

Household Registration and Targeting in the Hunger Safety Net Programme 2



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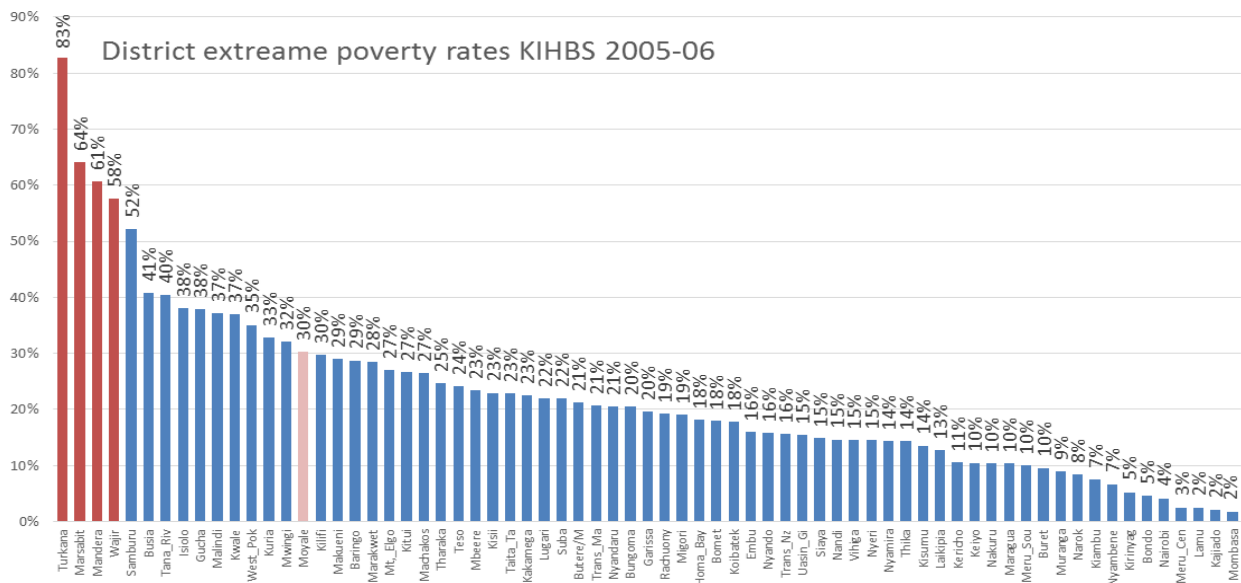
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This short report outlines the rationale behind the targeting approach for the Kenya Hunger Safety Net Programme.

Why have the four counties been selected for HSNP?

The four counties of Turkana, Marsabit, Mandera and Wajir were chosen for the Hunger Safety Net Program (HSNP) because they had the highest poverty and extreme poverty rates measured in KIHBS 2005-06. At that time Moyale was a separate district and now has been incorporated into Marsabit, but as can be seen from the graph below it wouldn't have qualified if it had remained a separate entity.

Figure 1 District extreme poverty rates from KIHBS 2005-06.



HSNP household registration process

Between December 2012 and June 2013, the HSNP Secretariat registered almost 375,000 households with the target of enumerating all qualifying households within the four counties.

Households eligible for HSNP registration were defined as:

1. All residents of dwellings other than prisons, hospitals and army barracks.
2. Those persons living in the streets or refugee or internal displaced persons camps were registered only if they are accepted by local government officers as resident in the community.

And should not include:

1. Members of the Kenyan armed forces who reside within a military base.
2. Households presenting themselves for registration not in their location of normal residence.
3. Any household members not excluded by above conditions that are not Kenyan citizens.

An individual household was defined as:

1. A person or a group of people living in the same compound (fenced or unfenced) .
2. Answerable to the same head
3. Sharing a common source of food and/or income as a single unit in the sense that

they have common housekeeping arrangements (that is, share or are supported by a common budget).

What information was collected during the registration?

Two components of the registration were required:

1. The communities view of each member household's well-being compared to the other households within the same community
2. Answers to a series of simple to answer questions on household and household member characteristics that are used to estimate of per capita adult equivalents monthly consumption. Consumption is the data used by governments for estimating whether a household is poor or not and how poor that household is. This estimating of consumption within HSNP context is referred to as a proxy means test (PMT).

