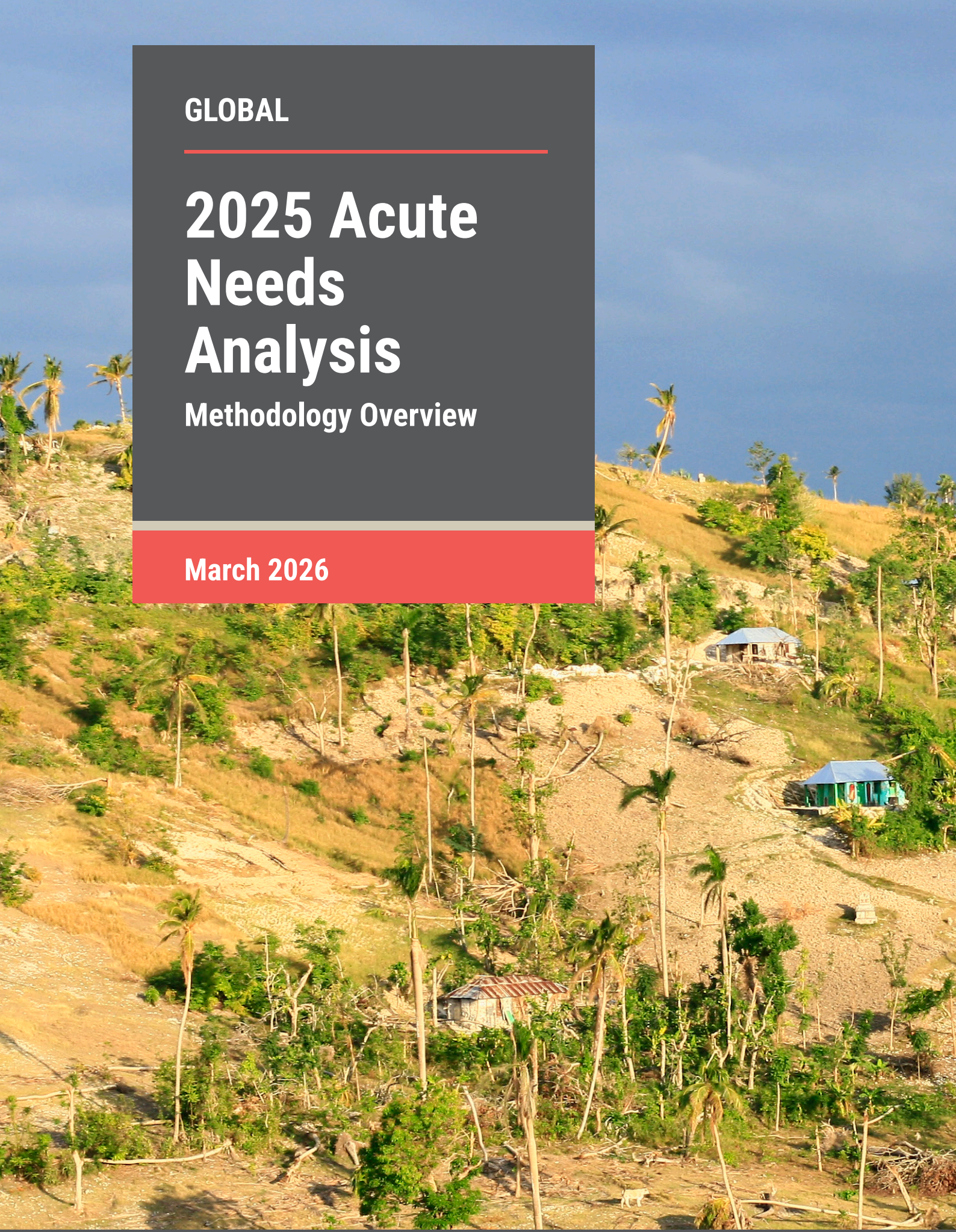
GLOBAL

2025 Acute Needs Analysis

Methodology Overview

March 2026



REACH Informing more effective humanitarian action

Table of contents

1 Introduction

1.1 Rationale

In the context of reduced humanitarian funding, high global needs, evidence-based prioritisation is more critical than ever. At the same time, funding cuts have impacted the information systems that inform those decisions, increasing the risk that populations facing the most severe and life-threatening conditions are not adequately identified.

In 2025, IMPACT Initiatives developed the Acute Needs Analysis (ANA), currently in its pilot phase, **to identify populations facing life-threatening needs.** This is to ensure that such populations are not overlooked in prioritization processes. The ANA is conducted at crisis level; crisis-level findings are also combined into global dissemination targeting intra-crisis funding allocation processes.

1.2 Analysis outputs

The ANA produces three main analytical outputs:

- Area-level classifications of the presence and severity of life-threatening conditions in each unit of analysis;
- Where data allows: The number of people estimated to be at a higher risk of experiencing life-threatening conditions due resource and public health gaps in each area;
- Analytical certainty scores to convey confidence in the conclusions, based on data quality and assumption dependency

These outputs are presented on a crisis-level map and a brief narrative of the main findings in each crisis.

1.3 Scope & limitations of the 2025 pilot

The 2025 ANA pilot was rolled out in 21 crises, in each of which the analysis was conducted by a country analyst based on a standardized analysis framework (see Chapters 2 and 3). In most crises, the analysis **was carried out at area level** (often administrative level 2). To minimize the risk of missing populations in severe conditions outside of known "hotspots", **the ANA sought to include all geographic areas in each crisis**, regardless of whether sufficient evidence would be available to conduct the full analysis.

The ANA relies primarily on existing data, including Multi-Sector Needs Assessments (MSNAs), sectoral assessments, health and nutrition surveillance, facility records, and key informant reporting, complemented by contextual information. Severity classifications are only provided **when minimum evidence requirements are met;** locations without sufficient evidence received an **"insufficient evidence" classification.**

Across crises, the ANA generally covers conditions during the May-August period, with some exceptions due to different information pipelines (timelines per crisis are available in

the country reports). **Results are specific only to this analysis period** and **should not be extrapolated** beyond it without updated analysis.

