone	Whether household has access to a smartphone
telegram	Whether household has access to Telegram
viber	Whether household has access to Viber
internet_no_access	Whether Household has access to internet

# Ukraine Cash Working Group

## Targeting Framework



WASH	
running_water	Availability of running water (water on-premises)
water_sufficient	Household has sufficient water
flush	Household has access to a latrine with flush
no_flush	Household does not have access to a latrine with flush
latrine_shared	Household is sharing latrine
latrine_shared_num	Number of household latrine is shared with
handwashing	Household has access to handwashing facility
handwashing_soap	Household has access to soap
garbage_inadequate	Garbage disposal is inadequate (burning/burying/to a specific collection point to be disposed alter/disposed on a public place with no collection)
Livelihood	
max_income	Highest amount of income from one single source
occupation	Source of highest income amount
total_income	Total income
income_empl_pen	Amount of income from employment/pensions
income_per_capita	Income per capita
income_quartile	Income quartile
income_quintile	Income quintile
income_pc_quartile	Income per capita quartile
income_pc_quintile	Income per capita quintile
expenditure_income_ratio	Expenditure to income ratio
debt_new	Household has taken up new debt since beginning of war
debt_amount	Amount of new debt
dept_per_capita	New debt per capita
lcs_stress_num	Number of stress coping strategies used
lcs_crisis_num	Number of crisis coping strategies used
lcs_emergencies_num	Number of emergency coping strategies used
lcs_total	Total number of coping strategies used
consumption_quartile	Quartile of total expenditures
consumption_quintile	Quintile of total expenditures
transfer_payments	Whether household received a transfer payment (excluding Government)
government_payments	Whether household received a government payment ( social benefits or assistance)
employment_status	Employment status of head of household (regular employment, irregular employment, self-employment, unemployment inc. retirement)
unemployed_all	Whether the whole household is unemployed
regular_employment	Awhether at least one household member is in regular employment
debt_basic_needs	Household took on additional debt to cover basic needs



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exp_total_hh	Final sum of expenditures household level
exp_total_pc_no_ca_hh	Log total expenditures per capita excluding cash assistance
ECMEN_above_MEB_hh	Logical: ECMEN above MEB (household level)
ECMEN_above_SMEB_hh	Logical: ECMEN above SMEB (household level)
ECMEN_text_hh	ECMEN household level
<b>Indexes</b>	
MDDI	Multi-dimensional Deprivation Index score
<b>Protection</b>	
women_concern	Safety and security concerns for women
women_concern_loc	Any areas that women and girls try to avoid because they feel unsafe
document_missing	Household members are missing key identity/civil documents
priority_needs_material	Whether priority needs identified are material
barriers_access_social_serv	Whether anyone in the HH experienced barriers in accessing social services provided by the government
<b>Transformations</b>	
log_exp_total	Log final sum of expenditures
log_exp_total_pc_no_ca	Log total expenditures per capita excluding cash assistance