IPC Integrated Food Security Phase Classification

Evidence and Standards for Better Food Security and Nutrition Decisions

IPC RESOURCE

Guidance on estimating the population in need of humanitarian food security assistance

WHAT DOES THE IPC TECHNICAL MANUAL V3.1 SAY ABOUT THE TOPIC?

- IPC Technical Manual provides guidance for estimating populations with any potential mitigating effects of assistance. The Manual, however, does not provide guidance for estimating the total population in need of humanitarian food security assistance. Refer to page 43 in Manual 3.1 for details.

WHAT DOES THIS RESOURCE ADD TO THE MANUAL?

- This document provides guidance for estimating and communicating the total population in need of humanitarian food security assistance (PiNHA).

CONTACTS

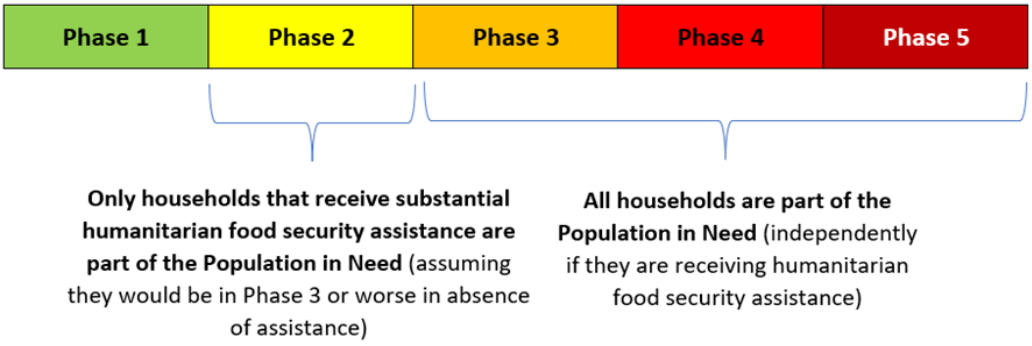
For queries or to request support contact the IPC Global Support Unit at **info@ipcinfo.org**.

1. Introduction

Under existing IPC protocols, the IPC classifies acute food insecurity among populations and in areas based on actual or forecasted conditions, without removing the positive effects of any humanitarian food security assistance.[1] Under existing IPC AFI protocols, populations are classified into five different IPC Phases, given the full set of conditions and outcomes those households are understood to be facing. Given that some households may be relying on humanitarian food security assistance in the current situation to meet their basic food needs, those households might have better outcomes (and therefore be classified in a better IPC Phase) than if they had not received assistance. Similarly, projection analyses in which humanitarian food security assistance is planned and funded or likely to be funded and delivered may lead to classification of households in a better IPC Phase than if no HFA is provided. As such, IPC population estimates of populations in Crisis or worse (IPC Phase 3+) do not reflect total HFA needs for an area, but only HFA needs further to those that have already been met.[2]

By contrast, the purpose of "population in need for food security assistance" estimates, is to capture the total number of people who would be in Crisis or worse (IPC Phase 3 or worse) if no assistance were provided during the period analysed. Thus, the population in need of assistance may include, further to those in Phase 3 and worse, some households whose outcomes reflect Phase 2, but only because humanitarian food assistance prevented them from facing IPC Phase 3 or worse outcomes. As a result, to understand the total number of people in need of assistance, analysis should be conducted to determine the share of the population in Phase 2 who would have been in IPC Phase 3 or worse, and therefore should be included in the PiNHA (population in need of humanitarian food security assistance) estimate.

Diagram 1: How populations in IPC Phases should be part of the population in need of humanitarian food security assistance



Conceptually the PiNHA analysis is conducted to see the share of population to be moved from Phase 2 to Phase 3+ to determine the PiNHA.[3] In practice the entire population in Phase 2 receiving HFA is not expected to be in Phase 3+ without it: the task of the analysts is to determine which share of that population group would likely be in Phase 3+ without HFA. The population groups already in Phases 3-5 are expected to always be included in the new estimate, as they have been identified to be in these Phases even in presence of assistance and hence would require HFA if none were provided.

The guidance that follows has been prepared to assist IPC analysts in estimating the total population in absence of food security assistance for IPC analysis areas and analysed populations. The guidance includes different methodological options and guidance for their use, as well as general principles for analysis and communication. It is noteworthy that given that official analyses of populations in absence of assistance are yet to be conducted, and results to be published, it is likely that this guidance will be revised in 2023-2024 based on further experiences accrued in its implementation.

[1] This guidance note focuses on humanitarian food security assistance (HFA) when identifying the kind of assistance taken into consideration when estimating the Population in Need of Humanitarian food security Assistance (PiNHA). Humanitarian food security assistance refers to cash, vouchers, food rations, and livelihood assistance. In those cases where more generic references to "assistance" are made, this is for the purposes of brevity and should be understood as humanitarian food security assistance, unless otherwise specified.

[2] Some institutions refer to these as "gap" estimates, as they reflect the gap between what is needed and what has been provided. This is not, however, standard IPC terminology and hence not used in this guidance.

