

2024 MSNA IN KENYA – METHODOLOGICAL OVERVIEW

Objective of the methodological overview

The Methodological overview is part of the MSNA analysis toolkit for coherent and harmonized publications across countries. It helps external stakeholders understand the methodology of concise and to-the-point MSNA outputs.

It is a key component of the MSNA Bulletin and linked to the [MSNA Analysis Guidance](#), which contains the details on the MSNI and the sectoral composite frameworks.

This methodological overview stresses the following:

- Final overview of the MSNA methodology: final scope and coverage of the assessment, secondary data sources, ethical considerations, and limitations (including deviations from the ToRs);
- Analysis of the Sectoral Composites: description of the framework used to construct the sectoral composite indicators;
- Annexes: further details on the country Sectoral Composite Framework, the estimation of the overall severity of needs (Multi-Sectoral Needs Index – MSNI), list of partners that participated in the research cycle.

About REACH

REACH facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT). For more information please visit [reachinitiative.org](#). You can contact us directly at: geneva@reach-initiative.org and follow us on X @REACH_info.

CONTENTS

Objective of the methodological overview	1
CONTENTS	2
List of Acronyms.....	3
Geographical Classifications.....	3
OVERVIEW OF THE ASSESSMENT METHODOLOGY	4
General and specific objectives and research questions.....	4
General and specific objectives	4
Research questions.....	4
Scope and coverage of the assessment.....	4
Groups of population and sampling strategy.....	5
Data collection and geographical coverage.....	5
Secondary data sources	6
Ethical considerations and limitations.....	7
Ethical considerations.....	7
Limitations and challenges	7
ANALYSIS OF SECTORAL COMPOSITES	8
ANNEXES	10
Annex 1: Related publications (terms of reference, datasets, dashboards).....	10
Annex 2: Details on the indicators used for the Sectoral Composites	11
Annex 3: Sectoral Composites – Aggregation.....	16
Annex 4: Multi-Sectoral Needs Index – Aggregation	17
.....	17
Annex 5: List of partners	18

List of Acronyms

ASAL:	Arid and Semi-arid Lands
GIS:	Geographic Information System
HH:	Household
IPC:	The Integrated Food Security Phase Classification
IDP:	Internally Displaced Person
KNBS:	Kenya National Bureau of Statistics
MSNI:	The Multi-sectoral Needs Index
PSU:	Primary Sampling Units or PSU
PPS:	Probability Proportional to Size
WASH:	Water, Sanitation, and Hygiene
SSU:	Secondary Sampling Units
UNHCR:	The United Nations High Commissioner for Refugees

Geographical Classifications

- County:** These are decentralized administrative units below the national level.
- Sub-County:** These are administrative units within a County and is further divided into wards, locations, and sub-locations.
- Ward:** These are subdivisions of a County, along with sub-counties, constituencies, and villages.
- Sub-location:** These are third-level subdivisions of Kenya's administrative regions, below counties and sub-counties.

General and specific objectives and research questions

General and specific objectives

The main objective of the 2024 MSNA was to understand the magnitude and severity of needs at the household level in Garissa, Mandera, and Turkana counties across the sectors of food security, livelihoods, WASH, health and nutrition, education, shelter, and humanitarian assistance and how these needs vary between population groups. This will provide evidence-based data to fill the information gaps and enhance the humanitarian response by providing up-to-date, relevant, and comparable information on the prioritization and multi-sectoral needs of refugee and host community populations in Garissa, Mandera, and Turkana Counties.

The specific objectives were:

- To understand the current needs and access to food, protection, WASH, livelihood, education, health, shelter, and humanitarian assistance among HHs in the targeted counties.
- To Identify variations in humanitarian needs across different geographical areas, population groups, and vulnerability profiles in the targeted Counties.
- To conduct an inter-sectoral analysis to comprehensively identify household priority needs and examine how these needs and access intersect across different sectors in the targeted counties.