These two methods have been selected to be combined to produce a more reliable estimates of well-being than any one of them alone. The advantages and disadvantages of community-based targeting (CBT) and proxy means testing (PMT) are detailed in the table below:


Community Based Targeting strengths	Community Based Targeting weaknesses	Proxy Means Test strengths	Proxy Means Test weaknesses
Current community view of distribution of well-being.	Relative measure of a household's well-being relative to the other households within the settlement. Middle income household in 1 location = poor in another.	Strong relationship between proxies' indicators and per capita adult equivalent consumption per month (KShs). $R^2= 69\%$.	Relationship between proxies and consumption from 2005-06.
Can be locally responsive to particular factors that differentiate well-being in a settlement.	Doesn't generate cut-off thresholds, unless use livelihood or survival thresholds from Household Economy Approach.	Uses many proxy indicators; 54 explanatory variables.	There is 31% of variation in consumption that is not explained by PMT. So some household's actual consumption not well estimated.
Can be a heuristic multivariate assessment of a households relative well-being	Can be open to elite capture.	Single model modified by rural/urban and County location.	Respondent has to respond to all questions in the model otherwise can't generate estimate consumption in KShs.
Opportunity for other settlement members to scrutinise a household's wealth group classification.	Can be hard to determine what factors community are using to differentiate well-being.	Generates comparable estimates of a household's well-being. Therefore the PMT result for a household with the same characteristics is same regardless of rural location within the same district.	Greater data collection load, therefore requires data quality assurance procedures to ensure consistency of quality of data enumeration.

Community's view of a households well-being- a relative well-being measure

Creating wealth groups using Household Economy Approach

This approach was used by Save the Children in Wajir and Mandera, World Vision in Turkana South and Oxfam in Turkana Central and North. Household Economy Approach (HEA) is a methodology used for predicting the impact on food security for large covariate shocks, i.e. drought. The first stage is to determine homogeneous livelihood zones where people's livelihoods can be considered similar enough to justify characterisation of the wealth groups within this livelihood zone. Then within each of these livelihood zones, four wealth groups are identified, and the typical assets associated with households in these wealth groups determined through visiting a small sample of communities within the livelihood zone, and conducting focus group interviews, key informants interviews and other data gathering activities. These HEA analysis were all done before HSNP registration began and were conducted by the respective NGOs, for their own targeting and programming requirements as well as providing a starting point for the community based targeting exercise.

The wealth group characteristics and asset criteria for the livelihood zone in which the community being enumerated is located were presented to the community or in some cases, key informants or elected representatives of the community. They were given an opportunity



to review these wealth group characteristics and decide if these classifications of categories were appropriate for the households in their own community. The community representatives were allowed to modify the HEA definition of the typical characteristics or assets of wealth groups in their community. Communities were also given the flexibility to decide the number of wealth groups appropriate in their community, but for the most part, four wealth groups were defined and used.

Individual household wealth ranking by CARE in Marsabit

CARE does not have a history of using HEA, but experience using community-based household wealth ranking. Wealth ranking uses a participatory process to generate an ordered welfare rank of all the households in a community. Initially CARE ambitiously thought they could individually rank each household within the community. Initial registration quickly indicated that this wasn't always easy. Experience showed that the very poor and the very rich were easy to rank. Typically those households in the middle range of well-being within the community were difficult to rank individually because there were many households that were viewed as being very similar in perceived well-being, and hence difficult to separate into individual ranks. The wealth ranking procedure was amended to allow for more than one household to have the same within community rank.


Therefore from these two community-based targeting methodologies, each household registered will be allocated to either one of four wealth groups or individual household well-being rank within the settlement in which they reside. But there is no basis for comparing a household that has been allocated to the very poor wealth group to a household in another settlement that is also in the very poor wealth group.

Proxy means testing (PMT), an absolute well-being estimate

The PMT is the method used during the HSNP registration for estimating the poverty of a household in a way that is comparable across livelihood zones and counties. Every household registered completed a short registration questionnaire that was directly entered into small computers to minimise enumeration mistakes and data entry errors. From the forty questions on household and household member characteristics, a prediction of a household's consumption was made using the relationship between these household characteristics and household consumption observed from the four counties data from the Kenya Integrated Household Budget Survey (KIHBS) 2005-06. This approach is referred to as a proxy means test or PMT for short. The proxy refers to the easily observable household and household member characteristics that were enumerated during the HSNP registration that were used to proxy an estimate of well-being rather than collect the more timely and expensive to collect household consumption data. The answers to the questions that are used to construct the indicators in the PMT are multiplied by the coefficients (the optimal weights for the individual indicators) that when summed together give the best estimate of a household's adult equivalent monthly consumption. All of these indicators multiplied by their individual coefficients are added up. After a final data transformation, this number represents the Kenya shillings valuation of the consumption that an adult is consuming within that household each month, but based on 2005-06 prices. This estimate of average monthly consumption in Kenya shillings provides the basis for comparing poverty between households, communities, livelihood zones and counties. This absolute measure of well-being, the PMT, is combined with the relative measure of well-being from the community wealth to arrive at the final selection of households to receive financial support.