[3] Conceptually also populations in Phase 1 can be there due to having received assistance. Based on lessons learned and field experiences, however, it seems that it is rather rare for households to move from Phase 3+ to Phase 1 due to receiving assistance. Conversely, it is also somewhat unlikely for households in Phase 1 to move to Phase 3 in absence of assistance.

[4] In practice in many PiNHA analyses the increase in the PiNHA estimate compared to the standard IPC populations ranges between 0 and 20 percentage points. The difference, however, is likely to be higher in especially vulnerable populations that are almost entirely reliant on external assistance, e.g. IDP and refugee populations.

2. Definitions of populations without assistance and standard IPC population estimates

For IPC purposes the population estimates in absence of assistance can be defined simply as **the total number of people in need of humanitarian food security assistance (PiNHA)**.[5] In contrast, the standard IPC population estimates in Phase 3+ reflect the number of people "in need of action further to the action already taken" as per the IPC Manual 3.1. This means that some households found in Phase 2 may be in this Phase only because they have received assistance and may therefore require continued assistance. Hence the standard IPC population estimates do not provide the total number of people in need of assistance, but a snapshot of the assessed needs based on the prevailing food security situation in the current or projected period (whether or not assistance is provided or expected to be provided).

3. Uses of PiNHA and standard IPC population estimates

IPC products, such as the briefs, population tables and maps provide a wealth of information for decision-makers. Reviewed together, the products offer the following types of information for programming:

- Situation snapshots with a validity period for current and projected periods, including information on the key drivers of food security, and most affected populations.

- Information on significance of provided assistance (HFA bags as mapping symbols).

- Population tables with the number and percentage of populations in different Phases by analysis area, and the total number and percentage of population in Phase 3+ by analysis area.

With this information decision-makers receive a comprehensive overview of the food security situation, helping them to review and plan assistance in terms of geography, severity and magnitude. They can compare the Phase classifications, population in Phase 3+ and the significance of assistance against the number of people currently or planned to be targeted by area and assess what deficits remain. However, because the standard estimates only capture populations who require assistance beyond what has already been provided, they do not capture the total number of people for whom assistance needs to be programmed.

The additional PiNHA table complements the information provided in the standard IPC products. The PiNHA table gives the total number of people in need of HFA by analysis area, for current and projection periods. Based on this information, decision-makers can easily plan their assistance, and IPC country teams can use the PiNHA for coordination and fundraising purposes.[6] PiNHA estimates also facilitate comparisons of the number of people in need across countries, without the potential influence of HFA. The PiNHA, however, does not provide any information on current or planned assistance programmes and the population estimates in presence of assistance, as the standard IPC population estimates furnish that.

As a result, the standard IPC population estimates and the PiNHA complement each other, and by combining the information provided in the regular IPC products and the PiNHA table the decision-makers have a full suite of information at their disposal.

[5] Given that IPC is only estimating populations in presence and absence of assistance, without considering compounding effects of deprivations e.g. in terms of shelter or WASH, the acronym used to describe the populations in absence of assistance is PiNHA to separate it from the sectoral, and intersectoral PiN estimates.

[6] Further efforts are still required to provide more detailed information to decision-making, such as disaggregation of PiN by IPC Phases [3-5].

Table 1: Summary table of PiN vs. standard IPC population estimates

The PiN is different from the standard IPC population estimates in following ways:

Item	IPC standard population estimates	IPC PiNHA estimates
Quantification	Table with breakdown of total population in five Phases by analysis area	One number reflecting the total number of people in need of HFA (in IPC Phase 3+) by analysis area
Mapping protocols	IPC classification maps based on the 20% rule. Significant HFA indicated with mapping symbols.	No mapping protocol
Current analysis period	A snapshot in time, regardless of whether there is HFA	A snapshot in time without any effects of HFA
Projection analysis period	A snapshot in time, by taking into account HFA that is planned and likely to be funded and delivered.	A snapshot in time without any effects of HFA
Use for decision-making	Helps decision-makers to identify gaps in terms of quantity and geographical scope of assistance based on IPC Phase classifications, population estimates and significance of current assistance.	Helps decision-makers to understand total needs in terms of the number of people requiring HFA.

The IPC provides population figures based on actual or forecasted conditions, without removing the effects of any humanitarian food security assistance. Current analyses and future projections include the effects of humanitarian food security assistance which has been delivered and, for future forecasts, any humanitarian food security assistance that has been planned, funded or likely to be funded and is likely to be delivered. As such, population tables identify those in different severity phases considering the mitigating impacts of any assistance.

Communicating the population in need of humanitarian food security assistance (PiNHA) alongside standard IPC population estimates is especially important in contexts where large parts of the population receive humanitarian food security assistance. The difference between standard IPC numbers and PiNHA estimates are likely to be larger among areas and populations that are highly reliant on assistance, such as internally displaced populations and refugees. Decision-makers require the information on PiNHA to adequately plan programming for vulnerable populations.

4. Criteria for selecting areas of PiNHA analysis

Many IPC countries do not have large-scale assistance programmes, and in these countries the PiNHA analysis has limited value. PiNHA analyses should, as a general rule, be prioritised among countries and areas where there is significant food security assistance based on the following criteria:

- Area is receiving (current analysis period) highly significant humanitarian food security assistance AND/OR
- Area is likely to receive (projection analysis period) highly significant humanitarian food security assistance.