Research questions

To achieve these objectives, the MSNA sought to answer the following research questions:

- What are the current needs and access to food, protection, WASH, livelihood, education, health, shelter, and humanitarian assistance among HHs' in the targeted counties?
- What are the variations in humanitarian needs among different geographical areas, population groups, and vulnerability profiles within the targeted counties?
- How do households 'priority needs vary across different sectors in the targeted counties?
- How do sectoral needs intersect with access to resources and services in the targeted counties?
- What coping strategies are households adopting to meet their needs?

Scope and coverage of the assessment

The Multi-Sector Needs Assessment (MSNA) was conducted in three arid counties: Turkana, Mandera, and Garissa. It included the Dadaab refugee camp and Kakuma and Kalobeyei Integrated settlements. The assessment targeted host communities and refugees.

A two-stage cluster sampling approach was utilized for the assessment, ensuring representative results with a 90% confidence level and a 10% margin of error, selected based on household population figures from the Kenya National Bureau of Statistics (2019 census). In the first stage, sub-locations (Primary Sampling Units or PSU) were randomly chosen using a Probability Proportional to Size (PPS) approach. In the second stage, households (Secondary Sampling Units or SSU) were randomly sampled from these sub-locations using GPS points generated by a Geographic Information System (GIS).

In the refugee camps, households were selected using a stratified random sampling technique, achieving a 95% confidence level and a 7% margin of error. A total of 4,002 households were surveyed (2,199 in host counties and 1,803 in refugee camps).

It is important to note that some clusters in Turkana County were not surveyed, which affects the confidence level of findings in that area, making them indicative rather than fully generalizable.

Groups of population and sampling strategy

Table 1: Defining the groups of the population

Host community	Refers to households residing in the host counties of Turkana, Garissa, and Mandera.
Refugee community	Refers to registered and unregistered households in the refugee camps in Dadaab, Kakuma, and Kalobeyei Integrated settlement in Turkana County. Households belonging to asylum seekers in such camps were also included in the samples.

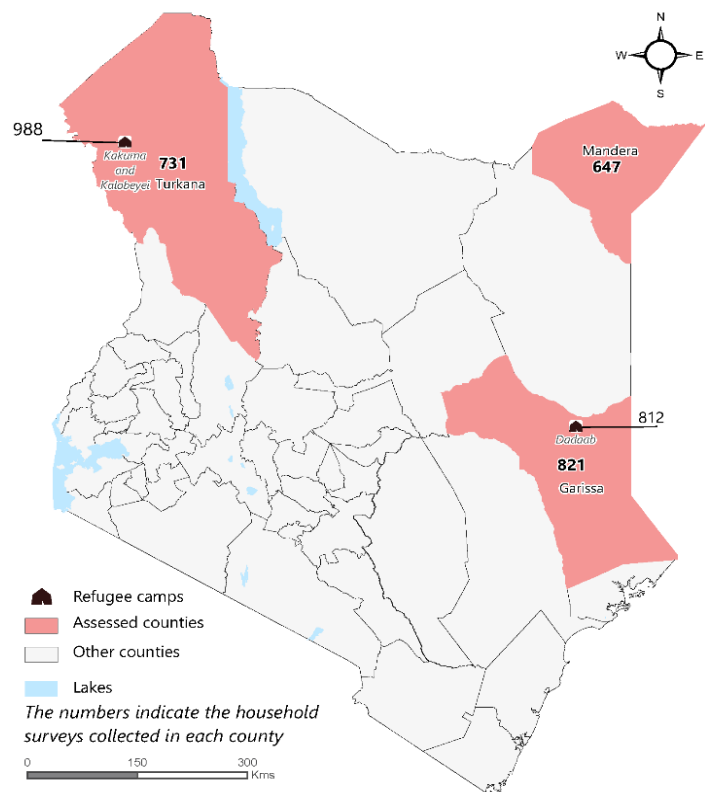
Table 2: Sampling strategy by group of population

Group of population	Type of sampling	Precision level	Further stratification
Host counties	Probability	Confidence level : 90% Margin of error : 10%	2-Stage cluster sampling
Refugee population	Probability	Confidence level : 95% Margin of error : 7%	Stratified simple random

Data collection and geographical coverage

Quantitative data collection took place between the 27th of May and the 5th of June 2024 and covered a total of 4,002 households. Households were interviewed through structured, 45-minute interviews covering all humanitarian sectors active in the Kenyan response. All surveys were conducted in person by enumerators. Each county had three teams, each consisting of six enumerators (18 enumerators per county). Each team had one supervisor in the field to support sampling and oversee data quality checks throughout the data collection process. The surveys were conducted on smartphones using the KoBo Collect Android app. Enumerators uploaded the data to the REACH server every day.