Why and how 100,000 household beneficiaries to receive support?

The funds available from the Government of Kenya, DFID and AusAid for the HSNP Phase 2013-2017 are currently sufficient to make regular payments to 100,000 beneficiary



households over the four-year period. Should more funds become available, the number of households can be increased by a simple extension of the methodology used to identify the poorest 100,000 households.

How were the 100,000 beneficiary households selected?

The results of the registration process produces two values for each of the households registered:

1. A household's PMT score in KShs.
2. A household's wealth group membership number (1 = very poor, 2 = poor, 3 = middle, 4 = better off) for households in Turkana, Wajir and Mandera (enumeration administered by Save the Children, World Vision and Oxfam), or an individual house rank in Marsabit (enumeration administered by CARE).

The initial step for combining these two pieces of information into a final list of households within each settlement qualifying for financial support from as HSNP uses the PMT score alone, as this is the only absolute measure that is comparable across settlements. This procedure is as follows:

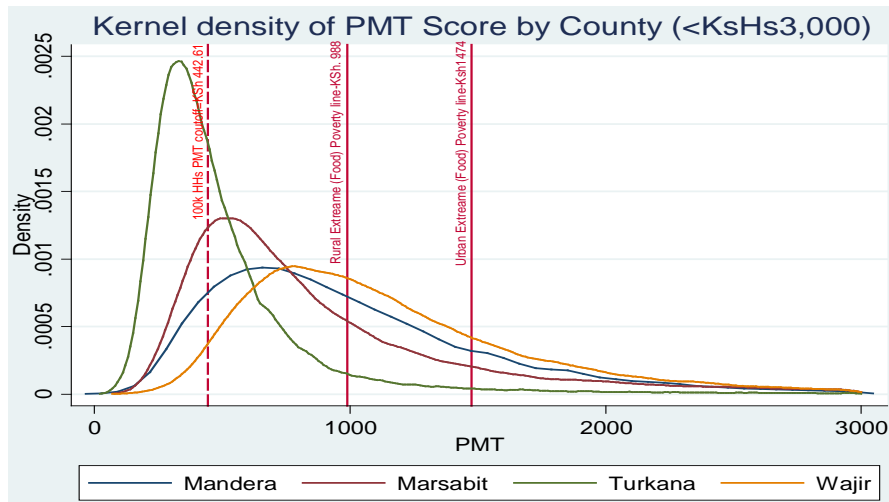
1. Sort households from the lowest PMT score (poorest) to the highest PMT score (richest).
2. Select the 100,000 households with the lowest PMT score. The PMT score of the 100,000th household was KShs. 442.6.
3. This is the PMT measure of well-being poverty that informs how many households within each of the settlements, or whatever administrative unit above. In some settlements there might not be any households that are eligible and in other settlements, most if not all households are eligible.

How were the PMT's consumption estimates households distributed?

The distribution of a household's PMT score is shown in Figure 2, indicating unsurprisingly that Turkana, has the poorest population and the highest depth of poverty, reflected by the distribution shifted to the left compared to the other 3 counties. The cut-off PMT score value of KShs. 442.6 is about half that of the Kenyan national rural extreme poverty line of KShs. 988. Using this KShs. 442.6 PMT cut-off alone, Turkana would have received support for 77,545 (77.54%) of the 100,000 households. This would be 56% of all of the households in Turkana, whereas in Wajir, only 3.0% of the 100,000 households would have been eligible based upon having a PMT score of less than KShs. 442.6, which amounts to 3.2% of the Wajir County population (Figure 3).