Several notable elements fall outside the scope of the 2025 ANA, including:

- **(Risk of) trauma deaths:** The ANA does not assess the risk of direct trauma mortality due to limitations in anticipating conflict dynamics, though it considers how insecurity affects access to and functioning of critical systems.
- **Humanitarian needs beyond the acutely life-threatening:** The pilot focuses on direct drivers of mortality and does not capture the full breadth of intersectoral humanitarian needs; conceptual refinements are planned from 2026 onwards, including exploring how to reflect additional dimensions of need.
- **Community priorities:** affected communities' priorities and perspectives are generally not included in this analysis. ANA findings should be substituted where available.
- **Magnitude estimates:** approaches to estimating the number of people facing life-threatening needs are being piloted, but require stronger data than what is available in many contexts, as a result, crisis-wide magnitude estimates could not be produced in most countries.
- **Real-time monitoring and updates:** The ANA provides a snapshot of conditions during the analysis period and does not capture subsequent changes; work is underway to develop light monitoring and update mechanisms.

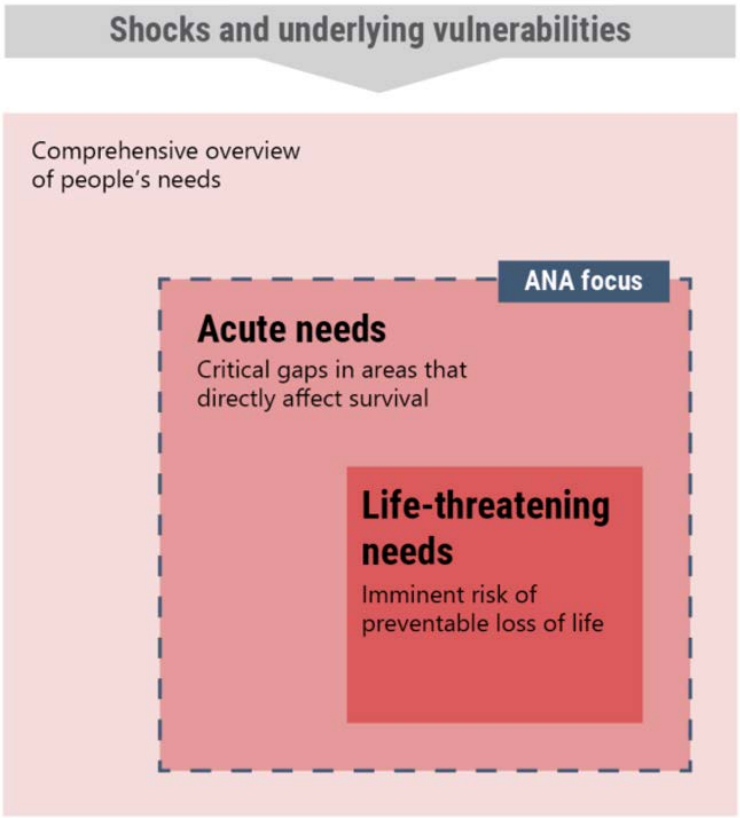
Lessons learnt from the 2025 pilot will inform methodological refinements for the 2026 ANA cycle.

2. The Acute Needs Framework (ANF)

2.1 Key analytical concepts

For the ANA, Acute Needs and related concepts are defined as follows:

- **Excess Mortality (technical term):** Mortality occurring above expected baseline levels and attributable to a crisis. It is typically measured through mortality surveys and expressed as excess deaths over time.
- **Risk of Excess Mortality (our definition):** An analytical construct used when there is not enough direct evidence to confirm excess mortality. It indicates that, based on the available data and analysis of mortality drivers, a population or area is facing a significant likelihood of experiencing excess mortality – either already underway or likely to occur soon.
- **Acute Needs (our definition):** High severity deprivations in key mortality drivers (see Acute Needs Framework). Acute needs in themselves may not necessarily lead to excess mortality, however, when they co-occur across critical systems RoEM increases.
- **Life-threatening needs (our definition):** A combination of acute needs that are currently or imminently driving excess mortality.



These concepts are visualized in the model to the left.

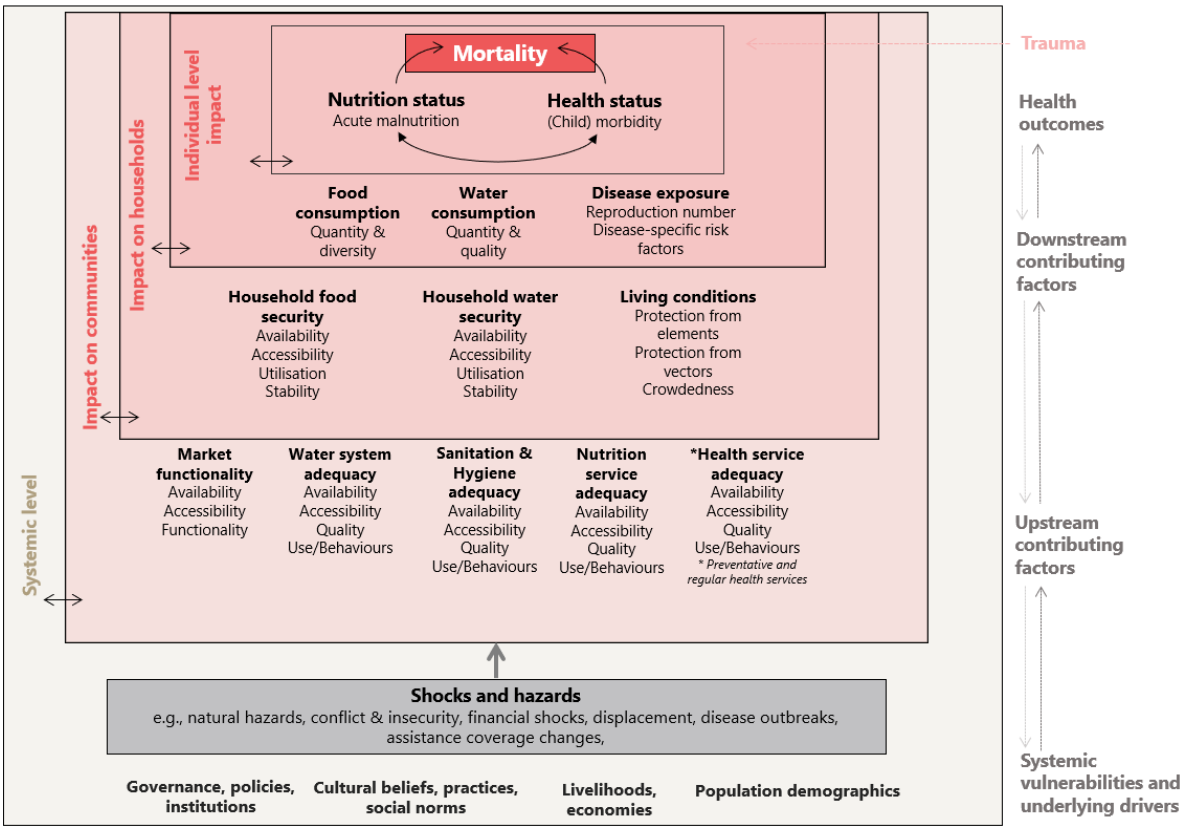
We could consider life-threatening needs as a subset of acute needs, which in turn are high severity deprivations in factors that are known to drive excess mortality in humanitarian contexts. Acute needs, in turn, can be considered a subset of "humanitarian needs" – which remains ill-defined in the sector.[1]