Assessment coverage map (2024 MSNA in Kenya):



Secondary data sources

Various secondary data sources were employed in the design and triangulation of the assessment findings, ensuring that the methodology relied on up-to-date population figures and that the findings were appropriately contextualized. Through the use of secondary data, background information about the counties was understood, providing crucial insights into changing climate conditions, population traits, livelihood zones, and other socioeconomic elements. Key references included data from various humanitarian organizations, statistics on food security and acute malnutrition, and demographic reports from KNBS.

Sampling frame:

- Kenya National Bureau of Statistics census [report](#), 2019.
- UNHCR: Kenya registered refugees and asylum -seekers, March 2024 [report](#).

Reports on the humanitarian context:

- IPC: Acute Foods Insecurity and Acute Malnutrition [analysis](#), March 2024
- REACH: MSNI [Bulletin](#), June 2023
- UNICEF: Humanitarian Situation [Report](#), August 2023.
- ASAL Humanitarian Network: Humanitarian crisis deepens as flooding escalates in ASAL Kenya, [report](#), November 2023.

Ethical considerations and limitations

Ethical considerations

During data collection and information dissemination, REACH ensured that all necessary ethical standards were adhered to, including:

- REACH ensured that all tool questions were developed in line with IMPACT Initiatives' Standard Operating Procedures on Personally Identifiable Information to uphold the "do no harm" concept. In addition, the survey was limited to participants who were eighteen years of age or older and with a solid understanding of the majority of household issues.
- Before conducting each survey, REACH ensured that enumerators obtained consent from respondents. Enumerators read a consent note to each respondent, clearly stating the purpose of the assessment, the sectors to be covered, and the length of the survey and emphasizing the voluntary basis of participation. REACH obtained letters of authorization from the local authorities before starting the data collection exercise. In addition, the County administration and other stakeholders in the locations were visited and informed of the timing and purpose of the data collection team's visit.
- All necessary personally identifiable data collected was not shared with external partners and access to the information was restricted within REACH. Any other personally identifiable information was deleted before the publication of the dataset.
- All respondents were provided with the Complaints and Feedback Mechanism (CFM) phone number managed by ACTED

Limitations and challenges

- **Limitations arising from interviewing the head of household:** The 2024 MSNA household survey targeted the head of the household, who reported by proxy on the rest of the household members. As a result, responses might not accurately reflect the lived experiences of individual household members, who may be more vulnerable. Additionally, intra-household dynamics (including intra-household power relations across gender, age, and disability) could not be captured through this method.
- **Reporting bias:** Certain indicators may be under or over-reported due to the subjectivity and perceptions of respondents. For instance, indicators with an extended recall period of six months (such as questions related to access to humanitarian assistance) may be liable to a certain degree of inaccuracy, as they are dependent on the respondent's ability to remember events in the past.
- **Underrepresentation of certain population groups in specific locations:** Due to the small number (3%) of internally displaced persons (IDPs), analysis based on population groups could not be conducted with a known level of precision in certain counties.
- **Subset indicators:** Findings related to a subset of the overall population may have a wider margin of error, potentially yielding results with lower precision.
- **Representativeness of the findings:** One stratum (Turkana County) was under-sampled due to operational constraints. The results for this stratum are not generalizable with a known level of precision and should be considered indicative only.

ANALYSIS OF SECTORAL COMPOSITES

For details regarding the indicators and thresholds used in this analysis, please refer to Annex 2.