Figure 2 Distribution of households PMT score (KShs. Per adult per month)

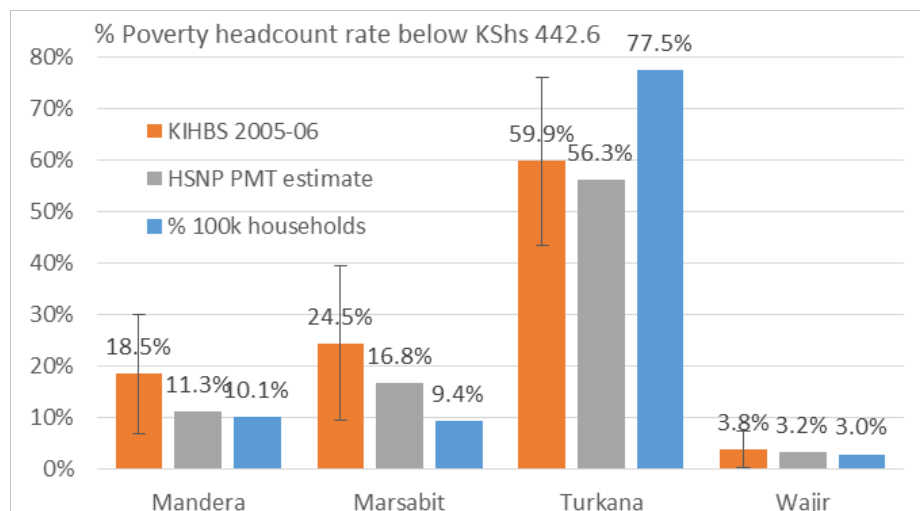


How good was the poverty measure from the PMT?

The numbers of households below the HSNP PMT eligibility cut off of KShs. 442.6 from the registration itself is compared with the estimate of the number of households below the same cut-off from the KIHBS 2005-06 (Figure 3). The HSNP registration data resulted in percentage of households within the county that were all within the error range of the estimate from the KIHBS 2005-06 survey data. The coincidence of the proportion of households below the KShs. 442.6 cut-off across the 4 counties between KIHBS 2005-06 and HSNP registration is a basis for some confidence in the quality of the HSNP PMT registration data and the validity of the relationship between household member and household characteristics and consumption.

Figure 3 also indicates that using the PMT KShs. 442.6 cut-off, 77.5% of the 100,000 households to be funded through HSNP would come from Turkana as opposed to just 3% from Wajir.

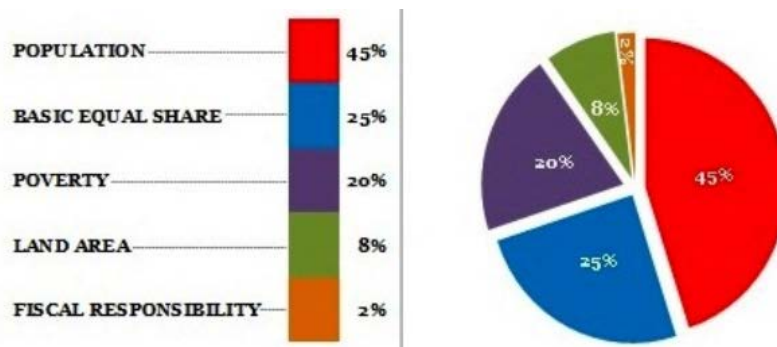
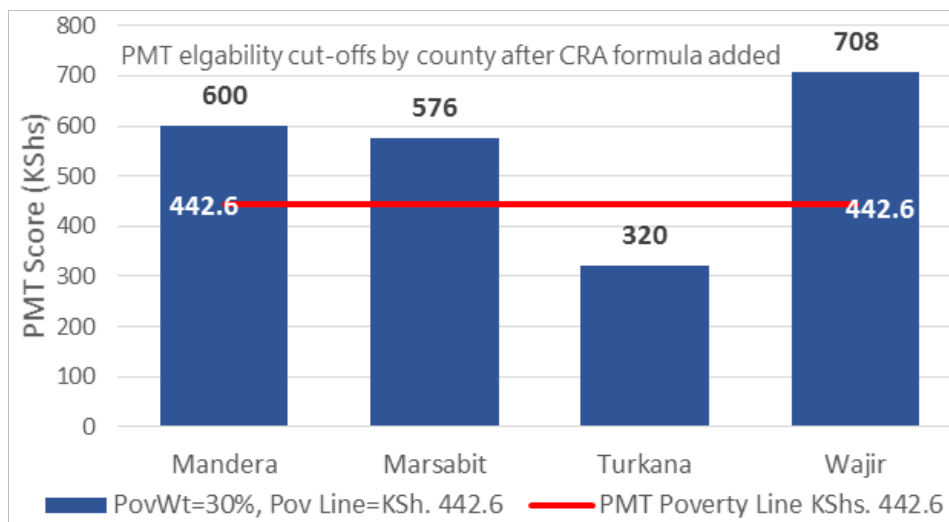
Figure 3 % Households with consumption less than KShs. 442.6



