



Minutes of the National Basic Assistance Working Group Meeting - 16 June 2017 - Beirut, Lebanon

Meeting Location	MoSA, 7 th Floor	Meeting Time	2:00 PM
Chairperson	Khalil Dagher (UNHCR)	Meeting Duration	1 hour
Minutes Prepared by	Khalil Dagher – Basic Assistance Sector Coordinator		
Represented Agencies	MoSA, WVI, SB Overseas, WFP, UNHCR, IRC, LCC, AUB, DAF, ECHO, ACF, SI, NRC, SIF, ADRA		
Agenda of the Meeting	Presentation of Findings, AUB: Recalibration of the Desk Formula (2017)		

2017 Recalibration of the Desk Formula, Targeting for Cash (and Food)

The Basic Assistance Working Group held on the 16th of June had aimed at presenting to partners the results of the recalibration of the desk formula by the AUB research team, contracted by UNHCR in close coordination with WFP. It aimed at presenting an opportunity to better understand the technicalities of the model which has been used by Sector’s actors before its operationalization. The recalibration process started earlier this year and was concluded in June. Below is a detailed explanation and presentation of the findings. Operational discussions, either by the Sector or its respective members, will follow based on the below achieved technical outcomes.

Objective	<ul style="list-style-type: none"> • Harmonized criteria, targeting approach, and targeting tool for Multi-Purpose Cash (MCAP) and food assistance; • The tool in hand should allow, once operationalized, the identification of beneficiaries and provision of assistance (MCAP and food) to the most vulnerable – optimal convergence;
Background	<ul style="list-style-type: none"> • Update the targeting model by developing a formula that builds on the last years’ experience; • Improve targeting performance;
Data Sources	<ul style="list-style-type: none"> • <i>VASyR 2016 (Main data set)</i> <ul style="list-style-type: none"> - Main Dataset for model simulation and testing; - Nationally representative random sample of the Syrian refugee population; - Consists of approximately 4,500 households and 22,850 individual observations; • <i>ProGres database (PG)</i> <ul style="list-style-type: none"> - UNHCR database of refugees; - Based on individuals included as of March 2017; - Limited number of variables (12);
Adaptation and Model	<ul style="list-style-type: none"> • Shift from testing the model, at case level to individual level, to provide a greater level of accuracy since the individual is the smallest common denominator for cash and food assistance programming: <ul style="list-style-type: none"> - Cash assistance is provided at case level - Food assistance is provided at individual level • Proxy used for welfare: monthly expenditure per capita (USD, aggregated as per last year’s); • Since the majority of Syrian refugees are poor, the log function was adopted as it transforms the skewed expenditure variable into one $[\log(y)]$ that is more approximately normal:

	<ul style="list-style-type: none"> - Reducing the skewness of the distribution; - Reducing the variability of the data (outliers); - Making the interpretation of the coefficients easier as they represent the percentage change in expenditure per capita (Y; or the predicted score) as a result of a unit change in an independent variable (X; or the different variables and parameters taken from the registration database) - Interpretation of the variables included in the model has to be observed at the outcome level, which is in this case the predicted expenditure per capita per month (or the score). Individual variables do not have a one to one effect on the score. Rather, it has to be seen as a correlation between different elements leading to the derivation of the score. 		
The Model	<ul style="list-style-type: none"> • The model is based on data available in ProGres; • ProGres variables used for the generation of indicators: arrival date, district of arrival, age, gender, relationship, disability, and medical condition; • Regression model for the welfare indicator, log (monthly expenditure per capita): $\log(Y_1) = f(\text{HH size, arrival date, district of arrival, other HHs characteristics, HHs shares, HHs sums, HoH characteristics})$ • The indicators included in the formula were data driven after conducting statistical significance testing. Other variables that are individually or jointly insignificant, in other terms do not predict welfare / poverty were eliminated; • At design phase, and based on a year of practice, all variables that had missing observations for the total population were eliminated (district of origin, education level of the head of household); • To compensate, other variables were tested and added accordingly to balance the explanatory power of the model and without affecting the accuracy and effectiveness of the model; • This step has been taken to ensure that <u>all households</u> are scored and ranked for identification and assistance; 		
Variables	Description	2016	2017
	Arrival Date	X	X
	Districts of Origin	X	
	Districts of Arrival	X	X
	Household size (case)	X	X
	Household size (squared)	X	X
	Share of members under 5 years of age	X	X
	Share of members between 5 and 17 years of age	X	
	Share of male members between 18 and 50	X	X
	Share of female members between 18 and 50	X	X

