04
Joint Intersectoral Analysis Framework 1.1

Humanitarian Programme Cycle 2022
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Introduction

This guidance document for the Joint Intersectoral Analysis Framework (herein 'The JIAF 1.1 guidance') is designed to assist country teams in conducting intersectoral analysis when preparing Humanitarian Needs Overviews (HNOs) and subsequent Humanitarian Response Plans (HRPs) as part of the 2022 Humanitarian Programme Cycle (HPC). It builds on the 'Enhanced HPC Approach' initiated in 2019.[1]

The Joint Intersectoral Analysis Framework 1.0 (JIAF 1.0) was endorsed by the Inter-Agency Standing Committee (IASC) for provisional use during the 2021 Humanitarian Programme Cycle (HPC).

In 2020, 27 countries piloted JIAF 1.0, resulting in the production of JIAF-informed HNOs. Incorporating feedback from these teams, the JIAF 1.1 Guidance is a more concise document, with improved clarity of instruction and new companion tools. There have been no major changes to the underlying JIAF methodology.

During 2021, an independent review of the JIAF 1.0 is being undertaken by an academic research institute. The findings of the review will form the basis of a strengthened JIAF methodology for future HPC cycles.

The JIAF 1.1 Guidance is offered as an additional resource for humanitarian country teams and does not supersede or replace any current agency, organization or IASC guidance including, but not limited to, the IASC Reference Module for the Humanitarian Programme Cycle.[2]

Organization of the document

The JIAF 1.1 Guidance comprises two sections with annexes:

- Section 1 provides an overview of the JIAF background, concept, approach and methodology.
- Section 2 is a step-by-step guide to implementing the JIAF.
- Annexes provide additional resources and examples of application.

What has changed?

The following updates have been made to the JIAF guidance:

- Section 1 has been significantly abridged.
- Section 2 has been refined to clarify the sequencing and content of each step of the process.
- JIAF Indicator Reference table [Gender Based Violence (GBV), Child Protection (CP), Health, Shelter, Water Sanitation and Hygiene (WaSH)] indicators have been updated.

Additional guidance is provided on:

- The use of Critical Indicators (see Step 2.1.6) ensuring the inclusion and active participation of local actors in the JIAF process (green side boxes);
- Additional information on how to identify a JIAF data scenario - including pros and cons of each (see Step 2.2.4);
- Additional information on linkages between Intersectoral and Sectoral PiN (Step 2.4.2 and 2.4.3);
- Guidance on Analyzing risks and determining the most likely evolution of the humanitarian situation is now included (Step 2.4.5).
- New templates and companion tools are available to automate aggregation in Scenario A and Scenario B:
  - Support the inception of a JIAF (Concept Note, Gantt chart);
  - Document the selection of indicators and information gaps (Word, Excel).
- New Annexes include:
  - Expanded Definitions (Annex 5);
  - Global Clusters' sectoral PiN Guidance (Annex 6);
  - Acronyms list (Annex 8).

[1] Throughout 2018, UN Agencies and NGOs came together to define their vision for the HPC, diagnose existing and emerging challenges, with associated solutions, and reinforce linkages between other initiatives. Global Clusters have been included throughout the process and have endorsed the new approach. The result is set of revised HPC templates with Step-by-Step guide which update existing guidance, integrating developments achieved over recent years on needs assessment and response planning, as well as commitments made at the WHS and Grand Bargain.

[2] HPC Reference module

1. Overview of JIAF background, concept, approach and methodology

This section provides an overview of the three core components which comprise the JIAF approach:

- The conceptual framework;
- The analytical methodology; and
- The implementation process.

1.1 Conceptual Framework

The primary objective of the JIAF approach is to inform strategic decision-making, response analysis, and response planning through a holistic, people-centred, and inclusive joint intersectoral analysis system that is comprehensive and methodologically rigorous.

The JIAF provides humanitarian actors with a common analytical framework and system to gather, structure, and synthesize information regarding the **intersectoral needs of populations in crisis**. Through applying the JIAF, actors can estimate the magnitude and severity of humanitarian needs as well as develop a common narrative around the context, shocks, and drivers of the crisis. This analysis can support projecting of how the severity and magnitude of needs may evolve within the planning cycle.

The JIAF Framework is built around **five main pillars**, each of which contains different sub-pillars to help organise information, visualize relationships, and bring a consistent structure to the analysis (see Figure 1, page 5).

The first three pillars – context, event/shock, and impact – allow response actors to **define the scope of the crisis**, i.e., to identify all affected geographic areas and estimate the total number of people who have been affected by it, disaggregated by key demographic characteristics.

The fourth pillar regarding Humanitarian Conditions allows response actors to then classify the severity of humanitarian needs within the affected areas and populations and estimate the number of people in need within each severity level.1 To define the scope and estimate severity of needs, pillar three type of humanitarian consequences pillar is considered: **living standards, coping mechanisms**, and **physical and mental wellbeing**. The outputs from the Humanitarian Conditions pillar are a critical part of the analysis process, as they can support **needs-based response planning, prioritization and resource allocation decisions.**

The fifth pillar applies a forward-looking lens, to **project needs based on the most likely evolution of the crisis** during the planning period. This forecasting will also include projecting how needs may change in the absence of assistance that is currently being provided. Further technical guidance will be developed to support JIAF users with operationalizing the forecasting component of the framework for the next HPC cycle.

1.2 Methodology

The JIAF analysis informs a number of key outputs.

The qualitative output is the detailed narrative unpacking the inter-relation of the three humanitarian consequences, the underlying characteristics, coping mechanisms, and other contextual and crisis factors associated with needs, vulnerabilities and capacities for different subsets of the population. It reveals how these factors may exacerbate the needs and vulnerabilities of certain subsets of the population.

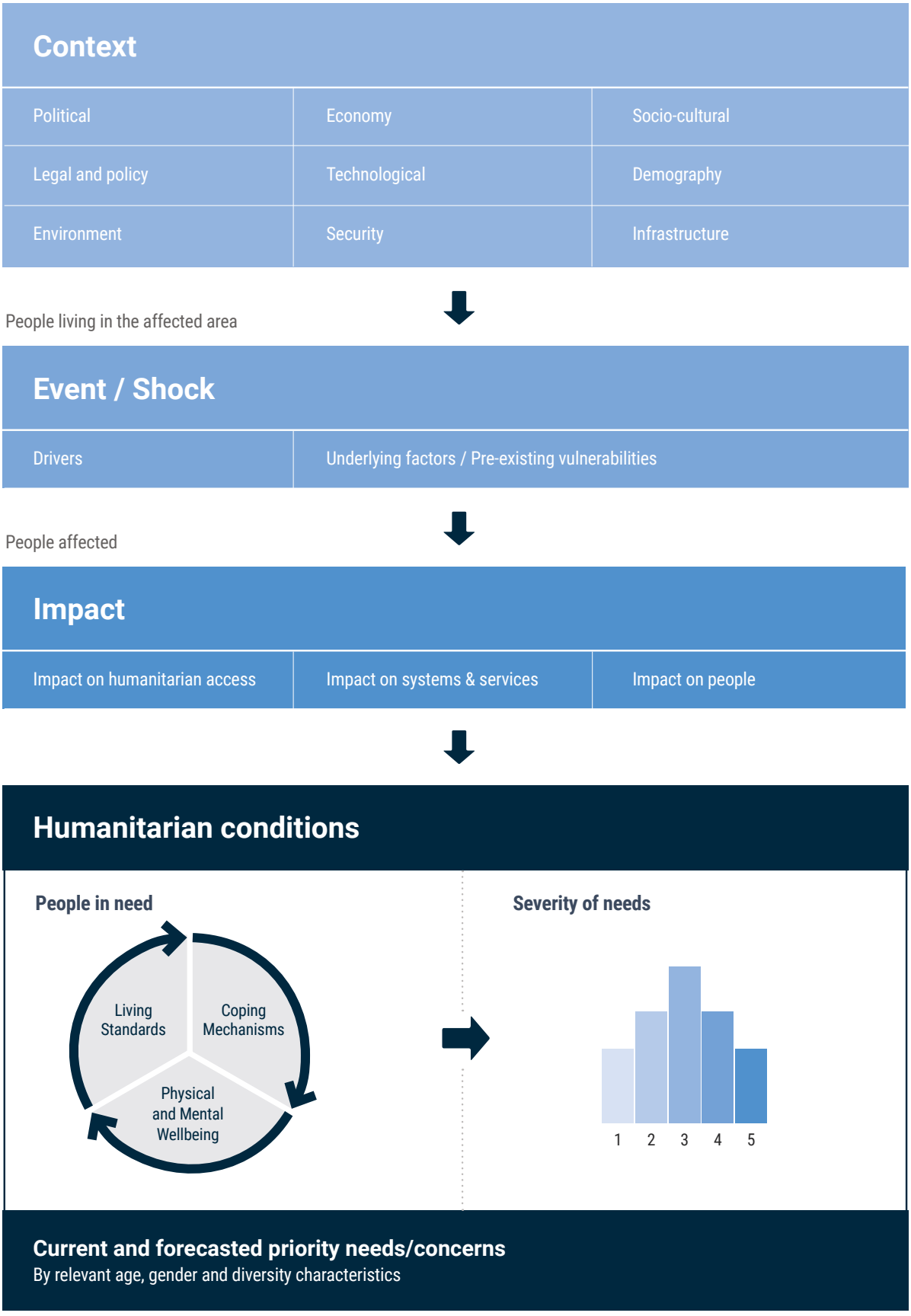
The core quantitative intersectoral outputs from the JIAF analysis are:

- The severity of needs, determined through a 1-5 severity scale (see Figure 2, page 6); and
- The overall magnitude of needs, represented by the People in Need (PiN) figure.

PiN and severity figures can be produced at crisis/country level, to reflect an overall estimation among the entire affected population and can also be produced at disaggregated geographic or population group levels – for example, for the population of Internally Displaced Persons (IDP) specifically and/or for each Admin 2 geographic area.

These quantitative pillars are further explained below.

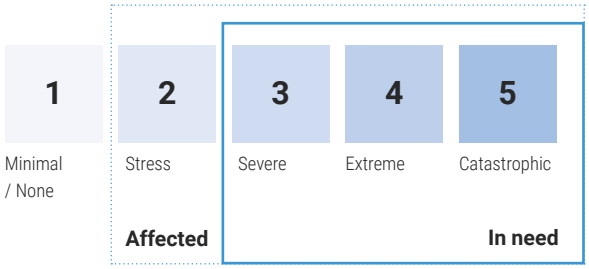
Figure 1. ***Visual representation of the JIAF conceptual framework.***



1.2.1
Severity of Needs

The severity level classification is conducted using the data collected and analysed from the JIAF Humanitarian Conditions pillar.

Figure 2. ***Simplified JIAF Severity Scale***



At country level, the Analysis Team selects sectoral and cross-sectoral indicators for inclusion in the JIAF severity model to gather evidence of Humanitarian Conditions.

The JIAF indicator reference table compiles a key set of indicators put forward by each Global Cluster/ Area of Responsibility (AoR). In Step 1.5, the Analysis Team reviews these indicators and defines sources for each Humanitarian Conditions pillars, to adapt the context as needed, using the severity scale definitions provided. The data to measure these indicators can be collected through a range of sources, including multi-sector needs assessments, sector-specific or thematic surveys, cluster information management systems, government statistics agencies, among others. The Independent Review will examine the JIAF indicator reference table to ensure greater relevance and adaptability at field level.

In particular, the selection of **critical indicators** (see details in Step 2.1.6, and the template to document the selection)[3] is an important step in developing a JIAF severity model that can appropriately capture and classify high severity levels. Critical indicators correspond most directly to time-critical, life-threatening consequences, and as such, the JIAF Analysis Team must ensure that these indicators at the highest severity levels (e.g., severity 5) equate to 'imminent death'. Indicators from well-established analysis methodologies whose severity indices relate to 'imminent death' in the highest categories should therefore be given precedence in the selection of critical indicators. The chief example of this is the Integrated Phase Classification (IPC) for Acute Food Insecurity (AFI) or Acute Malnutrition (AMN) and Cadre Harmonise (CH) whose severity classifications should be treated as critical indicators.

1.2.2
Magnitude of Needs

The aggregation method used to produce the severity analysis and subsequently the PiN will depend on the indicators to be analysed for the JIAF, and the type of data sources where those indicators are available. In 2020, two aggregation methods were developed to support the application of the JIAF to 2021 HPC joint analysis, based on two types of data availability scenarios:

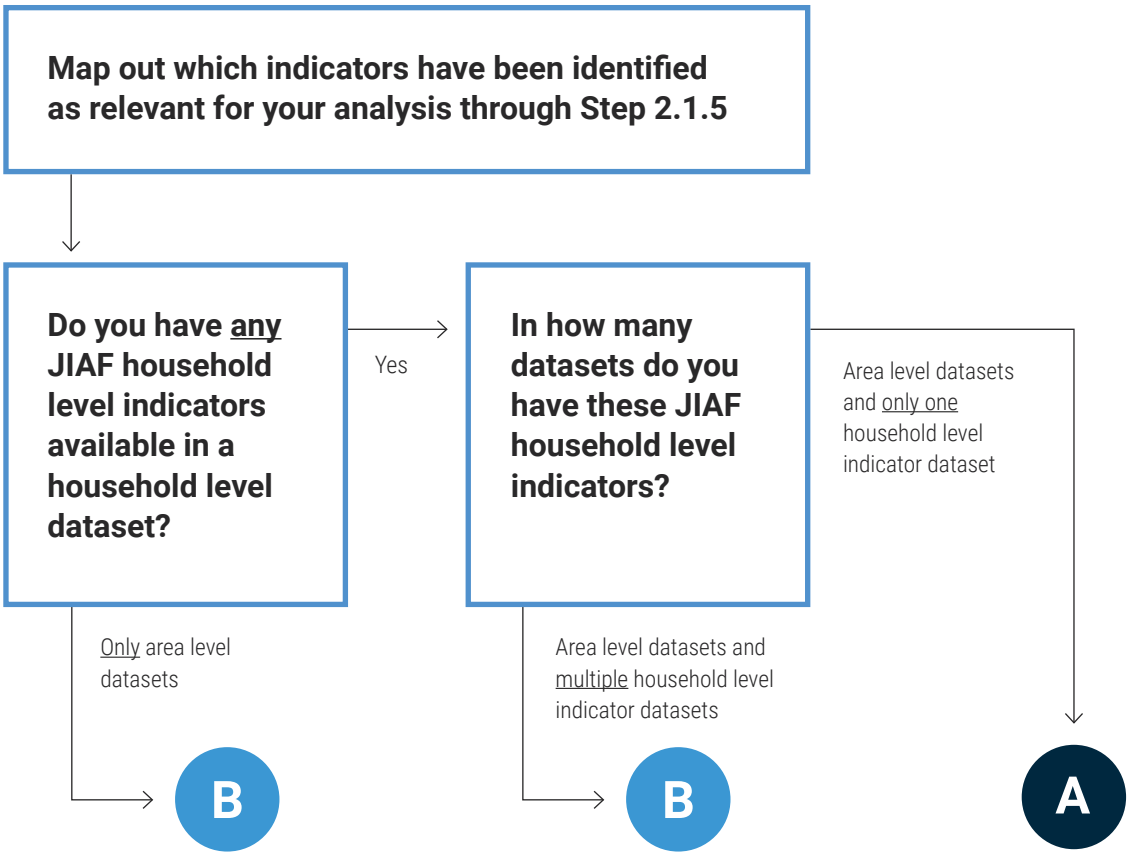
- **Data Scenario A**: Household level indicators are available, and they are all contained in a single household level indicator dataset. Household indicators are therefore "linked."
- **Data Scenario B**: Household level indicators or area-level indicators are available, but only through multiple household or area-level indicator datasets; or alternatively, only area-level datasets are available. Household indicators are therefore "unlinked."

Moreover, in either scenario, the household level data can and should be complemented by any number of relevant area-level datasets, as long as the geographical location of households and the area indicator can be matched. However, for scenario A, the process of linking area-level information to the household dataset requires further consideration and review, to ensure area-level classifications do not inadvertently result in an over- or under-estimating of needs.[4]

[3] Templates to document the selection of indicators

[4] More details on the pros and cons of both scenarios are available in section 2.2.4.

Figure 3. ***Data scenario decision tree***



In order to implement the **Data Scenario A** aggregation method, the available household level data will likely be collected using either:

- A single household level assessment covering all geographical areas (e.g., multi sector coordinated assessments); or
- Multiple household level assessments covering different geographical areas but using the same questions (i.e., harmonized household level assessments). Through this scenario, it is possible to identify households facing more than one sectoral need simultaneously, and to unpack the analysis further to understand which sectors may be driving overall humanitarian needs within a crisis. Perhaps most critically, aggregation through Data Scenario A ensures that households are not counted multiple times in the calculation of the overall PiN figure for the crisis.

Alternatively, in **Data Scenario B**, either household level information is not available for all selected indicators (only area-level information), or different households have been interviewed across different assessments, and it would be impossible to discern if the same households were included in multiple assessments – this would be the case, for example, if the JIAF analysis team was consolidating household data from a Knowledge Attitude and Practices (KAP) survey conducted by WaSH actors, an education assessment by education actors, a shelter damage assessment by shelter actors, etc. In this scenario, it is challenging to distinguish if the same people are facing issues in the three sectors or if they are simply different people with different issues. The household level indicators are thus "unlinked" and the percentage of the population in the data that have co-occurring needs is unknown. To address this shortcoming, an aggregation method was identified for Data Scenario B.