Incorporating Commission on Revenue Allocation formula to target the 100,000 households

NDMA decided on 8th October 2013, to incorporate a modified Commission on Revenue Allocation (CRA) formula to allocate the 100,000 households between the four counties. The CRA is a parliamentary approved formula for allocating funds to the counties presented below. The formula from <http://www.crakenya.org/> shows the criteria for resource allocation to the counties.

Figure 4 County PMT score cut-off after addition of CRA formula



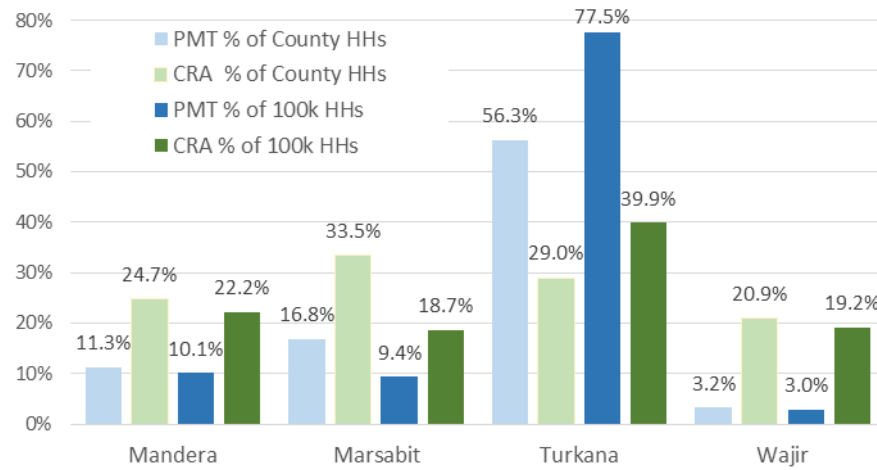
NDMA modified the CRA formula by removing land area and fiscal responsibility, increasing poverty to 30% resulting in the following weighting : 25% basic equal share, 30% poverty and 45% population. The poverty line calculating the poverty headcount rate component of the CRA formula was taken as the HSNP cut-off, i.e. KShs.442.6.

The impact of the incorporation of the CRA formula on the PMT score cut-off compared to the original PMT cut-off of Kenya shillings 442.6 is shown in Figure 4. To accommodate the CRA formula, the PMT cut-off of KShs. 442.6 common to all counties had to be modified, with Turkana only including households that had a PMT score of KShs.320 or below in comparison to Wajir which included household up to a PMT score of KShs.708.

The impact of this changing County level PMT score cut-off in terms of the number of households to be enrolled by HSNP is shown in Figure 5. The proportion of county's

households that is now targeted with the incorporation of the CRA formula varies between a maximum of 33.5% in Marsabit to a minimum of 20.9% in Wajir, compared to the PMT formulation alone which had a maximum of 56.3% in Turkana and a minimum of 3.2% in Wajir. Also, the use of the CRA formula resulted in a similar shift in terms of the distribution of the households across the 4 counties, with the CRA formulation resulting in 3 counties receiving a similar percent of the 100,000 available households (Mandera 22.1%, Marsabit 18.7% and Wajir 19.2%) with Turkana now to receive just under 40% of the programs households (Figure 5).

Figure 5 Impact of changing number of households per county when moving from PMT to CRA formula



Combining PMT and CBT information to identify actual households within settlements

With the new CRA formulation decided, we now know the number of households within each settlement to be targeted. But, the community-based view of relative well-being of households within the settlement has not been taken into consideration. Therefore the final choice of which actual households within the community are to receive support is made after combining the PMT score and the CBT wealth ranking with the goal of ending up with a single combined household ranking within the settlement.