The criteria for determining whether humanitarian food security assistance is significant are set in protocol 2.3.k. For PiN analysis purposes the higher criterion is used, i.e. assistance covering at least 50% of the kcal needs of at least 25% of households. The higher cut-off is used to ensure that the assistance provided is substantial enough to enable positive changes in the food security status of households, provided that they are fully able to utilise the assistance received.

5. PiNHA in countries or areas with no large-scale assistance

The primary utility of provision of PiNHA is in countries where there is highly significant assistance at least in some analysis areas and standard population estimates reflect the severity of food insecurity in presence of assistance.

There are many countries or areas with IPC analyses where there are no current or planned assistance programmes, or assistance programmes target to serve less than 25% of the population and/or the kcal provision meets less than 50% of needs. In these situations, the standard population estimates reflect the severity and magnitude of food insecurity, and hence effectively function as the PiNHA. Therefore, there is no need to prepare separate PiNHA estimates in countries or areas with no assistance, or with assistance programmes not meeting the criteria for highly significant assistance (at least 25% of the population targeted with assistance covering at least 50% of kcal needs).

6. Function 1: Consensus building

Process for PiNHA analysis

PiNHA analysis should be conducted at the end of the regular IPC analysis, after the classifications and population estimates for the current and projection periods have been reached. The PiN analysis concerns only those areas that meet the criteria for highly significant assistance (25% of households meeting at least 50% of their kcal needs through assistance). The decision on PiNHA analysis should preferably be taken by the TWG in the preparation phase for IPC analysis, based on information available on scale and coverage of assistance.

The same analysts who conducted the regular IPC analysis should preferably also do the PiNHA analysis for those areas. Given that the analysts are familiar with the areas and the data available, the PiNHA analysis is not expected to take a considerable amount of time, at most an extra day at the end of the IPC analysis workshop.

Given the specific nature of the PiNHA analysis, it may be also necessary to draw on the expertise of programme personnel of agencies providing humanitarian food security assistance in the country. They are likely to have the required information on assistance deliveries, their timing, targeting principles and practice, and monitoring reports detailing e.g. how households have used the assistance provided. [7]

7. Function 2: Overview of approached to calculate the population need of humanitarian food security assistance (PiNHA)

7.1 General principles

The overall principle for estimating the PiNHA is that of convergence of evidence. The purpose is not to select or use only one methodology for PiNHA estimates: rather the analyses should draw from multiple methodologies and approaches based on data availability and suitability of the methodologies to the country context.

In simple terms, analysts should identify the share of households classified in Phase 2 that should be added to the households identified in Phase 3, 4 and 5 to estimate the PiNHA.

[7] For example, agencies have post-distribution monitoring (PDM) reports that may be useful for PiN analysis. PDM reports track e.g. how households use the assistance they receive, providing valuable information for PiNHA analysis. Analysts are encouraged to contact the programme staff of agencies providing assistance, and to ask for PDM and other relevant reports for PiNHA analysis.

In other words, analysts should estimate the PiNHA by doing a two-step sum:

1. **Assign all households classified in Phase 3, 4 and 5 automatically to the PiNHA.** All households displaying or likely to display outcomes of Phase 3 or worse, including moderate or large food gaps and crisis and emergency coping behaviour, should be considered as part of the population in need. This is independent of whether they are or will be receiving humanitarian food security assistance. For example, if an area has 30% of households in Phases 3, 4 and 5, all these households will be part of the PiNHA. Because the PiNHA is expressed as the number (or percentage) of the population in IPC Phase 3 or higher, no additional work is needed to identify whether the households in IPC Phase 3 or IPC Phase 4, for example, would have been in a more severe IPC Phase without assistance.

2. **Assess what proportion of households in Phase 2 are receiving assistance and would likely be in Phase 3 or worse in absence of assistance.** For example, in the same area discussed above where 70% of households are in Phases 1-2, analysts should estimate what proportion of these are receiving significant humanitarian food security assistance that is likely preventing them from manifesting outcomes of Phase 3 or worse.

In mathematical terms the population in need will be:

$$\mathbf{PiNHA = Sum\ (Phase\ 3_{Tot} + Phase\ 4_{Tot} + Phase\ 5_{Tot}) + (Phase\ 2_{HFA})}$$

Where:

Phase 3_{Tot} is the total population in Phase 3 independent of their assistance status

Phase 4_{Tot} is the total population in Phase 4 independent of their assistance status

Phase 5_{Tot} is the total population in Phase 5 independent of their assistance status

Phase 2_{HFA} is the fraction of population in Phase 2 that receive significant humanitarian food security assistance and whose food security status was likely to have been improved by at least one IPC Phase.

The term Sum (Phase 3_{Tot} + Phase 4_{Tot} + Phase 5_{Tot}) is obtained from the population tables generated in the IPC Analysis. The term (Phase 2_{HFA}) is always lower than or equal to the total number of households in Phase 2 that are receiving assistance $(Ph2)_{HFA}$). Taking this and the above equation into account, it is possible to establish two conditions for the PiNHA number:

$$\mathbf{PINHA \leq (Ph3+) + (Ph2)_{HFA}}$$

$$\mathbf{PINHA \geq (Ph3+)}$$

Analysts can use the above conditions to check whether a PIN number is plausible.