The objective of the JIAF is to arrive at an overall estimate of the intersectoral severity of needs and the number of people in need of humanitarian assistance. Single, or sector-based PiN estimates are secondary in the JIAF by design. But in planning processes such as the Humanitarian Programme Cycle, both are required and important, and the relationship between them must be clear. In this context, a sector's PiN and severity figures should always be estimated as per the sector's validated / preferred methods; though the JIAF approach to analysis of context, shocks and impact can serve as a common logical reference.

1.2.3 Methodology limitations

As development of the JIAF is ongoing and the approach is implemented in the field, the final structure, concepts, methods, and tools are likely to evolve and be refined further.

Key documents

Title	What	Length / Reading time
2022 JIAF Indicator Reference table	A set of key indicators, with proposed thresholds put forward at global level. These can be adapted to local contexts as needed, using the severity scale definitions on Annex 7	n/a

Additional resources

Title	What	Length / Reading time
Analytical Framework Review report	The JIAF was developed based on a meta review of analytical frameworks (2017) and its structure/ sequential logic aligns with several commonly used frameworks in the humanitarian systems.	120 pages / 240 min
Aggregation Methods for the JIAF – Final Review 2020	Presentation on how the aggregation methods for the JIAF were developed.	30 slides / 60 min

2. JIAF Step by Step

While the JIAF is a data-driven process, it still requires coordinated, multi-stakeholder collaboration to collect, interpret the data and reach a technical consensus on the final analytical outputs. **There are five key steps** in implementing the recommended joint analysis process, as outlined in Figure 4. Within each of these five key steps, the process can be further broken down into additional activities.

Figure 4. ***Steps of the JIAF process***

#	STEP AND OUTPUT	ACTIVITIES
Step 1	**Plan and design a joint intersectoral analysis process** **Output** Reviewed Analysis Framework and JIAF Workplan	**1.1** Form the Analysis team **1.2** Set and agree on timeframe, roles, and responsibilities **1.3** Review guidance and templates **1.4** Set the scope of JIAF analysis: initial dive into the first 3 pillars (Context, Risk, Impact) **1.5** Review indicators and define sources for Humanitarian Conditions pillar **1.6** Identify 'critical' indicators Humanitarian Conditions pillar **1.7** Present for endorsement to the HCT/ICCG as the scope of the HNO
Step 2	**Collate and collect data** **Output** Initial intersectoral analysis narrative	**2.1** Secondary data review **2.2** Primary data collection **2.3** Start to tell the intersectoral story **2.4** Identify data scenario for the Humanitarian Conditions aggregation
Step 3	**Consolidate JIAF data** **Output** *Preliminary PiN* based on quantitative data aggregation	**3.1** Consolidate JIAF data **3.2** Initial estimates of the total number of people falling under each severity phase: the *Preliminary PiN* • Produce Preliminary PiN based on data aggregation scenario A (Annex 1) • Produce Preliminary PiN based on data aggregation scenario B (Annex 2)
Step 4	**Conduct JIAF analysis** **Output** Refined Joint Intersectoral analysis, Reviewed Intersectoral PiN, and projections	**4.1** Review the narrative developed in exploring the linkages between the pillars, the description of people's Humanitarian Conditions and factors associated (Step 2.2.3) and estimated, initial calculations of people in need ("Preliminary PiN") and severity phase estimation (Step 2.3.2) • Joint Analysis starting from Scenario A (including final intersectoral PiN calculation • Joint Analysis starting from Scenario B (including final intersectoral PiN calculation **4.2** Describe key issues, characteristics, and contributing factors of people in need, by severity phase
Step 5	**Validate analysis** **Output** JIAF ready to be transformed into HNO	**5.1** JIAF team aggregates all analysis results **5.2** Validate main conclusions in a workshop **5.3** Submit final outputs to ICCG/HCT for final validation and endorsement

Ensuring the inclusion and active participation of local actors in the JIAF process

The inclusion of local and national actors is necessary for accountability and fundamental to the JIAF's ability to accurately portray the intersectoral needs of the affected population. Local actors are always the first responders and hold a wealth of information and expertise that must be included in large analytical exercises such as the JIAF. Additionally, the inclusion of local actors supports the localization of the humanitarian response.

The purple boxes in this Step-by-Step provide simple guidance on when to involve local actors and how to ensure an inclusive environment to enable their active participation.[6]

While full achievement of the points below may not be possible in the first year, the humanitarian community should continue to increase local actors' participation over time.

How to ensure an inclusive JIAF process:

It is important to note that active participation goes beyond 'inviting' relevant actors to the steps above. To allow for genuine participation of local actors the JIAF team should consider all the below:

1. **Clear role definition:** It is important for local and international actors to understand what the JIAF is and what their role is in the JIAF process. Local actors should be empowered to speak up in JIAF meetings and their investment in the process should result in meaningful influence on the outcomes of the JIAF process.
2. **Strengthening technical capacity:** Where necessary, technical capacity strengthening should be provided to enable full and meaningful participation in the various pillars of the JIAF process. JIAF training should ensure that local actors are among their target audiences (please note section below on costs to ensure participation of local actors in trainings/meetings).
3. **Language:** It is fundamental that language is not a barrier to participation in the JIAF process. If communication is not in local languages, ensure translation and interpretation costs are factored into the JIAF process and should be ensured for all necessary documents/meetings/communication. Language used should be as inclusive as possible, i.e., refrain from using acronyms, idioms and other terms which may not be universally understood. If needed, provide a simplified guide[7] on JIAF that to improve the level of understanding.
4. **Communication channels:** Consult with local actors to establish preferred communication channels and ways to access information (e.g., WhatsApp, email, skype etc.). Important information e.g., timings, location etc., should be sent through several channels and with proper notice time to ensure wider reach (i.e., not just emails or Teams).

Costs incurred: It is important to note that the costs of participation in JIAF that are faced by local actors can be a key barrier e.g., cost of travel to meetings, overnight stays, internet access (in the case if online meetings) etc. The JIAF should consider the potential costs for local actor involvement where possible subsidize or fully cover participation costs.

[6] For more information, see the Grand Bargain guidance note on *The participation of local actors in humanitarian coordination groups*

2.1
Plan and design a joint intersectoral analysis process

JIAF is a participatory and inclusive process. To generate buy-in, the collaboration and effective participation of all relevant stakeholders[8] should be sought, documented and facilitated. The first step is to create an Analysis Team that will conduct and coordinate the analysis on behalf of the humanitarian stakeholders, under the strategic leadership of the HCT. The Analysis Team will have to review existing guidance and templates, agree on and align the scope of the analysis and production timelines with the overall planning process (such as the HPC) discussed at HCT/ICCG levels, and review which of JIAF indicators are applicable in the given context.[9]

2.1.1
Form the Analysis Team

Intersectoral analysis is better conducted in group settings, and the JIAF should ideally be planned for and carried out through partnerships with governments (where feasible), humanitarian actors, national civil society organisations (CSOs), and with participation of diverse representatives of the affected population (e.g., ethnicity, religion, socio economic, gender, age, disability, migration status etc.).

One practical approach could be to appoint the team through existing coordination structures (for HNOs the joint analysis is an HCT/ICCG led process). The appointed team should multi-sectoral and gender-balanced team and include a lead analyst. The Analysis Team will conduct the intersectoral analysis on behalf of the humanitarian coordination structure, submit results to the HCT/ICCG and where relevant discuss with a wider audience (government, representatives of the affected communities, clusters, etc.) and liaise with subject matter and contextual/cultural experts as required. At country-level the Analysis Team can be formed from an existing Assessment & Analysis Working Group, or formalised as a "workstream" or "task team" of a standard A&AWG, reporting to the ICCG.

The lead analyst will first ensure all Analysis Team members are familiar with the JIAF objectives, approach, framework and expected outputs. He/she should make sure the required range of technical knowledge and expertise is available in the team to conduct quality analysis, including:

- Technical skills (quantitative and qualitative analysis, Excel, Geographic Information System (GIS), graphic design, etc.).
- Sectoral expertise (team members should be drawn from clusters and Area of Responsibility leads (AoRs) and act as a liaison to their members to gather additional data and expertise if required).
- Cross-sectoral expertise (cash and voucher, Accountability to Affected People (AAP), disability, gender, etc.)
- Contextual and cultural expertise (at least one member of the team should know the context and situation on the ground well. The knowledge and expertise of local actors is particularly valuable).

Invite local actors to be part of analysis team

Local actors should be invited to be part of the JIAF analysis team either as local data scientists/analysts and/or persons with 'contextual and cultural expertise' which is vital for analysis process. Use existing networks such as the clusters, AoRs, OCHA and National NGOs (NNGOs) /International NGOs (INGOs) to identify potential local actors who could be considered.

2.1.2
Set and agree on timeframe, roles and responsibilities

To successfully deliver results, a well communicated work plan[10] should be developed detailing:

- Clear milestones including timing, tasks, responsibilities and participation, e.g., timeframe to collect/collate data, preliminary results, validation workshop, final results, etc.

[8] Country Clusters/Sectors, Inter Cluster Coordination Group (ICCG), Inter Sector Working Groups (ISWG), Cash Working Groups (CWG), Cluster Lead Agencies (CLAs), Cluster partners, NGOs, Academic institutions, Civil Society Organizations (CSOs), Organizations of Persons with Disabilities (OPDs), UN agencies, HC/HCT, National Government, Donors, Private Sector, Technical Agencies, etc.

[9] The HPC Step by Step guide provide an overview of roles and responsibilities, how HNO and HRP link and the main steps to develop them.

[10] See template Concept Note and Gantt Chart

- Who will facilitate the process and consolidate the data, who will participate in the joint analysis, including, where feasible, the affected population itself.

The Analysis Team should plan in advance for external consultations and results validation workshops. The Lead Analyst is responsible to keep track and record stakeholders' participation and contributions at different stages of the process, using a list of participants as evidence, as well as a record of decisions made, for example.

2.1.3
Review guidance and templates

The Analysis Team should visit the HPC resource repository to check if any substantive changes to the HPC templates were made that would influence the type of information/indicators that needs to be collected and analysed.

To increase the understanding and appropriate use of the JIAF as well as buy-in to the results, the analysis team should familiarise themselves with the pre-recorded trainings available[10] on the main JIAF concepts, terminology, definitions and overall approach.

In preparation of the joint analysis, the Analysis Team will share the objectives, tools, analytical standards and procedures that will be applied throughout the process.

2.1.4
Set the scope of JIAF analysis (first dive into the first 3 pillars: Context, Risk, Impact)

To set the scope of the analysis, the team will consider the JIAF pillars of Context, Shock and Impact in order to begin developing the 'Humanitarian Profile' of the crisis. In this step, the Analysis Team reach consensus on the overarching characteristics and key measures of the crisis, and how the population is affected, where and why.

The Analysis team should reach a conclusion on the most effective means of organising the analysis of intersectoral needs to follow (units of analysis, key themes to focus on, etc.). At this stage the Analysis Team should also consider how to ensure that sectoral scope considerations are made explicit and considered in the intersectoral scoping exercise.

This will reduce instances where discrepancies arise between sectoral and intersectoral PiN.

This step is better achieved in a workshop setting – see side box for sequencing – and the output report (step 5 in next page's blue box) can be use as the substance for drafting the HNO.

Setting the scope of JIAF analysis

The JIAF analysis team should ensure that local actors are invited, along with sector coordinators and experts, to define the scope of JIAF analysis and decide the most effective means of organising the analysis of intersectoral needs to follow (units of analysis, key themes to focus on, etc.). To ensure genuine participation of local actors in this workshop please see points above on capacity building, clear definition of role etc.

Based on an in-depth review of available secondary data, the Analysis Team sets the scope and parameters for the JIAF based on identified and agreed geographical areas, population groups (including groups with specific needs), and cross-sector thematic issues to ensure an intersectoral approach. The analysis of the crisis context, key shocks/events and impacts is based on available knowledge of the humanitarian situation and builds upon previous analyses. It aims at describing:

- The context or environment in which humanitarian actors operate (policies and legal framework, security profile, socio-cultural and demographics characteristics, infrastructure, etc.).
- The exposure of the population to different shocks and risks which define the humanitarian crisis in the given country (including conflict/violence, human rights violations, natural hazards, disease outbreaks, etc.).
- Impact of the crisis on affected population (including displacement / mobility), systems and services and humanitarian access.

[10] The pre-recorded sessions will be made available on jiaf.info in June 2021.

Workshop on setting the scope of the JIAF Analysis / HPC 2022

Step 1

Identify and consolidate available information (qualitative and quantitative) on the first three pillars (context, shocks, impact and vulnerabilities) including available indicators that can be aggregated or disaggregated to the selected geographical unit of analysis ensuring they are comparable between each other. A suggested set of indicators have been compiled based in consultation with sectoral experts for use in the JIAF. 2022 JIAF Indicator Reference table can be found here.

Step 2

Review and analysis of indicators. Clusters and AoR will guide the analysis of quantitative context-shock-impact indicators based on their sectoral expertise, as well as methodological considerations. This can be done in a simple manner by ranking / classifying indicators values most appropriate for each context. See Annex 3 for further guidance on options for indicators analysis.

Step 3

Joint interpretation. Consensus on the geographical areas affected by the crisis should be facilitated by the Analysis Team bringing together sector coordinators and experts. Analysis and interpretation of the consolidated information should be done one by one for each of the geographical units of analysis. Once agreement is reached, the discussion can move to the next area. In case of difficulties for reaching such consensus, it is preferable to include the specific area in an effort to capture all needs and determine through the JIAF exercise the level of severity.

Step 4

Identify and profile affected population groups. Identify affected groups in affected areas and establishing figures of the number of people affected using as reference the 2016 IASC Humanitarian profile Support Guidance. The figures should be disaggregated by key demographic and vulnerability characteristics related to the context, as a minimum by gender, age groups (children, youth, adult, older persons) and disability. Where possible, the Analysis Team should further break down children into the age groups used by the different sectors (0-6 months, 6 months-2 years, 3-5 years, 6-11 years, 12-17 years), as well as groups that require particular attention in each context (e.g., widows, children-at risk, minorities, pastoralists, among others).

Step 5

The common understanding and agreements reached during this process should be formalized in a narrative format that describes how context, shocks and impact results are linked focusing on the most vulnerable groups and locations. The narrative should explain the causal factors and linkages between these JIAF pillars and be organized by vulnerable groups and affected areas.

- Key vulnerability characteristics (including based on age, gender and disability and other contextually relevant characteristics).
- The linkages and causal factors between all of above pillars.

The main analytical outputs are agreed-upon affected geographic areas, population groups (both affected groups and groups with specific needs), and levels of disaggregation. This should be accompanied by:

- A brief rationale for focusing on these geographical locations and specific groups, e.g., based on changes that have occurred, achievements and gaps in response. This can be complemented with a ranking of affected geographic areas.
- Clarification that the analysis may or may not cover the whole country and every population group, depending on what the priorities are for programming decisions, and what changes have occurred in the context compared to previous analyses.
- Acknowledgement where barriers to humanitarian access will limit the depth of the analysis and recommended strategies to overcome information gaps.
- Agreement on units of analysis and disaggregation

Data collection and protocols

It is important that clusters and other stakeholders/ partners align their data collection, organization and analysis efforts with the agreed-upon units and disaggregation levels, and that divergences are explained and documented. Main units of analysis generally use are listed below.

- Affected geographical area: provinces, districts, sub-districts, municipalities, villages, settlements, etc.
- Affected groups: Internally Displaced Persons (IDPs), host communities, refugees, migrants and non-displaced affected populations. The country humanitarian profile will help determine which affected groups should be considered.
- Time: pre-crisis, in-crisis, in the future;
- Demographic groups: sex, age (disaggregated by relevant year intervals);[11]
- Groups with specific vulnerabilities, e.g.[12] pregnant and lactating women etc.
- Specific contextual or vulnerability categories: rural vs urban, coastal vs inland, specific ethnic/ minority groups

Disaggregation offers greater analytical opportunities; however, the number of disaggregations has an impact on the number of analyses that need to be conducted and the amount of data required to populate the JIAF. The Analysis Team, the main information providers and coordination bodies need to agree on practical disaggregation levels, balancing the imperative to distinguish the severity of Humanitarian Conditions by affected groups, geographical areas and other important units, the level at which data is the most commonly available and the pragmatic considerations of quality, speed and cost.

2.1.5
Review indicators and define sources for Humanitarian Conditions pillar

Once the exact units of analysis and disaggregation levels have been identified and agreed upon, the Analysis Team can start consulting with the relevant cluster/AoR and main data providers to review and identify which indicators will be used to populate this JIAF. Moreover, if a specific JIAF household level indicator has multiple sources [e.g., Multi Sector Needs Assessment (MSNA)] and sector-specific assessment), the concerned sector should be able to decide which source should be used for that indicator (based on reliability, etc.).

JIAF provides a working list of core indicators for the Humanitarian Conditions pillar,[13] each accompanied by thresholds recommended by global clusters/AoRs and categorized by sub-pillar. Not all indicators and thresholds presented in the current list have been tested and context adaptation may be possible, through discussions with corresponding Cluster/AoR lead prior to their application to the JIAF analysis.[14]

[11] Disaggregation by female and male and a disaggregation for children (ages 0-17 years inclusive) and adults (over 18 years) should always be included. For Nutrition, it is further recommended to disaggregate according to children aged 0-23 months and 24-59 months. For education, the following is recommended: 3-5, 6-12 and 13-17 and 15-24 years.

[12] It is recommended to use the Washington Group Short Set of Questions on Disability for data collection on disability status.