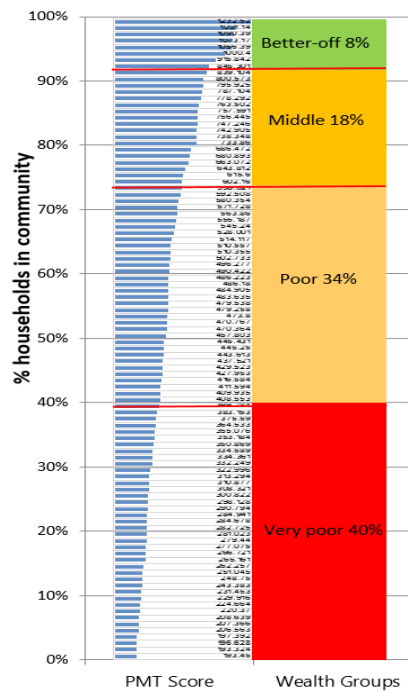
The PMT ranking and the CBT ranking were combined within each settlement in the following way:

1. The ordered PMT scores were divided up into the same number of wealth groups with the same number of households (but not necessarily the same actual households) generated from HEA wealth group ranking exercise. An example dividing up individual PMT scores into wealth groups based upon the CBT wealth group information is shown in the Figure 7.
2. This results in each household within the settlement having two wealth group numbers (very poor = 1, poor = 2, middle = 3, better off = 4), one from the division of PMT scores (Figure 7) and the other one directly from the community based targeting.
3. While in principal equal weight is given to both the CBT and the PMT data, data analysis indicated that for those households that had 2 or less members and no children under 18, the PMT model estimate of consumption was on average significantly poorer than for other types of households when compared against actual consumption. Therefore the final wealth group for households with 2 or less and no




- children will be the CBT wealth group rather than an average of the PMT and CBT wealth group scores.
4. Therefore combining these 2 wealth group numbers into a single wealth group is done through the following steps for those areas where HEA wealth group ranking was conducted (Turkana, Wajir & Mandera):
 - a. If household size > 2 or no children under 18 then final wealth group = the average of the PMT and CBT wealth group number $((PMT_WG + CBT_WG) / 2)$
 - b. If household size ≤ 2 & no children under 18 then final wealth group = CBT wealth group. Example calculations of final wealth group given in table below.

Figure 6 Example of coding PMT by wealth group



CBT WG	PMT WG	HH size ≤ 2 & #kids $< 18 = 0$	Final WG
1	4	No	2.5
2	3	No	2.5
1	1	No	1
4	1	Yes	4
1	2	No	1.5
3	4	Yes	3
3	4	No	3.5

- c. Households are then ranked by final wealth group and PMT score within final wealth group.
 - d. The number of households within the settlement with a PMT score below the county specific cut-off provided the number of households to be selected. The actual households to be enrolled were identified by taking the poorest from the final households ranked by wealth group and PMT score within wealth group up to the number of households dictated by the PMT score for that settlement.
5. For those households where the community-based targeting was done with wealth ranking (Marsabit) a proceeding step was required before the wealth group merging could take place, because the wealth group ranking did not produce 4 wealth groups but an individual household rank or small-group rank.

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- a. From the ordered list of PMT scores within the settlement, calculate the range from 2.5% →97.5 PMT percentile.
 - b. Divide this range by 4 to create boundaries for grouping of PMT scores into 4 wealth groups, without discarding the top and bottom 2.5% of households.
 - c. The number of households in each of these PMT wealth groups was used to code the ordered CBT ranks to create the same size wealth groups.
 - d. This creates to wealth group scores, and the same methodology for merging HEA and CBT wealth group scores can now be applied.
 - e. If household size >2 or no children under 18 then final wealth group = $(\text{PMT_WG} + \text{CBT_WG}) / 2$, i.e. the average of the PMT and CBT wealth group number (very poor = 1, poor = 2, middle = 3, better off = 4)
 - f. If household size ≤ 2 & no children under 18 then final wealth group = CBT wealth group.
 - g. Households are then ranked by final wealth group and PMT score within final wealth group.
 - h. The number of households within the settlement with a PMT score below the county specific cut-off provided the number of households to be selected. The actual households to be enrolled were identified by taking the poorest from the final households ranked by wealth group and PMT score within wealth group up to the number of households dictated by the PMT score for that settlement.

Checking a households participation in other social protection programs through the single registry

The final 100,000 households were checked against the single registry to determine which other social protection programs any of these households were also enrolled in.

[I am not aware of procedures beyond that that might have taken place before the list was finally sent to Equity Bank].