7.2 Approaches to estimating the population in need

Analysts should make use of the full range of information available to arrive at a convergence of evidence about the size of the population in need. Different approaches make use of various kinds of information, such as household survey data, monitoring information based on beneficiary or e.g. focus group interviews, implementing reports of HFA delivery, and key informant information. Analysts should start by calculating the current PiNHA based on actual outcomes, food assistance deliveries and any other information, and then to estimate outcomes as expressed in IPC projection analyses, including any changes in drivers, and to estimate the PiNHA for the projection period.

Below is a description of several methods to determine the PINHA. It is recommended that the Analysis Team uses simultaneously many methods presented hereafter depending on the type of information available and reaches consensus on which PINHA number should be retained. In this process the plausibility checks indicated in the Overview section above can be a useful resource.

7.3 Assessing share of households in Phase 2 with HFA

A. Analysts should start by identifying the share of households displaying outcomes of Phase 2 according to each of the direct outcome evidence that is available.

1. Outcomes of Phase 2 include:

i. Dietary energy intake greater than 2,100 kcal per person per day

ii. Acceptable Food Consumption Score

iii. Household Dietary Diversity of 5 to 12 groups but deterioration of ≥ 1 food group from typical

iv. Reduced Coping Strategies Index 4-18

v. Household Hunger Scale of 1

vii. Food Insecurity Experience Scale <- 0.36

Given that there is no separate cut-off for Phase 2 for FCS, and that for HDDS Phases 1 and 2 are typically combined, analysts are advised either to leave those two indicators out of this analysis, or to treat them with caution, with the knowledge that some households in this category are likely to be in Phase 1 rather than in Phase 2.

2. Analysts should determine the share of households with these indicator values who received assistance of a highly significant quantity (i.e. implementing partners confirm that assistance delivered is greater than 50% of caloric needs or households estimate that assistance is the main source of food or income).

This information on assistance received by households assessed should be available in the household survey, typically through different questionnaire modules:

- Questions on type of assistance received (in particular in-kind food rations, cash, and food vouchers)

- Questions on main food sources (food assistance as the main source of food esp. for most common food assistance items such as cereals, pulses or oil)

- Questions on main income sources (cash assistance)

B. **The share of households in Phase 2 receiving highly significant assistance** functions as a proxy for the maximum share of households that should be moved from Phase 2 to Phase 3+ to arrive at PiNHA.

Diagram 2: Share of households with Phase 2 level outcome indicators who receive highly significant assistance.

Step A			Step B
Original summary table of direct evidence			
	Phase 2 households (with or without assistance)	Phase 3+ households (with or without assistance)	% of households in Phase 2 receiving assistance
rCSI	27%	63%	5%
HHS	42%	38%	11%
LCS	15%	77%	4%

C. **Estimate population** in need for current period: Using the share of households with highly significant assistance and Phase 2 level outcome indicator values to guide the discussions on the share of households to be allocated to Phase 3+ for PiNHA. This information should be used together with other evidence and approaches to arrive at the final conclusion on the share of households to be allocated.

D. **Estimate population** in need for projection period: Using the evidence available, information on share of households in Phase 2 with HFA meeting at least 50% of kcal needs, the PiNHA for current period, as well as information on seasonality, expected shocks and other factors to estimate PiNHA for projection period.

Key considerations for analysts:

- This is a relatively simple and intuitive approach. Data is practically always available, and analysis can be done for different outcome indicators.

- Analysts should be aware that this approach assumes that all households in Phase 2 who receive assistance would potentially be in a worse Phase without it. Hence, they are automatically included in the difference to indicate the potential maximum share of households to be allocated to PiNHA. As such the approach may lead to overestimation of population in need as some households that received assistance may not move towards a worse Phase in absence of assistance. It is important that analysts consider alternative strategies that households could employ, the depth of the need and the amount of assistance to conclude what proportion of households would move to a worse Phase.

- This method is applicable only if the HFA levels are the same during the reference period of analysis and at the time of data collection.

- There is likely to be variability in the effect of HFA within the same indicator and variability between indicators at the household level. Yet little is known about this variability. This lack of understanding adds uncertainty to the process of allocating households in Phase 2 to PiNHA, even if good information on assistance provided is available.

- There are two options for assessing the share of households in Phase 2 receiving assistance:

1. Using as the weight the share of households getting assistance from the food security survey - this is the default option and requires no additional analysis.

2. If the actual share of households getting assistance is considerably higher than the share of households reporting having received assistance (e.g. by 10 percentage points or more), the actual share should be used as the weight in the calculations.

7.4 Using values of households not receiving assistance as a proxy for the entire population - only for humanitarian assistance targeted by areas

A. Divide the sample population in two groups: those who did not receive assistance and those who received assistance that covered at least 50% of their kcal needs.