[13] HPC 2022 Indicator Reference Table.

[14] Changes must be documented and communicated to the global cluster IMO for learning and further improvements purposes, using these templates.

The review process[15] should entail a facilitated discussion with cluster leads and main humanitarian stakeholders to review and select relevant and appropriate indicators for the context. The contextualization of JIAF indicators follows two steps, described below:

- The JIAF lead analyst should facilitate a discussion with cluster leads and main humanitarian stakeholders to establish a list of basic goods/commodities and services adapted to the context. This will allow clear identification of eligible indicators under the Humanitarian Conditions pillar compared to the Impact pillar. For example, if the list of basic needs includes "Information", then indicators about access to information or risk education could be included under the living standard sub-pillar dedicated to measuring the ability to meet basic needs. If the list does not include "Complaints and Feedback Mechanisms", then those indicators will be placed under the Impact on services sub-pillar.
- Once the list of basic needs is established, the Analysis Team will request Cluster/AoR to identify their candidate indicators for the JIAF. The following core principles should be respected when submitting Humanitarian Conditions indicators:
  - **Validity**: A clear relationship between the indicator and what is being measured exists.
  - **Unit of analysis**: JIAF indicators can be either at household or area-level.
  - **Transparency**: Each indicator has a robust and accepted methodology/instrument attached.
  - **Severity thresholds**: each indicator has severity thresholds preferably organized along a 5-point scale and at a minimum a 3-point scale, aligned with JIAF severity phase definitions and humanitarian population figures, e.g., severity class 1 means not affected; class 2 means being affected but not in need; and severity classes 3-5 signify increasing levels of need. Binary indicators (yes/no) are not recommended for the Humanitarian Conditions pillar as they cannot be used for severity calculation as defined at this time.
  - **Simplicity**: indicator is easy to understand and self-explanatory.
  - **Uniqueness**: indicators should be used only once in estimating severity of Humanitarian Conditions. This is to avoid redundancy and over weighting a particular indicator.
  - **Disaggregation**: data by sex, age categories, disability status as much as feasible

Discouraged practices

Based on a review of the use of indicators in previous HNOs, the following is not recommended:

- A sector PiN should not be used as a measure of severity in the Humanitarian Conditions pillar. Sector PiN, when already calculated, will be used at a later stage as part of the review and finalization of JIAF and sector findings.
- Response indicators, e.g., % of the population who have received (or not received) assistance, should not be included in the JIAF as they are not needs-related indicators. They can be used separately to calculate gaps in response and inform the projection of needs.
- Risk indicators, e.g., number of people living in flood prone areas should be used only to support JIAF risk analysis (see section 2.4.5).

Once the submitted indicators have been reviewed, contextualized and established for all pillars, the Analysis Team should ensure that each indicator has an owner and a source (government or local authorities, agencies, clusters/sectors, research institute, etc.). The Analysis Team should liaise with the respective clusters/AoR or with the main data providers to see how data can be obtained. In some cases of information gaps that cannot be filled otherwise, expert judgement elicitation sessions can be organized to obtain the best estimates (see 2.2.3), based on available secondary data.

[15] The review and selection of indicators should be documented, using these templates.

2.1.6
Identify 'critical' indicators and define sources for Humanitarian Conditions pillar indicators

Identifying critical indicators will be important when it comes to aggregation and overall severity classification.

Definition:
Critical indicators are those that correspond most directly to time-critical life-threatening consequences, as seen in the JIAF Severity Scale.[16] Critical indicators require a threshold for severity 5 measurement to equate to imminent death, indicating if people are not assisted as soon as possible, they will die. These indicators should also have well-established assessment methodologies and should have been collected within a reasonable timeframe.

Use within the JIAF:
Critical indicators should be used when aggregation results are scrutinized by subject matter experts, to ensure that these indicators are compared against aggregated results and if appropriate, lead to an override by the critical indicator(s) for the final severity score.

Given this intended use of critical indicators, indicators from well-established assessment methodologies whose severity indices relate to 'imminent death' in the highest categories should be selected as critical indicators. One example of this is the Integrated Phase Classification (IPC) [and Cadre Harmonisé (CH)] whose severity classifications should always be treated as critical indicators. Some examples are provided in the table below.

Finally, in addition to determining overall severity, critical indicators can also be used in the next layer of expert analysis to provide more disaggregated findings on top of the severity class of the 25% most in need and identify pockets of severe need within areas (especially for scenario B). See instructions for Step 6 of the scenario B aggregation under Annex 2.

Critical Indicators

While critical indicators can be used as "single source" to derive the intersectoral severity level for any given area (in both scenario A and B), the same is not true for the definition of the intersectoral PiN. In fact, PiN would be defined based on expert judgement, taking into account not only the critical indicators, but a wider array of sectoral indicators. As a result, the intersectoral PiN should not be lower than the value of critical indicators in any given area but could be higher.

In some situations in 2020, the JIAF analysis used the maximum PiN across critical indicators to determine the overall PiN in lieu of expert judgement. While it is highly recommended to ensure expert judgement takes place and avoid using this method, if such a situation were to arise again, the calculation should never be limited to critical indicators only.

[16] In the longer term, the JIAF will seek to adopt a 'universal' severity scaling, where each indicator in the reference table is aligned with the JIAF scale, but this will take more time and study to be fully executed. The identification of Critical Indicators is a temporary solution as the JIAF develops towards this goal.

Examples

The following table provides a list of examples of critical indicators, as identified at global level. However, it is important to note that these are examples meant for reference only, and different critical indicators can be identified as relevant in a given context. The purpose of this table is not to provide a prescriptive list of indicators that can be used as 'critical' indicators but rather to illustrate how these indicators should be identified to align with the definition provided above. As the definition as well as these examples illustrate, it can therefore be possible that in a given context there are either no critical indicators at all, or there are only 1-2 critical indicators to be considered for the intersectoral analysis.

SECTOR	INDICATOR	GLOBAL THRESHOLDS FOR SEVERITY 5[17]	COMMENT
Food Security	IPC - AFI /CH	Phase 5	Not Available
Nutrition	IPC AMN results/GAM prevalence for children U5	≥30% for GAM based on WHZ ≥15% for GAM based on MUAC[18]	Based on weight-for-height takes priority. Only if not available, then based on MUAC (mid-upper arm circumference).
WASH	% of HHs having access to water sources of sufficient quality and availability	Not enough water for drinking OR Less than 3 l/d/p Water comes directly from rivers, lakes, ponds, etc.	Not Available
Protection / Child Protection/ Education	# of civilian population (including children) killed, injured or missing by violence, conflict or natural hazards *NB: If above indicator not available, following Education indicator could also apply (If this indicator is used, the threshold should be set as appropriate to reflect physical assault with fatal injury): "% of children who have suffered attacks in or on their way to school in the last XX months / % of teachers who have suffered attacks in or on their way to school in the last XX months)"*	50% or higher of the total #[19]	Not Available

[17] This column has been added to demonstrate how each of these example indicators align with the definition for critical indicator above, and the requirement for having a severity 5 threshold that equates to imminent death. This does not mean that only a critical indicator with a score of 5 can be used to determine the overall severity; any given score for a critical indicator can be used for this purpose if this is found to be higher than the aggregated severity score from the other indicators.

[18] Reference: IPC Global Partners (2019) Integrated Food Security Phase Classification Technical Manual Version 3.0.

[19] Proposed thresholds are indicative, can be adjusted to context if needed.

2.1.7
Present for endorsement to the HCT/ICCG as the premise for setting the scope of the HNO

The common understanding and agreements reached during this first step of the JIAF Analysis should be formalized in a narrative format that describes how context, shocks and impact results are linked focusing on the most vulnerable groups and locations. The narrative should explain the causal factors and linkages between these JIAF pillars and be organized by vulnerable groups and affected areas. The choice of indicators and their sources should also be documented and included.

This initial analysis should be presented for endorsement to the HCT/ICCG as the premise for setting the scope of the HNO and HPC.

Once the scope of the analysis has been agreed and validated (Step 1), the next step is to collate and collect information in line with the plan (Step 2).

Supporting tools

Title	What	Length / Reading time
Note for launching in-country JIAF and JIAF Workplan	Template to be adapted at country level to succinctly present JIAF, objectives, milestones, timeline, roles and responsibilities	Note : 2 pages Excel: 1 Gantt chart
Template for documenting selection of indicators and information gaps	Template for documenting selection of indicators and information gaps	–
Afghanistan 2021 HNO Workshop Outcome Note	Narrative of HNO scope-setting workshop results and agreements	6 pages / 10 minutes

2.2 Collate and collect data

At a minimum, the JIAF should be based on a thorough secondary data review. It is however unlikely that secondary data alone will be sufficient to execute the JIAF to its fullest potential. Coordinated approaches (joint or harmonized) to data collection will be required to ensure sufficient and timely data is available to conduct the JIAF analysis, e.g., Cluster/AoR assessments to include JIAF indicators, leveraging the use of Multi Sector Needs Assessments (e.g., MSNAs), harmonizing data collection forms or sampling from different stakeholders, etc.

Most of the data in the Context and Shock pillars of the JIAF can be collated using secondary data review. Gathering data for the Impact and Humanitarian Conditions pillars generally requires more careful field assessment planning and coordination.

Before to start gathering data, the Analysis Team should circulate a JIAF dataset template or a JIAF data collection template to all JIAF main data contributors to clearly communicate how data will be organized and structured.

2.2.1 Secondary Data Review

The Secondary Data Review (SDR) process entails collating data or information relevant to JIAF pillars and sub-pillars in a systematic and structured manner. It generally comprises findings and information from sectoral statistics and reports, nationwide economic or demographic surveys, published research, web content, videos, humanitarian products, recordings or media reports. It can be either qualitative (videos, news report) or quantitative information [Standardized Monitoring and Assessment of Relief and Transitions (SMART), Multiple Indicator Cluster Survey (MICS) or Demographic and Health Survey (DHS) datasets, International Organization for Migration's (IOM) Displacement Tracking Matrix (DTM) dataset, Armed Conflict Location & Event Data (ACLED)] data, etc.). Collecting secondary data generally involves:

- **Planning**: setting up a team or identifying focal points in each Cluster/AoR in charge of the secondary data review, developing a tagging guidance (analysis framework, definitions, examples, assessment registry, etc.), developing information sharing and confidentiality protocols [Memorandum of Understanding (MoUs), storage, archiving, etc.], defining outputs requirements (report template, dataset, sourcing, etc.).
- **Collating secondary data**: locating, screening for relevance and gathering data.
- **Structuring data**: coding/tagging and storing secondary data into a common structured repository [spreadsheet or Data Entry and Exploration Platform (DEEP)]. All information should be coded and tagged based on relevant units of analysis agreed upon. In addition, all assessment reports should be entered in the assessment registry.

Secondary review/provision of data for JIAF

Proactively reach out – through existing networks e.g., the clusters, OCHA and NGO/INGOs - to local actors and ask for available data/needs assessment/reports which could be fed into the JIAF analysis. Ensure to capture available qualitative and quantitative data and especially data on the needs of more marginalized groups where data availability is often poor.

Ideally, secondary data review should be conducted on a regular basis. In the contrary case, the most recent data available across Clusters/AoRs should be used to conduct JIAF appropriately (if possible, 9-12 months of data will be required to capture seasonal variations and trends, e.g., if JIAF is conducted in September for the HNO, secondary data from January to September would have to be collated at a minimum). In consideration of the circumstances field operations are experiencing this year due to the COVID-19 pandemic (i.e., significant challenges / limitation to primary data collection) the JIAF team should focus on the most recent data available across Clusters/AoRs.

A team of several people (e.g., one person per cluster/AoR) is usually required to process a significant amount of secondary data. Capacity building and training is required on how to appropriately tag

[20] Inspiration could be found in the GIMAC Secondary Data Processing Work team SOPs, and its Supplemental Guidance

information using the JIAF framework, and quality control is required to ensure consistency and accuracy of tagging. In the case information is sensitive, data anonymization, information sharing and confidentiality protocols should be developed to facilitate information exchange and restrict access to the information.

Key documents

Title	What	Length / Reading time
JIAF Scenario A Aggregation Example	Excel demo worksheet showing the aggregation steps for Scenario A and Scenario B	–
JIAF Scenario B Aggregation Template	This tool provides a template and guide for the aggregation stage of JIAF analysis. It should be read together with the JIAF Guidance, specifically Annex 2	–
JIAF Scenario B Data Collection Template	Template to collect data from Clusters for Data Scenario B aggregation	–
IASC Operational Guidance on Data Responsibility in Humanitarian Action	Instructions on safe, ethical and effective management of personal and non-personal data for operational response	37 pages / 60 minutes
Field Guide to Data Sharing	Guide to facilitate the sharing of information amongst organizations (OCHA, Global Food Security Cluster)	15 pages / 20 minutes

Supporting tools

Title	What	Length / Reading time
Humanitarian Data Sharing Protocol – Afghanistan (October 2020)	Example of Data Sharing Protocol	12 pages / 25 minutes

2.2.2
Primary Data Collection

If the Secondary Data Analysis has revealed gaps in information that jeopardize the quality of the Joint Intersectoral Analysis process, the Analysis team and the HCT/ICCG may opt to conduct a primary data collection exercise. This data collection can be either conducted by each cluster / AoR with information gaps, or done as a single exercise coordinated through an inter-agency Assessment and Analysis Working Group (or similar), which reports to the inter-cluster/ inter-sector coordination group (ICCG) for the endorsement of key outputs.

In the case of a single coordinated data collection exercise, two key documents need to be developed and endorsed prior to the exercise:

- A Data Analysis Plan that identifies exact research questions, indicators, and data acquisition methods. The latter includes the data collection tool (e.g., survey questionnaire) that will be used to inform the relevant indicators.
- A detailed Terms of Reference (ToR) that outlines the data collection methodology and an overview of how the Data Analysis Plan will be achieved. The ToR should also provide a clear overview of:
  - The division of roles and responsibilities, both in terms of who is responsible for as well as to be consulted at all key stages of the data collection exercise
  - Standard Operating Procedures (SOPs) for data cleaning
  - Known limitations with the methodology (e.g., coverage gaps) and what this means for interpretation of the findings.

Throughout the data collection, incoming data should be monitored on a regular basis in line with the cleaning SOPs outlined in the ToR. Once data collection is complete and the datasets have been cleaned and finalized, all datasets should be uploaded on the Humanitarian Data Exchange platform.

Supporting tools

Title	What	Length / Reading time
Multisectoral Needs Assessment: Terms of Reference	Example from the Whole of Afghanistan 2021 (REACH)	15 pages / 30 minutes
Multisectoral Needs Assessment: Data Analysis Plan	Example from the Whole of Afghanistan 2021 (REACH) of Data Analysis plan, showing Research Question, Data Collection Method per Indicator/Variable, Questionnaire Question, expected format of Questionnaire Responses, Data Collection Level	–
Multisectoral Needs Assessment: Dataset	Example from the Whole of Afghanistan 2021 (REACH) – Multisectoral Needs Assessment dataset, showing sampling frame, variables, dataset for c.13,000 HH.	–

2.2.3
Start to tell the intersectoral story: how context, shocks and impact result in Humanitarian Conditions

Building upon all previous steps, the preliminary narrative developed during the analysis of the context, shocks and impact (see Step 1.4) should be expanded to unpack how context, shocks and impact result in Humanitarian Conditions, maintaining the focus on the most vulnerable groups and locations – using non-Humanitarian Conditions indicators from the JIAF Indicator Reference table, as well as the preliminary findings from the SDR and the Primary Data Collection. The narrative should explain the contributing factors and linkages between the JIAF pillars and identify which groups and sub-groups present different types of Humanitarian Conditions and why.

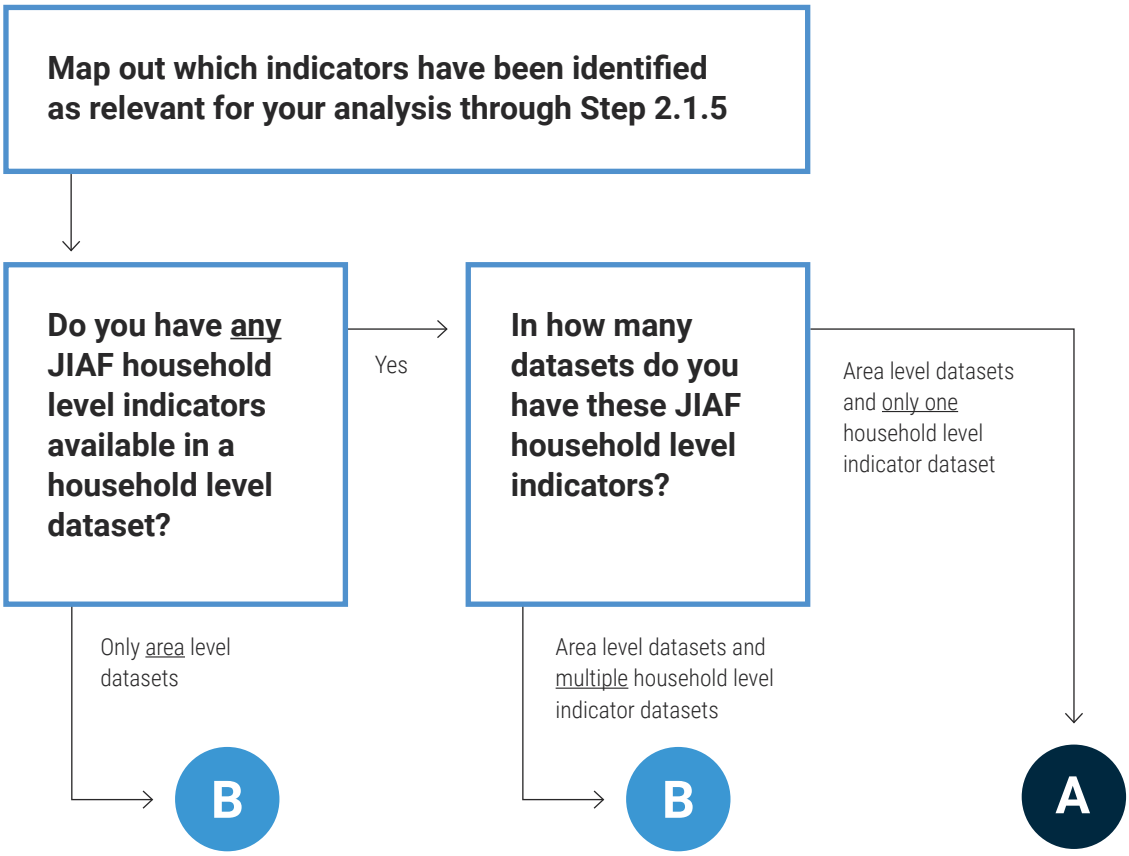
It should start identifying what the most critical problems are related to Physical and Mental Wellbeing and livelihoods and how people are coping with these. The narrative should highlight both commonalities and factors that explain differences in the humanitarian conditions the analysed groups and areas are presenting. These factors may include vulnerability characteristics (e.g., age, gender, disability), exposure to contextual factors and capacities of local and national institutions to respond.