	Share of members between 51 and 70	X	
	Share of members above 71	X	
	Share of members between 6 and 10 years of age		X
	Share of members between 11 and 17 years of age		X
	Share of members between 18 and 60 years of age		X
	Share of members above 60 years of age		X
	Sum of members under 5 years of age		X
	Sum of members between 6 and 10 years of age		X
	Sum of members between 11 and 17 years of age		X
	Sum of members between 18 and 60 years of age		X
	Sum of members above 60 years of age		X
	Share of members with a disability	X	X
	Sum of members with a disability		X
	Members above 60 years of age with a medical condition		X
	Dependency ratio		X
	Dependent members with a disability		X
	More than 3 dependents in HH		X
	Head of HH is female	X	X
	Head of HH age	X	X
	Head above 60 years of age		X
	Head of HH is female and below 18 years of age	X	
	Head of HH is disabled	X	X
	Head of HH education level	X	
	Head of HH with a medical condition	X	X
	Head of HH below 18		X
Simulations	<ul style="list-style-type: none"> • Simulations done on the VASyR data set; • Used per capita monthly expenditure as a proxy for welfare; 		

	<ul style="list-style-type: none"> Cutoff-point: MEB 114\$/person/month (to generate poor vs. non-poor individuals); Simulated the impact of the targeting mechanism with respect to poverty;
Targeting Effectiveness	<ul style="list-style-type: none"> The evaluation of the effectiveness of the targeting method is done through two basic measures: under-coverage and leakage: <ul style="list-style-type: none"> - Under-coverage is the exclusion error, and measures the share of the poor that the model fails to reach - Leakage is the inclusion error, and occurs when the program includes non-poor individuals; Comparing the 2017 model to the 2016 one, the coverage of the poor has increased from 87% to 93% whereas leakage remained more or less the same. Which leads to an increase in the targeting differential when applying the new model – Slides attached
Targeting Accuracy	<ul style="list-style-type: none"> Poverty Accuracy, refers to the individuals correctly predicted as poor. The benefits incidence is the transfer amount received by the group so in this case by the poor as a percent of total transfers received by the population; Compared to WFP and UNHCR’s 2016 models, the new model leads to the highest percentage of transfers going to poor versus non-poor and has the highest Balanced Poverty Accuracy Criterion (BPAC), which is defined as Poverty Accuracy minus the absolute difference between under-coverage and leakage;
Takeaways on the Model	<ul style="list-style-type: none"> The 2017 desk formula has a high coverage rate of the poor; It also has the highest targeting differential and BPAC and can rank the refugee population by economic vulnerability; This formula can be run multiple times within one year from its development. Coefficients can be used to compute vulnerability score of new cases; To rank new cases, the formula should be run on the entire population (including the new cases) and then all individual observations should be sorted based on the vulnerability score attained; The current approach – based on expenditures to model welfare is specific and effective for cash and food programming; yet it cannot be used for other services or assistance types; The current model is limited to variables collected at registration; if new variables were to be collected, the efficiency / effectiveness of the model will increase; Given the current operational context, where no further households visits can be conducted, this targeting approach is considered the most feasible;
Next Steps:	<ul style="list-style-type: none"> A targeting sub working will be held as a follow up to discuss different options that cash actors would be undertaking in order to operationalize the new results; Issues to be presented / addressed: <ul style="list-style-type: none"> - Implications of the recalibrated model on the population receiving assistance; - New distribution of the population across vulnerability groups; scores to be published on RAIS; - Targeting for cash and food: ensuring optimal convergence - Appeals and referrals - Communications

**Annex 1: Targeting Effectiveness
(compared to 2016 targeting model)**

MEB = 114\$/prs/month	Model Fit (R ²)	Coverage of the poor (1)	Under- coverage (2)	Leakage (3)	Targeting differential = (1) - (3)
2016 Desk Formula	34%	87%	13%	19%	68%
2017 Desk Formula	33%	93%	7%	20%	73%

Notes:

- Under-coverage is the percent of poor individuals that do not receive transfer.
- Leakage is percent of individuals that receive transfer and are not poor.
- The targeting differential is the difference between the coverage rate and the participation rate for non-poor.