B. Run analysis of outcome indicators (typically FCS, HDDS, HHS, rCSI and LCS) for the two groups

Diagram 3: Outcome indicators with and without assistance

Ampanihy with assistance					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
FCS	14%		29.8%	56.1%	
rCSI	16.2%	42.3%	41.5%		
HHS	37.9%	11.0%	49.9%	0.8%	0.5%
LCS	18.8%	21.7%	22.2%	37.3%	

Ampanihy without assistance					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
FCS	1.8%		8.1%	90.1%	
rCSI	5.4%	26.1%	68.5%		
HHS	18.9%	10.8%	64.9%	1.8%	3.6%
LCS	21.6%	1.8%	56.8%	19.8%	

C. Estimate population in need for current period: Using the share of households with highly significant assistance and Phase 2 level outcome indicator values to guide the discussions on the share of households to be allocated to Phase 3+ for PiNHA. This information should be used together with other evidence and approaches to arrive at the final conclusion on the share of households to be allocated.

Key considerations for analysts:

- The approach is very simple and fast, and requires minimal statistical analysis.

- Data availability is good, i.e. the same outcome indicators that are used for normal acute analysis can always be applied.

- Based on a large assumption that all households are in a rather similar situation without assistance (does not apply in situation where aid is targeted but may apply in high level emergencies where most households need assistance and where assistance programmes are not targeted but assistance is distributed mostly randomly).

- Indicators may reflect HFA differently, albeit there is little information available on potential differences.

- Based also on an assumption that households getting assistance have better outcome indicator values than households not getting assistance (assumption may not be true in all contexts).

- If households receiving assistance access varying amounts of HFA covering between 50% and 100% or their kcal needs, the impacts of the assistance on their food security status (and indicator values) may differ.

- Furthermore, there may also be some household groups in the area who receive HFA that covers less than 50% of their kcal needs. Yet, if they report receiving assistance in the household survey, they are allocated to the group receiving assistance, which may affect the results of the indicator analysis (assuming households receiving less assistance are likely to have smaller differences in indicators compared to the households not receiving assistance).

- Can be used as one piece of evidence if comparison shows that households receiving assistance have better outcomes than households not receiving assistance but should not be used as the only piece of evidence for PiNHA.

- Plausibility checks can also be applied here if the number of households in Phase 2 receiving assistance is provided.

- The number of households not receiving assistance needs to be equal or higher than the minimum sample size required by IPC Protocols. If only small groups, e.g. 25% of households are receiving assistance, it may also be difficult to have a sufficient sample size of households receiving HFA. This should be verified separately for areas undergoing the analysis.

7.5 Analysis of households' resoucres against needs' thresholds or limited access

ECMEN (Economic Capacity to Meet Essential Needs) [8]

A detailed methodology to **calculate food and non-food expenditures to assess overall economic capacity to meet essential needs, while removing any received assistance.** As a prerequisite for the analysis data from the following survey modules should be available:

- Expenditure on food items (30-day recall)

- Expenditures on non-food items (30-day recall)

- Expenditures on non-food items (six-month recall)

The basic analysis approach for ECMEN is below:

A. Identify the **relevant MEB** (information is often available from Cash Working Group)[9] . Given that MEB is usually calculated for a 30-day period, any expenditures with a longer recall period should be converted to a one-month period to allow comparison to the MEB.

B. **Aggregate expenditures** to establish household economic capacity. All recurrent and regular food and non-food expenditures made in cash, as well as the estimated value of consumption from own production should be included. Furthermore, purchases made with credit are included, whereas expenditures made with gifts or assistance are excluded (i.e. if a household has received cash assistance, the amount of assistance should be deducted from total expenditures).

C. **Compare the economic capacity of each household against the MEB** to establish whether a household is above this threshold, i.e. whether it can meet its essential needs.

D. **Produce the ECMEN indicator** by calculating the percentage of households whose economic capacity falls below, and above the MEB threshold.

E. To assess whether households are able to meet the **bare minimum needs the cut-off used (if available) should be SMEB, i.e. survival MEB.** If both cut-offs are available, it is useful to find out what expenditures have been included in each cut-off in order to select the most appropriate one. [10]Alternatively, analysis can be run with both cut-offs and presented to the group conducting the PiNHA analysis.

[8] Essential Needs Assessment. Guidance Note 2020 from WFP is available here. Short guidance with links to useful resources, including survey module, SPSS syntax and STATA do file are available here

[9] The CALP is useful resource for SMEB/MEB related documentation

[10] For each analysis using the ECMEN approach, analysts should clarify within the country the expenditures that are included in the SMEB/MEB cut-off used. From the food security perspective, the expenditures to be included should cover food needs for 2,100 kcal/day/person, and costs of water and food preparation.

Diagram 4: Example of ECMEN results

ECMEN	Below MEB cut-off	Above MEB cut-off
Betioky	35 %	65 %

Key considerations for analysts:

- Requires a specific set of data, as well as the food MEB/SMEB (subsistence minimum expenditure basket) cut-off at national or sub-national level.

- Provides clear results (one number).

- Requires statistical analysis capacity.

- Has specific data needs in terms of expenditure module (calculation of indirect expenditures such as value of food items consumed from own production and/or from hunting or gathering).

-Should be used in combination with LCSI and/or the debt indicator to identify whether households are depleting their long-term capacities in order to meet their essential needs.

7.6 HEA (Household Economy Analysis)

The Household Economy Approach is a livelihoods-based framework for analysing the way people obtain access to the things they need to survive and maintain their livelihoods. At the heart of HEA is a depiction of how people get by from year to year and of the connections with other people and places that enable them to do so. This is called the Baseline and has three components: livelihood zoning, a wealth breakdown and an analysis of livelihood strategies for each of the identified wealth groups.