[1] In 2026 and beyond, IMPACT will be developing a "Needs-based Assistance" conceptual and normative framework of humanitarian needs.

2.2 Theoretical basis of the ANF

The Acute Needs Framework (ANF) provides the conceptual backbone of the ANA. It consolidates insights from existing humanitarian frameworks, including the UNICEF Conceptual Framework, the Water Insecurity Analysis (WIA) framework, and the Integrated Phase Classification (IPC) framework, while adopting an explicitly inter-sectoral perspective focused on mortality risk. The current ANF is the result of a 2023 consultancy with leading academics and subsequent in-house consolidation and piloting.

The framework is structured around public health systems that are most directly linked to survival (food, water, health services, and living conditions) and shows possible pathways through which failures across these systems interact to produce life-threatening outcomes.



2.3 Structure of the framework

The ANF distinguishes between drivers based on their proximity to mortality. In this structure:

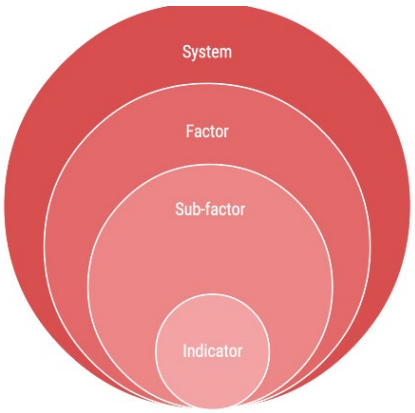
- **Health outcomes** are the most proximal indicators. They are directly linked to mortality risk and can reinforce each other through infection-malnutrition cycles. Because outcome data is often scarce, the ANA relies on interpreting contributing factors as proxies.

- **Downstream contributing factors** directly influence individual or household outcomes (e.g., food consumption, water consumption, etc.). They have strong analytical weight due to their closeness to mortality.
- **Upstream contributing factors** are systemic enablers or constraints. These factors shape risk environments but are further removed from immediate mortality outcomes. Severe upstream failures can signal high vulnerability, but by themselves do not substantiate RoEM unless they are mirrored in downstream deterioration.
- **Shocks and systemic vulnerabilities** explain why systems fail and why populations are susceptible. They are used to contextualise the analysis but are too indirect to be used for classification.

Within this structure, the ANF organizes crisis impacts across multiple analytical dimensions:

1. **Levels of impact.** In humanitarian data, impacts of a crisis can be observed at:
    a. **Individual level** (e.g., acute malnutrition, morbidity)
    b. **Household level** (e.g., household food insecurity)
    c. **Community level** (e.g., market collapse, non-functional health facilities)

2. **Systems, factors, sub-factors.** For the purpose of the analysis, the framework is also structured hierarchically:
    a. **System:** A broad domain that is critical to survival (i.e., food system, water system, living conditions, and the health & nutrition system, as well as health outcomes).
    b. **Factor:** A critical functional component within that system (e.g., food access, water security) – these are the factors that might contribute to severe health outcomes and excess mortality.
    c. **Sub-factor:** A more detailed, specific dimension within the factor (e.g., availability, accessibility, utilization).



This structure allows for analytical operationalisation: indicator thresholds are assigned at the factor and sub-factor level within systems to identify Acute Needs (See chapter 3: Analysis for more information).

2.4 Guiding Principles

The following principles underpin the analytical framework and design of the analysis steps and are meant to guide the analytical process.

1. **Excess mortality is a measurable concept, RoEM is estimable:** There is consensus on how to measure and report on mortality in crises. By contrast, ROEM cannot be directly measured – it is a REACH analytical construct, derived from structured analysis protocols and expert judgement, based on the best available evidence.
2. **Proximal drivers should be prioritized in the analysis.** Downstream drivers are more directly linked to mortality than upstream drivers, the latter of which are

important for context and sensemaking but cannot on their own substantiate claims about RoEM.