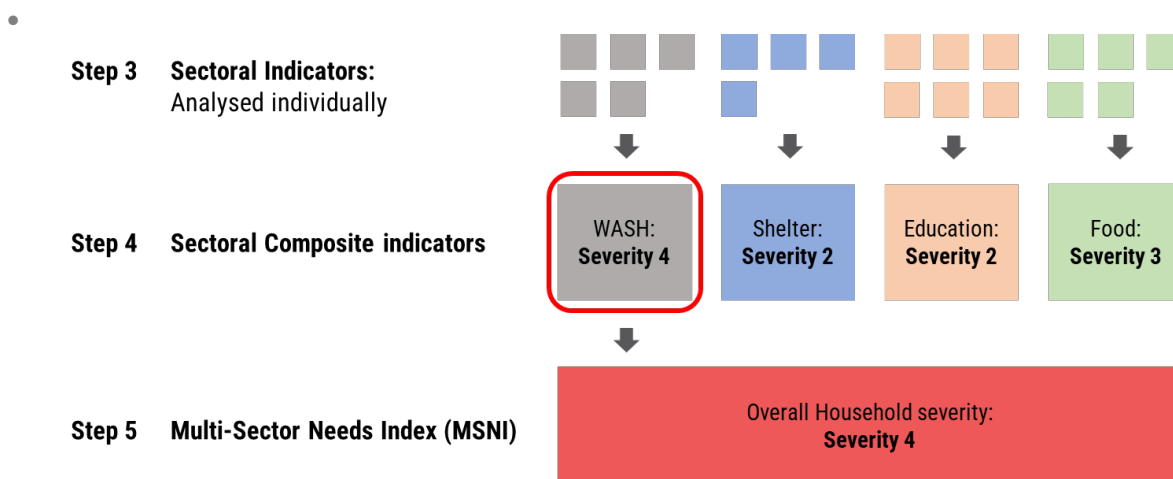
Each year, REACH facilitates the collection and analysis of crisis-level data across sectors and population groups through Multi-Sector Needs Assessments (MSNA) to support decision-making by humanitarian actors. MSNAs are conducted within a strong partnership framework at sector and inter-sector levels. They are timed to inform strategic decision-making milestones along the humanitarian programme cycle (HPC), such as the Humanitarian Needs Overview (HNO) and the Humanitarian Response Plan (HRP).

Note: The MSNI data analysis framework is independent from the Joint Inter-Sector Analysis Framework (JIAF). While some of the conceptual elements for the MSNI are the JIAF 2.0 (e.g. Sectoral Composites, indicators, severity categories), the methodology used is different. The REACH MSNI analysis method was developed internally by REACH and is implemented primarily using household-level data collected through the MSNA. In line with the research questions, the analysis aims to provide a crisis-wide overview of humanitarian needs and the underlying drivers, that influence access to basic needs and services.

The methodology relies on a two-step aggregation process (see *Figure 1*):

- (1) **Aggregation of indicators at the sector level:** Construction of Sectoral Composites, see Annex 3 for further details;
- (2) Aggregation of Sectoral Composites into a multi-sectoral composite result: Multi-Sector Needs Index (MSNI), see Annex 4 for further details.

Figure 1: Approach for the MSNI analysis



The key analytical components are:

- Sectoral Composites: signifies a need in a given sector, where the severity score is 3 or higher.
- Severity: signifies the “intensity” of needs, using a scale that ranges from 1 (minimal/no gap) to 4 (extreme needs)/4+ (very extreme needs).
- Magnitude: corresponds to the overall number or percentage of households in need.

- The Multi-Sectoral Needs Index (MSNI) is a measure of the household's overall severity of humanitarian needs across sectors (expressed on a scale from 1 to 4+), based on the highest severity of sectoral severity scores identified in each household.

The severity scale is based on the type of severity scales that exist in [Version 2.0 of the Joint Intersectoral Analysis Framework \(JIAF\)](#). This framework measures the gradual deterioration of a household's situation towards the worst possible humanitarian outcome. While the JIAF severity scale includes 5 classes ranging from 1 (none/minimum) to 5 (catastrophic), for the purpose of this MSNI, only a scale of 1 (none/minimum) to 4 (extreme) is used. The "4+" score (very extreme) is used when the data indicates that the situation could be catastrophic. But the term "catastrophic" is not used in this analysis. This is because the data needed to establish a "catastrophic" score is mainly collected at the area level (e.g. mortality rates or malnutrition prevalence), which is difficult to take into account in an analysis at the household or individual level.