HEA informs food security analysis and early warning by investigating – through a process called "Outcome Analysis" – how baseline access to food and income might change as a result of a specific hazard such as drought or as the result of a positive change, such as provision of humanitarian food assistance. Because both the Baseline and the Outcome Analysis convert households resources and needs into caloric equivalents, it is possible to assess the degree to which household resources (either earned, produced, or received) meet their "survival" [11] and "livelihoods protection" [12] needs.

How HEA can inform PIN estimates

When completing Outcome Analysis, analysts can run the analysis with and without humanitarian food security assistance. This allows the Outcome Analysis to reflect the degree to which households would or would not meet their livelihood protection and survival needs, under conditions in which HFA is provided, and under conditions under which HFA is not provided.

Outcome Analysis results are then applied to population data to provide estimates of the number (or percentage) of people who require HFA. When Outcome Analysis without HFA is applied to population data, this represents a PiNHA estimate, and when Outcome Analysis with HFA is applied to population data, this represents standard HEA indicator results for IPC analysis purposes.

Key considerations for analysts:

- With the information available, analysts will need to determine how much HFA to include in their analysis when running standard HEA outcome analysis. Likewise, analysts will need to make decisions about which wealth groups they believe are receiving assistance.

- It is not necessary to assume that an entire wealth group is receiving HFA in order to estimate outcomes for those fractions of the wealth group that are receiving HFA.

[11] The **Survival Threshold** is the amount of food and cash income required to ensure survival in the short-term, i.e. to cover minimum food and non-food needs. The "survival non-food" category generally includes the costs of preparing and consuming food plus any cash expenditure on water for human consumption.

[12] The **Livelihoods Protection Threshold** is the amount of food and cash income required to protect local livelihoods. This means a level of income that gives people the option to maintain expenditure on basic non-food goods and services at the levels prevailing in the reference year (assuming the reference year was neither especially good nor especially bad). Besides these essential non-food goods and services, the Livelihoods Protection expenditure basket can also contain a number of items that – while not absolutely essential for survival – can nonetheless be considered essential in terms of sustaining a minimum locally acceptable standard of living.

- In some cases, there is significant uncertainty about levels of HFA and concern that different HFA assumptions may lead to significant differences in Outcome Analysis results. In these cases, analysts can conduct sensitivity analysis to identify how sensitive the OA is to these assumptions and provide a more robust evidence base from which to assess the likely range of outcomes.

- Outcome Analysis is the only kind of evidence in the IPC AFI Reference Table that provides direct evidence of first-level outcomes in future periods. As such, if available, it can be used as a key piece of evidence for estimating PiNHA and standard population estimates in projections analysis.

- Occasionally, HEA Baselines are conducted in years when HFA is provided. This can add an additional layer of complexity in determining whether the HFA provided should be considered.

- Outcome Analysis is only as strong as the quality of the inputs included in running the analysis.

- Outcome Analysis should be run by well-trained HEA analysts, and information on data feeding into the analysis, assumptions and problem specifications used should be transparent and shared with the IPC analysts .

7.7. Information on food and income sources

Use of different information sources such as income and expenditure surveys to assess food and income sources and to what extent households can meet their food needs.

Another option is to use the recent food security survey data on income sources to assess the share of households who a) have a stable income source (e.g. salaried households) and hence are not likely to require assistance and b) are either dependent on external assistance (e.g. HFA, gifts, begging and hence should be included in PiNHA) and c) households who otherwise have unstable or low income and from whom at least a part should likely be included in the PiNHA.

Key considerations for analysts:

- Use of income and expenditure surveys or similar is an option if data is recent and available.

- Basic data on income sources is typically readily available from standard food security surveys. For added precision income sources can be cross tabulated with self-reported data on assistance.

- Provides partial information for estimation of PiNHA, but helps in assessing the extremes, i.e. especially the share of population that should not be included in the PiNHA and the share that at least should be included.

- Should be used in connection with other methods, as part of convergence.

7.8. Information on Humanitarian Food Assistance

A. **Assess humanitarian food assistance delivered in past few months (current) and planned deliveries (projected):** Assess magnitude and size of deliveries as well as issues related to sharing, diversion, targeting, timeliness etc. and conclude if/what proportion of households would be included in PiNHA. Analysts should use for example the following information sources: survey data on assistance, post-distribution monitoring reports (PDMs) and statistics on assistance deliveries by implementing agencies. These sources contain quantitative data that is representative of the population of households in the area or of households benefiting from assistance. Examples of useful data that may be found in them are listed hereafter. The list does not intend to be exhaustive and other useful elements of information not listed here may also be available.

Quantitative approaches:

- ***Food security status according to different outcome indicators.*** Information on IPC direct evidence of food consumption and livelihood change may be available, allowing analysts to estimate the share of food secure households that are receiving assistance. It is important that analysts discuss to what extent these food secure households benefiting from HFA are food secure because of previously received assistance and avoid assimilating food secure households with households that would be in Phase 2 even if assistance was removed.