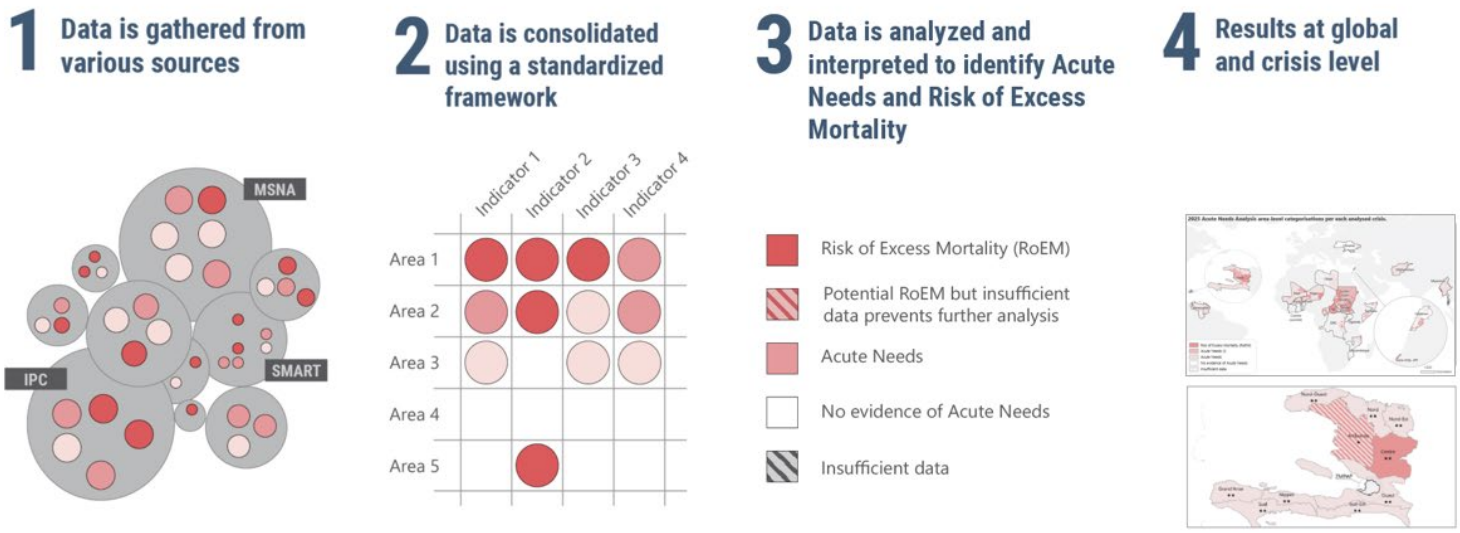
3. **RoEM is the result of multiple systems failing.** Excess mortality results from several failing systems. Deterioration in a single factor may not increase RoEM if compensatory and/or mitigating systems are functional. As a result, we can only confirm RoEM if we have credible evidence of system failure and a plausible scenario in which system failures are interacting in a way that makes it plausible for excess mortality to be occurring during the analysis window (or in the imminent future, meaning within the following 3 months).
4. **Timing and lag effects matter.** Stressors impact health and survival at different speeds. For example, a lack of safe drinking water presents an immediate risk, whereas poor dietary diversity or rising food insecurity may take weeks or months to manifest wasting or mortality. Coping mechanisms can temporarily delay impacts.

3. Analysis

The analysis follows a sequential analytical process designed to move from initial quantitative synthesis of available evidence to qualitative but structured interpretation of mortality risk. The process consists of four stages:

1. **Flagging analysis:** A systematic screening of all available evidence that meets the ANA minimum data requirements. Analysts enter relevant indicators into the flagging matrix, which applies pre-defined, standardized severity thresholds and minimum evidence checks to obtain a preliminary indication of the severity of acute needs in each unit of analysis.
2. **Deep-dive analysis**: Areas flagged for potential Risk of Excess Mortality (RoEM) and Acute Needs (AN) undergo comprehensive analysis to determine whether the preliminary flags are valid and credible, based on quantitative and qualitative evidence.
3. **Estimates of magnitude (pilot):** In this pilot-within a pilot meant to provide an indication of scope and capture pockets of the population outside of RoEM areas, analysts use a calculation tool that calculates the range estimate of persons facing life-threatening needs in each unit of analysis.
4. **Review of analytical certainty:** for each unit of analysis, analysts assess the certainty of the analytical conclusions by evaluating the strength of the evidence and the reliance on assumptions to get to a final conclusion.

The analysis is conducted by dedicated country analysts in close consultation with focal points and, where needed, technical experts. Analysis outputs, such as the flagging matrices, Deep-dive analyses, and estimate calculations, are subject to IMPACT's internal research quality review processes.



3.1 Units of analysis and aggregations

In most crises, the ANA is conducted at subnational area level, typically administrative level 2. The choice of analysis units depends on the operational relevance for decision-making as well as the availability of (representative) data. In some contexts, additional population-based units (e.g., urban/rural splits, gender of the head-of-household, or camp populations) are analysed where sufficient data exists. Classifications, magnitude estimates, and certainty scores are produced at the level of the unit of analysis, but can be aggregated to high levels (e.g., crisis-level summaries) for communication purposes. However, aggregation does not replace area-level analysis and may mask important sub-crisis differences.

3.2 Flagging analysis

The preliminary flagging analysis serves as a first analytical filter of the ANA. Its purpose is to synthesise the available data to **rapidly identify areas where evidence suggests acute or potentially life-threatening needs.** The flagging analysis screens for possible concerns but cannot by itself confirm RoEM (this requires a Deep-dive analysis).

Inputs into the flagging analysis

The flagging analysis is done through a **formatted Excel worksheet**, which is structured along the Acute Needs Framework (ANF). Analysts enter the available data into this worksheet for each unit of analysis (geographic units, mostly).

Each factor in the ANF is accompanied by a set of common humanitarian indicators[2] at individual, household, and community-level**, which have their own severity threshold**. These indicators and thresholds are based on global standards, existing severity frameworks, and consultations with public health experts at IMPACT headquarters. Thresholds were set at "emergency" or severity 4/5 equivalent levels.

All indicators in the framework are accompanied by a preference level, which differentiates (sectoral) "gold standard" indicators from proxy indicators.[3] Analysts are recommended to find the best possible indicators in their crisis context, if those are not available, they can go with lower-preference indicators. Preference levels in turn feed into final analytical certainty scores (see section 3.4). This ensures that the analysis can be run with the best available evidence and remain transparent about validity and reliability gaps.