2.2.4
Identifying the "data scenario" for the Humanitarian Conditions pillar aggregation

Two scenarios (A and B) have been identified, for aggregation of indicators in the Humanitarian Conditions pillar, to obtain the intersectoral severity classification and the initial, estimated JIAF PiN calculations. The scenarios are determined based on the indicator data agreed on and required to implement the JIAF, in particular whether data is at household and/or area-level.

Data scenario decision tree

Follow the decision tree to identify the data scenario for each geographical area / affected group.



NB: Neither Household data nor relevant area-level data must be discarded to facilitate use of data scenario A. If different JIAF household level indicators for the same area / group are spread across multiple datasets (e.g., MSNA + WaSH Household (HH) assessment) then data scenario B should usually be used. Moreover, if a specific JIAF household level indicator has multiple sources (e.g., MSNA and sector-specific assessment), the concerned sector should be able to decide which source should be used for that indicator (based on reliability, etc.)

A decision-tree is outlined above, summarizing how to identify the data scenario in a given crisis. A more detailed description of the scenario definitions follows further below, after which a summary comparative analysis of the two scenarios is outlined. It is important to note that the aggregation methods outlined in the Annexes of this guidance for both scenarios are based on simulated data.

Data Scenario A

Definition: *Any JIAF household level indicators collected at household level for the Humanitarian Condition pillar for an area & population group, is contained in one household level dataset.*[21]

For Data Scenario A to be possible in a given crisis, the available JIAF household indicators must be contained in one dataset and any relevant area-level indicators must be easily linked to this household-level dataset (more guidance on the latter in Annex 1, step 2 for scenario A aggregation). If different household level indicators have been collected and are available for the same area and population group in multiple datasets - or if household level indicators are not available at all - then Data scenario B should be used. Neither household level data nor relevant area-level data should be discarded to facilitate use of Data scenario A.

The household indicator data that is available, may have been collected using a single household level assessment covering all geographical areas (e.g., multi sector coordinated assessments, such as a household level MSNA) - or multiple household level assessments covering different geographical areas but using the same questions (i.e., harmonized household level assessments). It is important to note that the household level dataset required to implement scenario A does not need to always come from an MSNA, nor the use of scenario A should be the driver to introduce MSNAs in any given country; i.e. it may be the case that no household level multi-sector assessments have been done at all but JIAF household indicators are available from several sectoral assessments where different indicators were collected from the same household (and can thus be combined into a single household-level dataset).

Regardless of which type of household-level assessment was conducted, as long as the required household indicators are contained in one dataset, scenario A can be used.

In addition, any number of JIAF area-level indicators[22] that are available in a given crisis can also then be added to this household level data, as long as the geographical location of the assessed population is known (i.e. which area they are in). Since all indicators then refer to the same unit of analysis, i.e. the household level indicators are "linked", the co-occurrence/cumulation/interlinkages of needs can be easily derived, e.g. households that face deprivations in sanitation AND access to an improved water source AND have school aged children not attending school regularly. This linkage is a crucial advantage of scenario A, since the co-occurrence of needs can be determined within or between pillars and sub-pillars. The analysis of co-occurrences should feed the intersectoral analysis (Step 2.4).

However, there are key considerations to be kept in mind for this step of linking area-level information to the household dataset:

- This is not always easy to implement and could come with a risk of eventually over or under estimating needs (for e.g., if an area has been classified as IPC Phase 3, we cannot assume that there is not a single household in that area in a more severe situation). As such, if key area-level information is not easily linked to the household dataset, it is recommended to consider switching to scenario B.
- This "linking" can also only be done if the household data is stratified at the same geographical level as the area-level indicators (e.g., both at Admin 3 level). If not, scenario B would apply.

[21] This includes area-level information that has been linked back to the household level datasets (see details on aggregation step later in the document. A common way to identify where a household is located is the recording of coordinates when the interview is conducted. However, in order to ensure that data protection standards are followed during handling of data, the exact coordinates may have been removed from the dataset made available for the JIAF analysis. This is ok, as long as the location of the household in terms of the overall area (e.g., District), exists in the dataset. This enables the creation of one household level dataset, including all available JIAF household level and area-level indicators "linked" to each household.

[22] Note that this actually equates to magnitude-based indicators (so they may be collected at household level, but are analysed at area level). This could put us in a situation where there are two HH level datasets, but if all the degree-based indicators can be found in one of them, you would still be under scenario A.

Figure 5. ***Scenario A output table example***

AREA	POPULATION GROUP	TOTAL POPULATION	NUMBER OF PEOPLE IN EACH SEVERITY PHASE				
			1	2	3	4	5
District A	IDPs	10,000	1,600	2,100	2,700	2,500	1,100
District A	Residents	50,000	11,000	12,000	18,500	5,500	3,000
District B	Returnees	30,000	9,600	11,400	6,000	2,100	900
District B	Residents	60,000	25,800	28,200	4,200	1,800	0
District B	IDPs	15,000	1,650	2,550	3,450	4,200	3,150
		Sub-total	**49,650**	**56,250**	**34,850**	**16,100**	**8,150**
					Total PiN (3+4+5)		**59,100**

The full aggregation method for scenario A is outlined in Annex 1, including how to build the aggregation dataset using multiple datasets and how to produce the aggregation and obtain the outputs.

An example of the preliminary output table obtained through the scenario A aggregation is shown above. The interpretation of the aggregated results is outlined in the joint analysis section 2.4 below, including how to develop the overall intersectoral PiN estimates, building on the aggregated results in the table.

Please note that if Data scenario A is followed --> only refer to Data scenario A instructions throughout the rest of this document (so ignore any instructions relating to Data scenario B). Detailed instructions on how to produce the Data scenario A aggregation are outlined in Annex 1.

Data Scenario B

Definition: *There are either no JIAF household level indicators collected at household level for a given geographical area / group, or the available household indicators are spread across multiple household level datasets or JIAF indicators are primarily contained in area-level datasets.*

All situations other than that outlined under Data scenario A above, are classified as Data scenario B. This might be the case when data contributed to JIAF originate from different assessments and were not collected for the same units of analysis, e.g. food security indicators are provided by Food Security Assessment data at the household level or an updated IPC AFI/CH analysis is available, shelter indicators by the shelter cluster assessment at the shelter level and education indicators by an education survey at the facility or area-level. Since not the same people were assessed for shelter, food and education, it is challenging to distinguish if the same people are facing issues in the three sectors or if they are simply different people with different issues. In this scenario, there would be indicators from different data sources which are thus "unlinked" and the percentage of the population that have co-occurring needs is unknown.

Nevertheless, an aggregation approach has been identified for Data scenario B, which (to some extent) can estimate the co-occurrence of indicators. The full aggregation method for scenario B is outlined in Annex 2, including how to build the aggregation set using multiple datasets and how to produce the aggregation and obtain the outputs.

[23] During testing on 10,000 simulated datasets with different types of distributions (uniform distributions, normal distributions and Poisson distributions), the Data Scenario B Aggregation /unlinked indicator approach yielded the same final result (overall area-level severity class) as Data Scenario A aggregation /linked indicator approach in 83% of the 10,000 comparisons. This indicates that the approach to some extent is able to estimate co-occurrence / linkage between indicators, although the final results that can be obtained are less detailed (see Step 4 below). For further detail on the aggregation method testing please see here.

Figure 6. ***Scenario B output table example***

AREA	POPULATION GROUP	TOTAL POPULATION	OVERALL AREA SEVERITY PHASE	MINIMUM POPULATION IN THIS SEVERITY PHASE OR HIGHER	INITIAL JIAF PIN ESTIMATE	MAXIMUM PIN ACROSS INDICATORS	HNO PIN ESTIMATE (PRODUCED THROUGH EXPERT JUDGEMENT)
District A	IDPs	10,000	4	2,500	> 2,500	6,000	6,800
District A	Residents	50,000	3	12,500	>= 12,500	27,000	27,600
District B	Returnees	30,000	1	30,000	< 7,500	8,000	7,600
District B	Residents	60,000	2	15,000	< 15,000	21,500	21,000

An example of the final output table obtained through the scenario B aggregation is shown below. The interpretation of the aggregated results is outlined in the joint analysis section 2.4 below, including how to develop the overall intersectoral PiN estimates building on information shown in the final column on the right in the table below.

Please note that if Data scenario B is followed only refer to Data scenario B instructions throughout the rest of this document (i.e., ignore any instructions relating to Data scenario A). Detailed instructions on how to produce Data scenario B aggregation are outlined in Annex 2.

Regardless of which data scenario is being considered, it is important to note that whenever IPC/ CH[24] analysis is available, the results should be used as input into the JIAF analysis.

As noted in the JIAF Guidance issued in 2020, further development and testing is required to identify a robust methodology that allows a breakdown of population by severity phase 1-5 for scenario B, i.e. a methodology to enable production of the same output table as seen for scenario A above.

An Independent Review is being undertaken in 2021 by an academic research institute to review the JIAF methodology and to further strengthen the JIAF approach.

Once all information has been collated and collected (Step 2) as per the plan agreed on in Step 1, the next step is to consolidate it (Step 3).

[24] To avoid any duplication, when IPC/CH analysis is available, it should provide the basis for the food security component of the JIAF and one should refrain from using individual food security outcome level indicators, such as HHS, FCS, HDDS and rCSI

Figure 7. ***Summary comparative overview of Scenarios A and B***

	SCENARIO A	SCENARIO B
Requirements	Household level data is available for all selected JIAF indicators and contained in one unique database AND relevant area-level information can be easily linked into this database[25]	No specific requirements (Data for selected JIAF indicators is not contained in one unique household-level database but rather in one or more area-level datasets and/ or multiple household-level datasets)[26]
Pros	Aggregation steps easier to implement and allows for a more precise initial PiN estimation and a full breakdown of population by severity phase Linked indicators (i.e. possible to identify households facing need in more than one dimension/ indicator simultaneously, and to unpack the analysis further to understand which sectors may be driving overall humanitarian needs within a crisis)	Allows to use a variety of assessments and information at both household and area-levels, hence triangulation of results By incorporating multiple datasets, leaves more room for incorporation of sectoral expert judgement and analysis which has a critical role in the JIAF analysis and can compensate for weak quantitative analysis.
Cons	Limited triangulation because difficult to incorporate additional area-level information / data from other sources, if area-level information is not easily linked to the household dataset[27] If relying only on a single household-level assessment (e.g. MSNA), scenario A aggregation can lead to a weak or limited quantitative analysis that does not match the reality of the situation on the ground. This is because MSNAs often require sectors to only submit a limited number of indicators per sector. Meanwhile, sectors might rely on sector specific assessment to inform their sectoral Persons in Need (PiN) number. As such, different data sources will be contributing to discrepancy between the intersectoral PiN and the sectoral PiN HH-level data collection not suitable for all indicators Given the current COVID context, Data scenario A may often not be possible, where household level data has not been possible to collect as required	Aggregation steps more difficult to implement and does not allow for a full breakdown of population by severity phase – expert judgement is needed as following step Without the completion of the expert judgement step, comes with a risk of under-estimating PiN as results are presented as "Minimum population in this severity phase or higher (by applying a rule of 25% of the population)[28] Lack of clear guidance on expert judgment, which is an especially important component for the aggregation under this scenario Unlinked indicators (i.e. not possible to identify households facing need in more than one indicator/ dimension simultaneously)
Outputs	Preliminary Intersectoral PiN Initial breakdown of population by severity phase	Preliminary Intersectoral PiN (minimum or maximum estimates) Initial estimate of severity phase per area

[25] This step of linking area-level information to the household dataset is not always easy to implement (e.g., data would need to be at the same admin level) and could come with a risk of eventually over or under estimating needs (for e.g., if an area has been classified as IPC Phase 3, we cannot assume that there is not a single household in that area in a more severe situation). As such, if key area-level information is not easily linked to the household dataset, it is recommended to consider switching to Data Scenario B

[26] This means even if there is an MSNA dataset available, if any other data needs to be included in the analysis (including both area-level datasets and other household-level datasets), scenario B would apply.

[27] Such triangulation is especially important if there are data quality concerns with the single data source being used

[28] The 25% rule has unintended consequences (leads to an assumption that an area with severity level 1 or 2 has no people in need when this is not the case, and heavily relies on expert judgement which is an area that remains very weak in the JIAF guidance)

2.3 Consolidating JIAF data

2.3.1 Consolidating JIAF data for Humanitarian Conditions pillar

All JIAF data should be consolidated into one spreadsheet, organized based on the JIAF framework.

OCHA should provide the Analysis Team with the Common Operational Dataset (CODs)[29] considered by the JIAF, as well as the population figures and demographics in each of those areas.[30] Displaced population data will originate from the Camp Coordination and Camp Management (CCCM) cluster for IDPs in camp/sites and from United Nations High Commission for Refugees (UNHCR) for refugees, both in regard to the overall population figure and the PiN.

The Analysis Team should check for completeness of the final dataset and redirect data collation/collection efforts in case of information gaps. Depending on its format and source, some values in the spreadsheet will have to be transformed to fit JIAF data format requirements. However, the original data should always be available for further checks or control.

All datasets are to be uploaded on the Humanitarian Data Exchange platform.

2.3.2 Severity Analysis and initial estimates of the total number of people falling under each severity phase: the "Preliminary PiN"

Once all the data is consolidated into one single spreadsheet and in a tidy format, the Analysis Team should produce initial severity classification and initial calculations of the number of people in need ("Preliminary PiN") for each unit of analysis, based on the data available under the humanitarian conditions element.

Depending on the selected data scenario (A or B), a specific set of aggregation methods are recommended to produce initial estimations of the total number of people in need and the severity phase classification for each geographical area and group.[31] Annex 1 and 2 provide detailed step-by-step instructions for how to implement the aggregation methods for data scenario A and B respectively. Section 2.2.4 outlines how to identify the data scenario in a given crisis.

Once all information has been consolidated, the next step is to conduct a joint intersectoral analysis (Step 4).

Key documents

Title	What	Length / Reading time
JIAF Scenario A Aggregation Example	Excel demo worksheet showing the aggregation steps for Scenario A and Scenario B	–
JIAF Scenario B Aggregation Template	This tool provides a template and guide for the aggregation stage of JIAF analysis. It should be read together with the JIAF Guidance, specifically Annex 2	–
JIAF Scenario B Data Collection Template	Template to collect data from Clusters for Data Scenario B aggregation	–

[29] CODs are an authoritative reference dataset of administrative boundaries and population statistics.

[30] UNHCR is the authoritative source for refugee population figures and confirms these with host Governments based on international refugee law.

[31] This set of aggregation methods were identified through testing on 10,000 simulated datasets, for further information about the testing please see here.

2.4 JIAF analysis

2.4.1

Review the narrative developed in exploring the linkages between the pillars, the description of people's Humanitarian Conditions and factors associated (Step 2.2.3) and estimated, initial calculations of people in need ("Preliminary PiN") and severity phase estimation (Step 2.3.2)

The departure point is the understanding of what the Humanitarian Conditions of people consist of and why, in addition to the estimated, initially calculated number of people in need ("Preliminary PiN") and the resulting severity phase obtained through the aggregation.

In practice, the description of people's Humanitarian Conditions and factors associated (step 2.2.3 above) is done iteratively with the severity analysis and Preliminary PiN calculation. An understanding of people's Humanitarian Conditions and causes is essential to ensure the relevance and validity of the severity analysis and Preliminary PiN estimation. Conversely, the severity analysis and Preliminary PiN contribute to finalize the description of people's humanitarian needs and causes of these needs.

The estimates should be reviewed and agreed upon by subject matter and cultural/context experts to check for plausibility.

For the review of initial calculations of Preliminary PiN, the specific process and types of decision that need to be made will differ depending on the data scenario and the aggregation methods that were used in the previous steps. Analysis and interpretation should be done for each geographical area and group, one by one. Once there is consensus in one of them, the discussion can move to the next.

2.4.2

Joint Analysis starting from Data Scenario A

See Annex 1 for details on how to produce the initial estimated PiN ("Preliminary PiN") results that are reviewed in the steps below. Please refer to Data Scenario B section below instead if Preliminary PiN results were produced using the Data scenario B aggregation methods.