- ***Share of households using assistance as a main food or income source.*** Household surveys typically include questions on food and income sources. Analysts should review this data in more detail to see what proportion of households are highly dependent on assistance by reporting that e.g. the main source of cereal, pulses or oil is in-kind food aid, or that cash assistance is one of the three main sources of income. This information can be cross-checked with information on food consumption and livelihood change indicator status to assess what share of these households is likely to already be in Phase 3+, and what share in Phase 2, with the latter group potentially to be included in PiN.

Qualitative approaches:

- ***Typology and vulnerability conditions of households receiving HFA***. Knowing the criteria set to access the assistance (e.g. being a displaced household) and specific vulnerability conditions of the household (e.g. having chronically ill, or elderly members, or being recently displaced) can be helpful to get a general idea on how likely it is that households in Phase 2 would shift to Phase 3+ in absence of assistance.

- ***Share of households satisfied with the quantity of commodities received and reason for dissatisfaction.*** A high share of households dissatisfied because quantity received will not last until the next distribution may indicate small differences between the PiNHA and the P3+.

- ***Proportion of households reporting to have received less than their entitlement.*** Similarly to the previous point, a high share limits the difference between PiNHA and P3+.

- ***Concerns about selection of beneficiaries.*** This information may be useful to ascertain whether targeting could be an issue.

- ***Proportion of households reporting why food is not reaching intended beneficiaries.*** Similarly to the previous point, it is possible to know what percentage of households receive assistance without meeting the criteria as perceived by beneficiaries.

B. **Compare humanitarian food security assistance deliveries and share of households receiving assistance, and population classified in Phases 3, 4 and 5:** Assess how the humanitarian deliveries compare to population classifications and to other available evidence and conclude on PiNHA.

Key considerations for analysts:

- Requires detailed information on HFA, for current and projected periods, including information on potential problems in reaching beneficiaries and on targeting principles.

- Some HFA options are predominantly quantitative, others largely qualitative and rely on expert judgement in assessing the PiNHA.

- Should be used in connection with other methods, as part of convergence.

7.9. Household indicator convergence matrix

The Indicator Convergence approach is a process for analysing food security indicators at household level and building out a PiNHA estimate. Under this approach:

A. Analysts first converge food consumption indicators at the household level in order to understand what the collection of indicators suggests about the food consumption status of households.

B. Analysts then look at how the livelihood coping converges with the food consumption status of households, to assess how many households may be maintaining food consumption through the use of crisis or worse strategies and to classify households in different Phases, by using the IPC AFI Reference Table to guide the process.

C. Once households have been classified, analysts can use the survey data to review the amount of HFA households reported receiving.

D. Based on IPC protocols for what constitutes "significant" HFA, and the caloric relationship identified in the IPC AFI Reference Table between IPC Phases and Household Economy Analysis thresholds, analysts can decide whether HFA is significant enough and likely preventing households in IPC Phase 2 from experiencing Crisis (IPC Phase 3) or worse.

Analysts should compare the proportion of households reporting assistance, and the quantity of food they report having received, with delivery reports from implementing agencies. Do these two sources tell a similar story? If not, is there a clear reason why not? For example, if a large quantity of food was reportedly distributed by an implementing partner, but few households report receiving assistance, this discrepancy might be related to the recall period of the survey question (e.g. food was delivered 40 days ago, and the recall period is 30 days) or it is possible that food aid was diverted by local authorities or/and armed groups.

	How it works	Example
1	Analysts build a cross-tabulation of food consumption indicators from household-level survey data.	Analysts build a cross-tabulation of indicator results for each combination of FCS, HHS, and rCSI.
2	Analysts classify food consumption for all households with each combination of indicators.	Analysts assess that households with an FCS of 45, rCSI of 2, and an HHS of 0 have food consumption in line with None (IPC Phase 1).
3	Analysts build a cross tabulation of the food consumption classifications and the livelihood coping data.	Cross-tabulation shows how many households with food consumption in line with None (IPC Phase 1) reported livelihood coping in line with Stressed (IPC Phase 2).
4	Analysts classify the IPC Phase for all households with each combination of food consumption classifications and livelihoods coping.	Analysts assess that households with food consumption in line with None (IPC Phase 1) and livelihood coping in line with Stressed (IPC Phase 2) should be classified in Stressed (IPC Phase 2). These households are not part of the Phase 3+ estimate.
5	At each IPC Phase, analysts consult how many households reported receiving HFA in the survey and the caloric contribution of that HFA.	Analysts note that of the 20% of households classified in Stressed (IPC Phase 2), half reported receiving a 50% ration, which HFA delivery reports suggest is plausible.
6	Analysts identify whether the HFA provided is sufficient to change the IPC Phase classification for households, using the HEA caloric deficit thresholds as a guide.	Analysts note that of the 20% of households classified in Stressed (IPC Phase 2), half reported receiving a 50% ration, which HFA delivery reports suggest is plausible.

Key considerations for analysts:

- The cross-tabulation matrix approach provides detailed information on indicator combinations at household level.

- Building of a cross tabulation matrix with food consumption indicators, another combining indicative food consumption classification with the livelihood coping indicator and deciding on indicative Phase classification for each group of households is an exercise that is complex and takes time.

- Requires statistical analysis capacity.