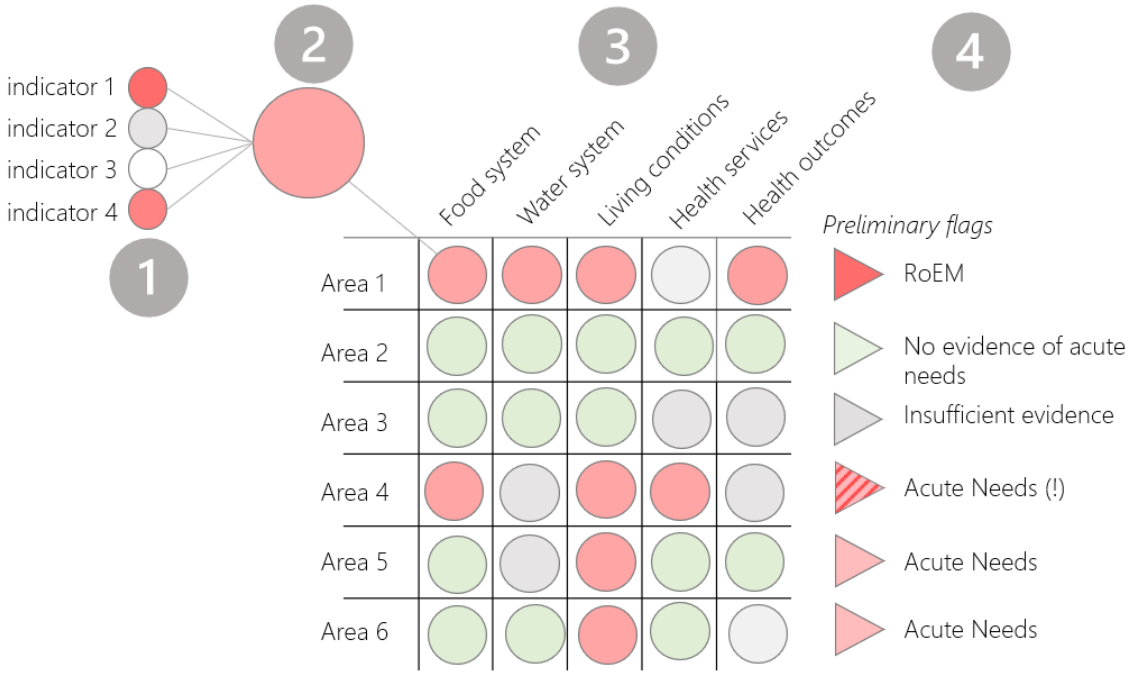
[2] Sources used differ between countries based on availability. Common sources include the Multi-Sector Needs Assessments (MSNAs), SMART Surveys and health surveillance data, sectoral infrastructure mapping such as Health resources and services availability mapping system (HeRAMS), classifications from the Integrated Phase Classification (IPC) or Cadre Harmonisé (CH), market monitoring data, humanitarian situation reports, Humanitarian Situation Monitoring (HSM), etc. More information on evidence used for each crisis analysis can be found in the country briefs.

[3] For instance, in the Food system, common food consumption indicators such as the Minimum Dietary Diversity (MDD) score, the Food Consumption Score (FCS) and the Household Hunger Scale (HHS) are preferred over proxy indicators such as the % of localities reportedly experiencing severe or extreme hunger (reported by key informants), or the % of households who reported only having had one meal per day. Such proxy indicators have a lower preference score and can be used cautiously as an indication of food gaps if no household or individual-level data is available.

The full list of indicators and thresholds in the standardised framework is available upon request.

How the flagging analysis works

The flagging model uses a structured threshold approach to determine where acute or potentially life-threatening needs may exist. Each factor in the analytical framework is accompanied by a set of indicators and standardized severity thresholds. Thresholds are checked sequentially in line with the diagram:



- **(1) Indicator thresholds**: Benchmarks based on global standards (WHO, UNICEF, Sphere, etc.) and input from technical experts that determine when an individual indicator (for example, GAM rates, water consumption) signals severe or very severe conditions.
- **(2) Factor thresholds:** Rules that require multiple indicators within a factor to exceed thresholds before the factor is flagged. This prevents factor-level flags from being based on single indicator outliers.[4]
- **(3→4) System thresholds:** Rules on how many factors within a system (food, water, living conditions, health/nutrition services, health outcomes) need to be flagged for that system to be flagged as an Acute Need. Typically, system thresholds are set at 1, which means that any factor within the system being flagged is sufficient for the system to be flagged. While this might seem redundant at first, these system thresholds exist to produce the final area-level flag, which depends on the combinations of flags from across different systems. For instance, a Risk of Excess

[4] Some factors are divided into subfactors (e.g., accessibility, availability, utilization, and stability are subfactors within the household food security factor). These are used primarily to determine evidence thresholds, i.e., when do we have sufficient information on household food security to rule out any issues? If we know that availability is not an issue, but we lack information on the other pillars, we cannot conclude that there are no issues. Yet if we know that availability is an issue and we lack information on the other pillars, the flagging system flags a gap for household food security regardless.

Mortality flag requires 3 contributing systems and health outcomes to be flagged, based on Guiding principle 3 (excess mortality is the outcome of multiple failing systems).

- **Evidence thresholds:** Minimum data requirements that are used to allow differentiation between "No Acute Needs" and insufficient evidence, aiding the interpretation of data gaps. Basically, how much evidence is needed to responsibly rule out the possibility of acute, potentially life-threatening needs.

Values are entered for each available indicator per unit of analysis, and the analysis tool automatically checks these against the indicators to determine a preliminary conclusions flag for each unit of analysis. In addition to these overall flags, the tool also provides a summary of deprivations per factor and across each system, as well as an overview of critical information gaps, allowing analysts a first overview of crisis dynamics and data collection priorities.

Outputs of the flagging analysis

The analysis generates the first set of preliminary outputs, which can be seen a preliminary indication of concern for each unit of analysis (most often, a geographic/administrative area or geographically confided population group):

- **Excess Mortality:** raised in areas where we have robust and timely mortality data and the death rates are above the emergency threshold.[5]
- **Potential Risk of Excess Mortality (RoEM):** When we see a strong convergence of severe health outcomes and system failures. This indicates probable life-threatening conditions, requiring a full Deep-dive analysis.
- **Acute Needs:** Severe deprivations are present, but the RoEM minimum criteria are not met (this could be due to evidence gaps). The Acute Needs flags should still be followed up on during a Deep-dive to understand severity and rule out a false negative.
- **No Evidence of Acute Needs**: No factor thresholds are exceeded AND we have sufficient required evidence to speak about the absence of acute needs.
- **Insufficient Evidence:** Incomplete or absent evidence preventing any analysis and conclusion.

Analysts use these outputs to prioritise locations for Deep-dive analysis. All locations that were flagged as potential RoEM and Acute Needs are required to be followed up on during that stage of the analysis, during which these preliminary categories can be adjusted. This rule is based earlier testing of the model against mortality data, which has shown that the flagging analysis can miss real mortality cases in evidence-poor contexts.