1. Review the Humanitarian Conditions and combination of humanitarian consequences that they represent, and why they are occurring, including differences amongst various population groups/sub-groups according to vulnerability and diversity characteristics, impact of the shock, and context (see 2.4.1).
2. Scrutinize the summary finding percentages and numbers estimated in the various severity classes, comparing against individual indicators, qualitative data, contextual information, common sense: do the findings make sense? Are there surprises? If so, how can they be explained?
3. Cross-check JIAF PiN estimates against any individual sector PiN estimates available for each area / group. As the JIAF PiN looks at a combination of needs, individual sectoral PiNs are expected to generally be lower in any given area. However, since different methodologies are used for JIAF / Sector PiN calculations, incidents may arise where a sector PiN is greater than the JIAF PiN. In this case, the following steps must be followed:
   - 3.1 Review the methodology used for each PiN calculation with the sector in question and the JIAF analysis team; identify and outline what caused the differences between sectoral PiN and intersectoral PiN
   - 3.2 Determine if the higher sectoral PiN estimates result from sectoral analyses relevant to the JIAF and in line with the agreed scope (affected populations, areas, themes, etc.). Remember that the purpose of the JIAF is to provide an objective overview of needs, so there should not be any pressure to keep needs at an agreed figure.
     - If the sectoral analysis is deemed relevant by the Analysis Team and the sector colleagues, increasing the intersectoral PiN in that area to match the Sectoral PiN in question should be considered. Note that both the sector and JIAF analysis team must agree with this decision and a description of the rationale of the change included.
     - If the sector PiN estimate is deemed not to be relevant to JIAF based on the checks performed, then the JIAF PiN will not be revised. Both the sector and the JIAF analysis team must agree with this finding.

What is Joint Needs Analysis?

Analysis is the process of transforming data and information into actionable insights.

Needs analysis provides estimates or informed opinions about Humanitarian Conditions and their contributing factors. It entails a systematic set of procedures and the use of specific lines of inquiry to identify current and forecasted humanitarian needs, and inform decisions about programme design, system improvements and allocation of resources.

Joint needs analysis is the process of bringing several subject matter and contextual/ cultural experts (usually in the form of one or several workshops) from different humanitarian organisations to conduct analysis.

Joint needs analysis is one of the most important steps of the process. The Analysis Team brings all the various data points together, interprets them and arrives at a final judgement on PiN and severity for each administrative area taking into consideration all information available.

Expert judgement is a broad term for a process that encompasses many different approaches - from simply asking someone for an informed opinion to help guide a decision, to complex, iterative and highly structured processes involving multiple rounds of elicitation and statistical analysis.

This step is best implemented in a workshop setting.

Expert judgement is fundamental to review and check that the results yielded by the quantitative aggregation process make sense. A guidance to further explain how to coordinate Expert Judgement will be developed in 2021/2022 (available for HPC 2023).

Who participates in the Joint Intersectoral Analysis?

While the Analysis Team leads the process throughout the different steps, for this intersectoral analysis step it is important to expand the participation to all relevant "experts". Defining 'experts' can be problematic in humanitarian settings. It is recommended that the following profiles be included in the panel that will provide the analysis:

- Knowledge of analysis and a firm understanding of the aggregation methods agreed
- Local knowledge of the areas being evaluated – this can be individuals who have spent significant amounts of time working on the ground, conducting research, or who are from that area
- Sector specific technical knowledge
- Intersectoral technical knowledge (e.g. emergency programme management)
- Knowledge of the datasets being used to inform the analysis, particularly anyone who worked on the assessments in question

Joint analysis sessions should be carried out in plenary and all clusters and AoRs should participate in them as well as field staff who are well informed about the various areas, planning, monitoring and evaluation or assessment staff, Information Management Officers (IMOs) and/ or analysts.

The objective is to find a panel of individuals who are knowledgeable on the subject matter. In some cases, there may be staff who are recognized to be knowledgeable that should be sought out – regardless of their current title. It is important to ensure there are representatives from each cluster/sector present on the Analysis Team. It is also recommended that Cluster /AoR coordinators keep their constituencies updated of the process.

The Analysis Team is in charge of ensuring all JIAF principles are respected and abided by during the analysis process. It is recommended that a workshop be arranged to discuss and review the various indicators in the master table and any other contextual information available for each unit of analysis. Subject matter, context and cultural experts (including local actors) should be included in the workshop.[32] The Analysis Team in collaboration with OCHA and under the strategic leadership of the HCT, will provide a facilitation role for these discussions with the group needing to have a majority agreement on any decisions taken. Where agreement is required on topics that are specific to one or two sectors, it is important to ensure the relevant sectors agree and, if not, that their concerns are documented to their satisfaction.

[32] In the case of large geographical areas to cover, the workshop should be organized at the field level to maximize the presence of people knowledgeable of the area

What is the focus of the Joint Analysis?

The Analysis Team will need to review all the available data, covering all pillars, to determine how many people are in need, what characteristics are shared by those people in need, how severe the needs are, and what underlying factors may be contributing to those needs along with making predictions for how needs may change (or not) in the coming months. It is during this step that the PiN and severity figures will be finalized through an interpretive analysis process that will look at all available information, consider if any adjustment is required, and finalize the figures for each administrative area. Refining the findings requires consideration of a number of factors:

1. ***Is there any conflicting data?*** If so, the Analysis Team should review the different datasets and determine what is the most accurate depiction of needs on the ground. It will be extremely important to ensure this process is well documented.

2. ***Is the data reliable?*** Data reliability is always a concern. With rapidly evolving situations, it is important to ensure data is as up to date as possible, sufficiently representative, and collected using a transparent and well-defined methodology. However, in humanitarian situations, it is often necessary to rely on data that are not considered highly reliable. If the reliability of data sources is considered questionable, the Analysis Team should consider if any results using those data sources should be adjusted in light of reliability concerns.

   As data collection is likely to be more difficult this year again, it is quite likely that some of the data sources being incorporated into the JIAF analysis may be less than ideal. One of the most anticipated problems is incorporation of data that is out-of-date. If circumstances on the ground have altered significantly since the data was collected, it is recommended that the Analysis Team factor this into their analysis process and flag any potential concerns they may have. For example, if data were collected early in the year for a given area and it is known that the assistance relied on by the population had since been blocked by movement restrictions, while situation reports had qualitatively identified a worsening situation in the area, the Analysis Team may decide to increase the severity level in the area. They should document the rationale for this increase, including the supporting evidence in terms of the time-lag in the available quantitative data; the assistance that ceased; and the (qualitative) situation reports indicating a worsening situation.

3. ***Is the intersectoral PiN in-line with the sectoral PiN?*** As different methodologies are used to calculate sectoral PiN and the intersectoral PiN produced through the JIAF analysis, it is quite likely that circumstances will arise where sectoral PiN differs compared to intersectoral figures. Specifically, as intersectoral PiN covers all sectors, it could be expected that the figures may be higher than the individual sector level PiN figures. However, there are multiple reasons for why this may not be the case. If a situation arises where intersectoral PiN is lower than a sectoral PiN figure, it is essential that every effort be taken to resolve the discrepancy before finalizing the HNO. One of the most important tasks of the Analysis Team is to review the sectoral and intersectoral PiN figures, documenting the explanations for discrepancies and identifying the most accurate possible JIAF PiN. This process is outlined in detail in the sections below.

Documenting the Joint Analysis

The joint analysis process overall must be well documented with all concerns recorded along with any dissenting opinions. JIAF analysis always follow the same steps:

- Review the description of people's Humanitarian Conditions and factors associated, and the estimated, initial calculations of people in need ("Preliminary PiN") and determination of severity phase[33, 34]
- Describe main issues and the characteristics of the estimated people in need by severity phase
- Establish underlying factors
- Anticipate future conditions
- Agree on current and forecasted humanitarian needs

[33] The initial estimations ("Preliminary PiN") are produced through the aggregation methodologies outlined in Annexes 1 and 2.

[34] Compiling all indicator data into one location where the Analysis Team can view it will help facilitate the analysis process

3.3 If no agreement is reached, then a narrative description outlining the issues must be drafted, agreed by both parties, and included in any JIAF report (such as the HNO). Both figures should remain in the document. The discrepancy should be highlighted where intersectoral PiN is displayed and both figures shown.

The above actions should be repeated for each instance (unit of analysis) where intersectoral PiN is below a sectoral PiN. Even though different methodologies are used to calculate PiN at the sectoral levels, responsible analysis should always endeavour to resolve discrepancies within a completed report (and document the rationale for any change) , and where resolution is not possible, it must explain them.

4. Cross-check the areas PiN estimate and severity score against known presence of concentrated pockets of potential high needs in an area with otherwise low severity need. An example of this can be the presence of one or more camps in an area with otherwise lower needs severity. The presence of these concentrated pockets can inform an adjustment of the estimates and severity classification of the area.

5. Adjust the JIAF estimate if appropriate based on the considerations outlined above, to obtain the most accurate possible estimate for the intersectoral PiN and ensure to carefully document the rationale and supporting evidence behind each adjustment. For extreme cases (severity phase 5), evidence should be very clearly documented, dissent reviewed, and additional subject matter experts consulted if necessary.

The final output of this step is an updated (if any updates are made) table outlining the breakdown of households by severity phase - along with an updated table (if any updates are made) where the percentage findings have been multiplied by the total population size, to obtain the PiN estimates.

It is recommended that the final output table also flags any areas and groups that are currently receiving assistance, to ensure that the current severity phase is understood as dependent on current levels of assistance. The implication being that IF current assistance decreased, the severity phase could increase (assuming needs / situation remain the same).[35]

It is recommended that the final output table also flags any areas and groups where those currently receiving assistance have not been incorporated into the analysis, to ensure that the current severity phase is understood as dependent on current levels of assistance. The implication being that IF current assistance would decrease, the severity phase would increase.

[35] A methodology to better factor in the inclusion of assistance being received has been flagged as an important requirement for future JIAF development.

Examples of possible situations where a Sector's PiN might exceed the JIAF PiN

Sector PiN is higher because they incorporated one or more indicators not used in the JIAF analysis but the indicator is considered relevant to needs of multiple sectors.

– Go through the steps highlighted above and revise the JIAF PiN.

The sector in question conducted their needs analysis misaligned with the agreed scope (affected populations, areas, themes, etc.) of analysis for the JIAF / HNO.

– The concerned sector(s) should adjust their analysis and re-estimate the sector PiN

The sector is using an alternate methodology for assessing needs in inaccessible areas that have no data available. In this situation if the sector is assuming a certain portion (or the entirety) of the population is in need, while the intersectoral analysis is leaving that area out of the analysis, then a resolution should be sought.

– If no agreement can be reached, a narrative description of the issue should be provided that both the sector and the JIAF analysis team agree on.

Figure 7. ***Scenario A output table example***

AREA	POPULATION GROUP	TOTAL POPULATION	PROPORTION OF HOUSEHOLDS IN EACH SEVERITY PHASE				
			1	2	3	4	5
District A	IDPs	10,000	16%	21%	27%	25%	11%
District A	Residents	50,000	22%	24%	37%	11%	6%
District B	Returnees	30,000	32%	38%	20%	7%	3%
District B	Residents	60,000	43%	47%	7%	3%	0%
District B	IDPs	15,000	11%	17%	23%	28%	21%

AREA	POPULATION GROUP	TOTAL POPULATION	NUMBER OF PEOPLE IN EACH SEVERITY PHASE				
			1	2	3	4	5
District A	IDPs	10,000	1,600	2,100	2,700	2,500	1,100
District A	Residents	50,000	11,000	12,000	18,500	5,500	3,000
District B	Returnees	30,000	9,600	11,400	6,000	2,100	900
District B	Residents	60,000	25,800	28,200	4,200	1,800	0
District B	IDPs	15,000	1,650	2,550	3,450	4,200	3,150
		Sub-total	**49,650**	**56,250**	**34,850**	**16,100**	**8,150**
					Total PiN (3+4+5)		**59,100**

2.4.3
Joint Analysis starting from Data Scenario B

See Annex 2 for details on how to produce the results that are reviewed in the steps below. Please refer to Data scenario A section above instead if estimated PiN results were produced using the Data scenario A aggregation methods.

In scenario B, the values on all household level indicators cannot be known for all households in all the datasets as the indicators are unlinked and, therefore, a disaggregation of population by individual severity phase is not possible.

However, it is possible to estimate the overall area/group severity phase, along with an estimate of the percentage of the population falling in that phase or a higher phase (this means that the minimum PiN is 25% of population). This area/group severity phase should be contextualized by a breakdown of any percentage of the population found in high severity phases on "critical" indicators, revealing pockets of severe needs. See more details on Critical Indicators in Step 2.1.6, and in Annex 2 for details on how to produce these results that are reviewed in the steps below.

1. Review the Humanitarian Conditions and combination of humanitarian consequences that they represent, and why they are occurring, including differences amongst various population groups/sub-groups according to vulnerability and diversity characteristics, impact of the shock, and context (see 2.4.1).
2. Scrutinize the summary finding percentages and numbers, comparing against individual indicators, qualitative data, contextual information, common sense.
3. Interpret the JIAF estimates. Where the JIAF estimate is preceded by a ">" (see Figure 8 below and table in Annex B, Step 6b), the "true" PiN is likely higher than the Intersectoral PiN estimate. Where the JIAF estimate is preceded by a "<", the PiN could likely be lower than the Intersectoral PiN estimate. Using the table below as an example, they can be interpreted as follows:
    - 3.1 Where the overall phase was "4", we know that the 25% does not include people in phase 3 (threshold for inclusion in PiN), so the "true" PiN is likely higher than 2,500.
    - 3.2 Where the overall phase was "3", we know that the 25% could represent the "true" PiN, if exactly 25% were found in phases 3,4 and 5 overall. However, it is more likely that more than 25% were found in phases 3,4 & 5, hence the "true" PiN could also be higher than 12,500.
    - 3.3 Where the overall phase was "1", we know that less than 25% were found in phases 2,3,4 & 5. Hence the "true" PiN is likely less than 7,500.
    - 3.4 Where the overall phase was "2", we know that less than 25% were found in phases 3,4 & 5. Hence the "true" PiN is likely less than 15,000.

People in Need : Preliminary, Current, Projected, Intersectoral, Sectoral, True PiNs

(excerpt from Annex 5)

Preliminary PiN
Output of indicator aggregation (prior to expert judgement review) to estimate the Intersectoral PiN.

Current PiN
Intersectoral PiN after expert judgement, but before projections

Projected PiN
Current PiN + 6 months (or other stated time-period), as used for HRP

Intersectoral PiN or **HNO PiN**
Output of indicators aggregation in the Humanitarian Conditions after Expert Judgment. The Intersectoral or HNO PiN can either be Current or Projected.

True PiN
The elusive real number of People in Need (Scenario B).

Sectoral PiNs
The people in need for a specific sector as defined by the methods and indicators used by that sector. Sectoral PiNs may or may not match the aggregation of that specific sectors indicators in the JIAF.

4. Compare the JIAF estimates against the "critical indicator"[36] breakdown of population by severity class (see table below).
   - 4.1 Where the % of population found in classes 3-5 of critical indicators is higher than the "Preliminary PiN" JIAF estimate, this supports the notion that the true PiN is higher than the "Preliminary PiN" JIAF estimate.
   - 4.2 Conversely, where the % of population found in classes 3-5 of critical indicators is lower than the "Preliminary PiN" JIAF estimate, this could indicate that the true PiN is lower than the "Preliminary PiN" JIAF estimate.
5. Compare "Preliminary PiN" JIAF estimates with individual sector PiN estimates available for each individual area / group, to estimate the HNO PiN. As the JIAF PiN looks at a combination of needs, individual sectoral PiNs are expected to generally be lower in any given area. However, since different methodologies are used for JIAF / Sector PiN calculations, incidents may arise where a sector PiN is greater than the JIAF PiN. In this case, the following steps must be followed:
   - 5.1 Review the methodology used for each PiN calculation with the sector in question and the JIAF analysis team; identify and outline what caused the differences between sectoral PiN and intersectoral PiN
   - 5.2 Determine if the higher sectoral PiN estimates result from sectoral analyses relevant to the JIAF and in line with the agreed scope (affected populations, areas, themes, etc.). Remember that the purpose of the JIAF is to provide an objective overview of needs, so there should not be any pressure to keep needs at an agreed figure.
     - If the sectoral analysis is deemed relevant by the Analysis Team and the sector colleagues, increasing the intersectoral PiN in that area to match the Sectoral PiN in question should be considered. Note that both the sector and JIAF analysis team must agree with this decision and a description of the rationale of the change included.
     - If the sector PiN estimate is deemed not to be relevant to JIAF based on the checks performed, then the JIAF PiN will not be revised. Both the sector and the JIAF analysis team must agree with this finding.
   - 5.3 If no agreement is reached, then a narrative description outlining the issues must be drafted, agreed by both parties, and included in any JIAF report (such as the HNO). Both figures should remain in the document. The discrepancy should be highlighted where intersectoral PiN is displayed and both figures shown.

[36] More details on Critical Indicators in Step 2.1.6

Examples of possible situations where a Sector's PiN might exceed the JIAF PiN

Sector PiN is higher because they incorporated one or more indicators not used in the JIAF analysis but the indicator is considered relevant to needs of multiple sectors.

– Go through the steps highlighted above and revise the JIAF PiN.

The sector in question conducted their needs analysis misaligned with the agreed scope (affected populations, areas, themes, etc.) of analysis for the JIAF / HNO.