- This method is applicable only if the HFA levels are the same during the reference period of analysis and at the time of data collection.

- Proper application of the approach requires information on the quantity of assistance received by households from the household survey. If this is unavailable, the assessment of whether households, or a share of households, in a particular cell/Phase should be allocated to PiNHA or not, is rendered more difficult.

- The cross-tabulation matrix approach is typically not used to estimate populations in IPC Acute Food Insecurity analyses. As a result, the estimates of households in different Phases, arrived at by using the matrix, may differ substantially from the standard IPC population estimates that are used as the starting point for the PiNHA analysis. This is likely to affect the use of the PiNHA estimates provided by the matrix approach.

7.10. Other options

A few other options have been highlighted through partners and in the PiN pilots and are listed below:

1. Assessing the IPC Phases of households by reviewing how indicators converge towards the IPC Phase descriptions, while conducting qualitative analysis on the potential Phase of households in absence of assistance.

2. Use of historical data and trends to guide the analysis, i.e. identifying analogue years or analysis periods to understand current or future (projection) needs.

This approach is especially useful if IPC analysis results exist for the analogue year/analysis periods, with no provided assistance. If assistance has been provided in the analogue period, this approach is less useful for PiNHA analysis.

Key considerations for analysts:

- Assessing households based on their indicators and assistance status is rather complicated and may provide contradictory or not meaningful results especially if different indicators are not converging. Good analysis capacity and information on households' livelihood situation and overall context is required.

- Situation in analogue years may have been affected by assistance, and this should be considered if using the approach of historical comparisons

[3] https://www.fantaproject.org/sites/default/files/resources/HHS-Indicator-Guide-Aug2011.pdf

8. Function 3: Communication of PiNHA estimates

The output of the PiNHA analysis is a population table with essentially three columns: analysis area, % of households in PiNHA and number of people in PiNHA. There is no breakdown of the PiNHA by IPC Phases 3, 4 and 5. The PiNHA table should be clearly labelled as 'Total population in need of humanitarian food security assistance for period xx.' If PiNHA is identified for both current and projection periods, two PiNHA tables should be prepared.

As explained, PiNHA estimates complement the standard IPC population estimates and hence do not replace them. If PiNHA estimates are prepared, both should be communicated in the IPC briefs but with clear indications on the nature of the population estimates.

Table 2: Example table of PiNHA analysis results

Analysis area	Percentage of households in PiNHA	Number of people in PiNHA Remarks
Tahoma	35%	54,000
Keriga	40%	32,000
Boukara	30%	47,000

9. ANNEX

Example of PiNHA analysis based on PiNHA pilot in Haiti in November 2022

Area of analysis: Sud Urbain

Population estimated in different phases:

Table 1					
Actuelle sept 2022 - feb 2023					
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Ph 3+
25	30	30	15	0	45
Projetée mars - juin 2023					
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Ph 3+
25	30	30	15	0	45

Method 1

A. Summary table for direct evidence

Table 1A: Indicateurs directs (N=254)					
Actuelle sept 2022 - feb 2023					
FCS	51%	Phase 3	Phase 4	Phase 5	Ph 3+
HDDS	84%	30	15	0	45
rCSI	18%	Phase 3	Phase 4	Phase 5	Ph 3+
HHS	39%	17%	40%	2%	1%
LCS	25%	42%	26%	8%	

B. % of households in Phase 2 receiving assistance

Table 1B		
FCS	Phases 1-2	14%
HDDS	Phases 1-2	23%
rCSI	Phase 2	12%
HHS	Phase 2	5%
LCS	Phase 2	11%

C. Estimate PiNHA:

Considering the share of households in phase 3+ is 45% as per the IPC analysis results. Considering the share of households in Phase 2 that receive assistance as presented in table 1B. Provided that FCS and HDDS values of 14 and 23% also include households in Phase 1 with HFA, it is likely that those values are overestimating the share of households in Phase 2 with HFA. Based on this and the values of other indicators, it seems that the maximum share of households that could be allocated from Phase 2 to PiNHA is around 10%.

Method 2

The households in the sample were analysed to obtain the summary table of direct evidence of households not receiving assistance. The result is presented in the following table:

Table 2 (N=185)					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
FCS	54%		28%	18%	
HDDS	89%		11%	1%	
rCSI	14%	44%	42%		
HHS	44%	17%	37%	2%	1%
LCS	22%	42%	28%	9%	

FCS is the only indicator that would indicate a plausible value for PiNHA given that it is the only one that shows a value above the share of households in ph3+ (i.e. 46%>45%).

Method 3

The ECMEN value was calculated for the Sud Urbain area and the result was 21%. Such a share of households would not be a plausible value because it is lower than the estimation of households in Ph3+ (i.e. 21%<45%). However, it is worth noting that the ECMEN was not a piece of evidence that was available during the IPC analysis of this area.

Method 4

The analysis team discussed the HFA interventions in the area and most of its members concluded that poor targeting had been an issue, with an important share of households receiving assistance without being in a situation of real need.

Conclusion

Considering the results obtained in the different methods and the issues related to targeting of the assistance, the team concluded that the **PiNHA in the current and projected period would be 45% and as a result the PiNHA estimates were not different from the standard IPC estimates.**