[5] In this analysis, the WHO Emergency Threshold has been used as a standardized threshold to indicate excess mortality. This threshold is more than 1 death / 10,000 persons / day (more than 2 for children younger than 5 years old). A doubling of baseline figures, as used in the UNHCR Emergency Handbook, is also an acceptable emergency threshold if reliable baseline data is available.

Pilot testing of the 2025 ANA flagging model

The 2025 ANA flagging model was piloted using data from the 2024 Multi-Sector Needs Assessments (MSNAs) in the Central African Republic (CAR). These surveys were selected because they included mortality indicators, which allowed us to test whether different combinations of RoEM thresholds could correctly identify areas where mortality was above the WHO Emergency Threshold. While *risk of excess mortality* is not the same as excess mortality, due to its forward-looking component, testing could give some initial insight into which (combinations of) framework indicators and thresholds have stronger relationships with mortality outcomes.

Several model configurations were tested, producing varied results. The final technical recommendation was to adopt a **higher specificity scenario.** In this scenario, most areas flagged for RoEM are genuinely at high risk, giving analysts a high level of initial confidence in the flagged areas. However, the high-specificity model showed limited sensitivity, meaning that there were areas with excess mortality that were not flagged as RoEM (false negatives).

To mitigate this limitation, the approach to the Deep-dive allows areas flagged as "Acute Needs" to be updated to RoEM during the Deep-dive if sufficient converging evidence supports this conclusion.

The testing was limited in scope – only indicators from common, standardised sources (which are generally available across most contexts) were used for testing. Due to data limitations, testing could only be done on data from CAR, and as such, it is not yet clear how well the models work in different contexts. Tests will continue to improve the model in 2026 and beyond.

3.3 Deep-dive analysis

Outputs of the Deep-dive analysis

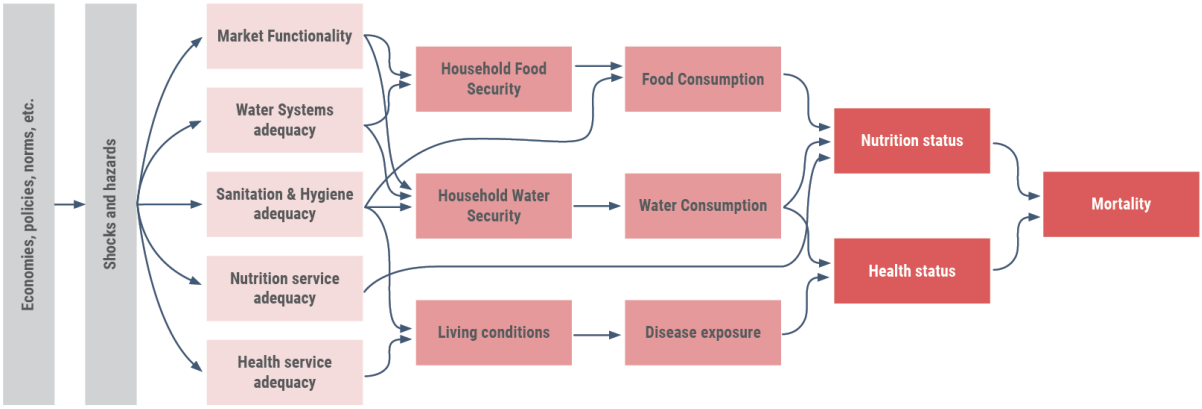
The Deep-dive analysis **serves to turn preliminary flags in to substantiated analytical conclusions.** Combining preliminary flagging results with qualitative information and expert judgement, it produces:

- A **final classification** of each unit of analysis:
  - **Excess Mortality:** Robust, timely evidence of mortality rates above global emergency thresholds.
  - **RoEM:** Analysis of available evidence suggests that excess mortality is a likely scenario in the current or near-term analysis period, all minimum evidence standards have been met.
  - **Acute Needs (!):** This category is used when the available evidence strongly suggests RoEM, but a specific data gap prevents full confirmation. Additional evidence would likely upgrade the classification.
  - **Acute Needs:** Available evidence suggests severe gaps in at least one contributing factor.
  - **No evidence of acute needs:** Evidence supports a "no acute needs" conclusion (this only appears if minimum evidence thresholds are met, i.e., if there are no critical data gaps in any of the contributing factors). Severe needs might exist in other sectors, as well as critical vulnerabilities.
  - **Insufficient evidence:** Evidence is insufficient to reach a conclusion.

- An **exploration of which systems are failing** (if any) and how deprivations across various systems are interacting with each other in the context of the crisis
- When granular evidence is available, it can also provide an indication of which **populations are most likely to be at risk**

In areas without Acute Needs, a lighter version of the Deep-dive provides an interpretation of underlying vulnerabilities and potential future risks.

To come to conclusions, analysts interpretate the likelihood of different mortality pathways in their crisis context, seeing if there is compelling evidence confirming a likely trajectory of interacting systemic gaps at different levels, as shown in the flow chart below.



The Deep-dive method: Analysis of Competing Hypotheses

The Deep-dive uses the Analysis of Competing Hypotheses (ACH) approach. This approach is particularly well-suited for RoEM analysis because it allows the combination of qualitative and quantitative evidence from multiple different sources; it explicitly tests alternative explanations; focuses on disconfirming evidence to minimise cognitive biases; produces audible conclusions; and allows for contextualization and interpretation.

How the Deep-dive analysis works

For each unit of analysis that was flagged during the flagging analysis as Acute Needs or potential RoEM, analysts assess the consistency of evidence against a set of hypotheses that describe different alternative severity scenarios. Each piece of evidence is assessed to determine whether it is consistent, inconsistent, or insensitive to each hypothesis, after which each hypothesis is tested to see which hypotheses have the least disconfirming evidence.

First, hypotheses are listed (standardised hypotheses were used for all Deep-dives).

Hypotheses for assessing Food System deprivation	
F1	Most people experience catastrophic food consumption gaps without mitigation capacities (systemic failure)
F2	Some people (pockets of the population) experience catastrophic food consumption gaps without mitigation capacities.
F3	Most people experience severe food consumption gaps with or without mitigation capacities
F4	Some people experience catastrophic food consumption gaps with or without mitigation capacities.