– The concerned sector(s) should adjust their analysis and re-estimate the sector PiN

The sector is using an alternate methodology for assessing needs in inaccessible areas that have no data available. In this situation if the sector is assuming a certain portion (or the entirety) of the population is in need, while the intersectoral analysis is leaving that area out of the analysis, then a resolution should be sought.

– If no agreement can be reached, a narrative description of the issue should be provided that both the sector and the JIAF analysis team agree on.

The above actions should be repeated for each instance (unit of analysis) where inter-sectoral PiN is below a sectoral PiN. Even though different methodologies are used to calculate PiN at the sectoral levels, responsible analysis should always endeavour to resolve discrepancies within a completed report (and document the rationale for any change), and where resolution is not possible, it must explain them.

6. Cross-check the areas PiN estimate and severity score against known presence of concentrated pockets of potential high needs in an area with otherwise low severity need. An example of this can be the presence of a particularly high number of child-headed households in an area with otherwise lower needs severity. The presence of these concentrated pockets can inform an adjustment of the estimates and severity classification of the area.
7. Adjust the JIAF estimate if appropriate based on the considerations outlined above, to obtain the most accurate possible estimate for the intersectoral PiN and ensure to carefully document the rationale and supporting evidence behind each adjustment. For extreme cases (severity phase 5), evidence should be very clearly documented, dissent reviewed, and additional subject matter experts consulted if necessary.

The final output of this step is an updated (if any updates are made) table outlining the breakdown of households by severity phase - along with an updated table (if any updates are made) where the percentage findings have been multiplied by the total population size, to obtain the PiN estimates.

It is recommended that the final output table also flags any areas where groups that are currently receiving assistance may not have been included in the PiN and severity calculations, to ensure that the current severity phase is understood as dependent on current levels of assistance and that needs are known to be greater than presented. The implication being that IF current assistance decreased, the severity phase could increase (assuming needs / situation remain the same).[37]

Figure 8. ***Scenario B output table example***

AREA	POPULATION GROUP	TOTAL POPULATION	OVERALL AREA SEVERITY PHASE	MINIMUM POPULATION IN THIS SEVERITY PHASE OR HIGHER	INITIAL JIAF PIN ESTIMATE	MAXIMUM PIN ACROSS INDICATORS	HNO PIN ESTIMATE (PRODUCED THROUGH EXPERT JUDGEMENT
District A	IDPs	10,000	4	2,500	> 2,500	6,000	6,800
District A	Residents	50,000	3	12,500	>= 12,500	27,000	27,600
District B	Returnees	30,000	1	30,000	< 7,500	8,000	7,600
District B	Residents	60,000	2	15,000	< 15,000	21,500	21,000

[37] A methodology to better factor in the inclusion of assistance being received has been flagged as an important requirement for future JIAF development.

2.4.4
Describe main issues and the characteristics of people in need by severity phase including associated and contributing factors

As mentioned, this step should be iterative with the severity analysis and estimation of the PiN above. An understanding of people's Humanitarian Conditions and factors associated is essential to ensure the relevance and validity of the severity analysis and PiN estimation. Conversely, the severity analysis and PiN contribute to finalise the description of people's humanitarian needs and the factors contributing the most to unmet needs.

For each unit of analysis and severity phase, the Analysis Team should describe the type of issues in Living Standards, Coping Mechanisms and Physical and Mental Wellbeing, and the interactions between these issues. It is important to emphasize the importance of presenting JIAF outputs at population group or sub-population group level as the combination of well-being, living standards and coping mechanism issues, and not as these three pieces separately. Small summary findings describing main issues and characteristics of the population falling in each severity class should be provided, using the individual indicators mostly driving the results.

Once done, the Analysis Team should identify underlying factors. Two levels of underlying factors are to be established:

- **Immediate factors** directly contributing to Humanitarian Conditions. A typology of immediate factors and subfactors commonly influencing Humanitarian Conditions is proposed in Annex 4 and can be adapted at country level. For instance, access constraints can be due to a physical problem (distance to the school, roads are in poor state, etc.), a financial problem (loss of income or increased fees cause difficulties for children to access education services regularly), security issues (e.g. checkpoints or attacks on the way in or out of school) or social discrimination (e.g. of people with disabilities). Contributing or associating factors should be analysed while considering the combination of Well-Being, Living Conditions and Coping Mechanism issues that people are facing. This will produce a list of contributing factors generally comprising three to five items. More can be added if it is possible to appropriately disentangle or order their contribution to Humanitarian Conditions. This list of ordered factors will later be aggregated and further used during the response analysis stage to identify main response objectives (e.g. increase access to…, etc.) and select the most appropriate response options.
- Other more **distant factors,** linked to context, shocks or impact. Main characteristics of the context, the shock and its impact should be described, and how they relate to the humanitarian conditions.

The results for each unit of analysis can be summarized in a table. A fictitious example is presented on the next page for District A - Affected Group IDPs, from which a descriptive narrative can be produced.

Based on the summary findings table, the Analysis Team can summarize visually the chain of cause and consequence by using a problem tree for each severity phase, showing causal mechanisms between types of issues and final outcomes.

2.4.5
Anticipate future conditions

The next step is to anticipate future conditions. As a first step, existing risk analyses should be consulted (previous HNOs, Emergency Response Plans (ERP), preparedness and contingency plans of humanitarian organisations). In case such risk analyses are absent or outdated it is recommended to look at the main shocks and stresses identified so far in the analysis process and develop a 'most likely scenario' that spans across the period of the planning decisions the JIAF outputs intends to inform (e.g. 12 months period of an HRP).

Based on the most likely scenario, two ways of supporting projections of needs have been identified:

1. Determine which JIAF indicators may change for the most likely scenario, and thus re-calculate the intersectoral PiN as per JIAF methodology (this is referred to as "Forecasted JIAF PiN" in the Guidance document mentioned below)
2. Determine a percentage increase/decrease reflecting the expected evolution in the impact and humanitarian conditions and apply it to the Current intersectoral PiN (this is referred to as "Forecasted HNO PiN" in the Guidance document mentioned below).

Details on how to determine the most likely scenario and the corresponding PiN projections is provided in the Guidance on Analyzing risks and determining the most likely evolution of the humanitarian situation.[38,39,40]

Figure 9. ***Example of workshop Output table***

DISTRICT	AFFECTED GROUP	PEOPLE IN THE AREA	DATE	TEAM
District A	IDPs	10,000	DD / MM / YYYY	Team B

SEVERITY CLASS	1. NONE / MINIMAL	2. STRESS	3. SEVERE	4. CRITICAL	5. CATASTROPHIC
PHYSICAL AND MENTAL WELLBEING	>2% HHs have been identified with disabilities	>4% HHs have been identified with disabilities	>15% HHs have been identified with disabilities 10% GAM for children U5 based on their weight for height	>25% HHs have been identified with disabilities 15% GAM for children U5 based on their weight for height	>35% HHs have been identified with disabilities 30% GAM for children U5 based on their weight for height
COPING MECHANISMS	No stress, crisis or emergency coping observed	35% using stress strategies	>40% engaged into crisis livelihood Coping Mechanisms	>55% engaged into emergency livelihood Coping Mechanisms >30% are using irreversible Coping Mechanisms to access basic needs, including XX and XX	>65% have totally exhausted their essential needs coping strategies >60% are using irreversible Coping Mechanisms to access basic needs, including XX and XX
LIVING STANDARDS	>85% living within a 30min walking distance from basic services	>30% are living within a 1H00 walking distance from basic services	>60% are living within a 1H00 walking distance from basic services 35% have lost their documentation 45% have lost their productive assets and property title	>50% are living within a 2H00 walking distance from basic services 55% have lost their documentation 85% have lost their productive assets and property title	>70% are living within a 2H00 walking distance from basic services 85% have lost their documentation All have lost their productive assets and property title
IMMEDIATE UNDERLYING FACTORS	None	Quality / Diversity	Access / Financial Availability / Transfer Quality / Diversity Access / Physical	Availability / Production Access / Financial Access / Physical	Availability / Production Access / Physical Access / Financial
ASSOCIATED IMPACT ON PEOPLE	No or minimal impact reported All have kept their sources of income or have grown businesses No tensions between IDPS and Host communities	< 15% of HH working members have lost their source of income	35% are displaced in rented accommodation and 15% live in IDP camps, 50% are in hosted families > 70% experience a reduced income level of 20-40% No tensions between IDPs and host communities	5% are displaced in rented accommodation and 35% live in IDP camps, 30% are in public building and 30% in self settled camps > 70% experience a reduced income level of 40-70% High discrimination against IDPs Frequent tensions between IDPs and communities	15% live in IDP camps, 50% are in public building and 35% in self settled camps >70% experience a reduced income level of 70-100% High discrimination against IDPs

[38] Note that for food security, IPC/CH projection should be utilized when available

[39] Note that some indicators already include a projection dimension (see e.g. nutrition) that could be helpful when anticipating future conditions.

[40] This guidance outlines key steps for analyzing risks and determining the most likely evolution of the humanitarian situation when developing an HNO. The analytical outputs should help to plan for the most likely scenario in the foreseeable future and inform the response analysis and targeting steps in the HRP. This guidance has been consulted with and approved by the Global Cluster Coordination Group and the Global HPC Planning group.

SEVERITY CLASS	1. NONE / MINIMAL	2. STRESS	3. SEVERE	4. CRITICAL	5. CATASTROPHIC
ASSOCIATED IMPACT ON SERVICES	All basic services are functional in the area	Limited damage to critical infrastructure < 10% of markets are not functional	Serious damage to critical infrastructure 70% live in areas where basic services (school, healthcare) are disrupted Intermittent electricity and water system < 30% of markets are not functional	Extensive damage to critical infrastructure 45% live in areas where basic services (school, healthcare) are non-functional Irregular electricity and water system < 50% of markets are not functional	75% live in areas where basic services (school, healthcare) are non-functional Electric grid and communication systems are non-functional Water system and service have broken down/collapsed < 70% of markets are not functional
ASSOCIATED IMPACT ON HUMANITARIAN ACCESS	No humanitarian access constraints	No humanitarian access constraints	25% of the population live in areas with regular access interruptions	55% of the population live in areas with severe access issues EO contamination	65% of the population live in areas with severe access interruptions and 30% in areas with no humanitarian access EO contamination
NATURE OF THE SHOCKS	All are in areas with no conflict	<10% are in areas of low conflict intensity	>70% are in areas of low conflict intensity	>60% are in areas of medium conflict intensity	>75% are in areas of high conflict intensity
ASSOCIATED CONTEXT	Functional rule of law, upgraded infrastructure	Functional rule of law, upgraded infrastructure	Dysfunctional rule of law, poor infrastructure, high number of female headed households, etc.	Dysfunctional rule of law, poor infrastructure, high number of female headed households, etc.	Dysfunctional rule of law, poor infrastructure, high number of female headed households, etc.

2.5
Validation of current and forecasted humanitarian needs

The final step is for the Analysis Team to aggregate all the previous analysis results and derive current and forecasted most severe needs,[41] including:

- Most severely affected geographical areas can be derived from the geographical area severity phase classification
- Most severely affected groups can be derived from the group severity phase classification
- Most essential issues to address can be derived from the projected list of main issues and immediate underlying factors. This will directly support response analysis for the HRP.

Priority needs can be further disaggregated by sex, age and disability, as well as other diversity characteristics. Experts inputs and data can be used to derive time-critical and relevant severity of needs for other important units of analysis, e.g. male/female, groups with specific needs, vulnerable groups, etc.

Once geographic, population groups and issues most essential to address (due to their severity, time- criticality etc.) have been derived from the JIAF results, a final validation workshop should take place to validate the main conclusions. Depending on the context it might help increase the understanding and buy-in if members of the Inter Cluster Coordination Group (ICCG) / HCT be invited before final outputs are submitted to the ICCG for final validation and endorsements.

Validation of findings

Invite experienced and knowledgeable local actors as 'experts' to join the validation of findings ensuring relevance to crisis/local context and that variations related to geography and population groups are reflected in the final product. It will be important to invite different/multiple local actors who can speak for the diverse voices in the area including local/national NGO (Non Government Organization) representatives and women-led organizations to ensure diverse knowledge on different areas/groups.

[41] It is recommended to present both sets of priorities alongside with contextual characteristics and risk drivers identified during step 4.5.4

Annex 1
Data Scenario A: Aggregation method for the Humanitarian Conditions pillar

This annex outlines the appropriate aggregation method for Data scenario A, where all household level indicators available for the Humanitarian Conditions pillar in a given crisis, exist in one single household dataset, to which any number of area-level indicators can be added. Step-by-step guidance is provided on how to construct the dataset for analysis and how to implement the aggregation using the dataset. All steps can be completed using Excel.

Please only refer to this Annex if working with Data Scenario A; If Data scenario B is identified, please ignore this Annex 1 and refer instead to Annex 2 where the aggregation method for Data scenario B is outlined. To identify which data scenario is applicable in a given crisis, please see Step 2.2.4 above.

Step 0

Obtain the household and the area-level datasets for all indicators included in the Country's JIAF. Prepare and clean the datasets (either using a Data Cleaning Plan or guidelines similar to Quartz Guide to Bad Data).

All original datasets should be uploaded on the Humanitarian Data Exchange platform for transparency purposes and to ensure reproducibility of results.

Step 1

Prepare the household and the area level datasets. Each indicator value should be re-coded to only represent the severity score (from 1 to 5) in both datasets. A common geographical field (Admin 0, 1, 2, 3 etc. and P CODES) should be available for each household and area-level indicator to facilitate merging.

Step 2

Reconcile household and area level indicators. Add all area-level indicators to the household level dataset. This results in one household level aggregation dataset, including all data with both household and area-level indicators "linked" for each household. Since several households might have been interviewed within a single geographical area, the same area-level indicator value will be repeated for all the interviewed households in the area, as shown in the example below.

HOUSEHOLD	AREA	POPULATION GROUP	HOUSEHOLD LEVEL INDICATORS		AREA LEVEL INDICATORS
			FUNCTIONAL AND IMPROVED SANTITATION	HOUSEHOLD HUNGER SCALE	COVERAGE OF DTC3 (DPT3 / PENTA3) IN <1 YEAR OLD
HH_ID_77	District A	IDPs	3	4	1
HH_ID_78	District A	IDPs	3	2	1
HH_ID_79	District B	IDPs	2	4	5

Step 3

Aggregate all indicators within the humanitarian condition pillar. The recommended aggregation method is the "Mean of Max 50% of indicators" if there are more than 4 indicators,[42] and simply the mean if there are 4 indicators or less. For each household, the "Mean of max 50%" returns the mean of the area and household indicators that have the highest scores, focusing only on the 50% of indicators that have the highest scores.

HOUSEHOLD	AREA	POP. GROUP	FUNCTIONAL AND IMPROVED SANITATION	HOUSEHOLD HUNGER SCALE	NUMBER OF INPATIENT BEDS PER 10,000	CHILDREN DROPPING OUT OF SCHOOL	JIAF SEVERITY PHASE
HH_ID_77	District A	IDPs	3	4	1	5	3
HH_ID_78	District A	IDPs	3	2	1	3	2
HH_ID_79	District B	IDPs	2	4	2	5	3

NB: the original aggregation testing, that identified the "Mean of Max 4" as a preferred option, was based on the aim to aggregate scores by sub-pillar. However, given ongoing discussions about allocation of indicators by sub-pillar the aggregation is conducted on the Humanitarian Conditions pillar overall. This means the number of indicators aggregated in one step increases significantly, hence it is recommended that the "Mean of Max 4" is replaced by "Mean of Max 50%" of indicators, since the likelihood of at least 4 indicators having very high severity scores increases significantly when all indicators in the Humanitarian Conditions pillar are aggregated at once.

Step 4

Check if any Critical indicator[43] (see section 2.1.6) severity score is higher than the final JIAF Severity Phase Classification. If so, replace the Humanitarian Conditions Score with the "Critical" indicator score.

HOUSEHOLD	AREA	POP. GROUP	JIAF SEVERITY PHASE	CRITICAL INDICATORS	UPDATED JIAF SEVERITY PHASE
				SAFE AND HEALTHY HOUSING ENCLOSURE UNIT	
HH_ID_77	District A	IDPs	3	4	4
HH_ID_78	District A	IDPs	2	2	2
HH_ID_79	District B	IDPs	3	1	3

[42] After exploring aggregation methods, it was concluded that arithmetic and geometric mean/median/weighted sums etc. suffer from central tendency, meaning that overall severity scores are "pulled down" the more indicators that are included. In reality, a household may then have very severe needs outcomes on some indicators but will not be identified as severely in need, if it happens to have low severity scores on some indicators (the probability of this happening increases with the number of indicators that are available). This can be avoided by applying the mean/median etc. using only the most severe indicators in each household. As long as an absolute scale has been used for all indicators (overall or within indicator group/sub-pillar), this should give an accurate estimation of the overall severity faced by the household. For further information about the aggregation method research, please see here.

[43] "Critical" indicators were identified earlier in the JIAF process (see section 2.1.6 above). These are indicators that signify a particularly worrying, "life-threatening", situation and that should therefore override the aggregated score to avoid severe needs being "hidden" by the other indicators in the aggregation.