- *The different levels of severity can be broadly defined as follows:*
- *Very extreme (4+): Indications of total collapse of living standards, with potentially immediately life-threatening outcomes (increased risk of mortality and / or irreversible harm to physical or mental well-being).*
- *Extreme (4): Collapse of living standards. (Risk of) significant harm to physical or mental well-being.*
- *Severe (3): Degrading living standards, with reduced access to / availability of basic goods and services. (Risk of) degrading physical or mental well-being.*
- *Stress (2): Living standards are under stress. Minimal (risk of) impact on physical or mental well-being / stressed physical or mental well-being overall.*
- *Minimal (1): Living standards are acceptable, at a maximum showing some signs of deterioration and / or inadequate access to basic services. No or minimal (risk of) impact on physical or mental well-being*

Based on the severity scale, sectoral composite scores are calculated by aggregating indicators by sector. A simple aggregation methodology was identified, based on the Multidimensional Poverty Index (MPI) aggregation approach. For details on the aggregation methodology, please refer to Annex 3.

The Multi-sectoral Needs Index (MSNI) is a measure of the overall severity of needs experienced by a household over all sectors (expressed on a scale of 1 to 4/4+), based on the highest severity score from the sectoral composite for a given sector and identified within each household. The MSNI approaches multi-sectoral needs from an overall perspective. A household is considered in need if any of its sectoral composite score is 3 or higher. Whether a household has very severe need in a single sector or co-occurring severe needs in several sectors, its final MSNI score will remain the same. While this approach makes sense from a response planning perspective—if a household has an extreme need in a single sector, this may substantiate a humanitarian intervention regardless of the co-occurrence with other sectoral needs—, further analyses are needed to unpack the MSNI and understand these differences in magnitude and severity between households. *For details on the MSNI construction, please refer to Annex 4.*

In addition to the MSNI, the bulletin includes additional analysis on the overall proportion of households by severity, the overall proportion of households in need by sector (i.e., sectoral composite), the overall proportion of households in need by total number of sectoral composite, and the most common needs profiles (sectoral composite combinations).

Annex 1: Related publications (terms of reference, datasets, dashboards)

All documentation and outputs related to the 2024 MSNA in Kenya are available on the REACH Resource Center:

- Terms of reference are available [here](#).
- Datasets for host and refugee community are available in [link 1](#) and [link 2](#) respectively.
- Results tables for host and refugee community are available in [link 3](#) and [link 4](#) respectively.

Annex 2: Details on the indicators used for the Sectoral Composites

			Sectoral Composite does not indicate need		Sectoral Composite indicates need		
Indicator/ Dimension	Question(s)	Response options	Severity level 1	Severity level 2	Severity level 3	Severity level 4	Severity level 4+
% of households having had access to an improved water source	What is the main source of drinking water for members of your household?	List of water sources	Improved water source on premises	Improved water source within 30 minutes	Improved water source more than 30 minutes return time	Unimproved water source	Surface water Open de
% of households reporting distance to water source	How long does it take to go there, get water, and come back?	Integer					
Household Indicator Convergence Matrix (HICM)	<i>(Food Consumption Score (FCS questions)</i> <i>Reduced Coping Strategies Index (rCSI questions)</i> <i>Household Hunger Scale(HHS questions)</i>	Integer	HHs are able to meet essential food needs	HHs have minimally adequate food consumption (but are unable to afford some essential non-food expenditures without engaging in stress-coping strategies)	HHs have food consumption gaps and are marginally able to meet minimum food needs (but only by depleting essential livelihood assets or through crisis-coping strategies)	HHs have large food consumption gaps (only mitigated by employing emergency livelihood strategies and asset liquidation)	HHs have an extreme lack of food even after full use of coping strategies
Health Needs and Washington Group-Short Set	During the last 3 months, did person of age xx and gender xx have a health problem and need to access health care?	Yes/no	No person with healthcare needs and no person with a disability	At least one person with a met need AND [no person with a disability OR WG-SS level 1 or 2]	At least one person with an unmet need AND [no disability OR WGSS level 1 or 2] OR [No person with needs OR met needs] AND WG-SS level 3 or 4	At least one person with unmet needs AND WG-SS level 3 or 4	
Access and barriers to access education	Did child of age xx and gender xx attend school or any early	List of barriers	All school-aged children attended formal		At least one school-aged child did not attend formal school at any time	At least one school-aged child did not attend formal	