Then, analysts enter all relevant evidence in the evidence rows. This should include evidence from the flagging analysis, but the format allows for additional (qualitative) evidence to be added to further contextualise and triangulate (provided that this information speaks to the analysis period and is deemed trustworthy).

	Hypotheses to test				
Evidence	**F1**	**F2**	**F3**	**F4**	**Notes**

Each piece of evidence is assessed horizontally, the analysts decide whether the information is consistent with each hypothesis (consistent = +, inconsistent = -, insensitive = N/A). Consistent does not necessarily mean supportive, it means that the information provided could coexist with the scenario in each respective hypothesis.

	Hypotheses to test				
Evidence	**F1**	**F2**	**F3**	**F4**	**Notes**
Example evidence	"++"	"+"	"-"	"--"	
Example evidence	"-"	"-"	"+"	"--"	
Example evidence	"NA"	"+"	"-"	"-"	
Example evidence	"+"	"-"	"-"	"--"	

When all evidence has been evaluated, analysts assess the likelihood of each hypothesis by looking vertically, seeing which hypothesis has the least conflicting/inconsistent evidence.

	Hypotheses to test				
Evidence	**F1**	**F2**	**F3**	**F4**	**Notes**
Example evidence	"++"	"+"	"-"	"--"	
Example evidence	"-"	"-"	"+"	"--"	
Example evidence	"NA"	"+"	"-"	"-"	
Example evidence	"+"	"-"	"-"	"--"	

Based on the vertical assessment and the evidence provided, analysts judge the probability of each hypothesis (e.g., likely, plausible, unlikely, very unlikely) and provide a summary of findings.

	Hypotheses to test				
Evidence	**F1**	**F2**	**F3**	**F4**	**Notes**
Example evidence	"++"	"+"	"-"	"--"	
Example evidence	"-"	"-"	"+"	"--"	
Example evidence	"NA"	"+"	"-"	"-"	
Example evidence	"+"	"-"	"-"	"--"	
Conclusion:	Likely	Plausible	Unlikely	Very unlikely	**Summary:**

The Deep-dives test severity of deprivations within systems, and, when severe deprivations are found within systems, analysts assess possible cross-system interactions.

- **Within systems**: Is there robust evidence that a specific system (such as food, water, and health) is failing in a way that plausibly generates Acute Needs?
- **Across systems**: Are multiple systems failing in ways that interact and amplify each other? Are services in place to mitigate impacts?

If serious deprivations are found across systems that could plausibly interact, analysts assess whether the overall pattern of shocks, vulnerabilities, and deprivations is likely to lead to excess mortality in the current analysis or near-term period (typically 1-3 months), testing the following three hypotheses:

- **RoEM Likely**: Systemic failures and vulnerabilities are interacting in ways that are likely driving or about to drive excess mortality (above the emergency thresholds).
  -> *Confirms RoEM*
- **Severe situation, but conditions not likely to drive excess mortality in near term**: conditions are severe and are likely contributing to severe and/or worsening health outcomes, and potentially preventable loss of life, but not to the extent that mortality levels will exceed emergency thresholds in the current or near-term period.
  -> *Rejects RoEM*
- **Risks are mitigated**: Systemic stress exist (as demonstrated in the earlier Deep-dives), but services, assistance, or coping mechanisms are plausibly preventing mortality to rise above emergency levels.
  -> *Rejects RoEM*

Analysts record the outcomes of the Deep-dives (which hypothesis was chosen + summary statement for each) in a summary file. If evidence is too limited, not well-triangulated, and/or multiple hypotheses remain "plausible" without any "likely" hypothesis sticking out, a conclusion can always remain *"inconclusive"*.

Common pathways and typologies

In addition to validating or refuting the RoEM hypothesis, analysts use the Deep-dive to interpret and unpack findings. They consider the potential pathways and mechanisms that are driving or might be driving Acute Needs and RoEM, including (not limited to):

- **Food-driven acute malnutrition (unmitigated)**: Acute malnutrition is high/rising due to food insecurity, compounded by poor health and nutrition services. Risk is usually highest among children under 5 years of age.
- **Food crisis (mitigated):** Food needs are present, but health, nutrition, and WASH services are preventing the situation from triggering emergency levels of acute malnutrition and mortality.
- **WASH crisis (uncontrolled):** Severe WASH failures drive disease outbreaks in vulnerable populations. Mortality rises due to transmission and lack of containment.
- **WASH crisis (controlled):** Disease transmission risk is high due to limited WASH infrastructure, but generally sufficient health response limits the risk of excess mortality in the analysis timeframe.
- **Health crisis due to infectious disease outbreak (uncontrolled):** Disease outbreaks are driving health needs among the population, limited/lack of health and nutrition services unable to mitigate mortality risk.
- **Health Crisis due to infectious disease outbreak (controlled):** Outbreaks are occurring, but containment and treatment are adequate to manage mortality.

- **Health Crisis due to high burden of noncommunicable diseases (uncontrolled):** Mortality rises due to collapse of health system in previously stable population with high burden of noncommunicable diseases (e.g., dialysis needs, hypertension, diabetes) now unable to access lifesaving treatment.
- **Health crisis due to systemic attrition (uncontrolled):** Mortality is chronically elevated due to dysfunctional health system, mainly due to preventable chronic or maternal causes.
- **Food, WASH and Health crisis (uncontrolled):** Compound risks from overlapping crises. Mortality driven by combined effects of critical gaps across public health systems and inadequate response, resulting in acute malnutrition and high morbidity driving excess mortality.
- **Food, WASH and Health crisis (controlled):** Multiple sectors are strained, but service coverage contains mortality risk. Early intervention is limiting impacts.

At the end, the Deep-dives are reviewed and validated at IMPACT HQ.

3.4 Estimates of Magnitude

What are magnitude estimates

The magnitude estimate provides **a range of the number of people who are at high risk of preventable loss of life due to public health-related causes** in each unit of analysis.