Annex 2: Targeting Accuracy

<u>Distribution of Benefits</u>				
MEB	Total	Poverty Status		
		P	NP	BPAC
2016 Desk Formula	100	80	20	74
2017 Desk Formula*	100	93	7	80

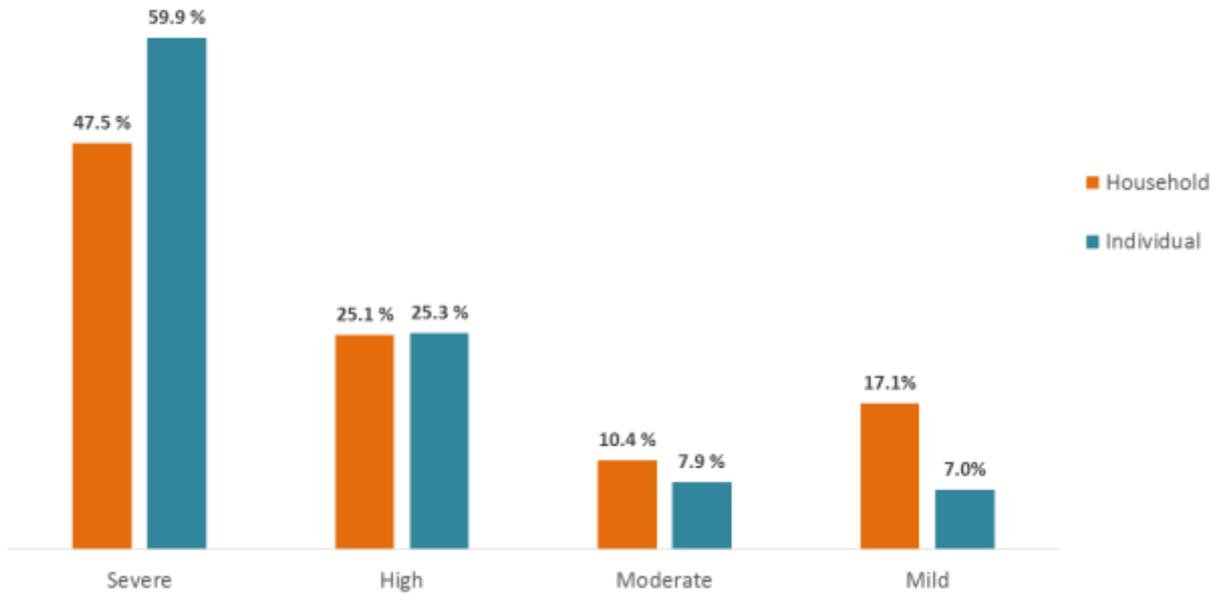
Notes:

- Benefits' incidence is the transfer amount* received by the group as a percent of total transfers received by the population;
- Specifically, benefits' incidence is: (Sum of all transfers received by all individuals in the group)/(Sum of all transfers received by all individuals in the population);
- Aggregated transfer amounts are estimated using household size-weighted expansion factors;
- The Balanced Poverty Accuracy Criterion (BPAC) is defined as Poverty Accuracy minus the absolute difference between under-coverage and leakage (IRIS Center 2005).

* Includes transfers received from both UNHCR and WFP

Annex 3: Distribution across Vulnerability Categories¹

Distribution of refugees on an individual and case level (%) based on the VASyR 2016 dataset



¹ Note: this distribution is based on the simulation done on the VASyR 2016 dataset, the primary data source for design of the model. This does not represent the simulation of the model on the total population in proGres. This analysis / simulation will follow.