Step 5

Estimate the percentage of households falling under each severity phase. Simply calculate, out of the total number of households in the dataset, the proportion of households per Humanitarian Condition Score (identified in the previous step)

AREA	POPULATION GROUP	TOTAL POPULATION	PROPORTION OF HOUSEHOLDS IN EACH SEVERITY PHASE				
			1	2	3	4	5
District A	IDPs	10,000	16%	21%	27%	25%	11%
District A	Residents	50,000	22%	24%	37%	11%	6%
District B	Returnees	30,000	32%	38%	20%	7%	3%
District B	Residents	60,000	43%	47%	7%	3%	0%
District B	IDPs	15,000	11%	17%	23%	28%	21%

Step 6

Estimate the number of households/people[44] **falling under each severity phase.** Multiply the percentages obtained in the previous step by total population figures to obtain the corresponding number of people falling under each severity phase. For District A / IDPs: multiply 27% that are under phase 3 by the total number of IDPs in District A (10,000) = 2,700 IDPs in severity phase 3, 2,500 in phase 4, etc. To obtain the total PiN, sum up the number of people falling under severity phase 3 to 5.

AREA	POPULATION GROUP	TOTAL POPULATION	NUMBER OF PEOPLE IN EACH SEVERITY PHASE				
			1	2	3	4	5
District A	IDPs	10,000	1,600	2,100	2,700	2,500	1,100
District A	Residents	50,000	11,000	12,000	18,500	5,500	3,000
District B	Returnees	30,000	9,600	11,400	6,000	2,100	900
District B	Residents	60,000	25,800	28,200	4,200	1,800	0
District B	IDPs	15,000	1,650	2,550	3,450	4,200	3,150
		Sub-total	**49,650**	**56,250**	**34,850**	**16,100**	**8,150**
					Total PiN (3+4+5)		**59,100**

If probability sampled data has been used for the aggregation, the summary findings should be presented in conjunction with the estimated level of precision with which the findings can be generalized to the population overall (e.g. the confidence level / error margin).

[44] A key assumption here is that the household size is relatively homogeneous within each group in a given area, hence the % of households could be projected directly on to the total number of individuals. Not perfect but "good enough".

Step 7

It is recommended that the final output table also flags any areas and groups that are currently receiving assistance, to ensure that the current severity phase is understood to be as dependent on current levels of assistance. The implication being that IF current assistance would decrease, the severity phase would likely increase (assuming needs / situation remain the same). This marks the end of the "automated" aggregation to produce estimated, initial PiN calculations ("Preliminary PiN").

Step 8

The next step is to review, interpret and adjust these estimations as part of the joint analysis process. Please see section 2.4 in the main narrative for details on how to do this.

Key documents and supporting tools

Title	What	Length / Reading time
Aggregation Methods for the JIAF – Final Review 2020	Presentation on how the aggregation methods for the JIAF were developed	30 slides / 60 min
Pre-recorded presentations on PiN aggregation methods	The pre-recorded sessions will be made available on jiaf.info in June 2021	–
Scenario A aggregation template	This tool provides a template and guide for the aggregation stage of JIAF analysis. It should be read together with the JIAF Guidance, specifically Annex 1	–

Annex 2
Data Scenario B: Aggregation method for the Humanitarian Conditions pillar

This annex outlines the appropriate aggregation method for Data scenario B, where we either have no household level indicators and data available for a given geographical area at all, or the available household indicators are spread across multiple household level datasets. This means the values on all household level indicators cannot be known for all households in all the datasets. Step-by-step guidance is provided on how to construct the dataset for analysis and how to implement the aggregation using the dataset. All steps can be completed using Excel.

Note: Scenario B does not allow for a full breakdown of population by severity phase – expert judgement is essential as a following step.

Please only refer to this Annex if working with Data Scenario B; If Data scenario A is identified, please ignore this Annex 2 and refer instead to Annex 1 where the aggregation method for Data scenario A is outlined. To identify which data scenario is applicable in a given crisis, please see Step 2.2.4 above.

Step 0

Obtain the household and the area-level datasets for all indicators included in the Country's JIAF. Prepare and clean the datasets (either using a Data Cleaning Plan or guidelines similar to Quartz Guide to Bad Data).

All original datasets should be uploaded on the Humanitarian Data Exchange platform for transparency purposes and to ensure reproducibility of results.

Step 1

Prepare the area level dataset. To build the JIAF dataset, all data should be summarised at area-level, per population group, and added into one dataset. Each indicator value should be re-coded to only represent the severity score (from 1 to 5). A common geographical field (Admin 0, 1, 2, 3 etc. and P CODES) should be available for each area-level indicator to facilitate merging.

Step 2

For each indicator, geographical area/affected group, calculate the percentage of people per severity class. This results in one area-level aggregation dataset including all household and area-level data but with "unlinked" indicators.[45] For area-level indicators that by definition apply to the total population of an area, this means 100% of the population will fall in a given severity class depending on the result for a given indicator. E.g. the indicator "Percentage of population that can access primary healthcare within one hour's walk from dwellings" has the following severity classes "1": >= 80%, "2": 75% < 80%, "3": 70% < 75%, "4": 65% < 70% and "5": < 65%. That means, if more than 80% of the population can access health care within one hour's walk, the severity of the area would be classified as 1, however, that does not mean that 100% of the population are severity class 1. It is not actually possible to calculate the exact degree-based severity for those households, but the proportion living over 1 hour walk from the health facility are still in need. For the present, while we look for a better longer-term solution for incorporating area-level indicators, will use the provided calculated severity for magnitude indicators (once again provided by the sectors).[46]

[45] In Data Scenario B, either household level information is not available for all selected indicators (only area-level information), or different households have been interviewed across different assessments, and it would be impossible to discern if the same households were included in multiple assessments – this would be the case, for example, if the JIAF analysis team was consolidating household data from a KAP survey conducted by WASH actors, an education assessment by education actors, a shelter damage assessment by shelter actors, etc. In this scenario, it is challenging to distinguish if the same people are facing issues in the three sectors or if they are simply different people with different issues. The household level indicators are thus "unlinked" and the percentage of the population in the data that have co-occurring needs is unknown.

[46] It is acknowledged that this stop-gap binary solution to include area-level indicators is not adequate. Further research is necessary to ensure the appropriate inclusion and aggregation of area-level indicators.

AREA	POP. GROUP	INDICATORS	INDICATOR CLASS	MAGNITUDE BASED SEVERITY	PIN CALCULATION	PROPORTION OF HOUSEHOLDS IN EACH SEVERITY PHASE				
						1	2	3	4	5
District A	IDPs	Water sources	Degree	-	-	16%	21%	27%	25%	11%
District A	Residents	Sanitation facilities	Degree	-	-	22%	24%	37%	11%	6%
District B	Returnees	IPC	Degree	-	-	32%	38%	20%	7%	3%
District B	IDPs	Distance to health facilities		1	15,000					

Step 3

Estimate the severity class for each indicator. For each geographical area/population group and each specific household level indicator in the dataset, apply a "25% rule".[47, 48]

In the first line of the table below for instance, there are 11% of IDPs in District A who present a phase 5 severity on the Water Sources indicator. 11% is less than 25% so the class-defining threshold is not met yet. Going one cell left, and adding the 25% cohort who present a phase 4 severity gives a cumulated percentage of population of 36%, which meets the 25% rule. The geographical area/population group is therefore classified as 4.

For Area (Magnitude-based) indicators, their outlined thresholds will allow their values to be converted into a severity classification for each geographical area. In other words:

1. If the severity phase is 2 or above, the minimum population in that severity phase or higher is 25%.
2. If the severity phase is 1, then we assume that a minimum of 75% of the population is classified under Severity 1 (as the combined needs of all other severity levels is assumed to be less than 25%).

AREA	POP. GROUP	INDICATOR	SEVERITY CLASSES						INDICATOR SEVERITY CLASSIFICATION
			MAGNITUDE	1	2	3	4	5	
District A	IDPs	Water sources		16%	21%	27%	25%	11%	4
District A	IDPs	Sanitation facilities		22%	24%	37%	11%	6%	3
District A	IDPs	IPC		32%	38%	20%	7%	3%	3
District A	IDPs	Distance to health facilities	1						1

21% + 24% = 45%, ie >25% threshold

[47] 25% was selected after testing thresholds of 10%,15%, 20%, 25% and 30% on 10,000 simulated datasets with different distributions (uniform distributions, normal distributions and Poisson distributions). The 25% threshold was most likely to yield the same final result (overall area-level severity class) as the ones obtained from the scenario A aggregation method (same in 83% of the 10,000 comparisons). This demonstrates that scenario B proposed aggregation method is able to estimate the co-occurrence of needs to some extent. For further detail on the aggregation method testing please see here.

[48] When using IPC/CH, there could be a discrepancy between the severity class derived using the JIAF 25% rule and the one derived from the IPC/CH rule (20%). However, this will be addressed either in Step 4 (critical indicators' severity overrides JIAF one) or by entering IPC information as Magnitude-based indicator.

Step 4

Aggregate all indicator severity phase scores within the Humanitarian Conditions pillar for each geographical area/affected group. The recommended aggregation method is the "Mean of Max 50% of indicators" if there are more than 4 indicators, and simply the mean if there are less than 4 indicators. For each area, the Mean of Max 50% returns the mean of the indicators that have the highest scores, focusing only on the 50% of indicators that have the highest scores.[49]

AREA	POP. GROUP	TOTAL POP.	LIVING STANDARDS INDICATORS				CALCULATED SEVERITY PHASE	CRITICAL INDICATOR SEVERITY	JIAF SEVERITY PHASE
			WATER SOURCES	SANITATION FACILITIES	IPC	DISTANCE TO HEALTH FAC.		IPC	
District A	IDPs	10,000	3	4	5	4	4	5	5
District A	Residents	50,000	4	3	2	2	3	2	3
District B	Returness	30,000	1	1	1	2	1	1	1

NB: the original aggregation testing, that identified the "Mean of Max 4" as a preferred option, was based on the aim to aggregate scores by sub-pillar. However, given ongoing discussions about allocation of indicators by sub-pillar it is recommended that the aggregation is conducted on the Humanitarian Conditions pillar overall. This means the number of indicators aggregated in one step increases significantly, hence the "Mean of Max 4" is replaced by "Mean of Max 50%" of indicators, since the likelihood of at least 4 indicators having very high severity scores increases significantly when all indicators in the Humanitarian Conditions pillar are aggregated at once.

Step 5

Check if any Critical indicator[50] (see section 2.1.6) severity score is higher than the final JIAF Severity Phase Classification for a group or geographical area. If so, replace the Humanitarian Conditions Score with the "Critical" indicator score.

Step 6.1

Estimate the "minimum number of people" falling under each severity phase. Since the "25%" rule was used to obtain the area/affected group severity phases, and the combination of 25% rule and the Mean of Max aggregation method was found to relatively accurately predict co-occurring indicators,[51] 25% can be multiplied by the total population figures to estimate the minimum number of people that fall in the severity phase (or higher). E.g. For IDPs in District A in the table below, where the total population is 10,000, the calculation would be 25% x 10,000 = 2,500, for Residents in District A it would be 50,000 x 25% = 12,500 etc. In other words:

1. If the severity phase is 2 or above, the minimum population in that severity phase or higher is 25%.
2. If the severity phase is 1, then we assume that a minimum of 75% of the population is classified under Severity 1 (as the combined needs of all other severity levels is assumed to be less than 25%).

[49] After testing aggregation methods, it was concluded that arithmetic & geometric mean/median/weighted sums etc. suffer from central tendency, meaning that overall severity scores are "pulled down" the more indicators that are included. In reality, a household may then have very severe needs outcomes on some indicators but will not be identified as severely in need, if it happens to have low severity scores on some indicators (the probability of this happening increases with the number of indicators that are available). This can be avoided by applying the mean/median etc. using only the most severe indicators in each household. As long as an absolute scale has been used for all indicators (overall or within indicator group/sub-pillar), this should give an accurate estimation of the overall severity faced by the household. For further information about the aggregation testing, please see here.

[50] "Critical" indicators were identified earlier in the JIAF process (see section 2.1.6 above). These are indicators that signify a particularly worrying, "life-threatening", situation and that should therefore override the aggregated score to avoid severe needs being "hidden" by the other indicators in the aggregation.

[51] For further detail on the aggregation method testing please see here.

AREA	POPULATION GROUP	TOTAL POPULATION	JIAF SEVERITY PHASE	MINIMUM POPULATION IN THIS SEVERITY PHASE OR HIGHER (25% OF POPULATION)
District A	IDPs	10,000	4	2,500
District A	Residents	50,000	3	12,500
District B	Returnees	30,000	1	30,000
District B	Residents	60,000	2	15,000

Step 6.2

To provide more disaggregated findings on top of the severity phase of the 25% most in need carefully identify pockets of severe needs within areas.

- Review "critical" individual indicators (See Step 2.1.6) where any percentage of the population is found in higher severity classes (e.g. classes 3, 4 or 5) and report this in the final output
- Add any percentage of the population found in high severity classes to the final output table, to reveal pockets of severe needs within areas.

AREA	POP. GROUP	TOTAL POP.	LIVING STANDARDS INDICATORS				CALCULATED SEVERITY PHASE	CRITICAL INDICATOR SEVERITY	JIAF SEVERITY PHASE
			WATER SOURCES	SANITATION FACILITIES	IPC	DISTANCE TO HEALTH FAC.		IPC	
District A	IDPs	10,000	3	4	5	4	4	5	5
District A	Residents	50,000	4	3	2	2	3	2	3
District B	Returness	30,000	1	1	1	2	1	1	1

AREA	POPULATION GROUP	TOTAL POPULATION	OVERALL AREA SEVERITY PHASE	MINIMUM POPULATION IN THIS SEVERITY PHASE OR HIGHER	INITIAL JIAF PIN ESTIMATE	MAXIMUM PIN ACROSS INDICATORS	HNO PIN ESTIMATE (PRODUCED THROUGH EXPERT JUDGEMENT
District A	IDPs	10,000	4	2,500	> 2,500	6,000	6,800
District A	Residents	50,000	3	12,500	>= 12,500	27,000	27,600
District B	Returnees	30,000	1	30,000	< 7,500	8,000	7,600

NB: While critical indicators can be used as "single source" to derive the intersectoral severity level for any given area, the same is not true for the definition of the intersectoral PiN. In fact, PiN would be defined based on expert judgement, taking into account not only the critical indicators, but a wider array of sectoral indicators. As a result, the intersectoral PiN should not be lower than the value of critical indicators in any given area but could be higher.

Step 7

The final output table also needs to flag any areas and groups that are currently receiving assistance, to ensure that the current severity phase is understood to be as dependent on current levels of assistance. The implication being that IF current assistance would decrease, the severity phase would likely increase (assuming needs / situation remain the same). This marks the end of the "automated" aggregation to produce estimated, initial PiN calculations.

Step 8

The next step is to review, interpret and adjust these estimations as part of the joint analysis process. Please see section 2.4 in the main narrative for details on how to do this.

Key documents and supporting tools

Title	What	Length / Reading time
Aggregation Methods for the JIAF – Final Review 2020	Presentation on how the aggregation methods for the JIAF were developed	30 slides / 60 min
Pre-recorded presentations on PiN aggregation methods	The pre-recorded sessions will be made available on jiaf.info in June 2021	–
Scenario B aggregation template	This tool provides a template and guide for the aggregation stage of JIAF analysis. It should be read together with the JIAF Guidance, specifically Annex 2	–
JIAF Scenario B data collection template	Template to collect data from Clusters for Data Scenario B aggregation	–

Annex 3
Additional guidance on the good use of context-shocks-impact indicators for identification of affected geographical areas and population groups

To guide the analysis of context-shocks-impacts, a suggested set of indicators has been compiled based on a review of commonly available data, indicators used in HNOs 2020 and consultation with sectoral experts, including indicators related to:

- A description of the environment in which humanitarian actors plan and operate (policies and legal framework, security profile, socio-cultural and demographics characteristics, etc).
- The exposure of the population to different shocks and risks (including conflict/violence and human rights violations, natural hazards, disease outbreaks, etc.)
- Key vulnerability characteristics (including based on age, gender and disability and other contextually relevant characteristics)
- Impact of the crisis on affected population (including displacement / mobility), systems and services.

The following sections provide further guidance for the consolidation available information and indicators.

- **Which geographical unit of analysis should be considered?** The geographical unit of analysis to be considered for this process should be the same one as the one decided by the HCT as a unit for the HPC analysis. This unit is always part of the Common Operational Dataset (COD) - Admin levels 1 to 4.

  Some sectors like Health or Education may find that their line national ministries follow a different geographical division from the COD's administrative divisions (i.e. Health Administrative Provinces). In this case, the sector can aggregate the dataset to the COD unit of analysis.

  In addition, the analysis should also consider sites or locations within larger geographical units where affected populations are concentrated (i.e. camps, camp-like settlements), to ensure they are not left behind or de- prioritized from needs analysis and response planning. CCCM clusters/sectors can provide the relevant information for this identification.

- **Should the context-based indicators be either aggregated or disaggregated at the agreed geographical unit of analysis?** Yes. Every indicator should be either aggregated or disaggregated at the agreed unit of analysis to ensure they are comparable between each other.

  For example: If the indicator (i.e. number of people internally displaced in the last XX months) is only available at Admin 0 (national level) but the unit of analysis is Admin 1 (state, province, district); it will not be possible to use the indicator in the geographical prioritization.

- **How can Context, Shock and Impact indicators be analysed to identify affected areas and groups?** Clusters and AoR will decide how to analyse each of their indicators based on their sectoral expertise. Following considerations on how to tackle the range of different indicators are recommended (noting the final decision is with country level clusters)
  - *Above / below average:* Indicators that use average (i.e. average population per functioning health facility (HF), by type of HF and by administrative unit) can be aggregated as above / below the average.
  - *Humanitarian / sectoral standards:* Indicators that are humanitarian / sectoral standards (i.e. prevalence of Global Acute Malnutrition (GAM)) can be systematically reflected in those geographical units of analysis where they have been identified below the sectoral minimum standard.