In the 2025 ANA, this is explicitly a pilot-within-a-pilot. The method is grounded risk theory, but still requires testing based on the 2025 findings. The ranges are **not supposed to be interpreted as caseload figures or targeting numbers.**

Yet the method is useful to help:

- **Identify smaller pockets of life-threatening conditions** in areas without RoEM at the area-level.
- Enable **rough comparison of the scale of risk** between areas of different population sizes within and across crises
- Indicate whether life-threatening conditions are concentrated in a few small areas or diffuse across many areas.

The estimates should thus be interpreted as **an analytical approximation**, rather than a precise number, based on a pilot method.

How the analysis works

The magnitude estimates draw on a simplified risk formula commonly used in disaster analysis: *Risk = Exposure x Vulnerability / Coping*. In the ANA, this is operationalised as follows:

- **Exposure** = the share of the population facing converging Acute Needs in systems that are critical for survival (food, water, living conditions)
- **Vulnerability** = the health and nutrition status of the population, which amplifies or lower the impact of the exposure

- **Coping capacity** = the ability of health and nutrition services to prevent, manage, or treat life-threatening outcomes

In this theory, high exposure + high vulnerability + weak coping ->higher risk, while high exposure but strong coping, or high vulnerability but low exposure ->lower risk. The estimate adjusts the exposed population upwards or downwards based on this conceptualisation.

Analysts use an automated calculation sheet but adjust ranges based on their expert judgement, which is guided with some helper columns with "common sense checks" to aid interpretation.

Analysts go through the following steps to obtain estimates:

Step 1: Decide whether an estimate is possible. Estimates can only be calculated when:

  - the area/group was not classified as "insufficient data"
  - AND reasonably reliable population figures are available
  - AND minimum household-level evidence is available across the exposure, vulnerability, and coping domains.

➔ The estimates calculations have higher evidence requirements (due to the reliance on household-level data) than the flagging and Deep-dive analysis parts. As a result, it is possible that magnitudes could only be estimated for a couple of areas in a crisis.

Step 2: Estimate exposure: analysts estimate high and low estimates of the proportions of the population exposed to multiple acute needs across the food, water, and living conditions systems, using severity cut-off tables, Deep-dive findings on the likelihood of interactions between gaps, and automated statistics such as the geometric mean for select exposure indicators. This provides **the range of the population exposed to converging acute needs.**

Step 3: Adjust for vulnerability and coping capacity: The exposure percentage ranges are adjusted based on vulnerability and coping capacity, using an automated adjustment factor calculation. The adjusted percentages represent the **estimated share of the population at risk of life-threatening conditions**, which can be converted to absolute numbers using the population figures.

3.5 Analytical Certainty Review

Outputs of the Analytical Certainty Review

The Analytical Certainty Score (ACS) expresses analytical confidence in each conclusion (RoEM, Acute Needs, No evidence of acute needs). In the final output, each conclusion is accompanied by an indication of the degree of certainty:

*** High certainty

** Medium certainty
* Low certainty

How the analysis works

The analysis of certainty is based on the review of the reliability of the evidence used and the reliance of the analyst on assumptions to get to a final classification. Analysts calculate two separate scores:

- **The Data Reliability Score (DRS)** shows how strong and timely the underlying evidence is.
- **The Inference Immediacy Score (IIS)** shows how directly and confidently the evidence supports the conclusion.

The **DRS** reflects the strength of those pieces of evidence that have been most critical to the conclusion for each unit of analysis. For each of these pieces of evidence, analysts consider the type of the indicator, timeliness of the data, and methodological constraints that might have impacted the quality of the data:

Good DRS	All key evidence is reasonably strong, recent, and methodologically sound.
Moderate DRS	Most key evidence is strong, but one piece is weaker or has some methodological caveats.
Poor DRS	One or more key pieces of evidence are weak, outdated, proxies, or methodologically constrained.

The **IIS** reflects how directly the evidence supports the conclusion, based on the proximity of the outcomes (health outcome indicators are the strongest signals, whereas assumptions have to be made when this level of data is not available) and the triangulation of the information (do all pieces of evidence point in the same direction?). The IIS is then scored qualitatively as follows:

Good IIS	Evidence is proximal to outcomes, clearly consistent with the chosen hypothesis, and does not rely on major assumptions.
Moderate IIS	Evidence is mixed in proximity and contains some indirect elements or minor contradictions.
Poor DRS	Evidence is mostly indirect, with mixed triangulation. Assumptions (still well-formulated) are needed to reach a conclusion.

The final ACS brings the two components together using a matrix approach:

	Good DRS	Moderate DRS	Poor DRS
Good IIS	★★★ **High certainty**	★★ **Medium certainty**	★ **Low certainty**
Moderate IIS	★★ **Medium certainty**	★★ **Medium certainty**	★ **Low certainty**
Low IIS	★ **Low certainty**	★ **Low certainty**	– ***Very low*** *(No RoEM statement possible)*

All areas that did not undergo a Deep-dive analysis get a Low ACS (*) by default, because flagging alone cannot provide strong analytical confidence. For areas that were classified as *Acute Needs* or *No evidence of acute needs*, this one-star ACS can be upgraded to a Medium (**) score if the minimum evidence standards are met and evidence is of high quality and is timely.

4. Use of the ANA findings

As highlighted, the 2025 ANA is a pilot analysis, which comes with a specific set of limitations and caveats which will be subject to further research and development for future iterations.

Most notably, **ANA findings depend on the availability and quality of existing data**. In many areas across crises, evidence remains incomplete or outdated, which is reflected in "insufficient evidence" classifications and lower certainty scores. The "Acute Needs" category also often behaves as a 'minimum severity classification' in locations where data was sufficient to say something about concerning gaps in at least one critical system, but insufficient across the board to analyse the possibility of RoEM based on inter-sectoral convergence of deprivations.

Because the ANA has generally been used as an area-level analysis, **it cannot adequately reflect differences between population groups or identify at-risk minorities or profiles**, although the magnitude estimates are meant as a check in locations where the evidence landscape allowed for estimates to be calculated.

Moreover, the ANA does not structurally include evidence on community preferences and priorities, nor does it cover all sectors and thematic areas that are relevant to the humanitarian response.

Against this background, ANA findings should be used **as one input** into bigger picture prioritisation processes, as a check to ensure the most acutely at-risk populations can be included in related decision-making. It is not designed to feed into sectoral planning or programmatic caseloads.