	childhood education program at any time during the 2023-2024 school year?		school at any time OR No school-aged children			school at any time, for any of these reasons (Protection risks whilst at the school, Protection risks whilst travelling to the school, Child needs to work at home or on the household's own farm, Child participating in income generating activities outside of the home, Child is associated with armed forces or armed groups, Marriage, engagement and/or pregnancy)	
Education Disruption	During the 2023-2024 school year, what was the main reason child of age xx and gender xx did not access formal school?	List of barriers	None of the children education was disrupted OR No school-aged children	At least one child education has been disrupted by teacher absenteeism.	At least one child education has been disrupted by climate related hazards or the school being used as a shelter by displaced population	At least one child education has been disrupted by school being occupied by armed groups/ non-state governmental actors	
% of households by the shelter type	What best describes the shelter situation of this household?	List of shelters types	Adequate shelter		Inadequate shelter		No shelter

% of households with shelter issues	What issues do members of your household face in the dwelling where you currently live?	List of issues	Less than 12% of issues selected [None reported]	More than 12% of issues selected [1 to 3 out of 8 issues reported]	More than 50% of issues selected [4 to 6 out of 8 issues reported]	More than 87% of issues selected [7 or 8 out of 8 issues reported]	
Security of Tenure	What is the occupancy arrangement for your current shelter?	Ownership, Rented, Hosted for free, No occupancy agreement	Low-risk	Medium-risk	High-risk		
Functional Domestic Tasks	Are members of your household able to (cook, sleep, store food and water or perform personal hygiene) where you live?	Yes, without any issues Yes, with issues No, cannot do	Cannot perform 0/5 tasks	Cannot perform 1/5 tasks	Cannot perform 2-3/5 tasks	Cannot perform 4-5/5 tasks	
Child separation	Does your household have any child, son or daughter (below 18 years) not currently living in the household?	Yes/no	No separated children	At least one child separated because left house to study		At least one child separated for reasons indicating severe child protection concerns	At least one child separated for reasons indicating very severe child protection concerns
Perceived risks	% of households reporting at least one member of the household felt concerned about their safety or security in the last 3 months, by frequency and type of protection risk	Never Just once or twice Several times Always Don't Know Prefer not to answer	Total score between 0 and 1	Total score between 2 and 3 AND no Always response	Total score between 4 and 8 OR One Alwaysresponse	Total score of 9 and above	

Sectoral Composites:

Food Security

The Food Security (FS) MSNI Framework is based on the IPC AFI analytical framework and reference table, and proposes an indicative measure of household food consumption gaps based on three main outcome indicators:

- The Food Consumption Score (FCS).
- Reduce Coping Strategies Index (CSI).
- The Household Hunger Scale (HHS).

Similar to [CARI](#), the FS MSNI Framework is derived from one single household survey, unlike the IPC AFI/CH classification results, thus Findings based on the Convergence Matrix are not IPC/CH-compatible but are nonetheless relevant to REACH as they consider all three food consumption outcome indicators. For further details on the HICM, including how it is constructed and its background, please see the [FEWS NET Matrix Guidance](#) document.

Health

The Health MSNI Framework relies on aggregation of data collected at the individual level to the household level. The composite indicator is derived from two indicators representing a proxy for condition severity (unmet health care needs) and a proxy for disease severity (disability).

Condition severity is measured with self-reported unmet healthcare needs (a mandatory indicator). People who have accessed healthcare are classified as not having a healthcare need (need met) and therefore, considered as not having a condition severity. People faced with a healthcare need who were not able to obtain care do have a condition severity and are classified as in need.

Disease severity is measured through the [Washington Group Short Set](#) (WG-SS) of questions.

Education

The Education MSNI Framework classifies households based on education experiences of children in the household. As the MSNI is measured at the household level, households are classified according to the child with the worst educational outcomes. The dimensions feeding into the Education MSNI Framework are attendance to formal education, potential disruption of attendance during the school year, as well as main barriers of access to formal education.