- *Maximum / Minimum:* Thresholds for indicators that they consider either ratio, functionality, percentage or number (of) can be contextualized at country level following a maximum / minimum rationale. For example: Indicator of Child Protection services functionality status. Thresholds: Fully operational / Partially operational / Not operational
- *Prevalence:* some indicators will be available as prevalence at national level (i.e. Child Abuse,[52] Dependency Ratio,[53] etc.) only. These prevalence indicators can be applied standardized across the geographical unit of analysis. They will complement the other context-based indicators and the joint interpretation/analysis will define if the specific geographical unit of analysis is affected by the humanitarian crisis or qualifies more as a development situation
- *Presence of affected population groups:* on every geographical unit of analysis with presence of affected groups (i.e. IDPs, refugees, returnees, host communities) the indicator will be binary: presence of (...) / no presence of (...).
- In case of sudden onset natural disasters (i.e. earthquakes), indicators can be adapted to each context: presence of people living in areas affected / exposed to natural hazards.

It is possible that some of these indicators are also used for the Humanitarian Conditions analysis, as they inform two different purposes: (i) its use under context-shocks-impact analysis informs the identification of affected areas based on exposure to pre-existing or ongoing shocks and impacts (e.g. disruption of services); (ii) its use under HC (Humanitarian Conditions) sub-pillars informs the analysis of severity of consequences in the affected population (e.g. level of lack of access to services).

- **Geographic Classification: Binary? high / medium / not affected?**

  For the identification and agreement of affected geographical areas, two options are recommended to be decided at country level by the Analysis Team. These are:

  - Binary prioritization: in contexts where the humanitarian impact of the crisis is geographically limited, the prioritization can be binary: humanitarian crisis affected area / no humanitarian crisis affected area.
  - High/Medium/Not affected: In contexts where the humanitarian impact of the crisis is geographically dispersed or different shocks or its combination are creating differentiated impacts: Highly affected, Medium affected and Not affected by the humanitarian crisis

[52] Child abuse in England and Wales: March 2020

[53] Age dependency ratio - Norway

Annex 4
List and definitions of underlying factors

A typology of factors commonly influencing humanitarian outcomes is proposed below. Each main factor category has sub-categories, common to all humanitarian sectors. For instance, access constraints can be due to a physical problem (the bridge leading to the market is broken or the roads are flooded), an economic problem (loss of income or increased fees cause difficulties for children to access education services regularly) or safety issues (such as checkpoints or attacks on the way to school).

Availability	Access	Quality	Use	Awareness
Production	Physical	Human resources	Knowledge	Message
Trade	Financial	Safety	Attitude	Channel
Stock	Security	Reliability	Practice	Frequency
Transfer	Social discrimination	Diversity	Dignity	

A list of standard definitions for each subcategory is proposed below. It is recommended to adapt the table and list for each context, using both sectoral and contextual knowledge.

Availability issues:

- Production: Lack of goods and services produced/built/delivered in the area (lack of water points, latrines, schools, health centres, etc.).
- Trade: Lack of goods and services brought into the area through market mechanisms due to disruption of supply chain.
- Stock: Lack or deficiency of goods or services held by traders or in government reserves (lack of medicines, ambulance, reconstruction materials, spare parts, fuel, etc.).
- Transfer: Lack of goods and services supplied by the government and/or aid agencies (lack of assistance, physicians, schoolteachers, health staff, subsidised bread, etc.).

Accessibility issues:

- Physical and logistical: Long distance, transport issues, fuel, lack of road maintenance, bridge destroyed, etc.).
- Security: Security constraints interrupting or preventing access or supply to/of goods and services (insecurity, checkpoints, attacks, etc.).
- Financial: Lack of income, resources or financial means (price inflation, loss of purchasing power, etc.) to purchase items or pay for services.
- Social discrimination: Difficulties in accessing or benefitting from services and goods due to discrimination or specific requirements (discrimination of minority groups, lack of documentation, etc.)

Quality issues:

- Human Resources: Number of people and possession of the required skills and knowledge to perform the service.
- Safety: Beneficiary of the good or service is free from danger, risk or doubt including physical safety, financial security and confidentiality, e.g. sterilisation of medical material, lightning around latrines at night, etc.
- Reliability: Ability to perform the anticipated service in a dependable and accurate manner, e.g. water quality, shelter standards, etc.
- Diversity: Ability to meet the variety of demands and needs expressed.

Use issues:

- Knowledge: Being not familiar with someone or something, which can include facts, information, descriptions, or skills acquired through experience or education. It can refer to the theoretical or practical understanding of a subject.
- Attitude/Belief: Refer to a person's general feelings about an issue, object, or person. Attitudes are interlinked with the person's knowledge, beliefs, emotions, and values, either positive or negative.
- Practices: The actual application or use of an idea, belief, or method as opposed to theories about such application or use.
- Dignity: Capacity of the service to be delivered in accordance and respect of local customs and culture

Awareness issues:

- Message: Ability to understand messages, e.g. language, literacy, etc.
- Channel: Possession of the appropriate channel to receive the information (radio, TV, etc.)
- Frequency: Frequency at which the message is repeated to ensure the largest audience is reached

Annex 5
Definitions

INTER SECTORAL

In the field of needs and response analysis, the terms multisectoral and intersectoral are often used interchangeably, and in some cases inconsistently. Part of the reason for this interchangeability is that the terms are not necessarily mutually exclusive; and approaches to needs assessments, analysis frameworks and response plans are often a combination of the two. Consider the Humanitarian Needs Overview (HNO), where the initial analysis in section 1 is framed as intersectoral analysis, but it is followed in section 2 by a sector - by- sector accounting of needs that better fits the description multisectoral analyses. In cases where intersectoral analysis informs the multisectoral analysis that follows, again we can see how keeping these 2 terms separate can be a challenge. Further, some sectors use intersectoral information in driving their sectoral analyses, or plans (the IPC for example).

Similarly, in formulating a response plan such as the Humanitarian Response Plan (HRP), the overall strategy and strategic objectives are typically intersectoral, whereas the individual projects proposed to meet the objectives are as a group multisectoral (though together should serve to enable the intersectoral strategic objectives of the plan). It is easy to see how these two terms are easily mixed.

For the purposes of the JIAF, the following definitions of multisectoral and intersectoral are provided:

INTERSECTORAL

An intersectoral approach in needs analysis is intended to enable system thinking and considering issues as a whole, by covering a range of information from each sector that collectively influence Humanitarian Conditions. Intersectoral analysis outlines the synergies across sectors that are underlying to complex issues? synergies across sectors to tackle complex issues using inter/cross sectors interventions and achieving inter-related humanitarian / development goals and targets, such as those found in Humanitarian Response Plans, or within the UN Sustainable Development Goals.

MULTISECTORAL

Multisectoral needs analysis focuses on analysis done primarily sector - by - sector in a linear and additive model with each sector's analysis considered equally with each other. Linkages across sectors are possible, but not the primary objective. The Multisector Initial Rapid Assessment (MIRA) is an example.

SECTOR

The term sector refers to: a) policy area (e.g. economic, social, cultural, environmental sector); b) a distinct field or theme (e.g. agriculture, education, health, etc.) In the JIAF, the term sector refers to the focus of responsibility for each cluster.

CLUSTER

"Clusters are groups of humanitarian organizations, both UN and non-UN, in each of the main sectors of humanitarian action, e.g. water, health and logistics. They are designated by the Inter-Agency Standing Committee (IASC) and have clear responsibilities for coordination. The Resident Coordinator and/or Humanitarian Coordinator (RC/HC) and the Humanitarian Country Team (HCT) manage a humanitarian response through the clusters. In the JIAF, the term 'Sector' is used in the same functional sense as Cluster.

PEOPLE IN NEED (PiN)

The reference Humanitarian Populations Figures IASC Guidance was produced in 2016, as the result of an interagency collaboration. It sets a common approach on population figures, how to categorize, how to count, and aggregate. As it was not updated since then, it is out of date on some aspects (such as the aggregation for instance), however, the "onion model" remains valid, and People in Need are described as a sub-set of the Population Affected and are defined as those members:

- Whose physical security, basic rights, dignity, living conditions or livelihoods are threatened or have been disrupted, AND
- Whose current level of access to basic services, goods and social protection is inadequate to re-establish normal living conditions with their accustomed means in a timely manner without additional assistance.

In this document, the PiN may be further qualified:

- "Preliminary PiN": output of indicator aggregation (prior to expert judgement review) to estimate the Intersectoral PiN.
- "Current PiN": Intersectoral PiN after expert judgement, but before projections
- "Projected PiN": Current PiN + 6 months(or other stated time-period), as used for HRP
- "Intersectoral PiN' or "HNO PiN": output of indicators aggregation after Expert Judgment. The Intersectoral or HNO PiN can either be Current or Projected.
- "True" PiN: the elusive real number of People in Need (Scenario B).
- WSectoral PiNs": The people in need for a specific sector as defined by the methods and indicators used by that sector. Sectoral PiNs may or may not match the aggregation of that specific sectors indicators in the JIAF. (see Annex 6)

NB: "JIAF PiN" still appears in some captions, but will be corrected to show "Intersectoral PiN."

SEVERITY

"Severity" expresses the degree of unmet needs - it describes 'how bad' the situation is for different groups or in different geographic areas. Severity Measures in Humanitarian Needs Assessments (ACAPS)

In the JIAF, intersectoral severity refers to the degree of harm brought by all combined 3 humanitarian consequences (Living Standards, Coping Mechanisms, Physical and Mental Well-being).

The JIAF uses a severity scale of 1-5, with the use of thresholds as defined by clusters for each severity level. The Severity Scale is in Annex 7.

MAGNITUDE (SIZE) *vs* DEGREE (INTENSITY)

Magnitude refers to the number of people affected, while Intensity is the degree of severity.

In the JIAF, indicators as either area-level or household-level as these terms are not always mutually exclusive. The distinction that is most important is how thresholds are determined. If the thresholds for an indicator are set based on the proportion of people who fall into a specific group, then the indicator is magnitude-based regardless of if it is collected through a household survey. For example, the indicator looking at distance to the nearest health facility builds thresholds based on how many people live more than one hour's walk from their nearest facility. Though collected at the household level, the indicator is actually magnitude. Degree-based indicators have household level thresholds. Effectively, all degree-based indicators are collected at the household level, but not all indicators collected at the household level are degree-based.

There are a few indicators that are degree-based, but are collected at facility or area level. For the moment, these indicators should be classed as 'Magnitude' because they can be more accurately aggregated that way - even though they are, in fact, degree-based indicators. (The current aggregation methods for degree-based indicators are only suitable if they have been collected at the household level).

CRITICAL INDICATORS

Critical indicators are those that correspond most directly to time-critical life- threatening consequences as seen in the JIAF Severity Scale.[54] Critical indicators require a threshold for severity 5 measurement to equate to imminent death, indicating if people are not assisted as soon as possible, they will die. These indicators should also have well-established assessment methodologies, and should have been collected within a reasonable timeframe.

In the longer term, the JIAF will seek to adopt a 'universal' severity scaling, where each indicator in the reference table is aligned with the JIAF scale, but this will take more time and study to be fully executed. The identification of Critical Indicators is a temporary solution as the JIAF develops towards this goal.

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HUMANITARIAN CONDITIONS AND HUMANITARIAN CONSEQUENCES

The Humanitarian Conditions pillar of the JIAF is where the consequences of the shock/event's impact on people are identified in terms of magnitude and analysed in terms of severity. The severity of Humanitarian Conditions is estimated by taking into account three humanitarian consequences or sub-pillars:

- Living Standards: This sub-pillar refers to the ability of the affected population to meet their basic needs. This is generally measured using indicators of population's access to essential goods and services, e.g. healthcare, food, education, rule of law, shelter, water and sanitation facilities, livelihoods and productive assets, etc. The exact list of basic needs may vary from one context to the other and should be contextually defined.
- Coping Mechanisms: This sub-pillar is used to understand and assess the degree to which individuals, households, communities and systems are coping or facing challenges with impact recovery, and understand the severity of the coping strategies they are relying on to cope with Living Standards or Physical and Mental Wellbeing issues. Coping Mechanisms can be positive or negative (e.g. borrowing money to purchase food items), sustainable or unsustainable (e.g., reliance on humanitarian aid).
- Physical and Mental Wellbeing: This sub-pillar refers exclusively to information and indicators about the physical and mental health of the affected population. Measures and observations include morbidity and mortality data, malnutrition outcomes, psychosocial or physical impairment, injuries and trauma, fear, etc. In addition, and when data is available, grave human rights violations such as killing, maiming, rape, arbitrary detention and disappearances can also be considered under this category.

More definitions available at Assessment and Analysis Terminology.

Annex 6
Global Clusters PiN Guidance

Cluster	Cluster PiN Guidance	Presentation	Supporting tool
CCCM	HPC 2021 - CCCM draft guidance	–	–
Education	Education PiN guidance	–	–
Emergency Telecommunications	–	–	–
Food Security	–	–	–
Health	GHC (Global Health Cluster) Guidance: People in Need Calculations	–	PiN Calculator
Logistics	–	–	–
Nutrition	Nutrition Humanitarian Needs Analysis Guidance	–	Excel tool
Protection	Global Protection Cluster Severity Scale & PiN Estimation	–	–
Shelter and NFI	–	–	–
WASH	2021 GWC HNO PiN Guidance	2021 WASH HNO People in Need (PiN)	

Annex 7
JIAF Severity Scale

SEVERITY PHASE		KEY REFERENCE OUTCOME	POTENTIAL RESPONSE OBJECTIVES
1	**None / Minimal**	Living Standards are acceptable (taking into account the context): possibility of having some signs of deterioration and/or inadequate social basic services, possible needs for strengthening the legal framework. Ability to afford/meet all essential basic needs without adopting unsustainable Coping Mechanisms (such as erosion/depletion of assets). No or minimal/low risk of impact on Physical and Mental Wellbeing.	Building Resilience Supporting Disaster Risk Reduction
2	**Stress**	Living Standards under stress, leading to adoption of coping strategies (that reduce ability to protect or invest in livelihoods). Inability to afford/meet some basic needs without adopting stressed, unsustainable and/or short-term reversible Coping Mechanisms. Minimal impact on Physical and Mental Wellbeing (stressed Physical and Mental Wellbeing) overall. Possibility of having some localized/targeted incidents of violence (including human rights violations).	Supporting Disaster Risk Reduction Protecting Livelihoods
3	**Severe**	Degrading Living Standards (from usual/typical), leading to adoption of negative Coping Mechanisms with threat of irreversible harm (such as accelerated erosion/depletion of assets). Reduced access/availability of social/basic goods and services Inability to meet some basic needs without adopting crisis/emergency - short/medium term irreversible - Coping Mechanisms. Degrading Physical and Mental Wellbeing. Physical and mental harm resulting in a loss of dignity.	Protecting Livelihoods Preventing & Mitigating Risk of extreme deterioration of Humanitarian conditions
4	**Extreme**	Collapse of Living Standards, with survival based on humanitarian assistance and/or long term irreversible extreme coping strategies. Extreme loss/liquidation of livelihood assets that will lead to large gaps/needs in the short term. Widespread grave violations of human rights. Presence of irreversible harm and heightened mortality	Saving Lives and Livelihoods
5	**Catastrophic**	Total collapse of Living Standards Near/Full exhaustion of coping options. Last resort Coping Mechanisms/exhausted. Widespread mortality (CDR, U5DR) and/or irreversible harm. Widespread physical and mental irreversible harm leading to excess mortality. Widespread grave violations of human rights.	Reverting/Preventing Widespread death and/or Total collapse of livelihoods

Annex 8
Acronyms List

AAP	Accountability to Affected People
AFI	Acute Food Insecurity
AMN	Acute Malnutrition
AORS	Areas of Responsibilities
ACLED	Armed Conflict Location & Event Data
CH	Cadre Harmonise
CCCM	Camp Coordination and Camp Management
CP	Child Protection
U5	Children under 5 years old
DEEP	Data Entry and Exploration Platform
DHS	Demographic and Health Survey
DTM	Displacement Tracking Matrix
GBV	Gender-Based Violence
GIS	Geographic Information System
GAM	Global Acute Malnutrition
GFSC	global Food Security Cluster
GHC	Global Health Cluster
GPC	Global Protection Cluster
GWC	Global WaSH Cluster
HH	Household
HCT	Humanitarian Country Team
HNO	Humanitarian Needs Overview
HPC	Humanitarian Programme Cycle
HRP	Humanitarian Response Plan
IPC	Integrated Phase Classification
ICCG	Inter Cluster Coordination Group
IASC	Inter-Agency Standing Committee
IDPS	Internally Displaced Persons
INGOS	International NGOs
IOM	International Organization for Migration
JIAF	Joint Intersectoral Analysis

KAP	Knowledge, Attitude and Practice
MOU	Memorandum of Understanding
MUAC	Mid-Upper Arm Circumference
MSNA	Multi Sector Needs Assessment
MICS	Multiple Indicator Cluster Survey
NNGOS	National NGOs
NFI	Non Food Items
NA	Not Available
OCHA	Office for the Coordination of Humanitarian Affairs
PIN	Persons in Need
SMART	Standardized Monitoring and Assessment of Relief and Transitions
TOR	Terms of Reference
UNHCR	United Nations High Commission for Refugees
WHZ	Weight-for-Height z-score