WASH

The WASH MSNI framework assesses at the household level, the availability of quality water, sanitation, and hygiene facilities in line with global standards. In particular, it follows the [JMP service ladder](#) definition to ascertain households' access to appropriate WASH.

Shelter and Non-food items

The Shelter MSNI framework captures four dimensions: shelter type and situation, shelter issues, security of tenure, and functionality of the domestic space. It is based on the Shelter Severity Classification (SSC), which is the unique method used by the Shelter Cluster to get the People in Need (PiN) figures. The SSC has three core pillars: 1) the structure of the shelter, 2) the living conditions inside the shelter, and 3) the settlement (access to basic services and infrastructures). MSNA indicators and associated questions have been endorsed by the Global Shelter Cluster (GSC) since they inform the SSC framework too. The dimensions of the MSNI framework correspond mostly to pillars one and two, as the settlement pillar is covered in other sectoral frameworks.

Protection

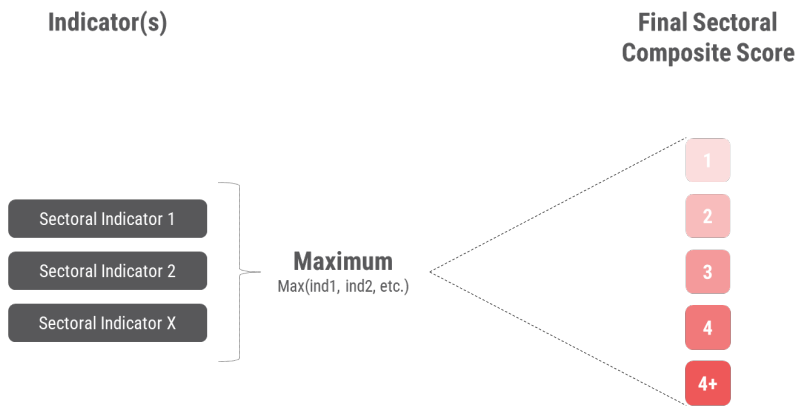
Protection core indicators are grouped into two categories: **prevalence of victims of protection risks** and **perceived risks of victimisation**. Each of these feeds directly into one composite indicator, respectively on **Child separation** and **Perceived risks**, that feeds into the Protection sectoral composite. Following the standard approach, the overall results are converted into a five-point scale corresponding to severity of needs.

Based on this distinction between current and potential exposure to a protection risk, two main categories of people in need are distinguished in the Protection framework: current victims and people at high risk. Protection Clusters oversee a large number of risks that the GPC and Global Areas of Responsibility (AoR) have grouped into a [consolidated list of 15 protection risks](#), against which we identify people in need.

Annex 3: Sectoral Composites – Aggregation

With the exception of the Food Security Sectoral Composite¹, the final sectoral severity score of a household will always be the maximum severity level reached by the sectoral indicators (or combination of indicators) included in the Sectoral Composite framework (see Table 3 below as an example).

Figure 2: Aggregation of indicators into a final Sectoral Composite score



¹ It is recommended for calculating the Food Security Composite to use the aggregation method of the [FEWSNET Matrix](#).

Annex 4: Multi-Sectoral Needs Index – Aggregation

The final 'multi-sectoral severity level' or Multi-Sector Needs Index (MSNI) is obtained for each household as the maximum severity level the household scored across all Sectoral Composite (see 3 below):

- $MSNI = \max(\text{Food Security Composite}, \text{Livelihoods Composite}, \text{WASH Composite}, \text{Health Composite}, \text{Education Composite}, \text{Protection Composite}, \text{SNFI Composite})$

Table 3: Example of MSNI calculation per household

	Sectoral LSG severity score						MSNI
	Food sec	Health	WASH	Protection	Education	Etc.	
HH1	4	4	4	4	3	3	4
HH2	2	2	4	2	1	1	4
HH3	3	3	3	4+	2	1	4+
HH4	2	3	1	1	2	1	3

Annex 5: List of partners

Funded by:

- USAID's [Bureau for Humanitarian Assistance](#) (BHA)